

Merrimack Valley Metropolitan Planning Organization

Federal Fiscal Years 2018 to 2022

**Transportation Improvement Program as
Amended through January 2018**

Final Report



January 2018

Prepared by the Merrimack Valley Planning Commission

This document was prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation. (under Contracts #95416, #MA-80-010 and #MA-80-011 with MassDOT) The views and opinions of the Merrimack Valley Planning Commission expressed herein do not necessarily state or reflect those of the Massachusetts Department of Transportation or the U.S. Department of Transportation.

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Table of Contents

Endorsement Page for Federal TIP - Signatures	1
Self Certification Compliance	3
310 CMR 60.05: Global Warming Solutions Act – Signatures	5
Part A. Introduction	7
Part A. 1. TIP Development Process.....	7
Part A. 2. Performance Measures	11
Part A. 3. Prioritization	18
Part A. 4. Public Participation.....	30
Public Participation Plan Stakeholder List.....	31
Part A. 5. Amendment/Adjustment Procedures.....	37
Part A. 6. High Priority Projects.....	38
Part A. 7. Advance Construction	40
Part A. 8. Transportation Funding Programs.....	41
Highway Projects	41
Transit Projects.....	43
Organization of Project Listings – Transit Projects	47
Part B. Project Listings.....	49
Highway Projects	49
Transit Projects.....	69
Summary of Highway Project Listings by Town	75
Part C. Federal Requirements	81
Part C.1. Highway Program Financial Plan	82
Final 2018-2022 State Transportation Improvement Program Budgets	83
Highway Program Financial Plan Table	89
Summary of Highway Funding Categories.....	90
Part C. 2. Transit Program Financial Plan.....	95
Transit Program Financial Plan Table.....	96
Summary of Transit Funding Categories	101
MVRTA Transit Operations and Maintenance Summary Table	102
Part C. 3. Status on Implementation of FFY 2017 TIP Projects	105
FFY 2017 Highway Project List.....	105
Part C. 3. Status on Implementation of FFY 2017 TIP Projects	106
FFY 2017 Transit Project List	107
Part C. 4. Air Quality Conformity	110
Part C. 5. Special Efforts - ADA	124
Part C. 6. Title VI Notice to Beneficiaries	124
Part C. 7. Environmental Justice.....	127

Part C. 8. Equity Analysis..... 130
List of Appendices in Separate File..... 145

Endorsement Page for Federal TIP - Signatures



Merrimack Valley Metropolitan Planning Organization Endorsement of the October 2017 Amendment #1 to the FFYs 2018-2022 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 FFYs 2018-2022 TIP is financially constrained and that the implementation of the Merrimack Valley Metropolitan Planning Organization 2016 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 October 2017 Amendment #1 to the FFYs 2018-2022 Transportation Improvement Program.

Signatory Certification:

Date: November 29, 2017

Stephanie Pollack
Secretary/
CEO Mass DOT

Joseph Costanzo
Administrator
MVRTA Advisory Board

James Fiorentini
Mayor of Haverhill

Jonathan L. Gulliver
MassDOT Highway
Division Administrator

William Buckley
City of Methuen

Daniel Rivera
Mayor of Lawrence

Joseph Bonavita
Town of Georgetown

Neil Harrington
Town of Salisbury

Robert Snow
Town of Rowley

Karen Conard
MVPC Director

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**Self Certification Compliance
Statement - Signatures
Merrimack Valley Metropolitan
Planning Organization**

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 FAST Act (Pub. L. 114-357) 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;
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:

Date: May 24, 2017

Stephanie Pollack
Secretary/
CEO Mass DOT

Joseph Costanzo
Administrator
MVRTA Advisory Board

James Fiorentini
Mayor of Haverhill

Thomas Tinlin
MassDOT Highway
Division Administrator

William Buckley
City of Methuen

Daniel Rivera
Mayor of Lawrence

David Surface
Town of Georgetown

Neil Harrington
Town of Salisbury

Robert Snow
Town of Rowley

Karen Conard, MVPC Director

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310 CMR 60.05: Global Warming Solutions Act – Signatures

310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation

Self – Certification Compliance Statement for Metropolitan Planning Organizations

This will certify that the FFYs 2018-2022 Transportation Improvement Program for the Merrimack Valley Metropolitan Planning Organization is in compliance with all applicable requirements in the State Regulation 310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation. The regulation requires the Metropolitan Planning Organizations (MPOs) to:

1. 310 CMR 60.05, 3(b)(1)(a): Evaluate and track the GHG emissions and impacts of RTPs and TIPs;
2. 310 CMR 60.05, 3(b)(1)(b): In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in RTPs, TIPs, and STIPs based on factors that include GHG emissions and impacts;
3. 310 CMR 60.05, 3(b)(1)(c): Quantify net GHG emissions and impacts resulting from projects in RTPs and TIPs and have made efforts to minimize GHG emissions and impacts;
4. 310 CMR 60.05, 3(b)(1)(d): Determine in consultation with MassDOT that the appropriate planning assumptions used for GHG emissions modeling are consistent with local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency;
5. 310 CMR 60.05, 4(a)(2)(e): Develop public consultation procedures for GHG reporting and related GWSA requirements consistent with current and approved regional public participation plans;
6. 310 CMR 60.05, 4(c): Prior to making final endorsements on the RTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the GHG Assessment and information on related GWSA activities in RTPs and TIPs and provide an opportunity for public review and comment on the RTPs, and TIPs.
7. 310 CMR 60.05, 6(a): After a final GHG assessment has been made by MassDOT and the MPOs, MassDOT and the MPOs shall submit MPO-endorsed RTPs and TIPs within 30 days of endorsement to the Department for review of the GHG assessment.

Signatory Certification:

Date: May 24, 2017

Stephanie Pollack Secretary/CEO Mass DOT	Joseph Costanzo, Administrator MVRTA Advisory Board	James Fiorentini Mayor of Haverhill	
Thomas Tinlin MassDOT Highway Division Administrator	William Buckley City of Methuen	Daniel Rivera Mayor of Lawrence	
David Surface Town of Georgetown	Neil Harrington Town of Salisbury	Robert Snow Town of Rowley	Karen Conard MVPC Director

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Merrimack Valley Metropolitan Planning Organization FFYs 2018-2022 Transportation Improvement Program Final Report prepared January 2018

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 primarily funded through the federal transportation act titled “Fixing America’s Surface Transportation Act (FAST Act)” that was signed into law December 4, 2015. The FAST Act funds \$305 billion dollars for transportation for Federal Fiscal Years (FFYs) 2016 through 2020.

The previous legislation “Moving Ahead for Progress in the 21st Century (MAP-21)” established planning factors known as the “MAP-21 eight planning factors”. The FAST Act adds two new planning factors (numbers 9 and 10 in the list that follows), the FAST Act stipulates that the metropolitan planning process...

“provide for consideration of projects and strategies that will-

- A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- B) increase the safety of the transportation system for motorized and non-motorized users;
- C) increase the security of the transportation system for motorized and non-motorized users;
- D) increase the accessibility and mobility of people and for freight;
- E) protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- F) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- G) promote efficient system management and operation;
- H) emphasize the preservation of the existing transportation system;

- I) improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- J) enhance travel and tourism.”

It is the responsibility of the Federal mandated, State designated, regional Metropolitan Planning Organizations (MPOs) to carry out the Federal transportation planning process in their respective urbanized areas and prepare many Federal transportation documents, including the Transportation Improvement Program (TIP). This process, and the MPOs themselves, were established with the intention to include local and regional input into the Federal transportation planning process.

Based on Federal regulations 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). MassDOT combines the 13 regional MPO TIPs with statewide projects to produce the Statewide TIP (STIP) from which Federal-aid highway and transit projects are chosen. 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 and STIP.

