

**MERRIMACK VALLEY METROPOLITAN
PLANNING ORGANIZATION
FINAL May 2014 Amendment to the FY 2014-2017
TRANSPORTATION IMPROVEMENT PROGRAM**

**Prepared by the
MERRIMACK VALLEY PLANNING COMMISSION**

June 26, 2014

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MERRIMACK VALLEY METROPOLITAN PLANNING ORGANIZATION
May 2014 Amendment to the FY 2014-2017 TRANSPORTATION
IMPROVEMENT PROGRAM
FINAL REPORT prepared June 2014

PART A. INTRODUCTION

PART A. 1. TIP DEVELOPMENT PROCESS

Federal transportation authorization legislation establishes funding categories for transportation projects that may be eligible for Federal funding and sets maximum funding levels per category for each year of the legislation. Projects in this TIP are planned to be funded with funding from the previous federal transportation act titled “Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)” in effect from August 10, 2005 until July 5, 2012 and with funding from the new federal transportation act titled “Moving Ahead for Progress in the 21st Century (MAP-21)” was signed into law July 6, 2012.

It is the responsibility of the regional Federally mandated, State designated, Metropolitan Planning Organization (MPO) to carry out the Federal transportation planning process in their respective urbanized area and prepare many federal transportation documents, including the Transportation Improvement Program (TIP). The process, and MPOs, have been established in order to include local and regional input in the Federal transportation planning process.

Based on regulations promulgated by the U.S. Department of Transportation (DOT), any transportation project funded through the Federal Highway Administration (FHWA), or the Federal Transit Administration (FTA) must be listed in the appropriate region's Transportation Improvement Program (TIP). Without such a listing, Federal Highway funds cannot be expended by the Massachusetts Department of Transportation (MassDOT) on local or State projects. Similarly, the Merrimack Valley Regional Transit Authority (MVRTA) can only receive federal funds for projects listed in the TIP.

Merrimack Valley Metropolitan Planning Organization (MVMPO)

The MVMPO was first created by the Governor of Massachusetts in 1972. The MVMPO covers the same 15-community geographic area that defines the MVPC region and the Merrimack Valley Regional Transit Authority service area. The current MVMPO membership is as follows:

- Secretary of Massachusetts Department of Transportation (MassDOT) -Richard Davey
- MassDOT Highway Division Administrator -Francis DePaola
- Director of the Merrimack Valley Planning Commission(MVPC) -Dennis DiZoglio
- Administrator of the Merrimack Valley Regional Transit Authority
Advisory Board -Joseph Costanzo
- Mayor of Haverhill -James Fiorentini
- Mayor of Lawrence -Daniel Rivera
- Representing Region 1 (Amesbury, Newburyport, Salisbury) -Ken Gray

- Representing Region 2 (Newbury, Rowley, West Newbury) -Robert Snow
- Representing Region 3 (Boxford, Georgetown, Groveland, Merrimac) -Stuart Egenberg
- Representing Region 4 (Andover, Methuen, North Andover) -Curt Bellavance

Ex officio, non-voting members of the MVMPO include:

- Federal Highway Administration – Region I -Pamela S. Stephenson
- Federal Transit Administration – Region I -Mary Beth Mello
- Rockingham Planning Commission MPO (NH) -Tim Moore
- Boston MPO -Richard Davey
- Northern Middlesex MPO -Steven Themelis
- Nashua Planning Commission MPO (NH) -Janet Langdell

The TIP has been prepared in accordance with 23 CFR 450.324.

Projects that appear in the TIP were initiated and selected from a number of sources. Bridge projects have been selected and developed by the MassDOT Department largely based upon the results of their ongoing bridge maintenance program. The Department has made it a priority to develop projects that would correct problems in “structurally deficient” bridges. The region’s Congestion Management Program is used to identify intersections and roadways where significant congestion exists, and measures the levels of congestion at these locations. This information has been used by local communities to develop roadway projects that are programmed in the TIP. Similarly, locations identified as having safety problems in the region’s Safety Monitoring System or the state’s Top 1,000 Intersection List have been used by the department and local communities to develop TIP projects.

PART A. 2. PRIORITIZATION

The FFY 2014-2017 Merrimack Valley Metropolitan Planning Organization’s Transportation Improvement Program (TIP) contains federal-aid project programming information for four years. For each year, gross estimates of project costs are listed in the federal fiscal year of the proposed advertise date. Federal fiscal years begin on October 1 and run through September 30. For example, FFY 2014 begins on October 1, 2013 and ends on September 30, 2014. The advertising dates shown for roadway projects were determined by the Capital Expenditure and Program Office within MassDOT and the MassDOT District 4 Office. The MVRTA determined advertising dates for transit projects.

Projects are programmed in the region’s TIP based on a number of factors. These include the project’s score based upon the MPO’s Transportation Evaluation Criteria, project cost and the availability of STP, CMAQ, and HSIP funding in the years covered in the TIP. Road and bridge project priority is largely dependent upon the current and expected design status for each project, as well as, environmental permitting and Right-of-Way (ROW) status. For bridge projects, the structure’s AASHTO rating is also given primary consideration when scheduling projects.

TRANSPORTATION EVALUATION CRITERIA

In 2003, the MPOs worked with the then Massachusetts Executive Office of Transportation and Public Works (EOTPW) to develop objective evaluation criteria that could be applied to transportation projects in the Commonwealth. Early in 2004, EOTPW asked planning staff from the then MassHighway Planning, the MassHighway district offices and the regional planning agencies to apply

these criteria to projects within their respective Metropolitan Planning Organizations (MPOs). Application of these criteria include not only an evaluation of the magnitude of improvement in the condition, mobility, and safety of transportation projects, but also an evaluation of their community effects and support, the land use and economic development impact, and the environmental effects.

The evaluation criteria are listed in Appendix C. The resulting Transportation Evaluation Criteria (TEC) scores for selected projects in the Merrimack Valley region that were derived by applying these criteria are shown in the table in Appendix C of this document and also in the Additional Information column in the project listings. It is hoped that in future years these criteria ratings, along with the readiness of projects, will make the planning process, and more specifically, the selection and prioritization of projects, more transparent to the general public.

This Transportation Evaluation Criteria (TEC) meets MAP-21's requirements for TAP funding (the required competitive process) and, in general helps to manage performance by focusing available funding on the highest regional priorities. It also helps to draw attention to the reader that MAP-21 is a very Performance Measure-oriented piece of legislation.

In June 2000, the Task Force of State and Regional Officials to Define, Develop and Monitor a Balanced Statewide Road and Bridge Program developed a Memorandum of Understanding that defined the content of and the Commonwealth's commitment to maintaining a significant statewide bridge and road program. Included in this MOU was a provision calling for the development of a cooperative process for state and regional officials to identify a priority listing of non-federal aid construction projects that will be considered by the state in selecting state-aid projects. The non-federal aid road and bridge project lists included in the TIP are to be developed by the regions based on the amount of state roadway and bridge money that can reasonably be expected to be available in the coming fiscal year. It should be noted that these reasonably expected non-federal aid funding figures are not "targets", but guides that assist the state and the regions in identifying priority projects and establishing a realistic project programming and implementation schedule.

To implement this provision of the MOU, this year's TIP includes sections that identify the MPO's priority road and bridge projects using a format prescribed by MassDOT's Office of Transportation Planning. For federally funded projects, the Merrimack Valley MPO has established the following programming categories:

- Federal-Aid Projects Using Target Authority (STP, STP-Enh) – Section 1A1
- Federal-Aid CMAQ Projects Using CMAQ Target (CMAQ) – Section 1A2
- Federal-Aid HSIP Projects Using HSIP Target (HSIP) – Section 1A3
- Federal-Aid State Category Bridge Projects (provided by MassDOT) – Section 1B
- Federal-Aid Non-target Projects (federally-funded non-target regional projects such as HPP, federal discretionary, Omnibus 330, Section 115, etc.) – Section 1C
- Federal-Aid major infrastructure and other state category projects, i.e., major infrastructure, interstate maintenance, statewide CMAQ, etc.) – Section 1D

Non-federally funded projects have been assigned to one of the following categories:

- Non-Federal-Aid Other Projects (only projects for which NFA funds have been specifically made available) - Section 2A
- Non-Federal-Aid Bridge Projects (provided by Mass Highway) – Section 2B
- Appendices A and B, Other Regional Priorities (projects for which funding has not been identified)

PART A. 3. PUBLIC PARTICIPATION

The principal objective of this document is the provision of an additional point for public access to and review of the transportation planning process. This 2014-2017 Transportation Improvement Program was developed in accordance with the Public Participation Process established for the Merrimack Valley Metropolitan Planning Organization (MVMPO). The MVMPO adopted its current Public Involvement process in December 2009. The Process applies to the development of the Transportation Improvement Program (TIP) and the Regional Transportation Plan (RTP). The public involvement process endorsed by the MVMPO is also being used by the MVRTA as its public involvement process. Therefore, this notice of public involvement and time established for review and comment on this TIP satisfies the Program of Project requirements established by the Federal Transit Administration (FTA).

The Merrimack Valley MPO's 2009 Public Participation Plan reflects the new consultation requirements of SAFETEA-LU (23 CFR 450.316(3)(b)) for the development of Regional Transportation Plans and Transportation Improvement Programs. This document identifies a number of new stakeholders to be consulted in developing these documents. In developing the draft FY 2014-2017 Transportation Improvement Program, stakeholders were given notice that the process of developing the FY 2014-2017 TIP was beginning. MVPC staff incorporated the stakeholders into the Merrimack Valley Transportation Committee, which was provided with a preliminary listing of TIP projects before the release of the draft. Stakeholders will also be notified of the availability of the document for public review and comment.

In accordance with this process, public notice of the Draft May 2014 Amendment to the 2014-2017 Transportation Improvement Program was published in the *Lawrence Eagle Tribune*, the *Newburyport Daily News*, and in the *Haverhill Gazette* (Published Weekly) informing the public of its right to comment on the document which would be available at the MVPC office, the MVPC website and local libraries from May 22, 2014 through June 20, 2014. It said that comments would be received through June 20, 2014 and that two separate public hearings on the document would take place on June 10, 2014 at 1:00 PM and at 6:00 PM at the MVPC office at 160 Main Street in Haverhill, MA. The MVMPO will summarize comments that are received during the 30-day review and comment period and will include this summary in the Final May 2014 Amendment to the 2014-2017 TIP.

PART A. 4. AMENDMENT/ADJUSTMENT PROCEDURES

The following amendment/adjustment procedures are hereby adopted to consist of the following:

Minor adjustments to the TIP do not require formal MPO action and can be made via the administrative action of the Merrimack Valley MPO. These minor adjustments are limited to:

- Moving a project from Fiscal Year 2 to Fiscal Year 1;
- Moving a project from Fiscal Year 2 or later to a later Fiscal Year;
- Changing the scope and description of a project as long as they are minor changes;
- Changing funding amount and sources, as long as they are minor changes.

Major changes continue to require MPO action through the formal amendment process. Major changes would require a thirty day public review and comment period that includes a public hearing. These changes include, but are not limited to:

- Advancement of other than a Fiscal Year 2 project.

PART A.5. HIGH PRIORITY PROJECTS/ADVANCE CONSTRUCTION

SAFETEA-LU contains a number of earmarked transportation projects that are to receive federal funding. Specific funding amounts have been obligated to each of these projects, but no additional funding was included in SAFETEA-LU to complete them. Consequently, states with these projects must implement them within the annual federal authorization limits established in the legislation. The Merrimack Valley region contains eleven such projects which are shown below:

Highway High Priority Projects (HPP):

- Amesbury-Newburyport – Rehabilitation of I-95 Whittier Bridge
- Andover – Design, Engineering and Construction at I-93 The Junction Interchange, (Andover, Tewksbury, and Wilmington).
- Haverhill – Construct Haverhill intermodal center access and vehicle capacity improvements.
- Lawrence – Design and construct Canal and Union Street Corridor improvements.
- Lawrence – Construct access improvements to the Lawrence Gateway Project.
- Methuen – Design, engineering and construction of Methuen Rotary alternative at I-93 and Routes 110 and 113.
- Newbury – Rehabilitation and paving of Parker River Road.
- North Andover – Improvements to Mass. Ave., Andover St., Osgood St., Salem St. and Johnson Street in the Old Town Center of North Andover.
- Parker River National Wildlife Refuge – Preliminary engineering for Rehabilitation and paving of Sunset Drive in National Wildlife Refuge.
- Salisbury to Danvers – Design, Engineer, Permit and Construct “Border to Boston Bikeway” rails-trails project.

Transit Projects for Bus and Bus-Related Facilities and Clean Fuels Grant Program:

- Haverhill – Design and Construct Intermodal Transit Parking Improvements
- Newburyport – Design and Construct Intermodal Facility
- Lawrence – Gateway Intermodal and Quadrant Area Reuse Project.

Projects included in the TIP are programmed in the Federal fiscal year that they are expected to be advertised for construction. Some of the HPP projects include money for design, in which case, the design money will be programmed in the TIP for the year it is expected to be spent on the project.

Advance Construction Projects (AC): Projects may only be designated AC if the project’s cost exceeds the regional annual target and construction, based on engineering decisions, will be scheduled to span the years for which funding is programmed.

- Amesbury/Newburyport - Reconstruct I-95 over the Merrimack River (Whittier Bridge)
- Groveland – Rehabilitation of Route 97 (School Street & Salem Street)
- Methuen – Interchange Reconstruction on I-93 at Route 110/113 Rotary

PART A. 6. TRANSPORTATION FUNDING PROGRAMS

HIGHWAY PROJECTS

Projects from the following Federal-aid (from SAFETEA-LU legislation) and non-Federal-aid funding categories are shown in the FFY 2014-2017 TIP, in some cases Federal-aid funding is from new categories established in MAP-21.

Bridge Replacement and Rehabilitation (BR) (SAFETEA-LU) - funds replacement and repair of structurally deficient or unsafe bridges in urban and rural areas on any public road. Bridges can be on the federal aid system (BR ON) or off system (BR OFF).

Funding: Federal - 80%, State - 20%

Congestion Mitigation and Air Quality Improvement Program (CMAQ) (SAFETEA-LU continued in MAP-21) – funds projects that reduce congestion and improve air quality

Funding: Federal - 80%, State - 20%

High Priority Projects (HPP) (Carryover from SAFETEA-LU) – funds up to 80% of the costs of specific transportation projects identified in SAFETEA-LU. These projects have a separate allocation, but do not receive additional funds and are therefore subject to the state's federal authorization limit.

Funding: Federal- 80%, State – 20%

Highway Safety Improvement Program (HSIP) (SAFETEA-LU continued in MAP-21) - funds safety improvement projects at high crash locations.

Funding: Federal - 90%, State – 10%

Interstate Maintenance (IM) (SAFETEA-LU) - funds projects to restore, resurface, and rehabilitate the Interstate System.

Funding: Federal - 90%, State - 10%

Interstate Maintenance Discretionary (IMD) (Carryover from SAFETEA-LU) – earmarked funds for projects to restore, resurface, and rehabilitate the Interstate System.

Funding: Federal - 90%, State - 10%

National Highway Program (NHS) (from SAFTEA-LU, MAP-21 enhances NHS to include additional roadways and is renamed National Highway Performance Program (NHPP)) - funds projects on all National Highway System Roadways.

Funding: Federal - 80%, State - 20%

Non-Federal Aid (NFA) - funds construction, reconstruction, and improvement projects on roads and bridges in urban and rural areas.

Funding: State - 100% (Transportation Bond Bill), or Private - 100%

Surface Transportation Program (STP) (SAFETEA-LU continued in MAP-21) - funds projects chosen by states and localities for any roads that are not functionally classified as local or rural minor collectors.

Funding: Federal - 80%, State - 20%

STP Enhancements (STP E) (SAFETEA-LU) - a portion of Surface Transportation Program funding for enhancement projects chosen by states and localities.

Funding: Federal -80%, State - 20%

Transportation Alternatives Program (TAP) – (New program established in MAP21) - authorizes a new category which provides funding for projects which can be defined as transportation alternatives including bicycle and pedestrian facilities, enhanced mobility, community improvements, environmental mitigations, and various other types of transportation alternatives as defined in MAP 21.

Funding: Federal - 80%, State - 20%

Transportation, Community, and System Preservation (TCSP) Program (SAFETEA-LU) – according to the Federal Highway Administration website “provides funding for a comprehensive initiative including planning grants, implementation grants, and research to investigate and address the relationships between transportation, community, and system preservation and to identify private sector-based initiatives.”

Funding: Federal - 80%, Other - 20%

TRANSIT PROJECTS

Projects from the following Federal-aid (SAFETEA-LU and/or MAP-21 as noted) and non-Federal-aid funding categories are shown in the FFY 2014-2017 TIP.

Section 5307 (SECT-07) (Capital and Planning) (SAFETEA-LU continued in MAP-21) - funds routine capital projects and planning assistance in urban areas. This is an urban formula grant program for MVRTA Preventative Maintenance and ADA costs.

Funding: Federal - 80%, State - 20% (Bond Issue Funds) (capital and planning expenses)

State funding for the MVRTA's operating budget is provided through an agreement with the Transit Division of MassDOT. Local funds are derived from community assessments based on the number of route miles and special services operated within each community.

The Merrimack Valley Planning Commission will provide the 20% match for the planning activities it will conduct for the Merrimack Valley Regional Transit Authority under its Section 5307 transit planning contract with the Authority.

Section 5309 (SECT-9) (SAFETEA-LU replaced in MAP-21 with Section 5339) - funds capital projects in urban areas which can be characterized as major capital investments in public transportation equipment and facilities. This is a discretionary grant program.

Funding: Federal - 80%, State - 20% (Transportation Bond Issue)

Section 5310 (SECT-10) (SAFETEA-LU continued in MAP-21)- provides capital funds, through the State, to private non-profit corporations and organizations to assist them in providing transportation services to meet the special needs of elderly and disabled persons.

Funding: Federal - 80%, Funding Applicant - 20%

ORGANIZATION OF PROJECT LISTINGS

Each highway project in the TIP contains the following information:

Project ID - project identification numbers given by MassDOT for each highway and bridge project and SAFETEA-LU project numbers for HPP projects;

MassDOT Project Description – Includes the community, or communities, in which the project is located and a brief description of work to be funded under the project; This description is exactly the same as MassDOT has input to its project information pages.

MassDOT District – MassDOT highway district number (Merrimack Valley MPO is part of District 4);

Funding Source - abbreviation for the funding category from which funding is expected (Funding categories and abbreviations are explained starting on page 3.);

Total Programmed Funds - estimated cost of project in Fiscal Year in which advertising is expected; *

Federal Funds – Portion of Total Programmed Funds provided by Federal Funding;

Non-Federal Funds– Portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds;

Additional Information – such as:

- Total Project Cost if project is being Advance Constructed (AC), and the number of years the AC funding is to be reimbursed and which year of AC the listing refers to;
- For years beyond the first year of the TIP, the total project cost in 2014 dollars and the Year of Expenditure cost which includes an inflation rate of 4% per year from 2014 dollars;
- The TEC Score – Transportation Evaluation Criteria (TEC) score as described in Part A.2. above;
- Whether the funding is for Construction or Design of the project;
- Whether Federal funding is from more than one funding category.
- Category of project for determining “Operating and Maintenance” versus “Capital and Other” cost.

The notation is O, M, C, or N representing: (O) operating costs, (M) maintenance costs, (C) capital costs, or (N) other costs, such as planning.

* Inflation increases project costs and therefore **the project costs** have been increased by **4% each** future year of the TIP.

Each transit project in the TIP contains the following information:

FTA Program – abbreviation for the Federal Funding program from which funding is expected. (Transit Funding categories and abbreviations are explained on page 6.);

Regional Transit Authority – MVRTA (Merrimack Valley Regional Transit Authority) is the regional transit authority.

Project Description – a brief description of work to be funded under the project.

Carryover or Earmark Details – indicates whether Carryover or a specific year's Earmark funding is being used.

Federal Funds – Portion of Total Programmed Funds provided by Federal Funding;

State Match Sources – Portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds, coming from State Sources subdivided into the following categories of State Funding:

RTACAP – Regional Transit Authority State Capital Assistance

MAP – Mobility Assistance Program

ITCCAP – Intermodal Transportation Center Capital

TDC – Transportation Development Credits

SCA – State Contract Assistance

RTA Funds – Portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds, coming from MVRTA funding sources other than State funding sources.

Total Cost - estimated total cost of project.