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 MVRTA service area. The current MVMPO membership is as follows:

- Secretary of MassDOT –Stephanie Pollack
- MassDOT Highway Division Administrator –Jonathan L. Gulliver
- Merrimack Valley Planning Commission (MVPC) Director –Karen Conard
- Administrator Merrimack Valley Regional Transit Authority –Joseph Costanzo
Advisory Board
- Mayor of Haverhill –James Fiorentini
- Mayor of Lawrence –Daniel Rivera
- Representing Region 1 (Amesbury, Newburyport, Salisbury) –Neil Harrington
- Representing Region 2 (Newbury, Rowley, West Newbury) –Robert Snow
- Representing Region 3 (Boxford, Georgetown, Groveland, Merrimac) –Joseph Bonavita
- Representing Region 4 (Andover, Methuen, North Andover) –William Buckley

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

- Federal Highway Administration –Massachusetts Division –Jeff McEwen
- Federal Transit Administration – Region I – Mary Beth Mello
- Rockingham Planning Commission MPO (NH), Chairman RPC –Phil Wilson
- Boston MPO, President MAPC –Keith Bergman
- Northern Middlesex MPO, Chairman NMCOG –Pat Wojtas
- Nashua MPO (NH), Chairman NRCP –David Hennessey

The TIP has been prepared in accordance with 23 CFR 450.326.

The development of the TIP starts with the Regional Transportation Plan (RTP). The MVMPO's RTP is a twenty-five year plan for transportation projects that can be programmed for implementation with Federal funds. The RTP is fiscally constrained and lists potential future projects in five year blocks. Projects were chosen for the RTP based on MAP-21 transportation planning factors, existing roadway conditions, problems identified through ongoing pavement, congestion, and safety analyses conducted by the MVMPO, local and state project priorities and fiscal factors. Each year, the MVMPO programs projects from the RTP that are 'ready-to-go' into its five-year Transportation Improvement Program (TIP). Only those projects that are specifically identified in the RTP, or are consistent with its recommendations, can be programmed in the TIP.

Only projects from the RTP first two banks of years (i.e., 2016 to 2020 and 2021 to 2025) are programmed in the TIP. A few inconsistencies with spending shown in RTP are that when the MVMPO's FFY 2016 RTP was developed, it was assumed the construction of the Groveland Community Trail and Phase II of the Bradford Rail Trail in Haverhill would occur in FFYs 2021-2025. Both projects are moving through the project implementation and design processes more quickly with the Groveland Community Trail expected to be advertised for construction in FFY 2019 and Phase II of the Bradford Rail Trail to be advertised in FFY 2020.

Projects that appear in the TIP were initiated and selected from a number of sources. Bridge projects have been selected and developed by MassDOT's Bridge section 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" (SD) bridges. The region's Congestion Management Process 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 identified as a "crash cluster" by MassDOT, are used by the Department and local communities to develop TIP projects.

Part A. 2. Performance Measures

Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act require State DOTs and MPOs to establish performance measures to be used in assessing the transportation system and programming projects for Federal funding categories provided in the Acts. The Final Rules establishing these measures have been released in three separate rule makings over the past year. "HSIP and Safety Performance Management Measures" with an effective date of April 14, 2016; and "Pavement and Bridge Condition Performance Measures" and "System Performance/Freight/CMAQ Performance Measures" both with effective dates of May 20, 2017. These Rules define the measures to be used in each of the categories. MassDOT will establish targets based on these performance measures and MPOs will work with MassDOT in choosing the same targets, adapting them to the specific region, or choosing new targets as goals for the MPO. In any case MassDOT and the MPOs will work cooperatively to exchange data and performance targets and measures as required by the legislation. The following are the performance measures as defined by the Final Federal Rules:

HSIP and Safety Performance Management Measures to be applied to all public roads:

- Number of Fatalities
- Rate of Fatalities
- Number of Serious Injuries
- Rate of Serious Injuries
- Number of non-motorized fatalities and non-motorized serious injury

Pavement and Bridge Condition Performance Measures:

- Percentage of Pavements of the Interstate System in Good condition
- Percentage of Pavements of the Interstate System in Poor condition
- Percentage of Pavements of the non-Interstate NHS in Good condition
- Percentage of Pavements of the non-Interstate NHS in Poor condition
- Percentage of NHS bridges classified as in Good condition
- Percentage of NHS bridges classified as in Poor condition

System Performance/Freight/CMAQ Performance Measures:

- Percent of the Person-Miles Traveled on the Interstate that are Reliable
- Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable
- Percent Change in Tailpipe CO₂ Emissions on the NHS Compared to the Calendar Year 2017 Level
- Truck Travel Time Reliability (TTTR) Index on the Interstate System
- Annual Hours of Peak Hour Excessive Delay Per Capita Percent of Non-SOV Travel on the NHS System
- Total Emission Reduction of all projects funded with CMAQ in areas designated as nonattainment or maintenance for ozone (O₃), carbon monoxide (CO), or particulate matter (PM₁₀ and PM_{2.5})

The MVMPO will work cooperatively with MassDOT to determine which performance measures the MPO will collect data for and measure, and which MassDOT will collect data for and measure and will exchange data and program projects for funding with consideration of meeting the targets established for each measure. The performance measures will be incorporated into the Transportation Evaluation Criteria (TEC) in the scoring categories as indicated in the TEC Scoring Criteria Chart in Section A.3.

MassDOT and the MPO's are using many similar performance measures, established prior to the Final Rules, in an effort to consider performance when choosing projects. Safety is currently monitored on all of the region's roadways by using MassDOT crash data to look at the number and types of crashes and where they took place. This is done to identify those areas that may need further study and infrastructure improvements. MassDOT has developed the "Crash Cluster" concept to identify locations where a high number of crashes occur. MassDOT considers crashes over a three year period and uses the Equivalent Property Damage Only (EPDO) method to assign scores to crashes in an effort to identify those locations where more severe crashes occur (10 points if fatal; 5 if personal injury; 1 if property damage only).

Analysis of crash data is used to indicate where a Road Safety Audit (RSA) to assess safety problems at an intersection, or along a roadway, should be conducted. A RSA is required in order for a project to qualify for HSIP funding. Through an RSA, transportation planners, MassDOT staff, public safety and local public works officials meet to review crash history, identify possible causes for the crash problem, and develop recommendations for correcting them.

The MVMPO also identifies all intersections in the region where 10 or more crashes occur in three years and counts and locates crashes involving non-motorized vehicles to capture more of the local potential problem areas.

MassDOT rates bridge condition by AASHTO rating, and programs all bridge and interstate maintenance projects in the TIP.

MVPC has a pavement management system that analyses and tracks the pavement conditions on all Federal-aid non-Interstate roadways for the Regional Transportation Plan.

MassDOT launched the "GreenDOT" initiative in July 2010, designed to make Massachusetts a progressive state in how its transportation network coexists with the environment and supports sustainable development. One of the goals of GreenDOT is to reduce greenhouse gas emissions and therefore the MVMPO and MassDOT analyze greenhouse gas (GHG) (CO₂) emissions impacts of all projects in the TIP.

Monitoring Progress in Meeting Targets

With the establishment of Performance Measure Final Rules, the MVMPO will soon be responsible for monitoring the effectiveness of previous TIPs in meeting the performance targets that are to be established. While MassDOT and the MPOs work together in establishing state and regional measures and targets contained in the Final Rules, staff will develop a methodology for tracking the effectiveness in meeting its existing performance targets as well as any targets related to the federally-mandated measures for inclusion in the FFYs 2019-2023 TIP.

The following table lists all of the programmed projects and which performance target(s), the project will help meet.

**Performance Target(s) Project Will Help Meet
(2018 to 2022 Statewide and Regional Target Funds)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2019- 2020	Amesbury	Amesbury - Reconstruction of Elm Street (# 602418)	\$12,064,000	Number of non-motorized fatalities and non-motorized serious injury.
2018	Amesbury / Salisbury	Amesbury - Salisbury - Trail Connector @ I-95 (# 607737)	\$2,574,805	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2020	Georgetown / Boxford	Georgetown - Boxford Border to Boston Trail, from Georgetown Road to West Main Street (Route 97) (# 607541)	\$1,874,028	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2021	Georgetown / Newbury	Georgetown - Newbury Border to Boston Trail, (Northern Georgetown to Byfield Section) (# 607542)	\$4,341,120	Number of non-motorized fatalities and non-motorized serious injury.