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PART B PROJECT LISTINGS

2014* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
Section 1A / Federal Aid Target Projects							
STP - Surface Transportation Program							
602033	AMESBURY- RECONSTRUCTION OF ROUTE 150	4	STP	\$ 4,643,054	\$ 3,714,443	\$ 928,611	Total Project Cost = \$4,643,054 (Construction) TEC = 5.07 out of 18. (M)
STP Subtotal ▶				\$ 4,643,054	\$ 3,714,443	\$ 928,611	◀ 80%Federal + 20%Non-Federal
HSIP - Highway Safety Improvement Program							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	HSIP-AC	\$ 609,064	\$ 548,158	\$ 60,906	AC YR 2 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
HSIP Subtotal ▶				\$ 609,064	\$ 548,158	\$ 60,906	◀ Funding Split Varies by Project Specifications
CMAQ - Congestion Mitigation and Air Quality Improvement Program							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	CMAQ-AC	\$ 2,582,785	\$ 2,066,228	\$ 516,557	AC YR 2 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
CMAQ Subtotal ▶				\$ 2,582,785	\$ 2,066,228	\$ 516,557	◀ 80%Federal + 20%Non-Federal
TAP Transportation Alternatives Program							
No Projects Programmed				\$ -	\$ -	\$ -	
TAP Subtotal ▶				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
Section 1A / Fiscal Constraint Analysis							
Total Federal Aid Target Funds Programmed ▶				\$ 7,834,903	\$ 8,140,326	◀ Total Target	\$ 305,423 Target Funds Available
Total STP Programmed ▶				\$ 4,643,054	\$ 5,121,799	◀ Max. STP	\$ 478,745 STP Available
Total HSIP Programmed ▶				\$ 609,064	\$ 609,064	◀ Min. HSIP	\$ - HSIP Minimum Met
Total CMAQ Programmed ▶				\$ 2,582,785	\$ 2,104,040	◀ Min. CMAQ	\$ (478,745) CMAQ Minimum Met
Total TAP Programmed ▶				\$ -	\$ 305,423	◀ Min. TAP	\$ 305,423 TAP Minimum Not Met

2014* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
►Section 1B / Federal Aid Bridge Projects							
	No Projects Programmed			\$ -	\$ -	\$ -	
BR Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
►Section 1C / Federal Aid Non-Target Projects							
►Earmarks							
	No Projects Programmed			\$ -	\$ -	\$ -	
Earmarks Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Earmark
►Other							
607471	LAWRENCE - UNION CROSSING PEDESTRIAN IMPROVEMENTS	4	TCSP	\$ 579,375	\$ 463,500	\$ 115,875	Total Project Cost = \$579,375 (Construction) (C)
Other Subtotal ►				\$ 579,375	\$ 463,500	\$ 115,875	◀ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects							
►IM - Interstate Maintenance							
	No Projects Programmed			\$ -	\$ -	\$ -	
IM Subtotal ►				\$ -	\$ -	\$ -	◀ 90%Federal + 10%Non-Federal
►NHS - National Highway System							
	No Projects Programmed			\$ -	\$ -	\$ -	
NHS Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
►Other							
605720	HAVERHILL- RIVERWALK CONSTRUCTION (BRADFORD SECTION) FROM ROUTE 125 TO COUNTY ROAD	4	Statewide STP-TE	\$ 2,410,718	\$ 1,928,574	\$ 482,144	(Construction) TEC = 5.32 out of 18. (C)
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	Statewide STP-TE-AC	\$ 458,334	\$ 366,667	\$ 91,667	AC YR 2 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 CMAQ & HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
Other Subtotal ►				\$ 2,869,052	\$ 2,295,242	\$ 573,810	◀ Funding Split Varies by Funding Source
►Regional Major Infrastructure							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	Statewide CMAQ-AC	\$ 23,808,000	\$ 19,046,400	\$ 4,761,600	AC YR 2 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
Regional Major Infrastructure Subtotal ►				\$ 23,808,000	\$ 19,046,400	\$ 4,761,600	◀ Funding Split Varies by Funding Source

2014* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 2 A / Non-Federal Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
►Section 2 B / Non-Federal Bridge Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Bridge Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
2014 Merrimack Valley MPO TIP Summary							
				TIP Section 1:	TIP Section 2:	Total of All Projects ▼	
Total ►				\$ 35,091,330	\$ -	\$ 35,091,330	◀ Total Spending in Region
Federal Funds ►				\$ 28,133,970		\$ 28,133,970	◀ Total Federal Spending in Region
Non-Federal Funds ►				\$ 6,957,360	\$ -	\$ 6,957,360	◀ Total Non-Federal Spending in Region
* Inflation has been accounted for by using Year of Expenditure Costs							
701CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: http://www.massdot.state.ma.us/Highway/flaggers/main.aspx							

2014 Merrimack Valley TIP GHG Tracking

MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	GHG Analysis Type	GHG Impact by the Numbers	GHG Impact Description	Additional Description
▶ Section 1A / Federal Aid Target Projects							
▶ STP - Surface Transportation Program							
602033	AMESBURY- RECONSTRUCTION OF ROUTE 150	STP	\$ 4,643,054	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	
					Quantified Impact ▶	0	
▶ HSIP - Highway Safety Improvement Program							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	HSIP-AC	\$ 609,064	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	0	
▶ CMAQ - Congestion Mitigation and Air Quality Improvement Program							
0		0	\$ -				
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	CMAQ-AC	\$ 2,582,785	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	0	
▶ TAP Transportation Alternatives Program							
0	No Projects Programmed	0	\$ -		0		
					Quantified Impact ▶	0	

2014 Merrimack Valley TIP GHG Tracking

MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	GHG Analysis Type	GHG Impact by the Numbers	GHG Impact Description	Additional Description
▶ Section 1B / Federal Aid Bridge Projects							
0	No Projects Programmed		\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Section 1C / Federal Aid Non-Target Projects							
▶ Earmarks							
0			\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
	LAWRENCE - UNION CROSSING PEDESTRIAN IMPROVEMENTS	TCSP	\$ 579,375	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	
					Quantified Impact ▶	0	
▶ Section 1D / Federal Aid Major & State Category Projects							
▶ IM - Interstate Maintenance							
0	No Projects Programmed		\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ NHS - National Highway System							
0	No Projects Programmed		\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
605720	Haverhill- Riverwalk Construction (Bradford Section) from Route 125 to County Road	Statewide STP-TE	\$ 2,410,718	Quantified	-3,520	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	3,520 = Emission Reduction in CO ₂ kg per year
605181	Methuen- Interchange Reconstruction on I-93 at Route 110/113 Rotary, including removal of M-17-017 & M-17-018, rehab of M-17-007 & new bridge construction of M-17-040	Statewide STP-TE-AC	\$ 458,334	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	-3520	
▶ Other							
605181	Methuen- Interchange Reconstruction on I-93 at Route 110/113 Rotary, including removal of M-17-017 & M-17-018, rehab of M-17-007 & new bridge construction of M-17-040	Statewide CMAQ - AC	\$ 23,808,000	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	0	

2014 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
► Section 2A / Non-Federal Projects							
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
► Section 2B / Non-Federal Bridge Projects							
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
2014 Merrimack Valley TIP GHG Tracking Summary					Total Quantified Impact ▼		
					Quantified Impact ►	-3,520	3,731 = Emission Reduction in CO ₂ kg per year

2015* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

6/25/2014 Endorsed

MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼		
▶Section 1A / Federal Aid Target Projects								
▶STP - Surface Transportation Program								
605114	GROVELAND- REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)	4	STP-AC	\$ 3,985,487	\$ 3,188,390	\$ 797,097	AC YR 1 of 2. Total Project Cost = \$6,470,690 in 2015 dollars after 4%inflation rate applied to 2014 cost, to be converted to FA FY 2015 + FY 2016 (Construction) TEC = 6.72 out of 18. (M)	
STP Subtotal ▶				\$ 3,985,487	\$ 3,188,390	\$ 797,097	◀ 80%Federal + 20%Non-Federal	
▶HSIP - Highway Safety Improvement Program								
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	HSIP-AC	\$ 492,173	\$ 442,956	\$ 49,217	AC YR 3 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)	
HSIP Subtotal ▶				\$ 492,173	\$ 442,956	\$ 49,217	◀ Funding Split Varies by Project Specifications	
▶CMAQ - Congestion Mitigation and Air Quality Improvement Program								
606669	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)	4	CMAQ	\$ 1,625,603	\$ 1,300,482	\$ 325,121	Total Project Cost = \$1,931,026. FY 2015 CMAQ + FY 2015 TAP (Construction) TEC = 5.47 out of 18. (C)	
604585	FLEX TO FTA FOR MVRTA NEW BUS UPGRADE TO CLEANER FUEL BUSES	4	CMAQ>FTA	\$ 450,000	\$ 360,000	\$ 90,000	(M)	
CMAQ Subtotal ▶				\$ 2,075,603	\$ 1,660,482	\$ 415,121	◀ 80%Federal + 20%Non-Federal	
▶TAP - Transportation Alternatives Program								
606669	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)	4	TAP	\$ 305,423	\$ 244,338	\$ 61,085	Total Project Cost = \$1,931,026. FY 2015 CMAQ + FY 2015 TAP (Construction) TEC = 5.47 out of 18. (C)	
TAP Subtotal ▶				\$ 305,423	\$ 244,338	\$ 61,085	◀ 80%Federal + 20%Non-Federal	
▶Section 1A / Fiscal Constraint Analysis								
Total Federal Aid Target Funds Programmed ▶				\$ 6,858,686	\$ 7,002,145	◀Total Target	\$ 143,459	Target Funds Available
Total STP Programmed ▶				\$ 3,985,487	\$ 4,543,465	◀ Max. STP	\$ 557,978	STP Available
Total HSIP Programmed ▶				\$ 492,173	\$ 492,173	◀ Min. HSIP	\$ -	HSIP Minimum Met
Total CMAQ Programmed ▶				\$ 2,075,603	\$ 1,661,084	◀ Min. CMAQ	\$ (414,519)	CMAQ Minimum Met
Total TAP Programmed ▶				\$ 305,423	\$ 305,423	◀ Min. TAP	\$ -	TAP Minimum Met

* Inflation has been accounted for by using Year of Expenditure Costs

2015* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

6/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
►Section 1B / Federal Aid Bridge Projects							
603682	AMESBURY - BRIDGE REPLACEMENT, A-07-026, ROUTE I-495 (NB & SB) OVER THE BIKEWAY (ABANDONED B&M RR LINE)	4	BR-ON	\$ 11,288,692	\$ 9,030,954	\$ 2,257,738	Total Project Cost = \$11,288,692 after 4%inflation rate applied to 2014 cost. (Construction) (C)
BR Subtotal ►				\$ 11,288,692	\$ 9,030,954	\$ 2,257,738	◄ 80%Federal + 20%Non-Federal
►Section 1C / Federal Aid Non-Target Projects							
►Earmarks							
No Projects Programmed				\$ -	\$ -	\$ -	
Earmarks Subtotal ►				\$ -	\$ -	\$ -	◄ Funding Split Varies by Earmark
►Other							
N. AND. SRTS	NORTHANDOVER - SAFE ROUTES TO SCHOOL (NORTH ANDOVER MIDDLE)	4	Statewide TAP	\$ 655,200	\$ 524,160	\$ 131,040	Total Project Cost = \$ 655,200 TAP is 80%Federal + 20%Non-Federal (Construction) (C)
Other Subtotal ►				\$ 655,200	\$ 524,160	\$ 131,040	◄ Funding Split Varies by Funding Source

* Inflation has been accounted for by using Year of Expenditure Costs

2015* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

6/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
Section 1D / Federal Aid Major & State Category Projects							
IM - Interstate Maintenance							
606549	GEORGETOWN- NEWBURY- WEST NEWBURY- NEWBURYPORT- AMESBURY- SALISBURY- INTERSTATE MAINTENANCE & RELATED WORK ON I-95		IM	\$ 20,659,912	\$ 18,593,921	\$ 2,065,991	Total Project Cost = \$20,659,912 after 4%inflation rate applied to 2014 cost. (Construction) (M)
				\$ -	\$ -	\$ -	
			IM Subtotal	\$ 20,659,912	\$ 18,593,921	\$ 2,065,991	◀ 90%Federal + 10%Non-Federal
NHS - National Highway System							
	No Projects Programmed			\$ -	\$ -	\$ -	
			NHS Subtotal	\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
Other							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	Statewide STP-TE-AC	\$ 458,334	\$ 366,667	\$ 91,667	AC YR 3 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
606503	NEWBURYPORT- CLIPPER CITY RAIL TRAIL ALONG THE CITY BRANCH (PHASE II)	4	Statewide STP-TE	\$ 3,120,000	\$ 2,496,000	\$ 624,000	(Construction) TEC = 5.75 (C)
			Other Subtotal	\$ 3,578,334	\$ 2,862,667	\$ 715,667	◀ Funding Split Varies by Funding Source
Regional Major Infrastructure							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	Statewide CMAQ-AC	\$ 23,808,000	\$ 19,046,400	\$ 4,761,600	AC YR 3 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
			Regional Major Infrastructure Subtotal	\$ 23,808,000	\$ 19,046,400	\$ 4,761,600	◀ Funding Split Varies by Funding Source

* Inflation has been accounted for by using Year of Expenditure Costs

2015* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/20/2014 Draft Released

6/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Section 2 A / Non-Federal Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Projects Subtotal ►				\$ -		\$ -	◀ 100% Non-Federal
► Section 2 B / Non-Federal Bridge Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Bridge Projects Subtotal ►				\$ -		\$ -	◀ 100% Non-Federal
2015 Merrimack Valley MPO TIP Summary							
				TIP Section 1:	TIP Section 2:	Total of All Projects ▼	
Total ►				\$ 66,848,824	\$ -	\$ 66,848,824	◀ Total Spending in Region
Federal Funds ►				\$ 55,594,268		\$ 55,594,268	◀ Total Federal Spending in Region
Non-Federal Funds ►				\$ 11,254,556	\$ -	\$ 11,254,556	◀ Total Non-Federal Spending in Region

* Inflation has been accounted for by using Year of Expenditure Costs

701CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

* Inflation has been accounted for by using Year of Expenditure Costs

2015 Merrimack Valley TIP GHG Tracking

MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	GHG Analysis Type	GHG Impact by the Numbers	GHG Impact Description	Additional Description	
▶ Section 1A / Federal Aid Target Projects								
▶ STP - Surface Transportation Program								
605114	GROVELAND- REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)	STP-AC	\$ 3,985,487	Qualitative		No Assumed Impact/Negligible Impact on Emissions		
					Quantified Impact ▶	0		
▶ HSIP - Highway Safety Improvement Program								
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	HSIP-AC	\$ 492,173	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.	
					Quantified Impact ▶	0		
▶ CMAQ - Congestion Mitigation and Air Quality Improvement Program								
606669	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)	CMAQ	\$ 1,625,603	Quantified		-211	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	211 = Emission Reduction in CO ₂ kg per year.
604585	FLEX TO FTA FOR MVRTA NEW BUS UPGRADE TO CLEANER FUEL BUSES	CMAQ-FTA	\$ 450,000	Qualitative		0	N/A	
					Quantified Impact ▶	-211		
▶ TAP - Transportation Alternatives Program								
606669	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)	TAP	\$ 305,423	Quantified		0	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	211 = Emission Reduction in CO ₂ kg per year. Quantity of Emissions Reduction shown above in CMAQ funding section.
					Quantified Impact ▶	0		

* Inflation has been accounted for by using Year of Expenditure Costs

2015 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
▶ Section 1B / Federal Aid Bridge Projects							
603682	AMESBURY- BRIDGE REPLACEMENT, A-07-026, ROUTE I-495 (NB & SB) OVER THE BIKEWAY (ABANDONED B&M RR LINE)	BR-ON	\$ 11,288,692	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	
				Quantified Impact ▶	0		
▶ Section 1C / Federal Aid Non-Target Projects							
▶ Earmarks							
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
				Quantified Impact ▶	0		
▶ Other							
N. AND. SRTS	NORTH ANDOVER - SAFE ROUTES TO SCHOOL (NORTH ANDOVER MIDDLE)	Statewide TAP	\$ 655,200	Qualitative	0	Assumed Nominal Decrease in Emissions from Sidewalk Infrastructure	
				Quantified Impact ▶	0		

* Inflation has been accounted for by using Year of Expenditure Costs

2015 Merrimack Valley TIP GHG Tracking

MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	GHG Analysis Type	GHG Impact by the Numbers	GHG Impact Description	Additional Description
▶ Section 1D / Federal Aid Major & State Category Projects							
▶ IM - Interstate Maintenance							
606549	GEORGETOWN- NEWBURY- WEST NEWBURY- NEWBURYPORT- AMESBURY- SALISBURY- INTERSTATE MAINTENANCE & RELATED WORK ON I-95	IM	\$ 20,659,912	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	
0		0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ NHS - National Highway System							
0	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	Statewide STP-TE-AC	\$ 458,334	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
606503	NEWBURYPORT- CLIPPER CITY RAIL TRAIL ALONG THE CITY BRANCH (PHASE II)	Statewide STP-TE	\$ 3,120,000	Quantified	-34,996	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	34,996 = Emission Reduction in CO ₂ kg per year
					Quantified Impact ▶	-34996	
▶ Other							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	Statewide CMAQ - AC	\$ 23,808,000	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	0	34,996 = Emission Reduction in CO ₂ kg per year

* Inflation has been accounted for by using Year of Expenditure Costs

2015 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
▶ Section 2A / Non-Federal Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Section 2B / Non-Federal Bridge Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
2015 Merrimack Valley TIP GHG Tracking Summary					Total Quantified Impact ▼		
					Quantified Impact ▶	-35,207	

* Inflation has been accounted for by using Year of Expenditure Costs

2016* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
Section 1A / Federal Aid Target Projects							
STP - Surface Transportation Program							
605114	GROVELAND- REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)	4	STP-AC	\$ 2,485,203	\$ 1,988,162	\$ 497,041	AC YR 2 of 2. Total Project Cost = \$6,470,690 in 2015 dollars after 4%inflation rate applied to 2014 cost, to be converted to FA FY 2015 + FY 2016 (Construction) TEC = 6.72 out of 18. (M)
606161	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)	4	STP	\$ 1,365,592	\$ 1,092,474	\$ 273,118	Total Project Cost = \$3,026,676 after 4%inflation rate applied to 2015 cost. FY 2016 STP + FY 2016 CMAQ (Construction) TEC = 9.32 out of 18. (C)
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	STP-AC	\$ 266,046	\$ 212,837	\$ 53,209	AC YR 4 of 4. Total Project Cost = \$77,236,601 = FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary) + FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
606159	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	4	STP	\$ 1,120,627	\$ 896,502	\$ 224,125	Total Project Cost = \$1,612,800 after 4%inflation rate applied to 2015 cost. FY 2016 STP + FY 2016 HSIP (Construction) TEC = 7.70 out of 18. (C)
STP Subtotal				\$ 5,237,468	\$ 4,189,974	\$ 1,047,494	◀ 80%Federal + 20%Non-Federal
HSIP - Highway Safety Improvement Program							
606159	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	4	HSIP	\$ 492,173	\$ 442,956	\$ 49,217	Total Project Cost = \$1,612,800 after 4%inflation rate applied to 2015 cost. FY 2016 STP + FY 2016 HSIP (Construction) TEC = 7.70 out of 18. (C)
HSIP Subtotal				\$ 492,173	\$ 442,956	\$ 49,217	◀ Funding Split Varies by Project Specifications
CMAQ - Congestion Mitigation and Air Quality Improvement Program							
606161	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)	4	CMAQ	\$ 1,661,084	\$ 1,328,867	\$ 332,217	Total Project Cost = \$3,026,676 after 4%inflation rate applied to 2015 cost. FY 2016 STP + FY 2016 CMAQ (Construction) TEC = 9.32 out of 18. (C)
CMAQ Subtotal				\$ 1,661,084	\$ 1,328,867	\$ 332,217	◀ 80%Federal + 20%Non-Federal
TAP - Transportation Alternatives Program							
		4	TAP		\$ -	\$ -	
TAP Subtotal				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
Section 1A / Fiscal Constraint Analysis							
Total Federal Aid Target Funds Programmed				\$ 7,390,725	\$ 7,726,747	◀ Total Target	\$ 336,022 Target Funds Available
Total STP Programmed				\$ 5,237,468	\$ 5,268,067	◀ Max. STP	\$ 30,599 STP Available
Total HSIP Programmed				\$ 492,173	\$ 492,173	◀ Min. HSIP	\$ - HSIP Minimum Met
Total CMAQ Programmed				\$ 1,661,084	\$ 1,661,084	◀ Min. CMAQ	\$ - CMAQ Minimum Met
Total TAP Programmed				\$ -	\$ 305,423	◀ Min. TAP	\$ 305,423 TAP Minimum Not Met

*Inflation has been accounted for by using Year of Expenditure Costs

2016* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID	MassDOT Project Description	MassDOT District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
►Section 1B / Federal Aid Bridge Projects							
	No Projects Programmed			\$ -	\$ -	\$ -	
BR Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
►Section 1C / Federal Aid Non-Target Projects							
►Earmarks							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
Earmarks Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Earmark
►Other							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
Other Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
►Section 1D / Federal Aid Major & State Category Projects							
►IM - Interstate Maintenance							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
IM Subtotal ►				\$ -	\$ -	\$ -	◀ 90%Federal + 10%Non-Federal
►NHS - National Highway System							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
NHS Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
►Other							
	No Projects Programmed			\$ -	\$ -	\$ -	
Other Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
►Regional Major Infrastructure							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	Statewide CMAQ - AC	\$ 4,832,356	\$ 3,865,885	\$ 966,471	AC YR 4 of 4. Total Project Cost = \$77,236,601= FY 2013, 2014, & 2015 Regional Major Infrastructure (CMAQ) & Statewide TE + FY 2016 Regional Major Infrastructure (CMAQ) + FY 2013 HPP # 2434 (2005) + 2013 IM (2010 Discretionary)+ FY 2013 STP & HSIP + FY 2014 CMAQ & HSIP + FY 2015 HSIP + FY 2016 STP (Construction) TEC = 9.63 out of 18. (C)
Regional Major Infrastructure Subtotal ►				\$ 4,832,356	\$ 3,865,885	\$ 966,471	◀ Funding Split Varies by Funding Source

*Inflation has been accounted for by using Year of Expenditure Costs

2016* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Section 2 A / Non-Federal Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
► Section 2 B / Non-Federal Bridge Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Bridge Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
TIP Section 1: TIP Section 2: Total of All							
2016 Merrimack Valley MPO TIP Summary				▼	▼	▼	▼
Total ►				\$ 12,223,081	\$ -	\$ 12,223,081	◀ Total Spending in Region
Federal Funds ►				\$ 9,827,682		\$ 9,827,682	◀ Total Federal Spending in Region
Non-Federal Funds ►				\$ 2,395,399	\$ -	\$ 2,395,399	◀ Total Non-Federal Spending in Region

701CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: <http://www.massdot.state.ma.us/Highway/flaggers/main.aspx>

*Inflation has been accounted for by using Year of Expenditure Costs

2016 Merrimack Valley TIP GHG Tracking

MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	GHG Analysis Type	GHG Impact by the Numbers	GHG Impact Description	Additional Description
▶ Section 1A / Federal Aid Target Projects							
▶ STP - Surface Transportation Program							
605114	GROVELAND- REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)	STP-AC	\$ 2,485,203	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	
606161	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)	STP	\$ 1,365,592	Quantified		Quantified Decrease in Emissions (See Emissions Analysis Appendix)	Quantity of Emissions Reduction shown below in CMAQ funding section
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	STP-AC	\$ 266,046	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
606159	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	STP	\$ 1,120,627	Qualitative	0	Assumed Nominal Decrease in Emissions from Other Improvements	
					Quantified Impact ▶	0	
▶ HSIP - Highway Safety Improvement Program							
606159	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	HSIP	\$ 492,173	Qualitative	0	Assumed Nominal Decrease in Emissions from Other Improvements	
					Quantified Impact ▶	0	
▶ CMAQ - Congestion Mitigation and Air Quality Improvement Program							
606161	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)	CMAQ	\$ 1,661,084	Quantified	-6,421	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	6,421 = Emission Reduction in CO ₂ kg per year
					Quantified Impact ▶	-6,421	
▶ TAP - Transportation Alternatives Program							
0		0 TAP	\$ -				
					Quantified Impact ▶	0	

*Inflation has been accounted for by using Year of Expenditure Costs

2016 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
▶ Section 1B / Federal Aid Bridge Projects							
0	No Projects Programmed	0	\$ -		0	N/A	
					Quantified Impact ▶	0	
▶ Section 1C / Federal Aid Non-Target Projects							
▶ Earmarks							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Section 1D / Federal Aid Major & State Category Projects							
▶ IM - Interstate Maintenance							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ NHS - National Highway System							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY , INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	Statewide CMAQ - AC	\$ 4,832,356	Quantified	Quantity included in Statewide Model = -2,376,169	RTP Project	Quantity of Emissions Reduction included in Statewide Model for RTPs = -2,376,169 kg/year.
					Quantified Impact ▶	0	

*Inflation has been accounted for by using Year of Expenditure Costs

2016 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
► Section 2A / Non-Federal Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
► Section 2B / Non-Federal Bridge Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
2016 Merrimack Valley TIP GHG Tracking Summary					Total Quantified Impact ▼		
					Quantified Impact ►	-6,421	6,421 = Emission Reduction in CO ₂ kg per year

*Inflation has been accounted for by using Year of Expenditure Costs

2017* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 1A / Federal Aid Target Projects							
►STP - Surface Transportation Program							
STP Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
►HSIP - Highway Safety Improvement Program							
HSIP Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Project Specifications
►CMAQ - Congestion Mitigation and Air Quality Improvement Program							
605020	SALISBURY - MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL)	4	CMAQ	\$ 3,464,576	\$ 2,771,661	\$ 692,915	Total Project Cost for regionwide Border to Boston = \$26,270,248. This project is for the Salisbury section only. Construction TEC = 5.05 (C)
607542	GEORGETOWN- NEWBURY - BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	4	CMAQ	\$ 3,464,575	\$ 2,771,660	\$ 692,915	Total Project Cost for regionwide Border to Boston = \$26,270,248. This project is for the Georgetown Square north to Byfield section only. Construction TEC = 4.72 (C)
CMAQ Subtotal ►				\$ 6,929,151	\$ 5,543,321	\$ 1,385,830	◀ 80%Federal + 20%Non-Federal
►TAP - Transportation Alternatives Program							
605020	SALISBURY - MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL)	4	TAP	\$ 205,423	\$ 164,338	\$ 41,085	Total Project Cost for regionwide Border to Boston = \$26,270,248. This project is for the Salisbury section only. Construction TEC = 5.05 (C)
607542	GEORGETOWN- NEWBURY - BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	4	TAP	\$ 100,000	\$ 80,000	\$ 20,000	Total Project Cost for regionwide Border to Boston = \$26,270,248. This project is for the Georgetown Square north to Byfield section only. Construction TEC = 4.72 (C)
TAP Subtotal ►				\$ 305,423	\$ 244,338	\$ 61,085	◀ 80%Federal + 20%Non-Federal
►Section 1A / Fiscal Constraint Analysis							
Total Federal Aid Target Funds Programmed ►				\$ 7,234,574	\$ 7,726,747	◀ Total Target	\$ 492,173 Target Funds Available
Total STP Programmed ►				\$ -	\$ 5,268,067	◀ Max. STP	\$ 5,268,067 STP Available
Total HSIP Programmed ►				\$ -	\$ 492,173	◀ Min. HSIP	\$ 492,173 HSIP Minimum Not Met
Total CMAQ Programmed ►				\$ 6,929,151	\$ 1,661,084	◀ Min. CMAQ	\$ (5,268,067) CMAQ Minimum Met
Total TAP Programmed ►				\$ 305,423	\$ 305,423	◀ Min. TAP	\$ - TAP Minimum Met