**Performance Target(s) Project Will Help Meet
(2018 to 2022 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2021	Groveland	Groveland - Reconstruction of Route 97 (School Street) from Parker Street to Gardner Street (# 605753)	\$4,049,510	1) Percentage of Pavements of the non-Interstate NHS in Good condition. 2) Number of non-motorized fatalities and non-motorized serious injury.
2019	Groveland	Groveland – Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,835,573	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2020	Haverhill	Haverhill – Bradford Rail Trail Extension from Route 125 to Railroad Street (# 608027)	\$1,176,240	Number of non-motorized fatalities and non-motorized serious injury.
2018-2022	Haverhill	Haverhill – Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River (# 605306)	\$116,603,655	1) Percentage of NHS bridges classified as in Good condition. 2) Percentage of Pavements of the Interstate System in Good Condition and in Poor Condition 3) Percent of the Person-Miles Traveled on the Interstate that are Reliable. 4) Truck Travel Time Reliability (TTTR) Index on the Interstate System.

**Performance Target(s) Project Will Help Meet
(2018 to 2022 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2018	Lawrence / North Andover	Lawrence – North Andover – Resurfacing and related work on Route 114 (# 608809)	\$2,123,453	Percentage of Pavements of the non-Interstate NHS in Good condition.
2019	MVRTA	Flex to FTA for MVRTA new bus upgrade to cleaner fuel buses (# MV0001)	\$698,541	Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level.
2021	Newbury - New- buryport - Salisbury	Newbury - Newburyport - Salisbury - Resurfacing and related work on Route 1 (# 608494)	\$11,854,752	Percentage of Pavements of the non-Interstate NHS in Good condition.
2019	New- buryport	Newburyport - Improvements at Nock Middle School & Molin Upper Elementary School (SRTS) (# 608792)	\$1,593,600	Number of non-motorized fatalities and non-motorized serious injury.

**Performance Target(s) Project Will Help Meet
(2018 to 2022 Statewide and Regional Target Funds) (Cont.)**

Year (s) Program- med	City / Town	Project Description	Total Cost Programmed	Federal Performance Target(s) Project Will Help Meet
2018	North Andover	North Andover - Intersection & Signal Improvements at Route 125 & Massachusetts Avenue (# 606159)	\$3,640,038	1) Number and Rate of Fatalities 2) Number and Rate of Serious Injuries 3) Number of non-motorized fatalities and non-motorized serious injury. 4) Percent change in Tailpipe CO ₂ Emissions on the NHS Compared to Calendar Year 2017 Level. 5) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable.
2021- 2022*	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Driveway (# 608095)	\$16,758,334*	1) Number of non-motorized fatalities and non-motorized serious injury. 2) Percentage of Pavements of the non-Interstate NHS in Good condition. 3) Percent of the Person-Miles Traveled on the non-Interstate NHS that are Reliable. 4) Number and Rate of Serious Injuries
2018	Salisbury	Salisbury - Multi-use Trail Extension (Borders to Boston Trail) Includes new Bridge S-02-004 (# 605020)	\$5,918,500	Number of non-motorized fatalities and non-motorized serious injury.

* This project is being Advance Constructed (AC'd) with a total project cost of \$16,816,717 being reimbursed from 2021 through 2023. Only the 2021 to 2022 funds programmed in this TIP are included in this table.

Part A. 3. Prioritization

The FFYs 2018-2022 Merrimack Valley Metropolitan Planning Organization's Transportation Improvement Program (TIP) contains Federal-aid project programming information for five 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 2018 begins on October 1, 2017 and ends on September 30, 2018. The advertising dates shown for roadway projects were determined based on information provided by the Capital Expenditure and Program Office within MassDOT, the MassDOT District 4 Office, and MVMPO member communities. The MVRTA and MassDOT's Rail and Transit Division determined programming 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 (TEC), project cost and the availability of STP, CMAQ, HSIP and TAP funding in the years covered in the document. Road and bridge project selection is also largely dependent upon the current and expected design status for each project, which can be affected by such factors as environmental permitting and Right-of-Way (ROW) status. For bridge projects, information from MassDOT's Bridge section 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. A score valued from -3 to 3 is assigned to each of the criteria. In fact, there is at least one score associated with each of the FAST Act ten planning factors. The scores within each category are averaged and then the category averages are added together to reach the total score. The following chart illustrates the data and scoring criteria for each TEC element as well as the planning factors considered in each element, and which TEC elements will be affected by future performance measures.

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

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Mobility				
A. Effect on magnitude and duration of congestion	Magnitude of current congestion, measured by Level of Service, traffic delays, or queue lengths, if available. If there is not currently congestion then score is zero unless project causes congestion.	Significant reduction in congestion = 3 Moderate reduction in congestion = 2 Small reduction in congestion = 1 No change in congestion = 0 Small increase in congestion = -1 Moderate increase in congestion = -2 Significant increase in congestion = -3	If there is not currently congestion then score is zero unless project causes new congestion.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Enhance travel and tourism. When official System Performance Measures for Reliability and Delay are established will be incorporated into this TEC element.
B. Effect on travel time and connectivity / access	Types and numbers of upgrades, such as, improves travel time by widening shoulders, or signal improvements; provides new access, connects existing trails, etc.	Major Upgrade such as providing new roadway access = 3 Multiple upgrades from signal improvements, new sidewalks, adding turn lanes, new trail = 3 to 2 One or two of above upgrades, or new = 2 to 1 No Upgrades = 0	Additional point (not above 3) if providing connectivity between schools, businesses, and other activity centers.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Connectivity; Enhance travel and tourism.

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

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

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Safety and Security (Cont.)				
C. Effect on transportation security and evacuation	Is on the NHS. Is a community designated evacuation route. Is within 10 miles of a nuclear power plant.	Will significantly improve travel along an evacuation route = 3 Is an evacuation route within 10 miles of a nuclear power plant, or is on the NHS and improves travel = 2 Is an evacuation route or Is within 10 miles of a nuclear power plant, or in on the NHS = 1 Is not any of the 3 listed in the data column = 0		Security; Safety.
Community Effects and Support				
A. Residential effects: ROW, noise, aesthetic, cut through traffic, and other.	Degree of effect on residential aspects.	Improves these aspects: Significantly = 3 Moderately = 2 Slightly = 1 No effect on these aspects = 0 Creates negative effects from these aspects: Slightly = -1 Moderately = -2 Significantly = -3		Environmental Sustainability;

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Community Effects and Support (Cont.)				
B. Public, local government, legislative, and regional support	Degree of support.	Improves these aspects: Greatly Supported = 3 Moderately Supported = 2 Somewhat Supported = 1 Not Supported, or unknown = 0 Some Opposition = -1		
C. Effect on service to minority or low-income neighborhoods. (Title VI and EJ)	Increased or decreased service to Title VI and EJ neighborhoods	Improves service to Title VI or EJ neighborhoods: Significantly = 3 Moderately = 2 Slightly = 1 No effect on Title VI or EJ neighborhood = 0 Slightly decreased service = - 1 Moderately decreased service = - 2 Significantly decreased service = - 3		Quality of Life; Accessibility and Mobility; Resiliency and Reliability; Enhance Travel and Tourism.

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

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

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

TEC Element	Data	Scoring	Additional Notes	Planning Factors Considered
Environmental Effects				
A. Air Quality / Climate effects	Green House Gas Analysis Results	Effect on Air Quality: Quantified decrease in emissions = 2 or 1 Qualitative decrease in emissions = 1 No effect on emissions = 0 Qualitative increase in emissions = -1 Quantified increase in emissions = - 2 or -1		Protect and Enhance the Environment. When official System Performance Measures for change in CO ₂ emissions on the NHS are established will be incorporated into this TEC element.
B. Water Quality / supply effects; wetlands effects.	Number / degree of positive or negative effects on water quality / supply effects; wetlands effects.	Effect on Water Quality / supply and wetlands: Positive effect: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Negative Effect: Slight = - 1 Moderate = - 2 Significant = - 3		Protect and Enhance the Environment; Reduce or mitigate stormwater impacts.

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

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 Appendix C and also in the 'Additional Information' column in the project listings. It is the goal of the MVMPO that these criteria ratings, along with information related to the readiness of projects, will make the planning process, and more specifically, the selection and prioritization of projects, more transparent to the general public. A sample project evaluation sheet showing the various criteria is in Appendix D.

The use of these TEC scores also allows the Merrimack Valley MPO to meet FAST Act requirements for programming Transportation Alternatives (TA) funding (similar to TAP funding from the previous legislation). TA funding is a set-aside of Surface Transportation Block Grant Programming (STBG) through a 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 FAST Act is a very Performance Measure - oriented piece of legislation.

Part A. 4. 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 FFYs 2018-2022 Transportation Improvement Program was developed in accordance with the Public Participation Process established for the Merrimack Valley Metropolitan Planning Organization (MVMPO). The MVMPO amended its current Public Involvement Process in March of 2017, it is contained in the [MVMPO Public Participation Plan as Amended through March 2017](#). The Process applies to the development of the Transportation Improvement Program (TIP), the Regional Transportation Plan (RTP) and the Unified Planning Work Program (UPWP). The Public Involvement Process endorsed by the MVMPO is also used by the MVRTA as its public involvement process. The notice of public involvement and time established for review and comment for the development of this TIP satisfies the Program of Project requirements established by the Federal Transit Administration (FTA).

The Merrimack Valley MPO's Public Participation Plan as amended through March 2017, reflects the consultation requirements identified in the FAST Act of 2015 and prior federal transportation authorizations, and the existing transportation planning regulations developed by the U.S. Department of Transportation for the development of Regional Transportation Plans and Transportation Improvement Programs. This document identifies a number of stakeholders to be consulted in developing these docu-

ments. In developing the Draft FFYs 2018-2022 Transportation Improvement Program, all MVMPO stakeholders were given notice that the process of developing the FFYs 2018-2022 TIP was beginning. Stakeholders were also notified of the availability of the document for public review and comment.

Public Participation Plan Stakeholder List

Listed below are categories of interested individuals, organizations and other stakeholders (Interested Parties) identified by the MVMPO for inclusion in the PPP. They are defined based on the individual groups identified in the FAST Act of 2015 and prior federal transportation authorizations, and the existing transportation planning regulations developed by the U.S. Department of Transportation.

The MVMPO continues to add individuals, organizations or other stakeholders to this list and their addition is not considered an act requiring the formal amendment of the PPP. Similarly, any of the individuals or organizations identified below may request to be removed from the mailing list and such action does not necessitate a formal PPP amendment.

Individuals, including:

- Interested individuals, business persons
- Merrimack Valley Transportation Committee (MVTC) members
- Libraries
- City/Town Clerks
- MVMPO Region Congressional Delegation
- MVMPO Region Legislative Delegation

Affected public agencies, including:

- Boards of Selectmen / City Councils
- Chief Elected Officials
- City and Town Engineers
- Federal Emergency Management Agency
- Federal Highway Administration
- Federal Transit Administration
- Greater Derry-Salem Cooperative Alliance for Regional Transportation (CART)

- Local Departments of Public Works
- Local Police Departments
- Local Traffic and Safety Committees
- MassRIDES
- Massachusetts Department of Environmental Protection
- MBTA Commuter Rail Officials
- Massachusetts Executive Office of Housing and Economic Development
- Massachusetts Executive Office of Public Safety and Security
- MassDOT
- Merrimack Valley Regional Transit Authority
- Metropolitan Area Planning Council
- Nashua Regional Planning Commission
- Rockingham Planning Commission
- U.S. Environmental Protection Agency

Representatives of public transportation employees, including:

- Truck Driver's Union Local #170

Freight shippers, including:

- P.J. Murphy Transportation
- JB Hunt
- Estes Express
- Shaheen Brothers
- ABF Freight
- PanAm Railways
- Bonney's Express

Providers of freight transportation services, including:

- United Parcel Service
- Federal Express

Private profit- and non-profit providers of transportation in the region, including:

- Assist Incorporated
- C&J Transportation
- Cape Ann Transit Authority (CATA)
- Central Wheelchair and Van Transportation
- EMT Corporation
- Local Taxi Companies
- Northern Essex Elder Transportation (NEET)
- Other Transportation Providers Identified in the Regional Transportation Plan
- The Coach Company
- TransCare

Representatives of users of public transportation, including:

- American Training, Inc.
- Cambridge College
- Community Action Incorporated (CAI)
- Emmaus, Inc.
- Elder Services of the Merrimack Valley
- Local Senior Centers/Councils on Aging
- Northeast Independent Living Program
- Merrimack College
- Merrimack Valley Hospice
- Merrimack Valley Workforce Investment Board, Inc.
- Northern Essex Community College
- Office of Employment Services

Representatives of bicyclist and pedestrian advocacy organizations, including:

- Andover Trails Committee
- Bay Circuit Alliance
- Coastal Trails Coalition
- Essex National Heritage Commission
- Essex County Trail Association

- Groveland Open Space and Recreation Committee
- MassBike
- Merrimack Valley Off-Road Trails Committee

Representatives for the community of individuals with disabilities, including:

- Executive Office of Health and Human Services
- Northeast Independent Living Program
- Department of Mental Health
- Massachusetts Commission for the Blind
- Area Nursing Homes
- United Cerebral Palsy
- CLASS Inc.
- Fidelity House
- Association of Retarded Persons (ARC)

Organizations and facilities that serve low-income and minority households who traditionally have been underserved by existing transportation systems and may face challenges accessing employment and other services, including:

- MVRTA Transit Centers in Amesbury, Haverhill and Lawrence (post notices)
- Social Security Offices
- Employment Offices (post notices)
- Ethnic, Civic/Social, Faith-Based and Veterans Organizations
- Merrimack Valley Goodwill
- Area Hospitals
- Salvation Army
- Groundwork Lawrence
- Lawrence Community Works
- United Way of the Merrimack Valley
- Methuen Arlington Neighborhood, Inc.
- YMCA/YWCA

Agencies and officials responsible for other planning activities within the MPA that are affected by transportation, including:

a. State and local planned growth:

1. Area Planning Boards
2. Mass Development
3. Merrimack Valley Transportation Management Association
4. The Junction Transportation Management Organization

b. Economic development:

1. Chambers of Commerce
2. Economic Development Administration
3. Local Community Development Directors
4. Merrimack Valley Economic Development Council

c. Environmental agencies and federal lands:

1. Andover Village Improvement Society (AVIS)
2. Essex County Greenbelt Association
3. Local Conservation Commissions
4. MassRiverways
5. Merrimack River Watershed Council
6. National Park Service
7. Powwow River Watershed Association
8. Parker River Clean Water Association
9. Shawsheen River Watershed Association
10. Trustees of Reservations
11. U.S. Environmental Protection Agency (EPA)
12. U.S. Fish and Wildlife Service

d. Airport operations:

1. Lawrence Airport Commission

e. Other Interested Parties

1. Conservation Law Foundation

The notices were sent directly to over 900 addressees representing these groups, 630 via e-mail and 300 via traditional mail.

In addition to these direct mailings, and in accordance with this process, public notice of the Draft FFYs 2018-2022 Transportation Improvement Program was published in the *Lawrence Eagle Tribune*, *Newburyport Daily News*, *Haverhill Gazette* (Published Weekly) and *Rumbo News* 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 April 29, 2017 through May 19, 2017. It said that comments would be received through May 19, 2017 and that two separate public hearings on the document would take place on May 9, 2017 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 21-day review and comment period and will include this summary in the Final FFYs 2018-2022 TIP. Public input in developing the TIP was sought at the following meetings in 2017:

- February 22, 2017, March 22, 2017, April 26, 2017 and May 24, 2017 MVMPO Meetings;
- February 2, 2017, March 2, 2017, April 6, 2017 and May 4, 2017 MVRTA Advisory Board meetings held at the MVRTA Office;
- February 16, 2017, March 16, 2017 and April 20, 2017 Merrimack Valley Planning Commission (MVPC) meetings;
- February 14, 2017 Methuen Arlington Neighborhood (MAN, Inc.) held in Methuen;
- February 24, 2017 MVPC Legislative Caucus;
- March 1, 2017 MVPC Planning and Community Development Directors meeting;
- April 5, 2017 MVPC DPW Directors meeting;
- April 26, 2017 Haverhill Mayor's Health Task Force, Healthy Active Living Working Group meeting held at Haverhill City Hall;
- April 29, 2017 Mt. Washington Neighborhood Alliance Health Fair meeting held at the Silver Birch School in Haverhill

The above meetings were held at the Merrimack Valley Planning Commission unless otherwise stated.