*Inflation has been accounted for by using Year of Expenditure Costs

2017* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
► Section 1B / Federal Aid Bridge Projects							
	No Projects Programmed			\$ -	\$ -	\$ -	
BR Subtotal ►				\$ -	\$ -	\$ -	◀ 80%Federal + 20%Non-Federal
► Section 1C / Federal Aid Non-Target Projects							
► Earmarks							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
Earmarks Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Earmark
► Other							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
Other Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 1D / Federal Aid Major & State Category Projects							
► IM - Interstate Maintenance							
	No Projects Programmed			\$ -	\$ -	\$ -	
	No Projects Programmed			\$ -	\$ -	\$ -	
IM Subtotal ►				\$ -	\$ -	\$ -	◀ 90%Federal + 10%Non-Federal
► NHS - National Highway System							
607476	METHUEN-RESURFACING AND RELATED WORK ON ROUTE 213	4	NHS	\$ 6,498,228	5,198,582	1,299,646	(M)
				\$ -	-	-	
NHS Subtotal ►				\$ 6,498,228	\$ 5,198,582	\$ 1,299,646	◀ 80%Federal + 20%Non-Federal
► Other							
	No Projects Programmed			\$ -	\$ -	\$ -	
Other Subtotal ►				\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

*Inflation has been accounted for by using Year of Expenditure Costs

2017* Merrimack Valley MPO Transportation Improvement Program as Amended through June 2014

5/22/2014 Draft Released

06/25/2014 Endorsed

MassDOT Project ID ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼
►Section 2 A / Non-Federal Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
►Section 2 B / Non-Federal Bridge Projects							
	No Projects Programmed			\$ -		\$ -	
	No Projects Programmed			\$ -		\$ -	
Non-Federal Bridge Projects Subtotal ►				\$ -		\$ -	◀100%Non-Federal
2017 Merrimack Valley MPO TIP Summary				TIP Section 1: ▼	TIP Section 2: ▼	Total of All Projects ▼	
Total ►				\$ 13,732,802	\$ -	\$ 13,732,802	◀ Total Spending in Region
Federal Funds ►				\$ 10,986,242		\$ 10,986,242	◀ Total Federal Spending in Region
Non-Federal Funds ►				\$ 2,746,560	\$ -	\$ 2,746,560	◀ Total Non-Federal Spending in Region
<p>701CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects / 701CMR 7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701CMR 7.00 is applicable to its project and design and construction will be fully compliant with this Regulation. This information, and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: http://www.massdot.state.ma.us/Highway/flaggers/main.aspx</p>							

2017 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
▶Section 1A / Federal Aid Target Projects							
▶STP - Surface Transportation Program							
0		0	\$ -				
				Quantified Impact ▶	0		
▶HSIP - Highway Safety Improvement Program							
				Quantified Impact ▶	0		
▶CMAQ - Congestion Mitigation and Air Quality Improvement Program							
605020	SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL)	CMAQ	\$ 3,464,576	Quantified	-6,837	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	6,837 = Emission Reduction in CO ₂ kg per year
607542	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	CMAQ	\$ 3,464,575	Quantified	-17,460	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	17,460 = Emission Reduction in CO ₂ kg per year
				Quantified Impact ▶	-24,297		
▶TAP - Transportation Alternatives Program							
605020	SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL)	TAP	\$ 205,423	Quantified	-6,837	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	6,837 = Emission Reduction in CO ₂ kg per year
607542	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	TAP	\$ 100,000	Quantified	-17,460	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	17,460 = Emission Reduction in CO ₂ kg per year
				Quantified Impact ▶	-24,297		

*Inflation has been accounted for by using Year of Expenditure Costs

2017 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
▶ Section 1B / Federal Aid Bridge Projects							
0	No Projects Programmed	0	\$ -		0	N/A	
					Quantified Impact ▶	0	
▶ Section 1C / Federal Aid Non-Target Projects							
▶ Earmarks							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Section 1D / Federal Aid Major & State Category Projects							
▶ IM - Interstate Maintenance							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ NHS - National Highway System							
	METHUEN-RESURFACING AND RELATED WORK ON ROUTE 213	NHS	\$ 6,498,228	Qualitative	0	No Assumed Impact/Negligible Impact on Emissions	Construction (M)
		0	\$ -	Qualitative	0	N/A	
					Quantified Impact ▶	0	
▶ Other							
					Quantified Impact ▶	0	

2017 Merrimack Valley TIP GHG Tracking

MassDOT Project ID ▼	MassDOT Project Description ▼	Funding Source ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG Impact by the Numbers ▼	GHG Impact Description ▼	Additional Description ▼
► Section 2A / Non-Federal Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
► Section 2B / Non-Federal Bridge Projects							
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
	No Projects Programmed	0	\$ -	Qualitative	0	N/A	
					Quantified Impact ►	0	
2016 Merrimack Valley TIP GHG Tracking Summary					Total Quantified Impact ▼		
					Quantified Impact ►	-24,297	6,421 = Emission Reduction in CO ₂ kg per year

**2014 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2015 (O)	Carryover, FY 2014 Funds Used	\$ 2,230,655	\$ -	\$ -	\$ -	\$ 557,665	\$ -	\$2,788,320
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2015 (O)	Carryover Used	\$ 1,068,140	\$ -	\$ -	\$ -	\$ 267,035	\$ -	\$1,335,175
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2015 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2015 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Purchase-Replacement 3 Model Year 2000 Commuter Buses Delivery FY 2014 (M)	Carryover Used	\$ 1,320,000	\$ 330,000	\$ -	\$ -	\$ -	\$ -	\$1,650,000
	MVRTA	FTA Operating Assistance for FY 2014 (O)		\$ 1,003,235				\$ 1,003,235		\$2,006,470
5307 Subtotal ►				\$ 5,702,030	\$ 330,000	\$ -	\$ -	\$ 1,827,935	\$ 20,000	\$7,879,965

**2014 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total▶				\$ 5,702,030	\$ 330,000	\$ -	\$ -	\$ 1,827,935	\$ 20,000	\$7,879,965
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 14 / 5307		\$ 5,300,000	\$ 5,300,000	Available	RTACAP	\$ 330,000	\$ 330,000	\$ -	Available	
Carryover/53	\$ 5,702,030	\$ 8,999,890	\$ 3,297,860	Available	MAP	\$ -	\$ -	\$ -		
Total 5307	\$ 5,702,030	\$ 14,299,890	\$ 8,597,860	Available	SCA	\$ 1,827,935	\$ 1,827,935	\$ -		
					TDC	\$ -	\$ -	\$ -		

**2015 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2016 (O)	2014 Carryover	\$ 2,342,185	\$ -	\$ -	\$ -	\$ 585,545	\$ -	\$ 2,927,730
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2016 (O)	2013, 2014 Carryover	\$ 1,100,185	\$ -	\$ -	\$ -	\$ 275,045	\$ -	\$ 1,375,230
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2016 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2016 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Purchase - Replacement: Vans 12 Model Year 2010 Delivery FY 2015 (M)	2012, 2013, 2014 Carryover Used	\$ 672,000	\$ 168,000					\$ 840,000
	MVRTA	Rehab/Renovation: Refurbish Engine/transmission 9 Model year 2009 Buses (M)	2013 Carryover Used	\$ 256,400	\$ 64,100					\$ 320,500
	5307 Subtotal ►				\$ 4,450,770	\$ 232,100	\$ -	\$ -	\$ 860,590	\$ 20,000

**2015 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Transit Authority ▼	Project Description ▼	Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total ▶				\$ 4,450,770	\$ 232,100	\$ -	\$ -	\$ 860,590	\$ 20,000	\$ 5,563,460
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 15 / 5307	\$ -	\$ 5,300,000	\$ 5,300,000	Available	RTACAP	\$ 232,100	\$ 232,100	\$ -	Available	
Carryover/5307	\$ 4,450,770	\$ 8,597,860	\$ 4,147,090	Available	MAP	\$ -	\$ -	\$ -	Available	
Total 5307	\$ 4,450,770	\$ 13,897,860	\$ 9,447,090	Available	SCA	\$ 860,590	\$ 860,590	\$ -	Available	
					TDC	\$ -	\$ -	\$ -	Available	

**2016 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ▶	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2017 (O)	2015 Carryover	\$ 2,459,295	\$ -	\$ -		\$ 614,825	\$ -	\$ 3,074,120
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2017 (O)	2015 Carryover	\$ 1,133,190	\$ -	\$ -	\$ -	\$ 283,295	\$ -	\$ 1,416,485
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2017 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2017 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Rehab/Renovation: Buckley Transportation Center Lawrence (M)	2015 Carryover	\$ 412,000	\$ 103,000	\$ -	\$ -	\$ -	\$ -	\$ 515,000
	MVRTA	Replace 5 of 17 Model Year 2004 Transit buses with new buses (delivery FY 2016) (M)	2014 Carryover	\$ 1,680,000	\$ 420,000	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
	MVRTA	Purchase-Replacement: Buses 8 of 17 Model Year 2004 Delivery FY 2016 (M)	2015 Carryover	\$ 2,688,000	\$ 672,000	\$ -	\$ -	\$ -	\$ -	\$ 3,360,000
	MVRTA	Replace 5 of 17 Model year 2004 Transit Buses with new (Delivery 2016) (M)	2014, 2015 Carryover	\$ 1,680,000	\$ 420,000	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
5307 Subtotal ▶				\$10,132,485	\$1,615,000	\$ -	\$ -	\$ 898,120	\$ 20,000	\$ 12,665,605

**2016 Merrimack Valley MPO
Transportation Improvement Program**

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total ▶				\$10,132,485	\$1,615,000	\$ -	\$ -	\$ 898,120	\$ 20,000	\$ 12,665,605

Fiscal Constraint Analysis									
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 16 / 5307	\$ 685,395	\$ 5,300,000	\$ 4,614,605	Available	RTACAP	\$ 1,615,000	\$1,615,000	\$ -	Available
Carryover/5307	\$ 9,447,090	\$ 9,447,090	\$ -	Available	MAP	\$ -		\$ -	Available
Total 5307	\$ 10,132,485	\$ 14,747,090	\$ 4,614,605	Available	SCA	\$ 898,120	\$ 898,120	\$ -	Available
					TDC	\$ -		\$ -	Available

2017 Merrimack Valley MPO

Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ▶	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2018 (O)	2016 Carryover	\$ 2,582,260	\$ -	\$ -	\$ -	\$ 645,565	\$ -	\$3,227,825
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2018 (O)	2016 Carryover	\$ 1,179,510	\$ -	\$ -	\$ -	\$ 294,875	\$ -	\$1,474,385
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2018 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2018 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Rehab/Renovation: Refurbish Engine/ Transmissions on 8 Model Year 2011 Buses (M)	2016 Carryover	\$ 240,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
5307 Subtotal ▶				\$ 4,081,770	\$ 60,000	\$ -	\$ -	\$ 940,440	\$ 20,000	\$5,102,210

2017 Merrimack Valley MPO
Transportation Improvement Program

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				Local Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total ▶				\$ 4,081,770	\$ 60,000	\$ -	\$ -	\$ 940,440	\$ 20,000	\$ 5,102,210
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 17 / 5307		\$ 5,300,000	\$ 5,300,000	Available	RTACAP	\$ 60,000	\$ 60,000	\$ -	Available	
Carryover/5307	\$ 4,081,770	\$ 4,614,605	\$ 532,835	Available	MAP	\$ -		\$ -	Available	
Total 5307	\$ 4,081,770	\$ 9,914,605	\$ 5,832,835	Available	SCA	\$ 940,440	\$ 940,440	\$ -	Available	
					TDC	\$ -		\$ -	Available	

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PART C. FEDERAL REQUIREMENTS



PART C TIP – FEDERAL REQUIREMENTS
Merrimack Valley Metropolitan Planning Organization Endorsement of the
May 2014 Amendment to the FFY 2014-2017 Transportation Improvement Program

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 May 2014 Amendment to the FFY 2014-2017 TIP to reprogram the Powwow Riverwalk project into FFY 2015 and to reprogram FFY 2015 and FFY 2016 target funding for the Methuen Rotary project into FFY 2014 is financially constrained and that the implementation of the Merrimack Valley Metropolitan Planning Organization 2012 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 May 2014 Amendments to the FFY 2014-2017 Transportation Improvement Program.

Signatory Certification:

 Richard A. Davey
 Secretary/CEO Mass DOT

 Joseph Costanzo, Administrator
 MVRTA Advisory Board

 James Fiorentini
 Mayor of Haverhill

 Francis DePaola
 MassDOT Highway
 Division Administrator

 Curt Bellavance
 Town of North Andover

 Daniel Rivera
 Mayor of Lawrence

 Stuart Egenberg
 Town of Georgetown

 Ken Gray
 Mayor of Amesbury

 Robert Snow
 Town of Rowley

 Dennis DiZoglio
 MVPC Director

Date: June 25, 2014



Merrimack Valley
 Planning Commission
*plan * develop * promote*

PART C. 2.
Merrimack Valley Metropolitan Planning Organization
Self Certification Compliance Statement

Concurrent with the submittal of the proposed TIP to the FHWA and the FTA, the MPO Policy Board shall certify that the metropolitan transportation planning process is being carried out in accordance with all applicable requirements including:

1. 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;
2. In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;
3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
5. Section 1101 (b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
6. 23 CFR 230, regarding the implementation of an Equal Employment Opportunity Program on Federal and Federal-aid Highway construction contracts;
7. The provisions of the American with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
9. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities;
11. Anti-lobbying restrictions found in 49 USC Part 20. No appropriated funds may be expended by a recipient to influence or attempt to influence an officer or employee of any agency, a Member of Congress, in connection with the awarding of any Federal contract.

Signatory Certification:

 Richard A. Davey
 Secretary/CEO Mass DOT

 Charles Boddy, Chairman
 MVRTA Advisory Board

 James Fiorentini
 Mayor of Haverhill

 Richard Byers
 MVPC Chairman

 Francis DePaola,
 MassDOT Highway
 Division Administrator

 Curt Bellavance
 Town of North Andover

 William Lantigua
 Mayor of Lawrence

 Stephen Smith
 Town of Georgetown

 Thatcher W. Kezer III
 Mayor of Amesbury

 Robert Snow
 Town of Rowley

Date: June 27, 2013

PART C.3. FINANCIAL SUMMARY - TARGETS

HIGHWAY PROJECTS FINANCIAL PLAN

Funding levels for Fiscal Years 2014-2017 have been developed cooperatively between the State and the MPOs as part of the TIP development process. The following four tables depict the resulting financial plan for each of the four fiscal years. The expected Title 23 Apportionment is listed first followed by the projected needs of the State. A formula developed by the Regional Planning Agencies (RPAs) and approved by MassDOT is applied to the “Statewide Infrastructure Program Plus State Match” to come up with target budgets for each MPO. Inflation increases project costs and therefore these costs have been increased 4% per year.

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2014
FEDERAL REGIONAL TARGETS
April 8, 2013**

	Obligation Authority	Obl. Auth. Matching State Funds	Total Funding Based on Obl. Auth.
Base Obligation Authority	\$550,000,000		
Redistribution, as Estimated by FHWA	\$50,000,000		
Total Estimated Obligation Authority Available:	\$600,000,000		
Central Artery/Tunnel Obligation Authority	(122,840,000)		
Final CAT/GANS			
Total Non-Earmarked Available Statewide - (Including State Match) Statewide Infrastructure Items:	477,160,000	110,747,165	587,907,165
Statewide Infrastructure Program (STP, NHPP)	\$10,000,000	\$2,500,000	\$12,500,000
Statewide HSIP Program	\$13,600,000	\$1,511,111	\$15,111,111
Statewide Safe Routes to Schools Program	\$5,200,000	\$367,304	\$5,567,304
Statewide CMAQ	\$19,300,000	\$4,825,000	\$24,125,000
Statewide Transportation Enhancements	\$10,000,000	\$2,500,000	\$12,500,000
Statewide Recreational Trails	\$800,000	\$200,000	\$1,000,000
Statewide ITS (CMAQ and STP)	\$12,560,000	\$3,140,000	\$15,700,000
Statewide Design and Right of Way	\$0	\$0	\$0
Statewide Interstate Maintenance Program (NHPP)	\$46,818,000	\$5,202,000	\$52,020,000
Statewide NHS Preservation Program (NHPP)	\$34,000,000	\$8,500,000	\$42,500,000
Statewide RR Grade Crossings (STP)	\$8,000,000	\$2,000,000	\$10,000,000
Statewide Transit (CMAQ)	\$0	\$0	\$0
Statewide Stormwater Retrofits	\$1,200,000	\$300,000	\$1,500,000
Statewide ADA Implementation Plan	\$0	\$0	\$0
Subtotal Statewide Infrastructure Items:	\$161,478,000	\$33,545,415	\$205,023,415
Other Statewide Items:			
Award Adjustments, Change Orders, Project Value Changes, Etc.	\$31,282,000	\$7,820,500	\$39,102,500
Planning	\$24,800,000	\$6,200,000	\$31,000,000
DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs	\$800,000	\$200,000	\$1,000,000
Subtotal Other Statewide Items:	\$56,882,000	\$14,220,500	\$71,102,500
Regional Major Infrastructure Projects:	\$18,066,667	\$4,516,667	\$22,583,334
Bridge Program:			
Statewide Bridge Maintenance Program (NHPP)	\$8,000,000	\$2,000,000	\$10,000,000
Statewide Bridge Repl. / Rehab Program (NHPP + STP OFF-System Bridge)	\$79,340,000	\$19,835,000	\$99,175,000
Statewide Bridge Inspection Program	\$5,000,000	\$1,250,000	\$6,250,000
Subtotal Federal Aid Bridge Program:	\$92,340,000	\$23,085,000	\$115,425,000
Total Regional Targets:			
Minimum Regional CMAQ Component:	\$38,000,000	\$9,500,000	\$47,500,000
Minimum Regional HSIP Component:	\$12,375,000	\$1,375,000	\$13,750,000
Regional TAP Component:	\$3,985,003	\$996,251	4,981,254
Maximum Regional Non-CMAQ / HSIP / TAP Component:	<u>\$94,033,330</u>	<u>\$23,508,333</u>	<u>\$117,541,663</u>
Total Regional Target	\$148,393,333	\$35,379,583	\$183,772,916

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2014 (CONT.)
FEDERAL REGIONAL TARGETS
April 8, 2013**

Region	Regional Share (%)	Regional Minimum HSIP Component	Regional Minimum CMAQ Component	Regional TAP Component	Total Regional Target With State Match	NonCMAQ/HSIP/TAP with State Match
		With State Match	With State Match	With State Match		
Berkshire Region	3.5596	\$489,451	\$1,690,831	\$0	\$6,541,662	\$4,361,380
Boston Region	42.9671	\$5,907,977	\$20,409,374	\$2,548,719	\$78,961,899	\$50,095,829
Cape Cod	4.5851	\$630,457	\$2,177,942	\$178,764	\$8,426,248	\$5,439,085
Central Mass	8.6901	\$1,194,893	\$4,127,812	\$426,039	\$15,970,107	\$10,221,363
Franklin Region	2.5397	\$349,215	\$1,206,379	\$0	\$4,667,365	\$3,111,771
Martha's Vineyard	0.3100	\$42,621	\$147,235	\$0	\$569,639	\$379,783
Merrimack Valley	4.4296	\$609,064	\$2,104,040	\$305,423	\$8,140,326	\$5,121,799
Montachusett	4.4596	\$613,189	\$2,118,288	\$74,990	\$8,195,452	\$5,388,986
Nantucket	0.2200	\$30,247	\$104,490	\$0	\$404,260	\$269,523
Northern Middlesex	3.9096	\$537,571	\$1,857,064	\$245,303	\$7,184,802	\$4,544,863
Old Colony	4.5595	\$626,937	\$2,165,783	\$300,009	\$8,379,207	\$5,286,477
Pioneer Valley	10.8099	\$1,486,364	\$5,134,712	\$473,939	\$19,865,703	\$12,770,689
Southeastern Mass	8.9601	\$1,232,014	\$4,256,049	\$428,067	\$16,466,244	\$10,550,114
Total:	100.00	\$13,750,000	\$47,500,000	\$4,981,254	\$183,772,916	\$117,541,663

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2015
FEDERAL REGIONAL TARGETS
April 8, 2013**

Base Obligation Authority	\$550,000,000		
Redistribution, as Estimated by FHWA	\$50,000,000		
Total Estimated Obligation Authority Available:	\$600,000,000		First ABP Gans
ABP GANS Repayment	(150,000,000)		
Total Non-Earmarked Available Statewide - (Including State Match) Statewide Infrastructure Items:	450,000,000	101,460,903	551,460,903
Statewide Infrastructure Program	\$0	\$0	\$0
Statewide HSIP Program	\$16,800,000	\$1,866,667	\$18,666,667
Statewide Safe Routes to Schools Program	\$5,200,000	\$1,300,000	\$6,500,000
Statewide CMAQ	\$10,200,000	\$2,550,000	\$12,750,000
Statewide Transportation Enhancements	\$10,000,000	\$2,500,000	\$12,500,000
Statewide Recreational Trails	\$800,000	\$200,000	\$1,000,000
Statewide ITS	\$10,240,000	\$2,560,000	\$12,800,000
Statewide Design and Right of Way	\$0	\$0	\$0
Statewide Interstate Maintenance Program	\$52,681,500	\$5,853,500	\$58,535,000
Statewide NHS Preservation Program	\$14,008,000	\$3,502,000	\$17,510,000
Statewide RR Grade Crossings	\$800,000	\$200,000	\$1,000,000
Statewide Transit	\$0	\$0	\$0
Statewide Stormwater retrofits	\$4,800,000	\$1,200,000	\$6,000,000
Statewide ADA Implementation Plan	\$3,200,000	\$800,000	\$4,000,000
Subtotal Statewide Infrastructure Items:	\$128,729,500	\$22,532,167	\$151,261,667
Other Statewide Items:			
Award Adjustments, Change Orders, Project Value Changes, Etc.	\$29,230,500	\$7,307,625	\$36,538,125
Planning	\$24,800,000	\$6,200,000	\$31,000,000
DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs	\$800,000	\$200,000	\$1,000,000
Subtotal Other Statewide Items:	\$54,830,500	\$13,707,625	\$68,538,125
Regional Major Infrastructure Projects:	\$18,066,667	\$4,516,667	\$22,583,334
Bridge Program:			
Statewide Bridge Maintenance Program	\$8,000,000	\$2,000,000	\$10,000,000
Statewide Bridge Repl. / Rehab Program	\$107,800,000	\$26,950,000	\$134,750,000
Statewide Bridge Inspection Program	\$5,000,000	\$1,250,000	\$6,250,000
Subtotal Federal Aid Bridge Program:	\$120,800,000	\$30,200,000	\$151,000,000
Total Regional Targets:			
Minimum Regional CMAQ Component:	\$30,000,000	\$7,500,000	\$37,500,000
Minimum Regional HSIP Component:	\$10,000,000	\$1,111,111	\$11,111,111
Regional TAP Component:	\$3,985,003	\$996,251	\$4,981,254
Maximum Regional Non-CMAQ / HSIP Component:	\$83,588,330	\$20,897,083	\$104,485,413
Total Regional Target	\$127,573,333	\$30,504,444	\$158,077,777