Part A. 5. 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 (Annual Element);
- .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 amounts that are less than a ten percent increase in project cost;
- .Changing funding sources.

Major changes continue to require MPO action through the formal amendment process. Major changes would require a twenty-one 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;
- .Ten percent or more increases in the construction cost estimate for a Fiscal Year 1 project;
- Adding a new project.
- Deleting a project
- Major change in project/project phase initiation dates or design scope

Part A. 6. High Priority Projects

SAFETEA-LU, contained a number of earmarked transportation projects that were to receive federal funding. Specific funding amounts were 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 along with their status:

<u>Highway High Priority Projects</u>	<u>Status</u>
Amesbury/Newburyport – Rehabilitation of I-95 Whittier Bridge	Under Construction
Andover – Design, Engineering and Construction at I-93 The Junction Interchange, (Andover, Tewksbury, and Wilmington)	Draft EIR/EIS Being Developed
Haverhill – Construct Haverhill intermodal center access and vehicle capacity improvements.	Project Complete
Lawrence – Design and construct Canal and Union Street Corridor improvements.	Project Complete
Lawrence – Construct access improvements to the Lawrence Gateway Project.	Project Complete
Methuen – Design, engineering and construction of Methuen Rotary alternative at I-93 and Routes 110 and 113.	Under Construction
Newbury – Rehabilitation and paving of Parker River Road	Project Complete
North Andover – Improvements to Mass. Ave., Andover St., Osgood St., Salem St and Johnson St. in the Old Town Center of North Andover	Project Complete
Parker River National Wildlife Refuge – Preliminary engineering for Rehabilitation and paving of Sunset Drive in National Wildlife Refuge	Project Complete
Salisbury to Boxford – Design, Engineer, Permit and Construct “Border to Boston Bikeway” rail trail project	Project Under Design

<u>Transit Projects for Bus and Bus-Related Facilities and Clean Fuels Grant Program</u>	<u>Status</u>
Haverhill – Design and Construct Intermodal Transit Parking Improvements.	Project Complete (see above)
Lawrence – Gateway Intermodal and Quadrant Area Reuse Project.	Project Complete (see above)
Newburyport – Design and Construct Intermodal Facility	Project Under Design

Part A. 7. Advance Construction

Advance Construction is a Federal-aid fund management tool, which as described by the Federal Highway Administration website:

“...allows states to begin a project even in the absence of sufficient Federal-aid obligation authority to cover the Federal share of project costs. It is codified in Title 23, Section 115. Advance construction eliminates the need to set aside full obligational authority before starting projects...At some future date when the state does have sufficient obligational authority, it may convert an advance-constructed project to a Federal-aid project by obligating the permissible share of its Federal-aid funds and receiving subsequent reimbursements.”

In other words, the state pays for the project with non-Federal-aid funds to begin with and can later seek reimbursement of the Federal share of the funding category’s project cost by obligating Federal-aid funding in future years.

Projects must meet the following criteria before they can be designated to use the Advanced Construction (AC) funding mechanism:

1. The project’s estimated Federal participating cost exceeds the **total** regional annual target (i.e. sum of HSIP, CMAQ, TA and Non HSIP/CMAQ/TA), and
2. Construction, based on an engineering review of the project, will take place during all the years for which federal funding is programmed.

The following projects are programmed in the FFY 2018-2022 TIP using this Advance Construction (AC) method:

- Amesbury – Reconstruction of Elm Street
- Haverhill – Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River
- North Andover- Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Driveway

Part A. 8. Transportation Funding Programs

Projects listed in the TIP must show the sources of funding that will be used to complete the project. The projects in the FFYs 2018 -2022 TIP are slated to use funding from the following Federal-aid funding programs identified in the FAST Act federal transportation funding authorization. Please note that in some cases Federal-aid funding is from older funding programs established in earlier legislation such as SAFETEA-LU and MAP-21. Projects may also receive non-Federal Aid funding which is shown in the project listings.

Highway Projects

Bridge Replacement and Rehabilitation ((BR) (continued in FAST Act)) - 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) (continued in FAST Act)) – 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) (continued in FAST Act)) - funds safety improvement projects at high crash locations and Railway-Highway Crossings.

Funding: Federal - 90%, State – 10%

National Highway Performance Program (NHPP) (continued in FAST Act) - funds projects on all National Highway System Roadways.

Funding: Varies, generally Federal - 80%, State – 20%, but for the Interstate System, Federal - 90%, State – 10%

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%

Transportation Funding Programs - Highway Projects (Continued)

STP Enhancements ((STP E) ((SAFETEA-LU; not continued in MAP-21)) - a portion of Surface Transportation Program funding for enhancement projects chosen by states and localities.

Funding: Federal -80%, State - 20%

Transportation Alternatives Program (TAP) – (MAP-21, replaced in FAST Act with Transportation Alternatives (TA) set- aside of STBG funds) - funds 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 FAST Act.

Funding: Federal - 80%, State - 20%

Transit Projects

Projects from the following Federal-aid (FAST Act) and non-Federal-aid funding categories are shown in the FFY 2018-2022 TIP.

Section 5307 (Capital and Planning) (continued in FAST Act) - 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 (continued in FAST Act) - 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 (continued in FAST Act)- 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%

Section 5339 (continued in FAST Act) - provides capital funds, through the State, for bus and bus related equipment and facilities.

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

Organization of Project Listings – Highway Projects

The TIP includes sections that identify the MPO's priority road and bridge projects using a format prescribed by MassDOT's Office of Transportation Planning. MassDOT is aligning the FFYs 2018 to 2022 Statewide Transportation Improvement Program (STIP) with the MassDOT Capital Investment Plan (CIP). The CIP identifies three capital planning priorities: reliability, modernization and expansion investments. The STIP will now align program names with CIP investment priorities as follows:

Reliability

- Bridge program (including investments in inspections, systematic maintenance, on-system NHS bridges, on-system non-NHS bridges, and off-system bridges)
- Interstate pavement program
- Non-Interstate DOT pavement program
- Roadway improvements program
- Safety improvements program

Modernization

- ADA retrofits program
- Intersection improvements program
- Intelligent Transportation Systems program
- Roadway reconstruction program

Expansion

- Bicycles and pedestrians program
- Capacity program

Therefore the MVMPO TIP organization of project listings has been updated to align with the STIP as follows:

Section 1A / Regionally Prioritized Projects

- Federal-Aid HSIP Projects Using MVMPO Target (HSIP)
- Federal-Aid CMAQ Projects Using MVMPO Target (CMAQ)
- Federal-Aid TAP (now set aside of STBG funding) Projects Using MVMPO Target (TAP)
- Federal-Aid STBG Projects Using MVMPO Target Authority (STP)

Section 1B / Earmark or Discretionary Grant Funded Projects (Provided by MassDOT)

- Federal-Aid Earmark or Discretionary Grant Funded Projects

Section 2A / State Prioritized Reliability Projects (Provided by MassDOT)

- Bridge Program / Inspections
- Bridge Program / Off-System
- Bridge Program / On-System (NHS)
- Bridge Program / On-System (Non-NHS)
- Bridge Program / Systematic Maintenance
- Interstate Pavement
- Non-Interstate Pavement
- Roadway Improvements
- Safety Improvements

Section 2B / State Prioritized Modernization Projects (Provided by MassDOT)

- ADA Retrofits
- Intersection Improvements
- Intelligent Transportation Systems
- Roadway Reconstruction

Section 2C / State Prioritized Expansion Projects (Provided by MassDOT)

- Bicycles and Pedestrians
- Capacity

Section 3 / Planning / Adjustments / Pass-throughs (Provided by MassDOT)

- Planning / Adjustments / Pass-throughs

Section 4 / Non-Federally Aided Projects (Provided by MassDOT)

- Non-Federal Aid

Appendices A and B

- Other Regional Priorities (projects for which funding has not been identified)

Each highway project in the TIP contains the following information:

Amendment/Adjustment Type – used to identify the type of amendment when changes are made to the document.

STIP Program – STIP program names as defined in the Organization of Highway Project Listings section above.

MassDOT Project ID - project identification numbers given by MassDOT for each highway and bridge project.

MPO – identifies the Metropolitan Planning Organization within which the project is located.

Municipality Name – identifies the community where the project is located.

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 at the beginning of Part A.8.);

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 - a) Planning / Design / Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-State non-Federal match; g) earmark details; h) TAP project proponent; i) other information.

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

Organization of Project Listings – Transit Projects

Each transit project in the TIP contains the following information:

Project Number – Transit Project number from MassDOT

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

Line Item – The FTA Line Item number

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

Carry Over – indicates whether Carry over funding is being used;

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

State Funds – portion of Total Programmed Funds not provided by Federal Funding, but required as matching funds in order to receive Federal Funds, coming from States sources;

TDC –Transportation Development Credits, and

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

Total - estimated total cost of project.

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Part B. Project Listings

Highway Projects

2018 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 1A / Regionally Prioritized Projects

► Regionally Prioritized Projects

Roadway reconstruction program	606159	Merrimack Valley	North Andover	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	4	HSIP	\$ 442,956	\$ 398,660	\$ 44,296	a) Construction; b) \$3,640,038 = \$442,956 HSIP + \$3,171,688 STP + \$25,394 Earmark; d) TEC = 7.95 out of 18; g) Demo ID MA 175
Roadway reconstruction program	606159	Merrimack Valley	North Andover	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	4	STP	\$ 3,171,688	\$ 2,537,350	\$ 634,338	a) Construction; b) \$3,640,038 = \$442,956 HSIP + \$3,171,688 STP + \$25,394 Earmark; d) TEC = 7.95 out of 18; g) Demo ID MA 175
Bicycles and pedestrians program	605020	Merrimack Valley	Salisbury	SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL), INCLUDES NEW BRIDGE S-02-004	4	CMAQ	\$ 3,215,183	\$ 2,572,146	\$ 643,037	a) Construction; b) \$5,918,500 = \$3,215,183 CMAQ + \$2,352,318 TAP; d) TEC = 5.88 out of 18; h) Project Proponent is Town of Salisbury
Bicycles and pedestrians program	605020	Merrimack Valley	Salisbury	SALISBURY- MULTI-USE TRAIL EXTENSION (BORDERS TO BOSTON TRAIL), INCLUDES NEW BRIDGE S-02-004	4	TAP	\$ 2,703,317	\$ 2,162,654	\$ 540,663	a) Construction; b) \$5,918,500 = \$3,215,183 CMAQ + \$2,352,318 TAP; d) TEC = 5.88 out of 18; h) Project Proponent is Town of Salisbury
STIP program	Project #	MPO	Municipalities	Description	District	Funding	\$ -	\$ -	\$ -	
Regionally Prioritized Projects subtotal ►							\$ 9,533,144	\$ 7,670,810	\$ 1,862,333	◀ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Section 1A Instructions: MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; Column C) Enter ID from ProjectInfo; Column E) Choose Municipality Name from dropdown list; Column H) Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; Column I) Enter the total amount of funds being programmed in this fiscal year and for each funding source; Column J) Federal funds autocalculates. Please verify the amount and only change if needed for flex. Column K) Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; Column L) Enter Additional Information as described - please do not use any other format.

Total Regional Federal Aid Funds Programmed ►	\$ 9,533,144	\$ 9,797,737	◀ Total	\$ 264,594	Target Funds Available
STP programmed ►	\$ 3,171,688	\$ 7,896,392	◀ Max STP	\$ 4,724,704	STP available
HSIP programmed ►	\$ 442,956	\$ 442,956	◀ Min. HSIP	\$ (0)	HSIP recommended met
CMAQ programmed ►	\$ 3,215,183	\$ 1,107,389	◀ Min. CMAQ	\$ (2,107,793)	CMAQ recommended met
TAP programmed ►	\$ 2,703,317	\$ 351,000	◀ Min. TAP	\$ (2,352,317)	TAP amount exceeded!

Remaining HSIP, CMAQ, and TAP Funds \$ 264,594

2018 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 1B / Earmark or Discretionary Grant Funded Projects

► Other Federal Aid

Earmark Discretionary	606159	Merrimack Valley	North Andover	NORTH ANDOVER- INTERSECTION & SIGNAL IMPROVEMENTS AT ROUTE 125 & MASSACHUSETTS AVENUE	4	Other FA	\$ 25,394	\$ 20,315	\$ 5,079	a) Construction; b) \$3,640,038 = \$442,956 HSIP + \$3,171,688 STP + \$25,394 Earmark; d) TEC = 7.95 out of 18; g) Demo ID MA 175
Earmark Discretionary	Project #	MPO	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►							\$ 25,394	\$ 20,315	\$ 5,079	◀ Funding Split Varies by Funding Source

► Section 2A / State Prioritized Reliability Projects

► Bridge Program / Inspections

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Bridge Program / Off-System

Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -	
Bridge Program / Off-System subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Bridge Program / On-System (NHS)

Bridge Program	605306	Merrimack Valley	Haverhill	HAVERRHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP-On	\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	AC Year 1 of 5, Total Cost \$116,603,655
Bridge Program / On-System (NHS) subtotal ►							\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	◀ Funding Split Varies by Funding Source

► Bridge Program / On-System (Non-NHS)

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -	
Bridge Program / On-System (Non-NHS) subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Bridge Program / Systematic Maintenance

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -	
Bridge Program / Systematic Maintenance subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2018 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal
► Non-Interstate Pavement											
	Non-Interstate Pavement	608809	Merrimack Valley	Multiple	LAWRENCE- NORTH ANDOVER-RESURFACING AND RELATED WORK ON ROUTE 114	4	NHPP	\$ 2,123,453	\$ 1,698,762	\$ 424,691	Construction
Non-Interstate Pavement subtotal ►								\$ 2,123,453	\$ 1,698,762	\$ 424,691	◀ 80% Federal + 20% Non-Federal
► Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 2B / State Prioritized Modernization Projects											
► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	TAP	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2018 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2C / State Prioritized Expansion Projects

► Bicycles and Pedestrians

Bicycles and Pedestrians	Project #	MPO	Municipalities	Description	District	Funding Source	Total Programmed Funds	Federal Funds	Non-Federal Funds	Additional Information
	607737	Merrimack Valley	Multiple	AMESBURY- SALISBURY- TRAIL CONNECTOR @ I-95	4	TAP	\$ 2,574,805	\$ 2,059,844	\$ 514,961	Construction / PSAC score 37
Bicycles and Pedestrians subtotal ►							\$ 2,574,805	\$ 2,059,844	\$ 514,961	◀ 80% Federal + 20% Non-Federal

► Capacity

Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	Funding	Funding	Funding	Additional Information
							\$ -	\$ -	\$ -	
Capacity subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 3 / Planning / Adjustments / Pass-throughs

► Planning / Adjustments / Pass-throughs

Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	Funding	Funding	Funding	Additional Information
							\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 4 / Non-Federally Aided Projects

► Non-Federally Aided Projects

Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	Funding	Funding	Funding	Additional Information
							\$ -	\$ -	\$ -	
Non-Federal Aid subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2018 Summary