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2015 (CONT.)
FEDERAL REGIONAL TARGETS
April 8, 2013**

Region	Regional Share (%)	Regional Minimum HSIP Component With State Match	Regional Minimum CMAQ Component With State Match	Regional TAP Component With State Match	Total Regional Target With State Match	Non CMAQ/ HSIP/TAP With State Match
Berkshire Region	3.5596	\$395,516	\$1,334,867	\$0	\$5,627,006	\$3,896,624
Boston Region	42.9671	\$4,774,123	\$16,112,664	\$2,548,719	\$67,921,442	\$44,485,937
Cape Cod	4.5851	\$509,460	\$1,719,428	\$178,764	\$7,248,089	\$4,840,437
Central Mass	8.6901	\$965,570	\$3,258,799	\$426,039	\$13,737,166	\$9,086,758
Franklin Region	2.5397	\$282,194	\$952,405	\$0	\$4,014,774	\$2,780,175
Martha's Vineyard	0.3100	\$34,441	\$116,238	\$0	\$489,992	\$339,313
Merrimack Valley	4.4296	\$492,173	\$1,661,084	\$305,423	\$7,002,145	\$4,543,465
Montachusett	4.4596	\$495,506	\$1,672,333	\$74,990	\$7,049,564	\$4,806,735
Nantucket	0.2200	\$24,442	\$82,492	\$0	\$347,736	\$240,803
Northern Middlesex	3.9096	\$434,401	\$1,466,103	\$245,303	\$6,180,223	\$4,034,415
Old Colony	4.5595	\$506,616	\$1,709,829	\$300,009	\$7,207,626	\$4,691,171
Pioneer Valley	10.8099	\$1,201,102	\$4,053,720	\$473,939	\$17,088,080	\$11,359,319
Southeastern Mass	8.9601	\$995,567	\$3,360,039	\$428,067	\$14,163,933	\$9,380,260
Total:	100.00	\$11,111,111	\$37,500,000	\$4,981,254	\$158,077,777	\$104,485,413

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2016
FEDERAL REGIONAL TARGETS
April 8, 2013**

	Obligation Authority	Obl. Auth. Matching State Funds	Total Funding Based On Obl. Auth.
Base Obligation Authority	\$550,000,000		
Redistribution, as Estimated by FHWA	\$50,000,000		
Total Estimated Obligation Authority Available:	\$600,000,000		
ABP GANS Repayment	(150,000,000)		
Total Non-Earmarked Available Statewide - (Including State Match) Statewide Infrastructure Items:	450,000,000	102,279,167	552,279,167
Statewide Infrastructure Program	\$0	\$0	\$0
Statewide HSIP Program	\$17,600,000	\$1,955,556	\$19,555,556
Statewide Safe Routes to Schools Program	\$5,180,000	\$1,295,000	\$6,475,000
Statewide CMAQ	\$30,000,000	\$7,500,000	\$37,500,000
Statewide Transportation Enhancements	\$10,000,000	\$2,500,000	\$12,500,000
Statewide Recreational Trails	\$800,000	\$200,000	\$1,000,000
Statewide ITS	\$10,480,000	\$2,620,000	\$13,100,000
Statewide Design and Right of Way	\$0	\$0	\$0
Statewide Interstate Maintenance Program	\$45,990,000	\$5,110,000	\$51,100,000
Statewide NHS Preservation Program	\$21,360,000	\$5,340,000	\$26,700,000
Statewide RR Grade Crossings	\$800,000	\$200,000	\$1,000,000
Statewide Transit	\$0	\$0	\$0
Statewide Stormwater retrofits	\$4,000,000	\$1,000,000	\$5,000,000
Statewide ADA Implementation Plan	\$3,200,000	\$800,000	\$4,000,000
Subtotal Statewide Infrastructure Items:	\$149,410,000	\$28,520,556	\$177,930,556
Other Statewide Items:			
Award Adjustments, Change Orders, Project Value Changes, Etc.	\$30,130,000	\$7,532,500	\$37,662,500
Planning	\$24,800,000	\$6,200,000	\$31,000,000
DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs	\$800,000	\$200,000	\$1,000,000
Subtotal Other Statewide Items:	\$55,730,000	\$13,932,500	\$69,662,500
Regional Major Infrastructure Projects:	\$25,600,000	\$6,400,000	\$32,000,000
Bridge Program:			
Statewide Bridge Maintenance Program	\$8,000,000	\$2,000,000	\$10,000,000
Statewide Bridge Repl. / Rehab Program	\$65,600,000	\$16,400,000	\$82,000,000
Statewide Bridge Inspection Program	\$5,000,000	\$1,250,000	\$6,250,000
Subtotal Federal Aid Bridge Program:	\$78,600,000	\$19,650,000	\$98,250,000
Total Regional Targets:			
Minimum Regional CMAQ Component:	\$30,000,000	\$7,500,000	\$37,500,000
Minimum Regional HSIP Component:	\$10,000,000	\$1,111,111	\$11,111,111
Regional TAP Component:	\$3,985,003	\$996,251	\$4,981,254
Maximum Regional Non-CMAQ / HSIP Component:	<u>\$96,674,997</u>	<u>\$24,168,749</u>	<u>\$120,843,746</u>
Total Regional Target	\$140,660,000	\$33,776,111	\$174,436,111

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2016 (CONT.)
FEDERAL REGIONAL TARGETS
April 8, 2013**

Region	Regional Share (%)	Regional Minimum HSIP Component	Regional Minimum CMAQ Component	Regional TAP Component	Total Regional Target With State Match	NonCMAQ/HSIP/TAP with State Match
		With State Match	With State Match	With State Match		
Berkshire Region	3.5596	\$395,516	\$1,334,867	\$0	\$6,209,305	\$4,478,922
Boston Region	42.9671	\$4,774,123	\$16,112,664	\$2,548,719	\$74,950,144	\$51,514,639
Cape Cod	4.5851	\$509,460	\$1,719,428	\$178,764	\$7,998,143	\$5,590,490
Central Mass	8.6901	\$965,570	\$3,258,799	\$426,039	\$15,158,727	\$10,508,318
Franklin Region	2.5397	\$282,194	\$952,405	\$0	\$4,430,234	\$3,195,635
Martha's Vineyard	0.3100	\$34,441	\$116,238	\$0	\$540,698	\$390,018
Merrimack Valley	4.4296	\$492,173	\$1,661,084	\$305,423	\$7,726,747	\$5,268,067
Montachusett	4.4596	\$495,506	\$1,672,333	\$74,990	\$7,779,073	\$5,536,244
Nantucket	0.2200	\$24,442	\$82,492	\$0	\$383,721	\$276,787
Northern Middlesex	3.9096	\$434,401	\$1,466,103	\$245,303	\$6,819,770	\$4,673,962
Old Colony	4.5595	\$506,616	\$1,709,829	\$300,009	\$7,953,491	\$5,437,037
Pioneer Valley	10.8099	\$1,201,102	\$4,053,720	\$473,939	\$18,856,402	\$13,127,642
Southeastern Mass	8.9601	\$995,567	\$3,360,039	\$428,067	\$15,629,657	\$10,845,984
Total:	100.00	\$11,111,111	\$37,500,000	\$4,981,254	\$174,436,111	\$120,843,746

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2017
FEDERAL REGIONAL TARGETS
April 8, 2013**

	Obligation Authority	Obl. Auth. Matching State Funds	Total Funding Based On Obl. Auth.
Base Obligation Authority	\$550,000,000		
Redistribution, as Estimated by FHWA	\$50,000,000		
Total Estimated Obligation Authority Available:	\$600,000,000		
ABP GANS Repayment	(150,000,000)		
Statewide Infrastructure Program	\$0	\$0	\$0
Statewide HSIP Program	\$17,500,000	\$1,944,444	\$19,444,444
Statewide Safe Routes to Schools Program	\$3,200,000	\$800,000	\$4,000,000
Statewide CMAQ	\$30,000,000	\$7,500,000	\$37,500,000
Statewide Transportation Enhancements	\$2,500,000	\$625,000	\$3,125,000
Statewide Recreational Trails	\$800,000	\$200,000	\$1,000,000
Statewide ITS	\$14,400,000	\$3,600,000	\$18,000,000
Statewide Design and Right of Way	\$0	\$0	\$0
Statewide Interstate Maintenance Program	\$47,718,000	\$5,302,000	\$53,020,000
Statewide NHS Preservation Program	\$19,932,000	\$4,983,000	\$24,915,000
Statewide RR Grade Crossings	\$4,000,000	\$1,000,000	\$5,000,000
Statewide Transit	\$0	\$0	\$0
Statewide Stormwater retrofits	\$4,000,000	\$1,000,000	\$5,000,000
Statewide ADA Implementation Plan	\$3,200,000	\$800,000	\$4,000,000
Subtotal Statewide Infrastructure Items:	\$147,250,000	\$27,754,444	\$175,004,444
Other Statewide Items:			
Award Adjustments, Change Orders, Project Value Changes, Etc.	\$29,930,000	\$7,482,500	\$37,412,500
Planning	\$24,800,000	\$6,200,000	\$31,000,000
DBEs, FAPO, Pavement Lab Retrofits, and Misc. Programs	\$800,000	\$200,000	\$1,000,000
Subtotal Other Statewide Items:	\$55,530,000	\$13,882,500	\$69,412,500
Regional Major Infrastructure Projects:	\$25,600,000	\$6,400,000	\$32,000,000
Bridge Program:			
Statewide Bridge Maintenance Program	\$8,000,000	\$2,000,000	\$10,000,000
Statewide Bridge Repl. / Rehab Program	\$67,960,000	\$16,990,000	\$84,950,000
Statewide Bridge Inspection Program	\$5,000,000	\$1,250,000	\$6,250,000
Subtotal Federal Aid Bridge Program:	\$80,960,000	\$20,240,000	\$101,200,000
Total Regional Targets:			
Minimum Regional CMAQ Component:	\$30,000,000	\$7,500,000	\$37,500,000
Minimum Regional HSIP Component:	\$10,000,000	\$1,111,111	\$11,111,111
Regional TAP Component:	\$3,985,003	\$996,251	\$4,981,254
Maximum Regional Non-CMAQ / HSIP Component:	<u>\$96,674,997</u>	<u>\$24,168,749</u>	<u>\$120,843,746</u>
Total Regional Target	\$140,660,000	\$33,776,111	\$174,436,111

**TITLE 23 – TRANSPORTATION FUNDING
FEDERAL FISCAL YEAR 2017 (CONT.)
FEDERAL REGIONAL TARGETS
April 8, 2013**

Region	Regional Share (%)	Regional Minimum HSIP Component With State Match	Regional Minimum CMAQ Component With State Match	Regional TAP Component With State Match	Total Regional Target With State Match	NonCMAQ/ HSIP/TAP with State Match
Berkshire Region	3.5596	\$395,516	\$1,334,867	\$0	\$6,209,305	\$4,478,922
Boston Region	42.9671	\$4,774,123	\$16,112,664	\$2,548,719	\$74,950,144	\$51,514,639
Cape Cod	4.5851	\$509,460	\$1,719,428	\$178,764	\$7,998,143	\$5,590,490
Central Mass	8.6901	\$965,570	\$3,258,799	\$426,039	\$15,158,727	\$10,508,318
Franklin Region	2.5397	\$282,194	\$952,405	\$0	\$4,430,234	\$3,195,635
Martha's Vineyard	0.3100	\$34,441	\$116,238	\$0	\$540,698	\$390,018
Merrimack Valley	4.4296	\$492,173	\$1,661,084	\$305,423	\$7,726,747	\$5,268,067
Montachusett	4.4596	\$495,506	\$1,672,333	\$74,990	\$7,779,073	\$5,536,244
Nantucket	0.2200	\$24,442	\$82,492	\$0	\$383,721	\$276,787
Northern Middlesex	3.9096	\$434,401	\$1,466,103	\$245,303	\$6,819,770	\$4,673,962
Old Colony	4.5595	\$506,616	\$1,709,829	\$300,009	\$7,953,491	\$5,437,037
Pioneer Valley	10.8099	\$1,201,102	\$4,053,720	\$473,939	\$18,856,402	\$13,127,642
Southeastern Mass	8.9601	\$995,567	\$3,360,039	\$428,067	\$15,629,657	\$10,845,984
Total:	100.00	\$11,111,111	\$37,500,000	\$4,981,254	\$174,436,111	\$120,843,746

The following table shows the total federal programmed amounts in this TIP for each of the four years covered in this document. The funding summaries below show the total Operating and Maintenance costs versus Capital and Other costs, for each year of the TIP. A fiscal constraint finding for the State Transportation Improvement Program will include the cost of operating and maintaining the existing MVMPO transportation system.

**Merrimack Valley Metropolitan Planning Organization
May 2014 Amendment to the FY 2014-2017 Transportation Improvement
Program**

**HIGHWAY PROGRAM FINANCIAL PLAN
(FHWA - related funding categories only)
Total Costs including Federal and State Match*
Figures include Federal Aid “target” program & statewide funding**

Fiscal Year	Federal Programmed Operating/ Maintenance Costs* (inc. Match)	Federal Programmed Capital and Other Costs* (inc. Match)	Total Federal + Match Programmed*	Total Federal + Match Estimated Available Funds*
2014	4.64	30.45	35.09	35.40
2015	25.10	41.75	66.85	67.00
2016	2.49	9.74	12.23	12.56
2017	6.50	7.23	13.73	14.22

* Millions of dollars

The financial plan contained herein is financially constrained and indicates that the Merrimack Valley Metropolitan Planning Organization's May 2014 Amendment to the 2014-2017 TIP reflects an emphasis on the maintenance and operation of the current roadway and bridge system with the ability to provide additional capital improvements. Only projects for which funds can be expected have been included.

Part B of this document includes a list of Non-federal-aid transportation projects in the region. The projects listed in Part B are an integral part of the planning, programming, and priority setting process of the MVMPO.

Following the Transit Projects Financial Plan, the eight tables in Part C.4. contain a breakdown of the project cost totals and federal aid cost portions by federal aid funding categories for each fiscal year and the expected available resources to cover the cost.

The tables on the following pages show actual MassDOT Highway Operating and Maintenance Expenditures for FFY 2011, 2012 and 2013.

Massachusetts Department of Transportation – Highway Division
Summary of Operating and Maintenance Expenditures
Merrimack Valley Region – Part 1: Non-Federal Aid

Section I – Non-Federal Aid Maintenance Projects – State Bondfunds
3/31/2013

Program Group/Sub Group	Estimated SFY 2011 NFA Expenditures	Estimated SFY 2012 NFA Expenditures	Estimated SFY 2013 NFA Expenditures
01- Bridge Repair & Replacement			
New Bridge (Excluded)	n/a	n/a	n/a
Bridge Replacement (Excluded)	n/a	n/a	n/a
Bridge Reconstruction/Rehab	\$0	\$0	\$0
Drawbridge Maintenance	\$173,111	\$107,257	\$146,819
Structure Maintenance	\$7,066,338	\$9,323,698	\$7,735,374
02 – Bridge Painting			
Painting - Structural	\$49,021	\$0	\$0
03 – Roadway Reconstruction			
Hwy Relocation (Excluded)	n/a	n/a	n/a
Hwy Recon. –Added Capacity (Excluded)	n/a	n/a	n/a
New Construction (Excluded)	n/a	n/a	n/a
Hwy Reconstr – Restr and Rehab	\$783	\$12,494	\$7,760
Hwy Reconstr – No Added Capacity	\$0	\$0	\$0
Hwy Reconstr – Minor Widening	\$0	\$0	\$0
Hwy Reconstr – Major Widening	\$0	\$0	\$0
04 – Roadway Resurfacing			
Resurfacing	\$489,317	\$519,177	\$1,038,354
05 – Intersection & Safety			
Impact Attenuators	\$13,322	\$16,848	\$10,057
Safety Improvements	\$0	\$0	\$17,323
Traffic Signals	\$32,336	\$31,101	\$21,145
06 – Signs & Lighting			
Lighting and Electrical	\$27,736	\$59,954	\$47,240
Sign Installation / Upgrading	\$48,444	\$47,967	\$32,137
Structural Signing	\$147	\$390	\$179
07 – Guardrail			
Guard Rail and Fencing	\$144,184	\$71,756	\$71,980

Massachusetts Highway Department
 Summary of Operating and Maintenance Expenditures
 Merrimack Valley Region – Part 1: Non-Federal Aid (Cont.)

Section I (Cont.) – Non-Federal Aid Maintenance Projects – State Bondfunds
 3/31/2013

Program Group/Sub Group	Estimated SFY 2011 NFA Expenditures	Estimated SFY 2012 NFA Expenditures	Estimated SFY 2013 NFA Expenditures
08 – Maintenance			
Catch Basin Cleaning	\$225,615	\$298,875	\$174,830
Crack Sealing	\$20,184	\$73,432	\$31,205
Landscape and Roadside Development	\$24,499	\$41,259	\$21,918
Mowing and Spraying	\$5,771	\$6,810	\$57,924
Pavement Marking	\$131,489	\$180,265	\$103,918
Sewer and Water	\$19,105	\$5,474	\$8,193
Process/Recycle/Trnsprt Soils	\$0	\$126	\$42
Contract Hwy maint.	\$212,406	\$318,254	\$176,887
09 – Facilities			
Chemical Storage Sheds	\$9,632	\$2,139	\$52,167
Vertical Construction		\$0	\$0
10 – Bikeways (Excluded)	n/a	n/a	n/a
11 – Other			
Miscellaneous / No Prequal	\$57,686	\$74,045	\$44,022
Asbestos Removal	\$0	\$0	\$0
Demolition	\$0	\$0	\$0
Drilling and Boring	\$4,804	\$682	\$1,829
Hazardous Waste Remediation	\$1,326	\$514	\$613
Utilities	\$0	\$0	\$0
Change in Project Value	\$0	\$0	\$0
Highway Sweeping	\$0	\$0	\$0
Intelligent Transportation Sys	\$0	\$0	\$0
Unknown	\$12,453	\$0	\$4,151
Underground Tank Removal Replace	\$0	\$0	\$0
Section I Total:	\$8,720,686	\$11,192,518	\$9,806,069

Section II – Non-Federal Aid Highway Operations - State Operating Budget Funding

12 – Snow and Ice Operations & Materials	\$4,727,440	\$1,945,047	\$3,254,264
13 – District Maintenance (Mowing, Litter Management, Sight Distance Clearing, Etc.)	\$786,416	\$674,499	\$752,748
Section II Total:	\$5,513,856	\$2,619,546	\$4,007,012
Grand Total NFA:	\$14,234,542	\$13,812,064	\$13,813,081

Massachusetts Department of Transportation – Highway Division
 Summary of Operating and Maintenance Expenditures
 Merrimack Valley Region – Part 2: Federal Aid

Section I – Federal Aid Maintenance Projects

3/31/2013

Program Group/Sub Group	SFY 2009 Federal-Aid Expenditures	SFY 2010 Federal-Aid Expenditures	SFY 2011 Federal-Aid Expenditures
01- Bridge Repair & Replacement			
New Bridge (Excluded)	n/a	n/a	n/a
Bridge Replacement (Excluded)	n/a	n/a	n/a
Bridge Reconstruction/Rehab	\$5,734,194	\$3,801,262	\$4,073,297
Structure Maintenance	\$2,384,033	\$3,104,518	\$1,829,517
02 – Bridge Painting			
Painting - Structural	\$1,001,919	\$743,714	\$581,878
03 – Roadway Reconstruction			
Hwy Relocation (Excluded)	n/a	n/a	n/a
Hwy Recon. – Added Capacity (Excluded)	n/a	n/a	n/a
New Construction (Excluded)	n/a	n/a	n/a
Hwy Reconstr – Restr and Rehab	\$0	\$378,732	\$393,193
Hwy Reconstr – No Added Capacity	\$51,911	\$0	\$17,304
Hwy Reconstr – Minor Widening	\$2,536,968	\$2,579,276	\$1,882,910
Hwy Reconstr – Major Widening	\$0	\$0	\$0
04 – Roadway Resurfacing			
Resurfacing	\$7,328,687	\$12,664,537	\$8,875,209
05 – Intersection & Safety			
Impact Attenuators	\$0	\$0	\$0
Safety Improvements	\$0	\$0	\$0
Traffic Signals	\$459,852	\$144,744	\$25,628
06 – Signs & Lighting			
Lighting and Electrical	\$0	\$0	\$0
Sign Installation / Upgrading	\$0	\$0	\$114,911
Structural Signing	\$0	\$0	\$0
07 – Guardrail			
Guard Rail and Fencing	\$272,285	\$0	\$118,646

Massachusetts Department of Transportation – Highway Division
 Summary of Operating and Maintenance Expenditures
Merrimack Valley Region – Part 2: Federal Aid (Cont.)

Section I – Federal Aid Maintenance Projects (Cont.)

3/31/2013

Program Group/Sub Group	SFY 2009 Federal-Aid Expenditures	SFY 2010 Federal-Aid Expenditures	SFY 2011 Federal-Aid Expenditures
08 – Maintenance			
Contract Highway Maintenance	\$2,646	\$211,434	\$71,360
Landscape and Roadside Development	\$0	\$0	\$0
Pavement Marking	\$0	\$13,473	\$4,491
Catch Basin Cleaning	\$0	\$0	\$0
09 – Facilities			
Vertical Construction	\$413	\$0	\$138
10 – Bikeways (Excluded)	n/a	n/a	n/a
11 – Other			
Intelligent Transportation Sys	\$278,388	\$28,368	\$102,252
Miscellaneous / No Prequal	\$2,089,085	\$0	\$702,689
Reclamation	\$0	\$755,588	\$251,863
Drilling & Boring	\$548	\$0	\$183
Unknown	\$15,066	\$0	\$5,022
Demolition	\$0	\$0	\$0
Utilities	\$0	\$0	\$0
Marine Construction	\$3,013	\$0	\$1,004
Section I Total:	\$21,724,784	\$24,280,902	\$19,082,658

Section II – Federal Aid Highway Operations

12 – Other			
ITS Operations – I-93 HOV Lane Operation and Towing	\$0	\$0	\$0
ITS Operations – Traffic Operations Center (South Boston)	\$0	\$0	\$0
Section II Total	\$0	\$0	\$0
Grand Total Federal Aid:	\$21,724,784	\$24,280,902	\$19,082,658

TRANSIT PROJECTS FINANCIAL PLAN

PLANNING JUSTIFICATION FOR TRANSIT PROJECTS

The Merrimack Valley region's FY 2014-2017 TIP federal aid transit projects are to be carried out using Section 5307 received by the MVRTA from the FTA. The Authority will design and oversee construction of the bus station relocation in Haverhill. With the exception of the provision of operating assistance, the planning justification for the Section 5307 projects are contained in the Merrimack Valley Regional Transit Authority's Five Year Capital Program for 2014-2018.

MVRTA FINANCIAL STATUS

The “Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users” (SAFETEA-LU) requires that projects appearing in the TIP must have an identified source of funding that will allow them to be completed within the time period contemplated. Transit projects appearing in the FY 2014-2017 TIP meet this criterion.

However, while the program of transit projects shown in this TIP is a fiscally constrained plan for the MPO, it does not meet all of the MVRTA’s capital funding needs as identified in the Authority's 2014-2018 Capital Program. A copy of this report can be found in Appendix E. Should additional state funding for transit capital spending become available, projects that appear in the MVRTA's FFY 2014 to FFY 2018 Capital Program can be added to the 2014-2017 MVMPO TIP program by amending the document.

Merrimack Valley Metropolitan Planning Organization FY 2014-2017 Transportation Improvement Program

TRANSIT PROGRAM FINANCIAL PLAN

(FTA related funding categories only)

Total Costs including Federal, State and Local*

Fiscal Year	Federal Programmed Operating/Maintenance Costs* (inc. Match)	Federal Programmed Capital and Other Costs* (inc. Match)	Total Federal + Match Programmed*	Total Federal + Match Estimated Available Funds*
2014	7.78	0.10	7.88	7.88
2015	5.46	0.10	5.56	5.56
2016	12.57	0.10	12.67	12.67
2017	5.00	0.10	5.10	5.10

* Millions of dollars

**Merrimack Valley MPO
Operations and Maintenance Summary Table
For the Merrimack Valley Regional Transit Authority
State Fiscal Year 2013**

The numbers below represent actual numbers for the previous year, the current year budget/forecast approved by the RTA Advisory Board, and Projections for the out-years. These numbers indicate that there are sufficient revenues projected to meet the operating needs of the area transit authority.

	Audit	Adopted Budget	Adopted Budget	Projected	Projected
Operating Revenue	Previous	Current	Yr Two	Yr Three	Yr Four
	2012	2013	2014	2015	2016
Farebox	1,608,522	1,598,470	1,744,570	1,742,645	1,784,505
Section 5307	2,879,115	3,124,395	3,028,430	3,387,280	3,497,410
Section 5311	-	-	-	-	-
CMAQ/TDM	-	-	-	-	-
Fully Funded*	-	-	-	-	-
Job Access/Reverse Commute	241,940	296,985	301,595	-	-
New Freedom	3,625	6,770	885	-	-
Advertising	70,007	25,000	26,000	26,000	26,000
Interest Income	5,936	5,000	10,000	10,000	10,000
Rental Income	-	-	-	-	-
State Contract Assistance**	5,519,034	5,519,034	5,684,605	6,880,050	7,052,050
Local Assessment	2,285,506	2,438,265	2,766,310	2,835,465	2,906,355
Other: (Define)	695,698	796,085	1,025,980	1,046,315	1,070,390
TOTAL	13,309,383	13,810,004	14,588,375	15,927,755	16,346,710
Operating Expenses	Previous	Current	Yr Two	Yr Three	Yr Four
	2012	2013	2014	2015	2016
TOTAL (See Description Below)	13,309,383	13,573,150	14,556,200	14,413,150	14,845,580

Footnotes:

* Fully funded refers to contract work often to Human Service Agencies

** Operating assistance provided by the State

*** Description of Operating Expenses: Salaries and Wages; Fringe Benefits: Legal, Accounting and Professional Services; Promotion/Marketing; Insurance; Equipment Leases and Rentals; Real Property Leases and Rentals; Non-capitalized Maintenance/Repair; Fuel costs; Tire costs; Office Supplies and Equipment; Interest Expense; Utilities; Management Fees; Travel and Training; and Other miscellaneous expense items.

PART C.4. SUMMARY OF FUNDING CATEGORIES

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY**

HIGHWAY PROJECTS

FEDERAL FISCAL YEAR 2014

Final May 2014 Amendment Prepared June 2014

HIGHWAY FFY 2014	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) From Region Target
Bridge Replacement and Rehab			
Congestion Mitigation/AQ	0	0	0
Congestion Mitigation/AQ-AC	2,066.23	2,582.79	2,582.79
Highway Safety (HSIP) - AC	548.16	609.06	609.06
Interstate Maintenance (IM)			
National Highway System			
Surface Transportation Program (STP)	3,714.44	4,643.05	4,643.05
Statewide CMAQ-AC	19,046.40	23,808.00	23,808.00
Statewide STP-TE	1,928.57	2,410.72	2,410.72
Statewide STP-TE-AC	366.67	458.33	458.33
TCSP	463.50	579.38	579.38
Transportation Alternatives Program (TAP)	0	0	305.42
Total FFY 2014	28,133.97	35,091.33	35,396.75

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
HIGHWAY PROJECTS
FEDERAL FISCAL YEAR 2015
Final May 2014 Amendment Prepared June 2014**

HIGHWAY FFY 2015	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) From Region Target
Bridge Replacement and Rehab	9,030.95	11,288.69	11,288.69
Congestion Mitigation/AQ	1,300.48	1,625.60	1,769.06
Congestion Mitigation/AQ to FTA	360.00	450.00	450.00
Highway Safety (HSIP) - AC	442.96	492.17	492.17
Interstate Maintenance (IM)	18,593.92	20,659.91	20,659.91
National Highway System			
Surface Transportation Program (STP)			
STP-AC (Advance Construction)	3,188.39	3,985.49	3,985.49
Statewide CMAQ-AC	19,046.40	23,808.00	23,808.00
Statewide TAP	524.16	655.20	655.20
Statewide STP-TE	2,496.00	3,120.00	3,120.00
Statewide STP-TE-AC	366.67	458.33	458.33
Transportation Alternatives Program (TAP)	244.34	305.42	305.42
Total FFY 2015	55,594.27	66,848.81	66,992.27

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
HIGHWAY PROJECTS
FEDERAL FISCAL YEAR 2016 and 2017
Final May 2014 Amendment Prepared June 2014**

HIGHWAY FFY 2016	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) From Region Target
Bridge Replacement and Rehab			
Congestion Mitigation/AQ	1,328.87	1,661.08	1,661.08
High Priority Projects			
Highway Safety (HSIP)	442.96	492.17	492.17
Interstate Maintenance (IM)			
National Highway System			
Surface Transportation Program	1,988.98	2,486.22	2,516.82
Surface Transportation Program - AC	2,201.00	2,751.25	2,751.25
Statewide CMAQ - AC	3,865.88	4,832.36	4,832.36
Statewide TAP			
Transportation Alternatives Program (TAP)			305.42
Total FFY 2016	9,827.69	12,223.08	12,559.10

HIGHWAY FFY 2017	Estimated Needs MVMPO (in 1000s) Federal Portion of Cost	Estimated Needs MVMPO (in 1000s) Total Project Cost	Available Resources MVMPO Projects (in 1000s) From Region Target
Bridge Replacement and Rehab			
High Priority Projects			
Interstate Maintenance (IM)			
National Highway System	5,198.58	6,498.23	6,498.23
Congestion Mitigation/AQ	5,543.32	6,929.15	6,929.15
Highway Safety (HSIP)			492.17
Surface Transportation Program			
Statewide TE			
Transportation Alternatives Program (TAP)	244.34	305.42	305.42
Total FFY 2017	10,986.24	13,732.80	14,224.97

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
2014 TRANSIT PROJECTS**

FTA FUNDING PROGRAM SUMMARIES (FEDERAL DOLLARS ONLY)

Merrimack Valley Regional Transit Authority			
FTA FUNDING PROGRAMS	ESTIMATED AUTHORIZATION FFY 2014	Regional TIP FFY 2014	BALANCE FFY 2014
Section 5307 Capital and Planning Formula	\$5,300,000	\$0	\$5,300,000
Section 5307 Transit Enhancements		\$0	\$0
subtotal	\$5,300,000	\$0	\$5,300,000
Section 5307 Capital and Planning Formula Carryover	\$8,999,890	\$5,702,030	\$3,297,860
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover	\$0	\$0	\$0
subtotal	\$8,999,890	\$5,702,030	\$3,297,860
<u>Section 5307 TOTAL</u>	\$14,299,890	\$5,702,030	\$8,597,860
Section 5309 Bus			
Section 5309 Fixed Guideway	\$0	\$0	\$0
<u>Section 5309 TOTAL</u>	\$0	\$0	\$0
Section 5310 Elderly and Disabled	\$0	\$0	\$0
Section 5310 Elderly and Disabled Carryover			
Federal Aid TOTAL	\$14,299,890	\$5,702,030	\$8,597,860
<u>OTHER TRANSIT FUNDING</u>			

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
2015 TRANSIT PROJECTS**

FTA FUNDING PROGRAM SUMMARIES (FEDERAL DOLLARS ONLY)

<i>Merrimack Valley Regional Transit Authority</i>			
FTA FUNDING PROGRAMS	ESTIMATED AUTHORIZATION FFY 2015	Regional TIP FFY 2015	BALANCE FFY 2015
Section 5307 Capital and Planning Formula	\$5,300,000	\$0	\$5,300,000
Section 5307 Transit Enhancements		\$0	\$0
subtotal	\$5,300,000	\$0	\$5,300,000
Section 5307 Capital and Planning Formula Carryove	\$8,597,860	\$4,450,770	\$4,147,090
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover	\$0	\$0	\$0
subtotal	\$8,597,860	\$4,450,770	\$4,147,090
<i>Section 5307 TOTAL</i>	\$13,897,860	\$4,450,770	\$9,447,090
Section 5309 Bus			
Section 5309 Fixed Guideway	\$0	\$0	\$0
<i>Section 5309 TOTAL</i>	\$0	\$0	\$0
Section 5310 Elderly and Disabled	\$0	\$0	\$0
Section 5310 Elderly and Disabled Carryover			
Federal Aid TOTAL	\$13,897,860	\$4,450,770	\$9,447,090
<u>OTHER TRANSIT FUNDING</u>			

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
2016 TRANSIT PROJECTS**

FTA FUNDING PROGRAM SUMMARIES (FEDERAL DOLLARS ONLY)

<i>Merrimack Valley Regional Transit Authority</i>			
FTA FUNDING PROGRAMS	ESTIMATED AUTHORIZATION FFY 2016	Regional TIP FFY 2016	BALANCE FFY 2016
Section 5307 Capital and Planning Formula	\$5,300,000	\$685,395	\$4,614,605
Section 5307 Transit Enhancements		\$0	\$0
subtotal	\$5,300,000	\$685,395	\$4,614,605
Section 5307 Capital and Planning Formula Carryove	\$9,447,090	\$9,447,090	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover	\$0	\$0	\$0
subtotal	\$9,447,090	\$9,447,090	\$0
<i>Section 5307 TOTAL</i>	\$14,747,090	\$10,132,485	\$4,614,605
Section 5309 Bus			
Section 5309 Fixed Guideway	\$0	\$0	\$0
<i>Section 5309 TOTAL</i>	\$0	\$0	\$0
Section 5310 Elderly and Disabled	\$0	\$0	\$0
Section 5310 Elderly and Disabled Carryover			
Federal Aid TOTAL	\$14,747,090	\$10,132,485	\$4,614,605
<u>OTHER TRANSIT FUNDING</u>			

**COST ESTIMATES AND AVAILABLE RESOURCES
SUMMARY BY FUNDING CATEGORY
2017 TRANSIT PROJECTS**

FTA FUNDING PROGRAM SUMMARIES (FEDERAL DOLLARS ONLY)

<i>Merrimack Valley Regional Transit Authority</i>			
FTA FUNDING PROGRAMS	ESTIMATED AUTHORIZATION FFY 2017	Regional TIP FFY 2017	BALANCE FFY 2017
Section 5307 Capital and Planning Formula	\$5,300,000	\$0	\$5,300,000
Section 5307 Transit Enhancements		\$0	\$0
subtotal	\$5,300,000	\$0	\$5,300,000
Section 5307 Capital and Planning Formula Carryove	\$4,614,605	\$4,081,770	\$532,835
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover	\$0	\$0	\$0
subtotal	\$4,614,605	\$4,081,770	\$532,835
<i>Section 5307 TOTAL</i>	\$9,914,605	\$4,081,770	\$5,832,835
Section 5309 Bus			
Section 5309 Fixed Guideway	\$0	\$0	\$0
<i>Section 5309 TOTAL</i>	\$0	\$0	\$0
Section 5310 Elderly and Disabled	\$0	\$0	\$0
Section 5310 Elderly and Disabled Carryover			
Federal Aid TOTAL	\$9,914,605	\$4,081,770	\$5,832,835
<u>OTHER TRANSIT FUNDING</u>			

**PART C. 5. STATUS ON IMPLEMENTATION OF FFY 2013 TIP PROJECTS
FFY 2013 HIGHWAY PROJECT LIST**

2013 Merrimack Valley MPO 2014-2017 Transportation Improvement Program Status of 2013 Highway Projects						
ID	Location	Project Description	Highway District	Funding Category	Total Estimated Cost	Project Status as of May 2013
600214	Hav.	HAVERHILL- RECONSTRUCTION OF ROUTE 125 (SOUTH MAIN ST), FROM BOSTON ROAD TO BASILIERE BRIDGE & SALEM STREET, FROM SOUTH MAIN STREET TO PEA BODY STREET	4	STP-AC	\$368,848	UNDER CONSTRUCTION
602469	Merrimac	MERRIMAC- RECONSTRUCTION OF ROUTE 110 (WEST MAIN STREET/EAST MAIN STREET), FROM 400 FEET WEST OF ORCHARD STREET TO BROAD STREET	4	STP	\$4,820,296	IN DESIGN
605181	Methuen	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY , INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	4	STP-AC HSIP CMAQ HPP (2005) IM SW CMAQ SW TE	\$260,795 \$442,956 \$885,911 \$329,258 \$1,000,000 \$17,700,000 \$188,500	IN DESIGN
600988	Grov./ Hav.	GROVELAND- HAVERHILL- BRIDGE REPLACEMENT, G-15-001=H-12-012, ROUTE 97 & ROUTE 113 OVER THE MERRIMACK RIVER (BATES BRIDGE)	4	BR-ON-AC		PAID OFF IN 2012, REMOVED FROM 2013 PROGRAMMING
F&WS	New bury	NEWBURY - REPAIR, RECONSTRUCTION & RESURFACING OF SUNSET DRIVE IN NEWBURY	4	HPP (2005) Other	\$224,975 \$350,025	COMPLETE

PART C. 5. STATUS ON IMPLEMENTATION OF FFY 2013 TRANSIT TIP PROJECTS

Merrimack Valley MPO												
2013 May 2013 Status of 2013 Transit Projects												
FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources					RTA Funds ▼	Total Cost ▼	Project Status as of May 2013
					RTACAP ▼	MAP ▼	ITCCAP ▼	TDC ▼	SCA ▼			
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2014 (O)	Carryover, FY 2012 Funds Used	\$ 988,165	\$ -	\$ -	\$ -	\$ -	\$ 247,040		\$ 1,235,205	file application 7/1/2013
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2014 (O)	Carryover Used	\$ 1,037,030	\$ -	\$ -	\$ -	\$ -	\$ 259,260		\$ 1,296,290	file application 7/1/2013
	MVRTA	Continue Short Range Planning MVPC UPWP FY 2014 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000	file application 7/1/2013
	MVRTA	Purchase 1 new 45' Commuter Coach ©	Carryover Used	\$ 454,800	\$ 113,700	\$ -	\$ -	\$ -	\$ -		\$ 568,500	delivery June 2013
	MVRTA	Washington Sq, Haverhill Transit Station Relocation - Final Design (N)	Carryover Used	\$ 208,460	\$ 52,115	\$ -		\$ -	\$ -	\$ -	\$ 260,575	still in preliminary design
	MVRTA	MVPC Technical Support to MVRTA FY 2014 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000	file application 7/1/2013
	MVRTA	Replace 4 Admin. Support Vehicles (M)	Carryover Used	\$ 160,735	\$ 40,185	\$ -	\$ -		\$ -	\$ -	\$ 200,920	complete

PART C.6.

Air Quality Conformity Information Merrimack Valley MPO FFY 2014-2017 Transportation Improvement Program

Since most all of Massachusetts (with limited exceptions) was designated on 5/21/12 by the United States Environmental Protection Agency as “unclassifiable/attainment” for the latest ozone standard, a conformity determination for the Merrimack Valley 2014-17 TIP is not required. 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. 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.

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.

Legislative and Regulatory Background

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 classified as unclassifiable/attainment.

Therefore, conformity for ozone in the Merrimack Valley MPO is required until July 20, 2013 for only the 1997 ozone standard. Since this 2014-17 TIP will not complete its collective development, review, and approval by the Federal Highway Administration until after July 20, 2013 – when this standard will be revoked, and since the latest area designations do not require conformity under the current 2008 standard, the MPO does not need to perform a conformity determination for ozone on the program.

PART C. 7. SPECIAL EFFORTS - ADA

Projects Required for Implementation of ADA

Another requirement of 23 CFR 450.324 is that projects required for the implementation of the Americans with Disabilities Act (ADA) should be so marked. There are no projects in this TIP listing that are required for the implementation of the Americans with Disabilities Act and therefore no projects are marked as such. There are projects to replace existing accessible transit vehicles with new accessible transit vehicles, but these are replacements not implementations.

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APPENDIX A and B: OTHER REGIONAL PRIORITIES

APPENDIX A: OTHER REGIONAL PRIORITY BRIDGE PROJECTS
Merrimack Valley Metropolitan Planning Organization
FY 2014-2017 Transportation Improvement Program
Implementing Agency: MassDOT

**BRIDGES THAT DO NOT FIT INTO FISCALLY CONSTRAINED TARGETS
AND THEREFORE HAVE NO FUNDING AVAILABLE IN ANY YEAR:**

<u>ID</u>	<u>Location</u>	<u>Project Description</u>	<u>Highway District</u>	<u>Estimated Total Project Cost</u>
602322	AMES.	AMESBURY- BRIDGE REPLACEMENT, A-07-008, OAK STREET OVER THE B&M RAILROAD (ABANDONED LINE)	4	\$1,000,000
	AND.	ANDOVER- REHAB. BRIDGE (A-09-001) ROUTE 28 (NORTH MAIN STREET) OVER THE SHAWSHEEN RIVER	4	
605418	AND.	ANDOVER- BRIDGE PRESERVATION, A-09-028, CHANDLER ROAD OVER I-93	4	\$4,708,700
601986	AND.	ANDOVER-BRIDGE REPLACEMENT, A-09-011, STATE ROUTE 28 (NORTH MAIN STREET) OVER MBTA RR	4	\$4,986,948
602892	HAV.	HAVERHILL- BRIDGE REPLACEMENT, H-12-023, NORTH AVENUE OVER SNOWS BROOK	4	\$505,842
603659	LAW.	LAWRENCE- BRIDGE REPLACEMENT, L-04-024, SALEM STREET OVER THE MBTA, AMTRAK & GUILFORD RAILROAD	4	\$2,980,000
604839	LAW.	LAWRENCE- BRIDGE REPLACEMENT, L-04-027, LOWELL STREET OVER B&M RAILROAD	4	\$4,473,000
	LAW.	LAWRENCE- BRIDGE REHABILITATION, L-04-002, AMESBURY STREET OVER THE MERRIMACK RIVER AND ACCESS ROAD	4	
	LAW.	LAWRENCE- BRIDGE REHABILITATION, L-04-042, SOUTH UNION CONNECTOR OVER SOUTH STREET	4	
	NBYPT	NEWBURYPORT- BRIDGE (N-11-002) STATE ROUTE 113 (HIGH STREET) OVER RAILROAD	4	
	NBYPT	NEWBURYPORT- BRIDGE (N-11-014) STATE ROUTE 1A (HIGH STREET) OVER US 1	4	
607115	NBYPT	NEWBURYPORT- BRIDGE REPAIRS, N-11-015, WASHINGTON STREET OVER US 1	4	

APPENDIX B: OTHER REGIONAL PRIORITY ROADWAY PROJECTS

Merrimack Valley Metropolitan Planning Organization FY 2014-2017 Transportation Improvement Program By Town

PROJECTS THAT DO NOT FIT INTO FISCALLY CONSTRAINED TARGETS AND THEREFORE HAVE NO FUNDING AVAILABLE IN ANY YEAR:

<u>ID</u>	<u>Location</u>	<u>Project Description</u>	<u>Highway District</u>	<u>Estimated Total Project Cost</u>
602418	AMES.	AMESBURY- RECONSTRUCTION OF ELM STREET	4	\$8,785,840
	AND.	ANDOVER- ROUTE 133 FROM EAST OF I-93 TO SHAWSHEEN SQUARE	4	
605694	AND/ N. AND	ANDOVER, NORTH ANDOVER – ROUTE 125, RESURFACING AND RELATED WORK	4	\$7,500,000
	AND/ N. AND	ANDOVER, NORTH ANDOVER – IMPROVEMENTS TO ROUTE 114 CORRIDOR	4	\$3,141,150
605199	AND./TEWKS/ WIL.	ANDOVER- TEWKSBURY-WILMINGTON-NEW INTERCHANGE CONSTRUCTION ON I-93 BETWEEN INTERCHANGES 41&42	4	\$147,584,864
606721	BOX.	BOXFORD RECONSTRUCT ROUTE 133 FROM NORTH ANDOVER LINE TO MAIN STREET (1.45 MILES)	4	\$3,480,000
	BOX.	BOXFORD RECONSTRUCT ROUTE 97 FROM GEORGETOWN TO TOPSFIELD (2 MILES)	4	\$3,785,600
605020	BOX./ GEORGE./ NEWBURY/ SALIS.	BOXFORD-GEORGE-NEWBURY-SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL)	4	\$26,270,248
604950	GEORGE.	GEORGETOWN-PARK & RIDE CONSTRUCTION AT I-95 AND ROUTE 133 INTERCHANGE	4	\$3,275,000
602843	GEORGE.	GEORGETOWN-RECONSTRUCTION OF ROUTE 97 (W. MAIN STREET) FROM MOULTON STREET TO GROVELAND TL	4	\$2,400,000
605753	GROV.	GROVELAND-RECONSTRUCTION OF ROUTE 97 (SCHOOL STREET) FROM PARKER STREET TO GARDNER STREET	4	\$3,376,526
605690	HAV.	HAVERTHILL-RESURFACING & RELATED WORK AT VARIOUS LOCATIONS (14 LOCATIONS)	4	\$3,000,000
605690	HAV.	HAVERTHILL-INTERSECTION IMPROVEMENTS ROUTE 110 AND ELLIOT WAY	4	
	HAV.	HAVERTHILL-SIGNALIZE ROUTE 97 (BROADWAY) AND FORREST STREET	4	

APPENDIX B: (CONT.) OTHER REGIONAL PRIORITY ROADWAY PROJECTS

**PROJECTS THAT DO NOT FIT INTO FISCALLY CONSTRAINED TARGETS
AND THEREFORE HAVE NO FUNDING AVAILABLE IN ANY YEAR:**

<u>ID</u>	<u>Location</u>	<u>Project Description</u>	<u>Highway District</u>	<u>Estimated Total Project Cost</u>
	HAV.	HAVERTHILL-SIGNALIZE ROUTE 97 (BROADWAY) AND LAKE STREET	4	
	HAV.	HAVERTHILL-WIDEN ROUTE 97 BROADWAY FROM COMPUTER DRIVE TO FORREST ST.	4	
602339	HAV.	HAVERTHILL-HISTORIC WATERFRONT WALKWAY PHASE II (CONSTRUCTION)	4	\$3,110,184
	LAW.	LAWRENCE-RECONSTRUCT RT 114 (WINTHROP AVE) FROM EAST OF I-495 TO WAVERLY ROAD	4	
	LAW.	LAWRENCE-RECONSTRUCT MERRIMACK ST. FROM PARKER ST. TO SOUTH UNION ST.	4	
	LAW.	LAWRENCE-RECONSTRUCT MERRIMACK ST. FROM SOUTH UNION ST. TO NORTH ANDOVER TOWNLINE	4	
	NBYPT.	NEWBURYPORT-ROUTE 1 ROTARY RECONFIGURATION	4	
	NBYPT.	NEWBURYPORT-ROUTE 1 / MERRIMAC STREET IMPROVEMENTS	4	
	N. AND.	NORTH ANDOVER- RECONSTRUCTION OF MASS. AVE AND SIDEWALKS (FROM OSGOOD ST. TO I-495)	4	
	N. AND.	NORTH ANDOVER- SIGNALS AND TURN LANES AT MASS. AVE AND I-495 NB AND SB RAMPS	4	
602202	SALIS.	SALISBURY RECONSTRUCTION OF ROUTE 1 (LAFAYETTE ROAD)	4	\$2,880,000