	TIP Section 1 - 3: ▼	TIP Section 4: ▼	Total of All Projects ▼	
Total ►	\$ 37,577,527	\$ -	\$ 37,577,527	◀ Total Spending in Region
Federal Funds ►	\$ 30,106,317	\$ -	\$ 30,106,317	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 7,471,210	\$ -	\$ 7,471,210	◀ Total Non-Federal Spending in Region

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

2019 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Section 2A / State Prioritized Reliability Projects											
► Bridge Program / Inspections											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Bridge Program / Off-System											
	Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -	
Bridge Program / Off-System subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Bridge Program / On-System (NHS)											
	Bridge Program	605306	Merrimack Valley	Haverhill	HAVERRHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP-On	\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	AC Year 2 of 5, Total Cost \$116,603,655
Bridge Program / On-System (NHS) subtotal ►								\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	◄ Funding Split Varies by Funding Source
► Bridge Program / On-System (Non-NHS)											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -	
Bridge Program / On-System (Non-NHS) subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Bridge Program / Systematic Maintenance											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -	
Bridge Program / Systematic Maintenance subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source
► Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 90% Federal + 10% Non-Federal
► Non-Interstate Pavement											
	Non-Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Non-Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District		\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◄ 80% Federal + 20% Non-Federal
► Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◄ Funding Split Varies by Funding Source

2019 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2B / State Prioritized Modernization Projects

► ADA Retrofits

ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Intersection Improvements

Intersection Improvements	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Intelligent Transportation Systems

Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Roadway Reconstruction

Roadway Reconstruction	608792	Merrimack Valley	Newburyport	NEWBURYPORT- IMPROVEMENTS AT NOCK MIDDLE SCHOOL & MOLIN UPPER ELEMENTARY SCHOOL (SRTS)	4	TAP	\$ 1,593,600	\$ 1,274,880	\$ 318,720	
Roadway Reconstruction subtotal ►							\$ 1,593,600	\$ 1,274,880	\$ 318,720	◀ 80% Federal + 20% Non-Federal

2019 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable: a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information</i>
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► Section 2C / State Prioritized Expansion Projects

► Bicycles and Pedestrians

Bicycles and Pedestrians	Project #	MPO	Municipalities	Description	District	CMAQ		\$ -	\$ -	
Bicycles and Pedestrians subtotal ►							\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Capacity

Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 3 / Planning / Adjustments / Pass-throughs

► Planning / Adjustments / Pass-throughs

Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 4 / Non-Federally Aided Projects

► Non-Federally Aided Projects

Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -		\$ -	
Non-Federal Aid subtotal ►							\$ -		\$ -	◀ 100% Non-Federal

2019 Summary

	TIP Section 1 - 3: ▼	TIP Section 4: ▼	Total of All Projects ▼	
Total ►	\$ 34,656,255	\$ -	\$ 34,656,255	◀ Total Spending in Region
Federal Funds ►	\$ 27,725,004		\$ 27,725,004	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 6,931,251	\$ -	\$ 6,931,251	◀ Total Non-Federal Spending in Region

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

2020 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 1A / Regionally Prioritized Projects

► Regionally Prioritized Projects

Roadway reconstruction program	602418	Merrimack Valley	Amesbury	AMESBURY- RECONSTRUCTION OF ELM STREET	4	STP	\$ 4,856,190	\$ 3,884,952	\$ 971,238	a) Construction; b) \$12,064,000 (inflated 4% from 2018 cost) = \$7,207,810 2019 STP + \$4,856,190 2020 STP; c) AC Year 2 of 2 = \$4,856,190; d) TEC = 5.98 out of 18;
Bicycles and pedestrians program	608027	Merrimack Valley	Haverhill	HAVERRILL- BRADFORD RAIL TRAIL EXTENSION, FROM ROUTE 125 TO RAILROAD STREET	4	STP	\$ 1,107,389	\$ 885,911	\$ 221,478	a) Construction; b) \$1,176,240 (inflated 8% from 2018 cost) = \$68,851 TAP + \$1,107,389 STP; d) TEC = 7.15 out of 18;
Bicycles and pedestrians program	608027	Merrimack Valley	Haverhill	HAVERRILL- BRADFORD RAIL TRAIL EXTENSION, FROM ROUTE 125 TO RAILROAD STREET	4	TAP	\$ 68,851	\$ 55,081	\$ 13,770	a) Construction; b) \$1,176,240 (inflated 8% from 2018 cost) = \$68,851 TAP + \$1,107,389 STP; d) TEC = 7.15 out of 18;
STIP program	Project #	Merrimack Valley	Municipalities	Description	District	Funding	\$ -	\$ -	\$ -	
STIP program	Project #	Merrimack Valley	Municipalities	Description	District	Funding	\$ -	\$ -	\$ -	
Regionally Prioritized Projects subtotal ►							\$ 6,032,430	\$ 4,825,944	\$ 1,206,486	◀ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Section 1A Instructions: MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; **Column C)** Enter ID from ProjectInfo; **Column E)** Choose Municipality Name from dropdown list; **Column H)** Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; **Column I)** Enter the total amount of funds being programmed in this fiscal year and for each funding source; **Column J)** Federal funds autocalculates. Please verify the amount and only change if needed for flex. **Column K)** Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; **Column L)** Enter Additional Information as described - please do not use any other format.

Total Regional Federal Aid Funds Programmed ►	\$ 6,032,430	\$ 10,106,034	◀Total	\$ 4,073,604	Target Funds Available
STP programmed ►	\$ 5,963,579	\$ 8,204,689	◀ Max STP	\$ 2,241,110	STP available
HSIP programmed ►	\$ -	\$ 442,956	◀ Min. HSIP	\$ 442,956	HSIP recommended not met
CMAQ programmed ►	\$ -	\$ 1,107,389	◀ Min. CMAQ	\$ 1,107,389	CMAQ recommended not met
TAP programmed ►	\$ 68,851	\$ 351,000	◀ Min. TAP	\$ 282,149	TAP recommended not met
Remaining HSIP, CMAQ, and TAP Funds		\$ 1,832,494			

► Section 1B / Earmark or Discretionary Grant Funded Projects

► Other Federal Aid

Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2020 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2A / State Prioritized Reliability Projects

► Bridge Program / Inspections

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$				
							-	-	-				
Bridge Program / Inspections subtotal ►							\$	-	\$	-	\$	-	◀ Funding Split Varies by Funding Source

► Bridge Program / Off-System

Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$	\$	\$				
							-	-	-				
Bridge Program / Off-System subtotal ►							\$	-	\$	-	\$	-	◀ 80% Federal + 20% Non-Federal

► Bridge Program / On-System (NHS)

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$	\$	\$				
	605306	Merrimack Valley	Haverhill	HAVERRHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP-On	23,320,731	18,656,585	4,664,146	AC Year 3 of 5, Total Cost \$116,603,655			
Bridge Program / On-System (NHS) subtotal ►							\$	23,320,731	\$	18,656,585	\$	4,664,146	◀ Funding Split Varies by Funding Source

► Bridge Program / On-System (Non-NHS)

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$	\$	\$				
							-	-	-				
Bridge Program / On-System (Non-NHS) subtotal ►							\$	-	\$	-	\$	-	◀ 80% Federal + 20% Non-Federal

► Bridge Program / Systematic Maintenance

Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$	\$	\$				
							-	-	-				
Bridge Program / Systematic Maintenance subtotal ►							\$	-	\$	-	\$	-	◀ Funding Split Varies by Funding Source

► Interstate Pavement

Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$				
							-	-	-				
Interstate Pavement subtotal ►							\$	-	\$	-	\$	-	◀ 90% Federal + 10% Non-Federal

► Non-Interstate Pavement

Non-Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$				
							-	-	-				
Non-Interstate Pavement subtotal ►							\$	-	\$	-	\$	-	◀ 80% Federal + 20% Non-Federal

► Roadway Improvements

Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$	\$	\$				
							-	-	-				
Roadway Improvements subtotal ►							\$	-	\$	-	\$	-	◀ 80% Federal + 20% Non-Federal

► Safety Improvements

Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$	\$	\$				
							-	-	-				
Safety Improvements subtotal ►							\$	-	\$	-	\$	-	◀ Funding Split Varies by Funding Source