APPENDIX C Transportation Evaluation Criteria Summary

For Selected Projects (FY 14-17) in the Merrimack Valley Region

Prepared by Merrimack Valley Planning Commission and MassDOT

FY	ID #	Project Description	Project Cost	AADT	Cost Effectiveness			Transportation				Other				
					Linear Lane Miles	Cost Per Unit Change in Condition (\$1,000)	Cost Per AADT	Cost Per Linear Lane Mile (\$1,000)	Condition	Mobility	Safety & Security	Community Effects and Support	Land Use and Economic Develop.	Environmental Effects	New Total (2014-2017)	Old Total (2013-2016)
TIP	605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY	66,000,000	36,300	NA	\$33,000	\$1,818	NA	2.00	3.00	2.33	0.80	1.50	0.00	9.63	9.63
OPP	605199	ANDOVER- TEWSKBURY- WILMINGTON- NEW INTERCHANGE CONSTRUCTION ON I-93 BETWEEN INTERCHANGES 41 & 42	\$147,587,993	NA	NA	\$73,794	NA	NA	2.00	1.75	1.33	1.40	3.00	0.00	9.48	9.08
TIP	606161	HAVERHILL ROUTE 125 THREE INTERSECTIONS	\$2,702,389	NA	NA	\$1,081	NA	NA	2.50	2.00	1.67	1.40	1.00	0.75	9.32	8.92
OPP		LAWRENCE-ROUTE 114 FROM EAST OF I-495 TO WAVERLY ROAD		37,236					2.50	2.75	1.33	1.40	1.00	-0.25	8.73	8.45
OPP		INTERSECTION	\$3,600,000	12,773	2.4	\$1,800	\$282	\$1,500	2.00	2.00	1.33	0.60	1.50	1.00	8.43	5.45
TIP	606159	NORTH ANDOVER- INTERSECTION IMPROVEMENTS ROUTE 125 AT MASS AVE.	\$1,440,000	30,284	NA	\$960	\$48	NA	1.50	1.75	2.00	1.20	0.75	0.50	7.70	7.55
OPP		LAWRENCE-MERRIMACK ST PARKER ST TO SOUTH UNION STREET		9,654	0.6				2.50	0.75	1.00	1.00	1.75	0.50	7.50	7.38
OPP		LAWRENCE-MERRIMACK ST SOUTH UNION STREET TO NORTH ANDOVER LINE		9,654	0.6				2.00	0.75	0.67	1.20	1.75	0.50	6.87	7.38
TIP	605114	GROVELAND- ROUTE 97 (GEORGETOWN TOWNLINE TO PARKER ROAD)	\$5,991,380	15,486	2.0	\$2,397	\$387	\$2,996	2.50	0.50	1.67	0.80	1.00	0.25	6.72	6.52
TIP	607374	LAWRENCE- UNION CROSSING TCSP	\$679,375	NA	NA	\$1,359	NA	NA	0.50	1.00	0.67	2.60	1.25	0.50	6.52	NR*
TIP	602469	MERRIMAC- RECONSTRUCTION OF ROUTE 110 (WEST MAIN STREET/EAST MAIN	\$6,075,055	18,302	1.2	\$3,038	\$332	\$4,899	2.00	0.50	1.33	0.80	1.00	0.75	6.38	6.38
OPP	602418	AMESBURY- RECONSTRUCTION OF ELM STREET	\$8,785,840	12,436	3.4	\$5,857	\$706	\$2,584	1.50	0.50	1.33	0.40	1.75	0.50	5.98	5.98
OPP		HAVERHILL- WALKWAY PHASE II (OF DOWNTOWN)		NA	NA	NA	NA	NA	0.00	1.00	0.33	2.00	1.75	0.75	5.83	4.77
TIP	606503	NEWBURYPORT- CLIPPER CITY RAIL-TRAIL, PHASE 2	\$3,120,000	NA	NA	NA	NA	NA	0.00	1.25	1.00	1.00	1.75	0.75	5.75	6.20
TIP	606669	AMESBURY - POWWOW RIVERWALK CONSTRUCT. PHASE I INC. PED BRIDGE	\$2,952,321	NA	NA	\$5,905	NA	NA	0.50	0.75	0.67	0.80	2.00	0.75	5.47	5.42
TIP	605720	HAVERHILL- RIVERWALK CONST. (BRADFORD SECTION) FROM RT. 125 TO COUNTY RD	\$2,410,718	NA	NA	\$4,821	NA	NA	0.50	1.00	0.67	1.60	1.00	0.50	5.27	5.32
TIP	602033	AMESBURY- RECONSTRUCTION OF ROUTE 150	\$3,535,889	9,686	1.6	\$2,357	\$365	\$2,210	1.50	0.50	1.67	0.40	0.50	0.50	5.07	4.82
TIP	605020	SALISBURY- SECTION OF BORDER TO BOSTON TRAIL	\$3,850,000	NA	NA	NA	NA	NA	0.50	1.25	1.00	0.80	0.75	0.75	5.05	4.55
OPP	605694	ANDOVER, NORTH ANDOVER - ROUTE 125, RESURFACING AND RELATED WORK	7,500,000	20,400	18.5	\$3,750	\$368	\$405	2.00	0.50	0.67	0.80	0.50	0.25	4.72	4.72
OPP		GEORGETOWN- SQUARE TO BYFIELD SECTION OF BORDER TO BOSTON TRAIL	\$3,600,000	NA	NA	NA	NA	NA	0.00	1.25	0.67	0.80	1.25	0.75	4.72	NR*
OPP	602202	SALISBURY- RECONSTRUCTION OF ROUTE 1 (LAFAYETTE ROAD)	\$3,600,000	12,147	4.8	\$2,400	\$296	\$750	1.50	0.50	1.67	0.60	0.50	-0.25	4.52	4.52
OPP	606721	BOXFORD - RECONSTRUCTION OF ROUTE 133 (NORTH ANDOVER TL TO MAIN ST)	\$3,480,000	6149	2.9	\$3,480	\$566	\$1,200	1.00	0.50	1.00	0.40	0.50	1.00	4.40	4.40
OPP	605690	HAVERHILL- RESURFACING & RELATED WORK AT VARIOUS LOCATIONS (14)	\$3,000,000	NA	15.4	\$2,000	NA	\$195	1.50	0.25	0.33	1.00	1.25	0.00	4.33	4.83
OPP	605753	GROVELAND- ROUTE 97 (PARKER ROAD TO GARDNER STREET)	\$3,600,000	13,500	1.8	\$2,400	\$267	\$2,000	1.50	0.25	0.67	0.60	0.75	0.50	4.27	4.07
OPP	602843	GEORGETOWN- ROUTE 97 FROM MOULTON STREET TO GROVELAND TOWNLINE	\$3,160,300	15,486	2.24	\$2,107	\$204	\$1,411	1.50	0.50	0.67	0.60	0.50	0.50	4.27	4.07
OPP	604950	GEORGETOWN- PARK & RIDE CONSTRUCTION AT I-95 AND ROUTE 133 INTERCHANGE	\$4,143,920	NA	NA	NA	NA	NA	0.00	1.75	0.33	0.20	0.75	0.75	3.78	3.98
OPP		GEORGETOWN- SOUTH OF SQUARE SECTION OF BORDER TO BOSTON TRAIL	\$1,480,000	NA	NA	NA	NA	NA	0.00	1.00	0.67	0.60	0.75	0.50	3.52	NR*
OPP		BOXFORD- SECTION OF BORDER TO BOSTON TRAIL	\$3,630,000	NA	NA	\$7,260	NA	NA	0.50	1.00	0.67	0.40	0.25	0.25	3.07	NR*
OPP		BOXFORD - RECONSTRUCTION OF ROUTE 97	\$3,785,600	11,190	4.28	\$3,786	\$338	\$884	1.00	0.25	0.33	0.20	0.00	0.25	2.03	2.03

*NR = Not Rated = the project was not rated because it is still being designed, or is being re-designed, and there is currently not enough design detail available to rate the project.

NA = Not Applicable TIP means project is programmed in the TIP OPP means project is not programmed in the TIP, but is in the Other Priority Projects Appendix.

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APPENDIX D
FY 2014-2017 TIP
Green House Gas (GHG) Monitoring and Evaluation

Greenhouse Gas Monitoring and Evaluation

Introduction

This section summarizes the greenhouse gas (GHG) impacts that are anticipated to result from the projects that are included in this FFY 2014 – 2017 Transportation Improvement Program (TIP). It includes a summary of the state laws and policies that call for reducing greenhouse gas in order to mitigate global climate change, actions that are being taken to respond to these state laws and policies, the role of regional planning and TIP development in reducing GHG emission and tracking these reductions, and the projected GHG emission impacts from the projects programmed in the TIP.

State Policy Context

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

- By 2020: 25 percent reduction below statewide 1990 GHG emission levels
- By 2050: 80 percent reduction below statewide 1990 GHG emission levels

GreenDOT Policy

The transportation sector is the single largest emitter of greenhouse gases, accounting for over a third of GHG emissions, and therefore the transportation sector is a key focus of the *Clean Energy and Climate Plan*. MassDOT's approach to supporting the implementation of the plan is set forth in its GreenDOT Policy Directive, a comprehensive sustainability initiative that sets three principal objectives:

- **Reduce greenhouse gas (GHG) emissions.** MassDOT will achieve this by taking GHG emissions into account in all of its responsibilities, from strategic planning to project design and construction and system operations.
- **Promote the healthy transportation modes of walking, bicycling, and public transit.** MassDOT will achieve this by pursuing multi-modal, "complete streets" design standards; providing choice in transportation services; and by working with MPOs and other partners to prioritize and program a balance of projects that serve drivers, pedestrians, bicyclists, and public transit riders.
- **To support smart growth development.** MassDOT will achieve this by working with MPOs and other partners to make transportation investments that enable denser, smart growth development patterns that support reduced GHG emissions.

GreenDOT Policy and Metropolitan Planning Organizations

The Commonwealth's thirteen metropolitan planning organizations (MPOs) are integrally involved in helping to achieve the GreenDOT goals and supporting the GHG reductions mandated under the GWSA. The MPOs are most directly involved in helping to achieve the GHG emissions reductions

under the second goal – to promote healthy transportation modes through prioritizing and programming an appropriate balance of roadway, transit, bicycle and pedestrian investments – and assist in the third goal by supporting smart growth development patterns through the creation of a balanced multi-modal transportation system. This will be realized through the transportation goals and policies espoused in the Regional Transportation Plans (RTPs), the major projects planned in the RTPs, and the mix of new transportation projects that are programmed and implemented through the TIPs. The GHG tracking and evaluation processes enable the MPOs to identify the anticipated GHG impacts of the planned and programmed projects, and also to use GHG impacts as a criterion in prioritizing transportation projects.

Regional GHG Tracking and Evaluation in RTPs

MassDOT coordinated with MPOs and regional planning agency (RPA) staffs on the implementation of GHG tracking and evaluation in development of each MPO's 2035 RTPs, which were adopted in September 2011.

Working together, MassDOT and the MPOs have attained the following milestones:

- Modeling and long-range statewide projections for GHG emissions resulting from the transportation sector. Using the Boston MPO's regional model and the statewide travel demand model for the remainder of the state, GHG emissions were projected for 2020 no-build and build conditions, and for 2035 no-build and build conditions.
- All of the MPOs included these GHG emission projections in their RTPs, along with a discussion of climate change and a statement of MPO support for reducing GHG emissions as a regional goal.

Project-Level GHG Tracking and Evaluation in the Transportation Improvement Program

It is also important to monitor and evaluate the GHG impacts of the transportation projects that are programmed in the MPO Transportation Improvement Programs (TIP). The TIP includes both the larger, regionally-significant projects from the RTPs, which have already had their aggregate GHG impacts calculated and reported in the RTP, as well as smaller projects that are not included in the RTP but that may nevertheless have impacts on GHG emissions. The principal objective of this tracking is to enable the MPOs to evaluate expected GHG impacts of different projects and to use this information as a criterion for prioritizing and programming projects in future TIPs.

In order to monitor and evaluate the GHG impacts of TIP projects, MassDOT and the MPOs have developed the following approach for identifying anticipated GHG impacts and quantifying GHG impacts of projects, when appropriate, through the TIP. Different types of projects will have different anticipated GHG emissions impacts. The different project categories are outlined on the next two pages with this region's project tracking sheet on the third page.

- Projects with Quantified Impacts
 - **RTP Projects** - Major capacity expansion projects (e.g. Green Line Extension, I-95 Whittier Bridge Replacement) would be expected to have a significant impact on GHG emissions. However, these projects are included in the RTPs and analyzed using the statewide model or Boston regional model, which would reflect their GHG impacts. Therefore, no independent TIP calculations are required.

- **Quantified Decrease in Emissions** - Projects that would be expected to produce a measurable decrease in emissions. The approach for calculating these impacts is described below. These projects should be categorized in the following manner:
 - **Quantified Decrease in Emissions from Traffic Operational Improvement** - An intersection reconstruction or signalization project that is projected to reduce delay and congestion.
 - **Quantified Decrease in Emissions from Pedestrian and Bicycle Infrastructure** - A shared-use path that would enable increased walking and biking and decreased vehicle-miles traveled (VMT).
 - **Quantified Decrease in Emissions from New/Additional Transit Service** - A bus or shuttle service that would enable increased transit ridership and decreased VMT
 - **Quantified Decrease in Emissions from a Park and Ride Lot** A park-and-ride lot that would enable increased transit ridership/ increased ridesharing and decreased VMT
 - **Quantified Decrease in Emissions from Bus Replacement** A bus replacement that would directly reduce GHG emissions generated by that bus service.
 - **Quantified Decrease in Emissions from Other Improvement**
- **Quantified Increase in Emissions** – Projects that would be expected to produce a measurable increase in emissions.
- **Calculation of GHG Impacts for TIP Projects** - The Office of Transportation Planning at MassDOT provided the spreadsheets that are used for determining Congestion Management and Air Quality Improvement (CMAQ) eligibility. These spreadsheets require the same inputs as the CMAQ calculations, and have been adapted to provide CO₂ impacts. The data and analysis required for these calculations is available from functional design reports that should be submitted for projects that would produce a measurable GHG impact.
- **Projects with Assumed Impacts**
 - **No Assumed Impact/Negligible Impact on Emission** - Projects that do not change the capacity or use of a facility (e.g. a resurfacing project that restores a roadway to its previous condition, or a bridge rehabilitation/replacement that restores the bridge to its previous condition) would be assumed to have no GHG impact.
 - **Assumed Nominal Decrease in Emissions** - Projects that would be expected to produce a minor decrease in emissions that cannot be calculated with any precision. Examples of such projects include roadway repaving or reconstruction projects that add a new sidewalk or new bike lanes. Such a project would enable increased travel by walking or bicycling, but there may be not data or analysis to support any projections of GHG impacts. These projects should be categorized in the following manner:
 - **Assumed Nominal Decrease in Emissions from Sidewalk Infrastructure**
 - **Assumed Nominal Decrease in Emissions from Bicycle Infrastructure**

- **Assumed Nominal Decrease in Emissions from Sidewalk and Bicycle Infrastructure**
- **Assumed Nominal Decrease in Emissions from Intelligent Transportation Systems (ITS) and/or Traffic Operational Improvements**
- **Assumed Nominal Decrease in Emissions from Other Improvements**
-
- **Assumed Nominal Increase in Emissions** - Projects that would be expected to produce a minor increase in emissions that cannot be calculated with any precision.

Regional Greenhouse Gas Impact Summary Tables for FFY 2014 – 2017 TIP

The following tables summarize the calculated quantitative and assumed qualitative impacts of the projects included in the regional FFY 2014 – 2017 TIP.

2014 Regional Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG Impact by the Numbers
602033	AMESBURY- RECONSTRUCTION OF ROUTE 150	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
605720	HAVERTHILL- RIVERWALK CONSTRUCTION (BRADFORD SECTION) FROM ROUTE 125 TO COUNTY ROAD	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-3,520
605181	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040	Quantified	RTP	Emissions decrease included in Statewide Model =
			Total Impact (in kilograms)	-3,520

2015 Regional Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG Impact by the Numbers
606669	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-211
604839	AMESBURY- BRIDGE REPLACEMENT, A-07-026, ROUTE I-495 (NB & SB) OVER THE BIKEWAY (ABANDONED B&M RR LINE)	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
605114	GROVELAND-REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
	FLEX TO FTA FOR MVRTA NEW BUS UPGRADE TO CLEANER FUEL BUSES			
606549	GEORGETOWN- NEWBURY- WEST NEWBURY- NEWBURYPORT- AMESBURY- SALISBURY- INTERSTATE MAINTENANCE & RELATED WORK ON I-95	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
606503	NEWBURYPORT- CLIPPER CITY RAIL TRAIL ALONG THE CITY BRANCH (PHASE II)	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-34,996
			Total Impact (in kilograms)	-35,207

2016 Regional Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG Impact by the Numbers
606161	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-6,421
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)	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
606159	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	Qualitative	Assumed Nominal Decrease in Emissions from Sidewalk Infrastructure	N/A
			Total Impact (in kilograms)	-6,421

2017 Regional Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG Impact by the Numbers
606161	METHUEN-RESURFACING AND RELATED WORK ON ROUTE 213	Qualitative	No Assumed Impact/Negligible Impact on Emissions	N/A
NORTH GEORGETOWN B to B	BOXFORD- GEORGETOWN- NEWBURY- SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL) * NORTHERN GEORGETOWN SECTION	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-17,460
SALIS B to B	BOXFORD- GEORGETOWN- NEWBURY- SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL) * SALISBURY SECTION	Quantified	Quantified Decrease in Emissions (See Emissions Analysis Appendix)	-6,837
			Total Impact (in kilograms)	-24,297

CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Project

FILL IN SHADED BOXES ONLY

Apr-12

TIP YEAR:

MPO: **Merrimack Valley Planning Commission**

Municipality: **Amesbury**

Project: **# 606669 Amesbury Powwow Riverwalk Construction from Main St to Water St. inc. Ped. Bridge**

Step 1: Calculate Estimated Reduction in Vehicle Miles Traveled (VMT):

If VMT reduction per year is known then go to Step 2B, if not proceed with Step 1:

A. Facility Length (L):	<input type="text" value="0.2"/>	Miles	
B. Service Area Radius (R):	<input type="text" value="1.0"/>	Miles	(Default = 1 Mile)
C. Service Area of Community(ies) (SA): $L * 2R = SA$	0.4	Sq. Miles	
D. Total Land Area of Community(ies) (T):	<input type="text" value="12.3"/>	Sq. Miles	
E. Service Area % of Community(ies) Land Area (LA): $SA / T = LA$	3.3%		
F. Total Population of Community(ies) (TP):	<input type="text" value="16,283"/>	Persons	
G. Population Served by Facility (P): $LA * TP = P$	530	Persons	
H. Total Number of Households in Community(ies) (HH):	<input type="text" value="6,642"/>	HH	
I. Number of Households Served by Facility (HS): $LA * HH = HS$	216	HH	
J. Total Number of Workers Residing in Community(ies) (W):	<input type="text" value="8,421"/>	Persons	
K. Workers Per household (WPHH): $W / HH = WPHH$	1.27	Persons	
L. Workers In Service Area (WSA): $HS * WPHH = WSA$	274	Persons	
M. Population Density of the Service area (PD): $P / SA = PD$		1,324 Persons Per Sq. Mile	
N. If the bicycle and pedestrian commuter mode share is known, enter the percentage at the right.		(BMS) <input type="text" value="1.9%"/>	
If not, use the 2000 US Census Journey to Work data to determine the mode share and enter the percentage to the right.			
O. Bike and Ped. Work Utilitarian Trips (BWT): $WSA * BMS = BWT$		5 One-Way Trips	
P. Bike and Ped. Non-Work Utilitarian Trips (BNWT): $BWT * 1.7 = BNWT$		9 One-Way Trips	
(Latest planning assumptions estimate non-work utilitarian trips to be 1.7 times the work utilitarian.)			

Step 2: Calculate the VMT Reduction Per Day:

A. $((2 * BWT) + (2 * BNWT)) * (0.5 * L) = VMTR$		2.8 VMTR Per Day
B. $VMTR * Operating Days Per Year$	$2.8 * 200 =$	562 VMTR Per Year
If the Vehicle Miles Traveled Reduction is known enter in the box to the right.		
Note: A manual entry of the VMTR will override the calculated cell.		

Step 3: MOBILE 6 Emission Factors for Average Commuter Travel Speed:

Note: Use 35 MPH as a default if average speed is not known.

Speed Used:

2016 Auto Summer VOC Factor grams/mile	2016 Auto Summer NOx Factor grams/mile	2016 Auto Summer CO Factor grams/mile	2016 Auto Summer CO2 Factor grams/mile
<input type="text" value="0.232"/>	<input type="text" value="0.178"/>	<input type="text" value="3.540"/>	<input type="text" value="368.100"/>

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
<input type="text" value="0.1"/>	<input type="text" value="0.1"/>	<input type="text" value="2.0"/>	<input type="text" value="210.7"/>

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	Emission Reduction in kg per year	First year cost per kilogram
Summer VOC	<input type="text" value="\$1,803,376"/>	0.1 -	\$13,577,301
Summer NOx	<input type="text" value="\$1,803,376"/>	0.1 -	\$17,696,258
Summer CO	<input type="text" value="\$1,803,376"/>	2.0 -	\$889,812
Summer CO2	<input type="text" value="\$1,803,376"/>	210.7 -	\$8,557

Spreadsheet Template Prepared by the Office of Transportation Planning

CMAQ Air Quality Analysis Worksheet for Traffic Flow and Intersection Improvements

Apr-12

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This sheet represents the Overall Air Quality Analysis for the Haverhill Improvements

TIP YEAR: on Main Street (Route 125) Project. The combined delays have been input in Step 7 below.

MPO: **Merrimack Valley Planning Commission** Municipality: **Haverhill**
 Project: **#606161 Haverhill Improvements on Main Street (Route 125)**

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

Street Name	Dir	(Vol / PHF)	Left-Turns X delay per veh	Total move. delay	+	(Vol / PHF)	Thru X delay per veh	Total move. delay	+	(Vol / PHF)	Right-Turns X delay per veh	Total move. delay	Total approach delay
Main St	NB		0.95		+	0.95			+	0.95			
Main St	SB		0.95		+	0.95			+	0.95			
	EB		0.95		+	0.95			+	0.95			
	WB		0.95		+	0.95			+	0.95			
Total Intersection Delay/Seconds =													

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

Street Name	Dir	(Vol / PHF)	Left-Turns X delay per veh	Total move. delay	+	(Vol / PHF)	Thru X delay per veh	Total move. delay	+	(Vol / PHF)	Right-Turns X delay per veh	Total move. delay	Total approach delay
Main St	NB		0.95	0	+	0.95		0	+	0.95		0	0
Main St	SB		0.95	0	+	0.95		0	+	0.95		0	0
	EB		0.95	0	+	0.95		0	+	0.95		0	0
	WB		0.95	0	+	0.95		0	+	0.95		0	0
Total Intersection Delay/Seconds =													0

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

Peak Hour (AM/PM) **PM** Total Intersection Delay: **0**

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

Street Name	Dir	(Vol / PHF)	Left-Turns X delay per veh	Total move. delay	+	(Vol / PHF)	Thru X delay per veh	Total move. delay	+	(Vol / PHF)	Right-Turns X delay per veh	Total move. delay	Total approach delay
Main St	NB		0.95		+	0.95			+	0.95			
Main St	SB		0.95		+	0.95			+	0.95			
	EB		0.95		+	0.95			+	0.95			
	WB		0.95		+	0.95			+	0.95			
Total Intersection Delay/Seconds =													

Step 5: Calculate vehicle delay in hours per day:

	(Delay in seconds X Hours per day) /	Seconds per hour =	Delay in hours / day
Existing peak hour intersection delay	(0 X 10) /	3600 =	0.0
Peak hour intersection delay w/ improvements	(0 X 10) /	3600 =	0.0

Step 6: MOBILE Emission factors for arterial idling speed:

	2016 Summer VOC Factor grams/hour	2016 Summer NOx Factor grams/hour	2016 Winter CO Factor grams/hour	2016 Summer CO2 Factor grams/hour
	4.053	1.805	45.735	1414.950

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

	Delay In Hours per Day	Summer VOC Emissions kilograms/day	Summer NOx Emissions kilograms/day	Winter CO Emissions kilograms/day	Summer CO2 Emissions kilograms/day
Existing Conditions	992.0	4.021	1.791	49.337	1,403.630
With Improvements	973.5	3.946	1.757	48.417	1,377.454
Net Change		-0.075	-0.033	-0.920	-26.177

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

	Net change per day (kg) X	Avg. weekdays per year	X	Seasonal adj. factor =	Adj. net change in kg per year
Summer VOC Emissions	-0.075 X	250	X	1.0188 =	-19.098
Summer NOx Emissions	-0.033 X	250	X	1.0188 =	-8.505
Winter CO Emissions	-0.920 X	250	X	0.9812 =	-225.700
Summer CO2 Emissions	-26.177 X	250	X	0.9812 =	-6,421.114

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

Emission	Project Cost /	Adj. net change in kg per year =	First year cost per kilogram
Summer VOC	\$3,000,000 /	-19.098 =	\$157,088
Summer NOx	\$3,000,000 /	-8.505 =	\$352,731
Winter CO	\$3,000,000 /	-225.700 =	\$13,292
Summer CO2	\$3,000,000 /	-6,421.114 =	\$467

Spreadsheet Template Prepared by the Office of Transportation Planning

CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Project

FILL IN SHADED BOXES ONLY

TIP YEAR: 2013

MPO: Merrimack Valley Planning Commission

Municipality: Haverhill

Project: # 605720 Haverhill Riverwalk Construction (Bradford Section) from Route 125 to County Road

Step 1: Calculate Estimated Reduction in Vehicle Miles Traveled (VMT):
If VMT reduction per year is known then go to Step 2B, if not proceed with Step 1 :

- A. Facility Length (L): 0.7 Miles
- B. Service Area Radius (R): 1.0 Miles (Default = 1 Mile)
- C. Service Area of Community(ies) (SA): $L * 2R - SA$ 1.4 Sq. Miles
- D. Total Land Area of Community(ies) (T): 32.97 Sq. Miles
- E. Service Area % of Community(ies) Land Area (LA): $SA / T - LA$ 4.2%
- F. Total Population of Community(ies) (TP): 60,879 Persons
- G. Population Served by Facility (P): $LA * TP - P$ 2,585 Persons
- H. Total Number of Households In Community(ies) (HH): 24,150 HH
- I. Number of Households Served by Facility (HS): $LA * HH - HS$ 1,025 HH
- J. Total Number of Workers Residing In Community(ies) (W): 29,241 Persons
- K. Workers Per household (WPHH): $W / HH - WPHH$ 1.21 Persons
- L. Workers In Service Area (WSA): $HS * WPHH - WSA$ 1,242 Persons
- M. Population Density of the Service area (PD): $P / SA - PD$ 1,846 Persons Per Sq. Mile

N. If the bicycle and pedestrian commuter mode share is known, enter the percentage at the right. (BMS) 2.0%
If not, use the 2000 US Census Journey to Work data to determine the mode share and enter the percentage to the right.

- O. Bike and Ped. Work Utilitarian Trips (BWT): $WSA * BMS - BWT$ 25 One-Way Trips
- P. Bike and Ped. Non-Work Utilitarian Trips (BNWT): $BWT * 1.7 - BNWT$ 42 One-Way Trips
(Latest planning assumptions estimate non-work utilitarian trips to be 1.7 times the work utilitarian.)

Step 2: Calculate the VMT Reduction Per Day:

- A. $((2 * BWT) + (2 * BNWT)) * (0.5 * L) - VMTR$ 46.9 VMTR Per Day
- B. $VMTR * Operating Days Per Year$ $46.9 * 200 =$ 9,387 VMTR Per Year
If the Vehicle Miles Traveled Reduction is known enter in the box to the right. VMTR Per Year

Step 3: MOBILE 6 Emission Factors for Average Commuter Travel Speed:

Note: Use 35 MPH as a default if average speed is not known. Speed Used: 35 MPH

2016 Auto Summer VOC Factor grams/mile	2016 Auto Summer NOx Factor grams/mile	2016 Auto Summer CO Factor grams/mile	2016 Auto Summer CO2 Factor grams/mile
0.232	0.178	3.540	368.100

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
2.2	1.7	33.9	3,520.3

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	Emission Reduction in kg per year	First year cost per kilogram
Summer VOC	\$584,141	2.2 -	\$263,280
Summer NOx	\$584,141	1.7 -	\$343,151
Summer CO	\$584,141	33.9 -	\$17,255
Summer CO2	\$584,141	3,520.3 -	\$166

Spreadsheet Template Prepared by the Office of Transportation Planning

CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Project

FILL IN SHADED BOXES ONLY

Apr-12

TIP YEAR: 2015

MPO: Merrimack Valley Planning Commission

Municipality: Newburyport

Project: # 606503 Newburyport Clipper City Rail Trail Along the City Branch (Phase II)

Step 1: Calculate Estimated Reduction in Vehicle Miles Traveled (VMT):

If VMT reduction per year is known then go to Step 2B, if not proceed with Step 1:

A. Facility Length (L):	1.5	Miles	
B. Service Area Radius (R):	1.0	Miles	(Default = 1 Mile)
C. Service Area of Community(ies) (SA): $L * 2R = SA$	3	Sq. Miles	
D. Total Land Area of Community(ies) (T):	8.4	Sq. Miles	
E. Service Area % of Community(ies) Land Area (LA): $SA / T = LA$	35.7%		
F. Total Population of Community(ies) (TP):	17,416	Persons	
G. Population Served by Facility (P): $LA * TP = P$	6,220	Persons	
H. Total Number of Households in Community(ies) (HH):	7,622	HH	
I. Number of Households Served by Facility (HS): $LA * HH = HS$	2,722	HH	
J. Total Number of Workers Residing in Community(ies) (W):	9,775	Persons	
K. Workers Per household (WPHH): $W / HH = WPHH$	1.28	Persons	
L. Workers In Service Area (WSA): $HS * WPHH = WSA$	3,491	Persons	
M. Population Density of the Service area (PD): $P / SA = PD$	2,073	Persons Per Sq. Mile	
N. If the bicycle and pedestrian commuter mode share is known, enter the percentage at the right.	(BMS)	3.3%	
If not, use the 2000 US Census Journey to Work data to determine the mode share and enter the percentage to the right.			
O. Bike and Ped. Work Utilitarian Trips (BWT): $WSA * BMS = BWT$	115	One-Way Trips	
P. Bike and Ped. Non-Work Utilitarian Trips (BNWT): $BWT * 1.7 = BNWT$	196	One-Way Trips	
(Latest planning assumptions estimate non-work utilitarian trips to be 1.7 times the work utilitarian.)			

Step 2: Calculate the VMT Reduction Per Day:

A. $((2 * BWT) + (2 * BNWT)) * (0.5 * L) = VMTR$	466.6	VMTR Per Day
B. $VMTR * Operating Days Per Year$	$466.6 * 200 =$	93,316 VMTR Per Year
If the Vehicle Miles Traveled Reduction is known enter in the box to the right.		
Note: A manual entry of the VMTR will override the calculated cell.		

Step 3: MOBILE 6 Emission Factors for Average Commuter Travel Speed:

Note: Use 35 MPH as a default if average speed is not known.

Speed Used: 35 MPH

2016 Auto Summer VOC Factor grams/mile	2016 Auto Summer NOx Factor grams/mile	2016 Auto Summer CO Factor grams/mile	2016 Auto Summer CO2 Factor grams/mile
0.232	0.178	3.540	368.100

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
22.1	16.9	336.6	34,995.5

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	Emission Reduction in kg per year	First year cost per kilogram
Summer VOC	\$3,000,000	22.1 -	\$136,015
Summer NOx	\$3,000,000	16.9 -	\$177,278
Summer CO	\$3,000,000	336.6 -	\$8,914
Summer CO2	\$3,000,000	34,995.5 -	\$86

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CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Project

FILL IN SHADED BOXES ONLY

TIP YEAR: **2013**

MPO: **Merrimack Valley Planning Commission**

Municipality: **Salisbury**

Project: **Salisbury Rail Trail Mudnock Road to NHSL along Abandoned RR**

Step 1: Calculate Estimated Reduction in Vehicle Miles Traveled (VMT):

If VMT reduction per year is known then go to Step 2B, if not proceed with Step 1:

A. Facility Length (L):	2.3	Miles	
B. Service Area Radius (R):	1.0	Miles	(Default = 1 Mile)
C. Service Area of Community(ies) (SA): $L * 2R = SA$	4.5	Sq. Miles	
D. Total Land Area of Community(ies) (T):	15.4	Sq. Miles	
E. Service Area % of Community(ies) Land Area (LA): $SA / T = LA$	29.2%		
F. Total Population of Community(ies) (TP):	8,283	Persons	
G. Population Served by Facility (P): $LA * TP = P$	2,420	Persons	
H. Total Number of Households in Community(ies) (HH):	3,441	HH	
I. Number of Households Served by Facility (HS): $LA * HH = HS$	1,005	HH	
J. Total Number of Workers Residing in Community(ies) (W):	3,950	Persons	
K. Workers Per household (WPHH): $W / HH = WPHH$	1.15	Persons	
L. Workers In Service Area (WSA): $HS * WPHH = WSA$	1,154	Persons	
M. Population Density of the Service area (PD): $P / SA = PD$	538	Persons Per Sq. Mile	
N. If the bicycle and pedestrian commuter mode share is known, enter the percentage at the right.	(BMS) 1.3%		
If not, use the 2000 US Census Journey to Work data to determine the mode share and enter the percentage to the right.			
O. Bike and Ped. Work Utilitarian Trips (BWT): $WSA * BMS = BWT$	15	One-Way Trips	
P. Bike and Ped. Non-Work Utilitarian Trips (BNWT): $BWT * 1.7 = BNWT$	26	One-Way Trips	
(Latest planning assumptions estimate non-work utilitarian trips to be 1.7 times the work utilitarian.)			

Step 2: Calculate the VMT Reduction Per Day:

A. $((2 * BWT) + (2 * BNWT)) * (0.5 * L) = VMTR$	91.2	VMTR Per Day
B. $VMTR * Operating Days Per Year$	$91.2 * 200 =$	18,231 VMTR Per Year
If the Vehicle Miles Traveled Reduction is known enter in the box to the right.		VMTR Per Year

Note: A manual entry of the VMTR will override the calculated cell.

Step 3: MOBILE 6 Emission Factors for Average Commuter Travel Speed:

Note: Use 35 MPH as a default if average speed is not known.

Speed Used: **35 MPH**

2016 Auto Summer VOC Factor grams/mile	2016 Auto Summer NOx Factor grams/mile	2016 Auto Summer CO Factor grams/mile	2016 Auto Summer CO2 Factor grams/mile
0.232	0.178	3.540	368.100

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
4.3	3.3	65.8	6,837.0

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	Emission Reduction in kg per year	First year cost per kilogram
Summer VOC	\$3,687,500	4.3 -	\$855,749
Summer NOx	\$3,687,500	3.3 -	\$1,115,359
Summer CO	\$3,687,500	65.8 -	\$56,083
Summer CO2	\$3,687,500	6,837.0 -	\$539

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CMAQ Air Quality Analysis Worksheet for Bicycle and Pedestrian Project

FILL IN SHADED BOXES ONLY

TIP YEAR: **2013** Municipality: **Georgetown/**
Merrimack Valley **Newbury**
 Project: **Georgetown North Section of B to B from Georgetown Square to Byfield Center**

Step 1: Calculate Estimated Reduction in Vehicle Miles Traveled (VMT):

If VMT reduction per year is known then go to Step 2B, if not proceed with Step 1 :

A. Facility Length (L): **3.6** Miles
 B. Service Area Radius (R): **1.0** Miles (Default = 1 Mile)
 C. Service Area of Community(ies) (SA): $L * 2R - SA$ 7.2 Sq. Miles
 D. Total Land Area of Community(ies) (T): **37.1** Sq. Miles
 E. Service Area % of Community(ies) Land Area (LA): $SA / T - LA$ 19.4%
 F. Total Population of Community(ies) (TP): **14,849** Persons
 G. Population Served by Facility (P): $LA * TP - P$ 2,882 Persons
 H. Total Number of Households In Community(ies) (HH): **5,531** HH
 I. Number of Households Served by Facility (HS): $LA * HH - HS$ 1,073 HH
 J. Total Number of Workers Residing In Community(ies) (W): **7,259** Persons
 K. Workers Per household (WPHH): $W / HH - WPHH$ 1.31 Persons
 L. Workers In Service Area (WSA): $HS * WPHH - WSA$ 1,409 Persons
 M. Population Density of the Service area (PD): $P / SA - PD$ 400 Persons Per Sq. Mile

N. If the bicycle and pedestrian commuter mode share is known, enter the percentage at the right. (BMS) **1.7%**
 If not, use the 2000 US Census Journey to Work data to determine the mode share and enter the percentage to the right.

O. Bike and Ped. Work Utilitarian Trips (BWT): $WSA * BMS - BWT$ 24 One-Way Trips
 P. Bike and Ped. Non-Work Utilitarian Trips (BNWT): $BWT * 1.7 - BNWT$ 41 One-Way Trips
 (Latest planning assumptions estimate non-work utilitarian trips to be 1.7 times the work utilitarian.)

Step 2: Calculate the VMT Reduction Per Day:

A. $((2 * BWT) + (2 * BNWT)) * (0.5 * L) - VMTR$ 232.8 VMTR Per Day
 B. $VMTR * Operating Days Per Year$ $232.8 * 200 =$ 46,557 VMTR Per Year
 If the Vehicle Miles Traveled Reduction is known enter in the box to the right. **VMTR Per Year**

Note: A manual entry of the VMTR will override the calculated cell.

Step 3: MOBILE 6 Emission Factors for Average Commuter Travel Speed:

Note: Use 35 MPH as a default if average speed is not known.

Speed Used: **35 MPH**

2016 Auto Summer VOC Factor grams/mile	2016 Auto Summer NOx Factor grams/mile	2016 Auto Summer CO Factor grams/mile	2016 Auto Summer CO2 Factor grams/mile
0.232	0.176	3.540	388.100

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
11.0	8.4	167.9	17,459.6

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	Emission Reduction in kg per year	First year cost per kilogram
Summer VOC	\$3,600,000	11.0 -	\$327,149
Summer NOx	\$3,600,000	8.4 -	\$426,396
Summer CO	\$3,600,000	167.9 -	\$21,440
Summer CO2	\$3,600,000	17,459.6 -	\$206

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APPENDIX E

**PROJECTS from MVRTA CAPITAL PROGRAM FFY 2014- FFY 2018
Adopted May 2, 2013**

2014 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2015 (O)	Carryover, FY 2014 Funds Used	\$ 2,348,800	\$ -	\$ -	\$ -	\$ 587,200	\$ -	\$ 2,936,000
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2015 (O)	Carryover Used	\$ 1,038,480	\$ -	\$ -	\$ -	\$ 259,620	\$ -	\$ 1,298,100
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2015 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2015 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Replace 5 of 17 Model Year 2004 Transit buses with new buses (delivery FY 2016) (M)	Carryover Used	\$ 1,680,000	\$ 420,000	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
	MVRTA	Replace 3 Model Year 2000 40' Commuter Buses with 3 Model Year 2014 45' Commuter Buses	Carryover Used	\$ 1,320,000	\$ 330,000	\$ -	\$ -	\$ -	\$ -	\$ 1,650,000
	MVRTA	FTA Operating Assistance for FY 2014 (O)		\$ 1,003,235				\$ 1,003,235		\$ 2,006,470
5307 Subtotal ►				\$ 7,470,515	\$ 750,000	\$ -	\$ -	\$ 1,850,055	\$ 20,000	\$10,090,570

2014 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5309 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5310 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5311 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5316 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5317 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Grants Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Operating Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total▶				\$ 7,470,515	\$ 750,000	\$ -	\$ -	\$ 1,850,055	\$ 20,000	\$ 10,090,570
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 14 / 5307		\$ 5,300,000	\$ 5,300,000	Available	RTACAP					
Carryover/5307	\$ 7,470,515	\$ 8,999,890	\$ 1,529,375	Available	MAP					
Total 5307	\$ 7,470,515	\$ 14,299,890	\$ 6,829,375	Available	SCA					
					TDC	\$ -				

2015 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2016 (O)	Carryover, FY 2015 Funds Used	\$ 2,427,775	\$ -	\$ -	\$ -	\$ 606,945	\$ -	\$ 3,034,720
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2016 (O)	Carryover Used	\$ 1,069,635	\$ -	\$ -	\$ -	\$ 267,410	\$ -	\$ 1,337,045
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2016 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2016 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Replace 12 Model Year 2010 Paratransit Vehicles (M)	Carryover Used	\$ 672,000	\$ 168,000					\$ 840,000
	MVRTA	Replace 17 Model year 2004 Transit Buses with new (Delivery 2016) 5 of 17 (M)	Carryover Used	\$ 1,680,000	\$ 420,000	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
	MVRTA	Refurbish Engine/ Transmission on 9 Model year 2009 transit buses (M)	Carryover Used	\$ 256,400	\$ 64,100					\$ 320,500
	MVRTA	Relocation of Washington Square Transit Station to New Location - Construction (C)	Carryover Used	\$ 1,880,000	\$ 470,000	\$ -	\$ -	\$ -	\$ -	\$ 2,350,000
	MVRTA	New buryport Intermodal Transit Center - Construction (C)	Carryover Used	\$ 1,880,000	\$ 470,000	\$ -	\$ -	\$ -	\$ -	\$ 2,350,000
	5307 Subtotal ►				\$ 9,945,810	\$ 1,592,100	\$ -	\$ -	\$ 874,355	\$ 20,000

2015 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5309 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5310 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5311 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5316 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5317 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Grants Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Operating Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Total ▶		\$ 9,945,810	\$ 1,592,100	\$ -	\$ -	\$ 874,355	\$ 20,000	\$ 12,432,265

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 15 / 5307	\$ 3,116,415	\$ 5,300,000	\$ 2,183,585	Available	RTACAP				
Carryover/5307	\$ 6,829,395	\$ 6,829,395	\$ -	Available	MAP				
Total 5307	\$ 9,945,810	\$ 12,129,395	\$ 2,183,585	Available	SCA				
					TDC	\$ -			

2016 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ▶	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2017 (O)	Carryover, FY 2016 Funds Used	\$ 2,505,065	\$ -	\$ -	\$ -	\$ 626,265	\$ -	\$ 3,131,330
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2017 (O)	Carryover Used	\$ 1,101,730	\$ -	\$ -	\$ -	\$ 275,430	\$ -	\$ 1,377,160
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2017 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2017 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Replace 17 Model year 2004 Transit Buses with new (Delivery 2016) 8 of 17 (M)	Carryover Used	\$ 2,688,000	\$ 672,000	\$ -	\$ -	\$ -	\$ -	\$ 3,360,000
	MVRTA	Rehab/Renovation Bus Area, Buckley Transportation Center, Lawrence (M)	Carryover Used	\$ 412,000	\$ 103,000	\$ -	\$ -	\$ -	\$ -	\$ 515,000
	5307 Subtotal ▶				\$ 6,786,795	\$ 775,000	\$ -	\$ -	\$ 901,695	\$ 20,000

2016 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5309 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5310 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5311 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5316 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		5317 Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Grants Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Operating Subtotal ▶		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Total ▶		\$ 6,786,795	\$ 775,000	\$ -	\$ -	\$ 901,695	\$ 20,000	\$ 8,483,490

Fiscal Constraint Analysis

Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼	
FFY 16 / 5307	\$ 4,603,210	\$ 5,300,000	\$ 696,790	Available	RTACAP				
Carryover/5307	\$ 2,183,585	\$ 2,183,585	\$ -	Available	MAP				
Total 5307	\$ 6,786,795	\$ 7,483,585	\$ 696,790	Available	SCA				

2017 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ▶	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2018 (O)	Carryover, FY 2017 Funds Used	\$ 2,583,745	\$ -	\$ -	\$ -	\$ 645,935	\$ -	\$3,229,680
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2018 (O)	Carryover Used	\$ 1,134,775	\$ -	\$ -	\$ -	\$ 283,695	\$ -	\$1,418,470
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2018 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2018 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Refurbish Engine/ Transmission on 8 Model Year 2011 Transit Buses (M)	Carryover Used	\$ 240,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
			5307 Subtotal ▶	\$ 4,038,520	\$ 60,000	\$ -	\$ -	\$ 929,630	\$ 20,000	\$5,048,150

2017 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total ▶				\$ 4,038,520	\$ 60,000	\$ -	\$ -	\$ 929,630	\$ 20,000	\$5,048,150
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 17 / 5307	\$ 3,341,730	\$ 5,300,000	\$ 1,958,270	Available	RTACAP					
Carryover/5307	\$ 696,790	\$ 696,790	\$ -	Available	MAP					
Total 5307	\$ 4,038,520	\$ 5,996,790	\$ 1,958,270	Available	SCA					
					TDC	\$ -				

2018 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5307 ►	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2019 (O)	Carryover, FY 2017 Funds Used	\$ 2,661,255	\$ -	\$ -	\$ -	\$ 665,315	\$ -	\$3,326,570
	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2019 (O)	Carryover Used	\$ 1,168,820	\$ -	\$ -	\$ -	\$ 292,205	\$ -	\$1,461,025
	MVRTA	Continue Short Range Transit Planning MVPC UPWP FY 2019 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	MVPC Technical Support to MVRTA FY 2019 (20% match from MVPC) (N)	Carryover Used	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 50,000
	MVRTA	Refurbish Engine/ Transmission on 8 Model Year 2011 Transit Buses (M)	Carryover Used	\$ 240,000	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
	MVRTA	Replace Model Year 2012 Bus/Van Surveillance Security System (M)	Carryover Used	\$ 824,000	\$ 206,000	\$ -	\$ -	\$ -	\$ -	\$1,030,000
	MVRTA	Replace 4 Model Year 2012 Supervisory Vehicles	Carryover Used	\$ 289,645	\$ 72,410	\$ -	\$ -	\$ -	\$ -	\$ 362,055
	5307 Subtotal ►				\$ 5,263,720	\$ 338,410	\$ -	\$ -	\$ 957,520	\$ 20,000

2018 Projects from MVRTA 2014-2018 Capital Program FFY 2014- FFY 2018

FTA Program ▼	Regional Transit Authority ▼	Project Description ▼	Carryover or Earmark Details ▼	Federal Funds ▼	State Match Sources				RTA Funds ▼	Total Cost ▼
					RTACAP ▼	MAP ▼	TDC ▼	SCA ▼		
5309 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5309 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5310 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5311 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5316 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5317 Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SoGR ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Livability ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TIGER ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other ▶		No Projects Programmed	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Subtotal ▶				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total ▶				\$ 5,263,720	\$ 338,410	\$ -	\$ -	\$ 957,520	\$ 20,000	\$ 6,579,650
Fiscal Constraint Analysis										
Federal Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		State Funding Source ▼	Programmed ▼	Available ▼	(+/-) ▼		
FFY 17 / 5307	\$ 3,305,450	\$ 5,300,000	\$ 1,994,550	Available	RTACAP					
Carryover/5307	\$ 1,958,270	\$ 1,958,270	\$ -	Available	MAP					
Total 5307	\$ 5,263,720	\$ 7,258,270	\$ 1,994,550	Available	SCA					
					TDC	\$ -				

APPENDIX F

FY 2014-2017 TIP

Key to Maps Showing Locations of Transportation Projects

Map Number	Project Number	City/Town	Project Description
1	602033	AMESBURY	AMESBURY- RECONSTRUCTION OF ROUTE 150
1	606669	AMESBURY	AMESBURY- POWWOW RIVERWALK CONSTRUCTION, FROM MAIN STREET TO WATER STREET, INCLUDES PED BRIDGE A-07-034 (PHASE I)
1	603682	AMESBURY	AMESBURY- BRIDGE REPLACEMENT, A-07-026, ROUTE I-495 (NB & SB) OVER THE BIKEWAY (ABANDONED B&M RR LINE)
2	607471	LAWRENCE	LAWRENCE – UNION CROSSING PEDESTRIAN IMPROVEMENTS (CONSTRUCTION OF PEDESTRIAN IMPROVEMENTS ON UNION STREET BETWEEN MERRIMACK RIVER AND ESSEX STREET)
3	606503	NEWBURYPORT	NEWBURYPORT- CLIPPER CITY RAIL TRAIL ALONG THE CITY BRANCH (PHASE II)
4	605114	GROVELAND	GROVELAND- REHABILITATION OF ROUTE 97 (SCHOOL STREET & SALEM STREET)
5	606161	HAVERHILL	HAVERHILL- IMPROVEMENTS ON MAIN STREET (ROUTE 125)
5	605720	HAVERHILL	HAVERHILL- RIVERWALK CONSTRUCTION (BRADFORD SECTION) FROM ROUTE 125 TO COUNTY ROAD
6	605181	METHUEN	METHUEN- INTERCHANGE RECONSTRUCTION ON I-93 AT ROUTE 110/113 ROTARY, INCLUDING REMOVAL OF M-17-017 & M-17-018, REHAB OF M-17-007 & NEW BRIDGE CONSTRUCTION OF M-17-040
6	607476	METHUEN	METHUEN-RESURFACING AND RELATED WORK ON ROUTE 213
7	606159	NORTH ANDOVER	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE
7	N. AND. SRTS	NORTH ANDOVER	NORTH ANDOVER - SAFE ROUTES TO SCHOOL (NORTH ANDOVER MIDDLE)
8	SALIS B to B	SALISBURY	BOXFORD- GEORGETOWN- NEWBURY- SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL) * SALISBURY SECTION
8	NORTH GEORGETOWN B to B	GEORGETOWN	BOXFORD- GEORGETOWN- NEWBURY- SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL) * NORTHERN GEORGETOWN SECTION
9	606549	VARIOUS	GEORGETOWN- NEWBURY- WEST NEWBURY- NEWBURYPORT- AMESBURY- SALISBURY- INTERSTATE MAINTENANCE & RELATED WORK ON I-95

APPENDIX G

Comments Received on Draft MVMPO FY 2014-2017 TIP

CLF comments on the draft TIP



For a thriving New England

CLF Massachusetts 62 Summer Street
Boston MA 02110
P: 617.350.0990
F: 617.350.4000
www.clf.org

By First-Class Mail and E-Mail

June 4, 2013

Anthony Komornick
Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830

Dear Mr. Komornick:

I write on behalf of Conservation Law Foundation (“CLF”) to provide the following comments on the Merrimack Valley Metropolitan Planning Organization’s (“MPO”) draft Transportation Improvement Program for fiscal years 2014-2017 (“TIP”). CLF is a nonprofit, member-supported regional environmental organization working to conserve natural resources, protect public health, and promote thriving communities for all in the New England region. CLF has long advocated for enhanced public transportation in New England.

We provide these comments to strongly support the inclusion of two segments of the Border to Boston trail (Salisbury and Georgetown) in fiscal year 2017 of the TIP. We also greatly appreciate the continued programming of \$450,000 in flexed highway funds in the TIP for FY2015 to allow the Merrimack Valley Regional Transit Authority (“MVRTA”) to purchase hybrid replacement buses and urge the MPO to add two further bus upgrades in FY2016, where roughly \$300,000 in Surface Transportation Program (“STP”) funds remain available.

The continued inclusion of GHG tracking information in the TIP, as required by the GreenDOT Policy Directive (“GreenDOT”), appears to have been very useful to MPO members in their deliberations and will also be useful to the general public in reviewing the draft TIP. We respectfully request that in future years, MPO members be provided with quantitative information regarding greenhouse gas (“GHG”) emissions projected in connection with *all* individual transportation projects (with a significant positive or negative GHG impact) prior to selection for inclusion in the Transportation Improvement Program.

Border to Boston Trail

The Border to Boston trail—an emerging twenty-eight mile shared use trail, which will link eight communities from the New Hampshire border to Boston’s North Shore—is an important regional project that will help to promote active transportation and thereby reduce GHG emissions and improve local and regional air quality. The Border to Boston trail is included in the Bay State Greenway Priority 100, a list of shared-use path segments that are MassDOT’s top trail priorities.

CLF MAINE • CLF MASSACHUSETTS • CLF NEW HAMPSHIRE • CLF RHODE ISLAND • CLF VERMONT



We therefore appreciate that the MPO, after losing statewide Transportation Alternatives Program (“TAP”) funding to a yet to be defined statewide competitive process, was able to quickly act to add back this important project to the TIP in FY2017 with CMAQ target funds. Moreover, we were pleased that an additional segment of the Border to Boston trail, the 3.6 mile-long Newbury to Georgetown portion, was also added to the TIP in FY2017. Both of these segments of the Border to Boston trail will have a significant positive impact on the region’s environment and economy.

MVRTA Hybrid Replacement Buses

CLF is very pleased that the MPO last year programmed in the TIP funding for hybrid replacement buses for the MVRTA for FY2015 and that the draft TIP maintains this funding. This funding will make it possible for the MVRTA to replace three out of seventeen aging buses in 2016 with hybrid buses rather than diesel buses. The fuel savings these hybrid buses will provide are very important to the transit authority given the already high price of fuel and anticipated fuel price spikes in the near future. The hybrid buses will also help emit fewer greenhouse gases and improve local and regional air quality.

The GWSA, M.G.L. c. 21N, provides that, by 2020, statewide GHG emissions shall be reduced twenty-five per cent below the 1990 emissions level and requires the Commonwealth to develop a plan to achieve those reductions. The transportation sector produces nearly forty percent of the total GHG emissions in Massachusetts so it is particularly important to ensure emissions are aggressively reduced in this sector. See MPO’s Long Range Transportation Plan – Paths to a Sustainable Region (“LRTP”) at 5-3. Additionally, over the last twenty-five years, total VMT has increased nearly seventy percent.¹ At the same time, public transit in New England averted more than 1.7 mmt of carbon dioxide emissions—the equivalent of taking 310,000 cars off the road for a year.² Given the growing climate crisis, the Commonwealth needs to create the right incentives, promote transit ridership, and reduce VMT in order to achieve the GWSA GHG reduction target by 2020. Reliable, accessible public transportation is a critical component of any successful GHG reduction policy. We therefore greatly appreciate that the MPO has decided to flex a portion of the funding available for programming in the TIP for a transit project as provided by the Intermodal Surface Transportation Efficiency Act of 1991 (“ISTEA”), continued under the 1998 Transportation Equity Act for the 21st Century (“TEA-21”), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (“SAFETEA-LU”), and in Moving Ahead for Progress in the 21st Century (“MAP-21”).

¹ See *Cool Moves: Transit in NE and Its Role in Curbing Global Warming Environment NH* (2007). Found at: <http://www.environmentnewhamshire.org/reports/environmental-health/global-warming-reports/cool-moves-transit-in-new-england-and-its-role-in-curbing-global-warming-pollution> (8-10-09).

² *Id.*



By flexing funding for transit, the MPO is furthering GreenDOT, which the Commonwealth specifically has incorporated into the Massachusetts Clean Energy and Climate Plan for 2020 (“Climate Plan”). See Climate Plan at pp. 66-67. The Transportation Improvement Programs and the Statewide Transportation Improvement Program **must be consistent with the Commonwealth’s GHG reduction target.** Id. at 66 (emphasis added). GreenDOT and the Climate Plan specifically require the MPOs and MassDOT to “balance highway system expansion projects with other projects that support smart growth development and promote public transit, walking and bicycling.” Id.

Considering the great benefits of the hybrid buses and the MVRTA will be replacing a total of seventeen buses, we urge the MPO to add two more hybrid bus upgrades to FY2016, where \$296,645 in STP funds remain available prior to finalizing the TIP.

GHG Modeling

As required by GreenDOT since it was issued two years ago, the MPO last year began to model GHG emissions for certain transportation projects. This GHG tracking information has been incorporated into the TIP. Including such GHG accounting data makes it transparent and available to the public, and importantly, assists the deliberations of MPO members as they develop the TIP. We therefore applauded the MPO for taking this crucial step last year, one that not every Metropolitan Planning Organization in Massachusetts had taken at that time. The GHG emissions data provided in the TIP, however, has not yet been quantified for each project.

GreenDOT requires that for “project prioritization and selection:”

“Regional Transportation Improvement Programs (TIPs) and State Transportation Improvement Program (STIP) will include an evaluation of overall greenhouse gas emissions from the project programs, and will need to be developed in a manner that fits into an overall state greenhouse gas reduction target. This will require that the MPOs and MassDOT balance highway system expansion projects with other projects that support smart growth development and promote public transit, walking and bicycling.” See GreenDOT, p. 5.

Accordingly, the MPO must evaluate emissions for each project in order to be able to compare projects under consideration, make appropriate choices, assess the total GHG emissions profile of the TIP, and assure it is *decreasing over time*. The MPO must be able to consider quantified GHG emissions from each individual transportation project included in the TIP, so that project selection can be prioritized on the basis of GHG emissions as required by GreenDOT and the Climate Plan issued pursuant to the GWSA. We therefore respectfully request that next year the MPO provide such information to its members and the public for *all* projects under consideration which are expected to have a significant positive or negative impact on GHG emissions.



Thank you for your consideration of these comments. If you have any questions, I can be reached by phone at (617) 850-1739 or by email at rmares@clf.org.

Sincerely,

Rafael Mares
Staff Attorney

cc David Mohler, MassDOT (by e-mail only)
Clinton Bench, MassDOT (by e-mail only)

Response to CLF Comments:

The projects that CLF's comments are supporting, the Salisbury and northern Georgetown sections of the Border-to-Boston trail and the \$450,000 flex CMAQ funds to MVRTA for some bus replacements to be hybrid fuel buses, remain programmed in the final 2014-2017 TIP endorsed on June 27, 2013.

The comments also urged the MPO to spend STP funds that were available in the draft in FY 2016 on more hybrid fuel bus replacements. However, MassDOT proposed using these funds to add to the percentage of regional funds going to the Methuen Rotary project, along with an additional \$4,832,356 of Statewide CMAQ funding being added to FY 2016.

Finally the MVMPO has evaluated all of the TIP projects that would have a significant quantifiable effect on greenhouse gas (GHG), with the exception of the hybrid bus upgrades. Currently EPA does not have a reasonably efficient way of calculating the GHG savings of various fueled buses.

FHWA comments on MVMPO draft TIP

6-24-2013

Good afternoon Tony. While the Draft TIP is out for comments, FHWA is taking this opportunity to provide a few comments that should be addressed prior to preparing the final document for MPO endorsement. They are:

Introduction

- has no reference to SAFETEA-LU or the subsequent legislation, MAP-21. Please insert a reference so the reader understands that the federal requirements are based in legislation.

Prioritization

- The Transportation Evaluation Criteria is an excellent section within which to explain to the reader that the TEC, meets MAP-21's requirement for TAP funding (the required competitive process) and, in general, helps to manage performance by focusing available funding on the highest regional priorities. It also helps to draw attention to the reader that MAP-21 is a very Performance Measure-oriented piece of legislation.

Part A.5

- The definition for AC should discuss that construction must occur over the years for which funding is programmed, based on engineering decisions. Just emphasizing that the engineering drives the length of time needed for construction.

On the 2014 Element

- Please review each entry on this element. The cost estimates used should be 2014 "present Day" costs. No reference to inflation should be present. At present, these projects appear to identify both a 2013 and a 2014 cost. Please only use 2014 dollars.
- Minimum HSIP and CMAQ have been met
- Element is financially constrained.

On the 2015 Element

- Please only show the 2015 dollar costs, calling attention to the fact that a 4% inflation rate, over 2014, was factored in to them.
- It is noted that the TAP minimum amount programmed has not been met.
- HSIP and CMAQ minimums have been met.
- Element is financially constrained.

On the 2016 Element

- Please only show the 2016 dollar costs, calling attention to the fact that a 4% inflation rate, over 2015, was factored in to them.
- It is noted that the TAP minimum amount programmed has not been met.
- HSIP and CMAQ minimums have been met.
- Element is financially constrained.

On the 2017 Element

- It is noted that there are no projects programmed in the 2017 Element, using target funding of any kind. Please work with MassDOT to program eligible projects for STP, CMAQ, HSIP and TAP funding.
- As a result of the condition leading to the comment above, no minimum amounts programmed have been met.

Target Tables

- The print is too small to be legible. Please correct this. The version in the final document must be legible. Please work with MassDOT if necessary to correct this issue.

MassDOT Highway Operating and Maintenance Expenditures Table

- The print is too small to be legible. Please correct this. The version in the final document must be legible. Please work with MassDOT if necessary to correct this issue.

Status on Implementation of FFY 2013 TIP Projects (p.66)

- The MPO has until 90 days after the beginning of the Federal Fiscal Year to publish an update to this listing with current information. Thank you for including it here in the TIP. As the end of December approaches, please review the list to see if any further updates are necessary to add.

Please feel free to contact me if any clarification is necessary, regarding y comments above. Thank you again for the opportunity to comment on the draft TIP. Have a nice day.

Paul



Paul F. Maloney, P.E. (Maryland)
Statewide and Metropolitan Planner
FHWA - Massachusetts Division
55 Broadway, 10th floor
Cambridge, MA 02142
Phone: 617-494-3610
Email: paul.maloney@dot.gov

Response to FHWA comments:

All of the changes requested have been made in the final report with the exception that there remains funding yet to be programmed for TAP in FFY 2015 and FFY 2016 and HSIP in FFY 2017. The MVMPO did program the FFY 2017 regional STP and CMAQ target funds as all CMAQ category funds, as well as the FFY 2017 TAP regional target funds for the Salisbury and northern Georgetown sections of the Border to FFY 2017.

MassDOT comments on MVMPO draft TIP



Deval L. Patrick, Governor
Richard A. Pinsky, Secretary & CEO



June 21, 2013

Dennis DiZoglio, Executive Director
Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830

Dear Mr. DiZoglio:

The Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning (OTP) has reviewed the draft Federal Fiscal Year 2014 to 2017 Transportation Improvement Program (TIP) released by the Merrimack Valley Planning Commission's Merrimack Valley Metropolitan Planning Organization (MPO) on May 22, 2013. I would like to take this opportunity to provide feedback on the MPO's 3C planning process as it relates to the preparation of this document and to comment specifically on the contents of the draft document released for public review.

As required under the federal Moving Ahead for Progress in the 21st Century (MAP-21) legislation, we must continue to seek ways to incorporate performance measures into our planning process by identifying key metrics, targets and thresholds that can be used to measure progress on priority activities. As federal guidance on performance measurement becomes available, MassDOT looks forward to working with all of Massachusetts' MPOs to develop performance-based planning processes that will help the regions to set policies and prioritize projects in a manner consistent with federal and state goals.

As the federally-authorized entities charged with ensuring public participation in the spending of federal funds, MPOs have a primary responsibility for outreach and civic engagement in the development of the TIP. We commend the MPO for its efforts in holding MPO meetings on April 17, May 22, and June 27 to present the TIP development process and the scoring of projects, to propose the draft TIP, and to endorse the final TIP, respectively. OTP urges the MPO to ensure that the TIP and any subsequent amendments are as accessible as possible to members of the public. MPO staff should consult with the MPO on guidelines and standard practices for making the TIP and TIP amendments easily available. This should include the posting of the TIP and TIP amendments on the MPO's website, updating the TIP project lists whenever they are amended, and ensuring that the TIP project lists are labeled with the number and date of the latest amendment.

OTP also reminds the MPO of the importance of ensuring that the MPO process is accessible to all individuals, including members of Title VI, Environmental Justice (EJ),

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and Limited English Proficiency (LEP) communities, as this part of the process continues to be a major priority for the U.S. Department of Transportation. We encourage a continued emphasis on engaging these populations during the planning process and throughout all transportation planning-related efforts in accordance with the Region's public participation plan.

In preparing to endorse the 2014-2017 TIP, the MPO should bear in mind that the Congestion Mitigation and Air Quality Improvement (CMAQ) and Highway Safety Improvement Program (HSIP) components of the regional target are a minimum. MPO staffs should work with the proponents of regional target projects, OTP, and the Highway Division to leverage CMAQ and HSIP funds to the maximum extent possible within the overall regional target.

Beginning this year, MassDOT will deploy our custom-developed database for compiling the State Transportation Improvement Program (STIP). In order to ensure that this process is as trouble-free as possible, we are asking that all of the MPOs keep their TIP list information as consistent as possible. First, the project description field should exactly match the MassDOT ProjectInfo description. Any other information should be included in the "Additional Information" field, including total project cost, project funding sources, source of match funding (other than state bond funding), project costs in Year of Expenditure, Design Funding, and an identification of the Advance Construction (AC) year/total AC years (e.g. "AC Year 1 of 3") as applicable.

The MassDOT Rail and Transit Division is also deploying a new system for creating and managing the TIP transit project lists. Regions are encouraged to ensure that transit project descriptions are as informative as possible for public review. To this end, the MassDOT Rail and Transit Division is reviewing and updating the descriptions for many of the TIP transit projects. In order to ensure the most up to date transit project list from Grants Plus+ is made available to the public, the MPO should include a current TIP list from Grant Plus+ when it is time to endorse its TIP.

The MPO should also make every effort to program the full amount of their regional target for all TIP years. The closer the year, the more important full programming is. However, given all of our transportation system's needs, and all of the deserving projects, we expect each MPO to identify projects that will fully utilize available target funds in all of the TIP years. If the regional targets are not fully programmed, the MPO should work with the MassDOT Highway Division districts and with the regional municipalities in a timely fashion to identify additional projects.

In addition, please note the following comments specific to the information contained in the Merrimack Valley MPO's DRAFT 2014-2017 TIP.

- In Part A. 6, please clarify that the listed funding categories are from SAFETEA-LU and insert the appropriate information related to funding categories from MAP-21.
- In Part A. 6, the definition of TDC is incorrect. The abbreviation stands for Transportation Development Credits.
- In the 2014 highway project listing in section 1.D, the funding for the Methuen Rotary project will be wholly Regional Major Infrastructure CMAQ instead of split

between Statewide CMAQ and Regional Major Infrastructure-CMAQ. The Statewide CMAQ line item should be removed, and the Regional Major Infrastructure-CMAQ line item should increase to a total amount of \$23,808,000.

- In the 2015, 2016, and 2017 highway project listings, the regional target TAP funds are currently unprogrammed. I encourage you to determine whether the currently programmed projects are eligible for TAP funding and program them as such, or identify projects in your region and program them in the TIP. Due to guidance received from the Federal Highway Administration, it is understood that the region's transportation evaluation criteria process fulfills the requirement for evaluating and awarding TAP funds. Please ensure that your transportation evaluation criteria take into consideration projects' components that are 1A²-eligible.
- In the 2015 highway project listing in section 1C-Other, please add the North Andover – Safe Routes to School (North Andover Middle) project for a total amount of \$655,200 of statewide TAP funds. This addition is due to guidance received from the Federal Highway Administration that our Safe Routes to Schools program is already an established competitive application process and can therefore be programmed with TAP funds.
- In the 2015 highway project listing in section 1D, the statewide CMAQ funding for the Methuen Rotary should be removed, and an amount of \$23,808,000 should be programmed under Regional Major Infrastructure-CMAQ.
- In the 2016 highway project listing in section 1D, a line item for Regional Major Infrastructure-CMAQ should be added with the amount of \$4,832,356 for the Methuen Rotary project.
- In order to maintain a consistent contribution to match the contribution of statewide funds, please program in the 2016 highway project listing in Section 1A the amount of \$296,645 in regional CMAQ funds for the Methuen Rotary project.
- In the 2017 highway project listing, the regional target HSIP funds are unprogrammed. I encourage you to work with the MPO, the MassDOT Highway Division District 4, and the municipalities to identify HSIP-eligible projects for programming.

I commend the Merrimack Valley MPO members and staff for their hard work in creating an accessible and comprehensive document. I recognize the thorough, full and open public process that the MPO membership and staff fulfill, especially in respect to the preparation of certification documents such as the TIP. Please contact me at (857) 368-8865 or Calli Cenizal at (857) 368-8843 if you have further questions.

Sincerely,



David J. Mohler
Executive Director
Office of Transportation Planning

Cc: Pamela Stephenson, Division Administrator, Federal Highway Administration
Mary Beth Mello, Regional Administrator, Federal Transit Administration
Francis DePaola, MassDOT Highway Division Administrator
Paul Stedman, Acting MassDOT Highway District 4 Director
Clinton Bench, Deputy Executive Director, Office of Transportation Planning
Ned Codd, Director of Project Oriented Planning
Shri Warrington, Manager of MPO Activities
Catalda Cenizal, MPO Liaison

Response to MassDOT comments:

All of the changes requested specific to the MVMPO have been made in the final report with the exception that there remains funding yet to be programmed for TAP in FFY 2015 and FFY 2016 and HSIP in FFY 2017.

MVRTA comments on MVMPO draft TIP

MVRTA Comment: In Appendix E update the MVRTA FFY 2014-2018 Capital Program to the one Adopted on May 2, 2013.

Response to MVRTA Comment:

Change made.

Appendix H

May 2014 Amendments to the MVMPO FFY 2014-2017 TIP

The May 2014 Amendment to the MVMPO 2014-2017 TIP moved the Amesbury Powwow Riverwalk project from FFY 2014 to FFY 2015 and advanced some of the funding for the Methuen Rotary Advance Construction project from FFYs 2015 and 2016 to FFY 2014 to fill in CMAQ funding in FFY 2014 that previously was slated for the Powwow Riverwalk.

The reprogramming of the FFY 2014 TAP funds previously slated for the Powwow Riverwalk was “Tabled” so that the MPO can gather additional project proposals.

Appendix I

Comments received on the Draft May 2014 Amendments to the MVMPO 2014-2017 TIP during the public review period

Jerry Klima of Salisbury supports the use of TAP funds to pay for the design of the Powwow Riverwalk.