2020 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2B / State Prioritized Modernization Projects

► ADA Retrofits

ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$	\$	\$		
							ADA Retrofits subtotal ►	\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Intersection Improvements

Intersection Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$	\$	\$		
							Intersection Improvements subtotal ►	\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Intelligent Transportation Systems

Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$		
							Intelligent Transportation System subtotal ►	\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Roadway Reconstruction

Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	TAP	\$	\$	\$		
							Roadway Reconstruction subtotal ►	\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2020 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2C / State Prioritized Expansion Projects

► Bicycles and Pedestrians

Bicycles and Pedestrians	607541	Merrimack Valley	Multiple	GEORGETOWN- BOXFORD- BORDER TO BOSTON TRAIL, FROM GEORGETOWN ROAD TO WEST MAIN STREET (ROUTE 97)	4	CMAQ	\$ 1,874,028	\$ 1,499,222	\$ 374,806	Construction / PSAC score 31
Bicycles and Pedestrians subtotal ►							\$ 1,874,028	\$ 1,499,222	\$ 374,806	◀ 80% Federal + 20% Non-Federal

► Capacity

Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 3 / Planning / Adjustments / Pass-throughs

► Planning / Adjustments / Pass-throughs

Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 4 / Non-Federally Aided Projects

► Non-Federally Aided Projects

Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -	\$ -	\$ -	
Non-Federal Aid subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2020 Summary

	TIP Section 1 - 3: ▼	TIP Section 4: ▼	Total of All Projects ▼	
Total ►	\$ 31,227,189	\$ -	\$ 31,227,189	◀ Total Spending in Region
Federal Funds ►	\$ 24,981,751	\$ -	\$ 24,981,751	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 6,245,438	\$ -	\$ 6,245,438	◀ Total Non-Federal Spending in Region

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

2021 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 1A / Regionally Prioritized Projects

► Regionally Prioritized Projects

Roadway reconstruction program	605753	Merrimack Valley	Groveland	GROVELAND- RECONSTRUCTION ON ROUTE 97 (SCHOOL STREET) FROM PARKER STREET TO GARDNER STREET	4	STP	\$ 4,049,510	\$ 3,239,608	\$ 809,902	a) Construction; b) \$4,049,510 (inflated 12% from 2018 cost) = \$4,049,510 STP; d) TEC = 4.90 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	CMAQ	\$ 1,107,389	\$ 885,911	\$ 221,478	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 1 of 3 = \$6,290,405; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	HSIP	\$ 442,956	\$ 398,660	\$ 44,296	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 1 of 3 = \$6,290,405; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	TAP	\$ 351,000	\$ 280,800	\$ 70,200	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 1 of 3 = \$6,290,405; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	STP	\$ 4,389,060	\$ 3,511,248	\$ 877,812	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 1 of 3 = \$6,290,405; d) TEC = 11.17 out of 18;	
Regionally Prioritized Projects subtotal ►								\$ 10,339,915	\$ 8,316,228	\$ 2,023,687	◀ 80% Federal + 20% Non-Federal

► Section 1A / Fiscal Constraint Analysis

Section 1A Instructions: MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; **Column C)** Enter ID from ProjectInfo; **Column E)** Choose Municipality Name from dropdown list; **Column H)** Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; **Column I)** Enter the total amount of funds being programmed in this fiscal year and for each funding source; **Column J)** Federal funds autocalculates. Please verify the amount and only change if needed for flex. **Column K)** Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; **Column L)** Enter Additional Information as described - please do not use any other format.

Total Regional Federal Aid Funds Programmed ►	\$ 10,339,915	\$ 10,339,915	◀ Total	\$ (0)	Funds Over Programmed
STP programmed ►	\$ 8,438,570	\$ 8,438,570	◀ Max STP	\$ 0	STP available
HSIP programmed ►	\$ 442,956	\$ 442,956	◀ Min. HSIP	\$ (0)	HSIP recommended met
CMAQ programmed ►	\$ 1,107,389	\$ 1,107,389	◀ Min. CMAQ	\$ 0	CMAQ recommended not met
TAP programmed ►	\$ 351,000	\$ 351,000	◀ Min. TAP	\$ 0	TAP recommended not met
HSIP, CMAQ, TAP Overprogrammed \$	(0)				

2021 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 1B / Earmark or Discretionary Grant Funded Projects

► Other Federal Aid											
Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$	\$	\$		
Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -		
							Other Federal Aid subtotal ►	\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 2A / State Prioritized Reliability Projects

► Bridge Program / Inspections											
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$		
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -		
							Bridge Program / Inspections subtotal ►	\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Bridge Program / Off-System											
Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$	\$	\$		
Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -		
							Bridge Program / Off-System subtotal ►	\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Bridge Program / On-System (NHS)											
Bridge Program	Project #	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP-On	\$ 23,320,731	\$ 18,656,585	\$ 4,664,146		AC Year 4 of 5, Total Cost \$116,603,655
							Bridge Program / On-System (NHS) subtotal ►	\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	◀ Funding Split Varies by Funding Source

► Bridge Program / On-System (Non-NHS)											
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$	\$	\$		
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-Off	\$ -	\$ -	\$ -		
							Bridge Program / On-System (Non-NHS) subtotal ►	\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

► Bridge Program / Systematic Maintenance											
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$	\$	\$		
Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP-On	\$ -	\$ -	\$ -		
							Bridge Program / Systematic Maintenance subtotal ►	\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Interstate Pavement											
Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$	\$	\$		
Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -		
							Interstate Pavement subtotal ►	\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal

► Non-Interstate Pavement											
Non-Interstate Pavement	Project #	Merrimack Valley	Multiple	NEWBURY-NEWBURYPORT- SALISBURY- RESURFACING AND RELATED WORK ON ROUTE 1	4	NHPP	\$ 11,854,752	\$ 9,483,802	\$ 2,370,950		Construction
							Non-Interstate Pavement subtotal ►	\$ 11,854,752	\$ 9,483,802	\$ 2,370,950	◀ 80% Federal + 20% Non-Federal

2021 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 2B / State Prioritized Modernization Projects											
► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation Systems	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal

2021 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 2C / State Prioritized Expansion Projects

► Bicycles and Pedestrians

	Bicycles and Pedestrians	607542	Merrimack Valley	Municipalities	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	4	CMAQ	\$ 4,341,120	\$ 3,472,896	\$ 868,224	Construction / PSAC score 28.5
Bicycles and Pedestrians subtotal ►								\$ 4,341,120	\$ 3,472,896	\$ 868,224	◀ 80% Federal + 20% Non-Federal

► Capacity

Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 3 / Planning / Adjustments / Pass-throughs

► Planning / Adjustments / Pass-throughs

Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 4 / Non-Federally Aided Projects

► Non-Federally Aided Projects

Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -	\$ -	\$ -	
Non-Federal Aid subtotal ►							\$ -	\$ -	\$ -	◀ 100% Non-Federal

2021 Summary

	TIP Section 1 - 3: ▼	TIP Section 4: ▼	Total of All Projects ▼	
Total ►	\$ 49,856,518	\$ -	\$ 49,856,518	◀ Total Spending in Region
Federal Funds ►	\$ 39,929,510	\$ -	\$ 39,929,510	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 9,927,008	\$ -	\$ 9,927,008	◀ Total Non-Federal Spending in Region

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

2022 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable: a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information</i>
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Section 1A / Regionally Prioritized Projects

Regionally Prioritized Projects

Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	CMAQ	\$ 1,107,389	\$ 885,911	\$ 221,478	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 2 of 3 = \$10,467,929; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	HSIP	\$ 442,956	\$ 398,660	\$ 44,296	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 2 of 3 = \$10,467,929; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	TAP	\$ 351,000	\$ 280,800	\$ 70,200	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 2 of 3 = \$10,467,929; d) TEC = 11.17 out of 18;	
Roadway reconstruction program	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN ROUTE 125 (ANDOVER STREET) & STOP & SHOP DRIVEWAY	4	STP	\$ 8,566,584	\$ 6,853,267	\$ 1,713,317	a) Construction; b) \$16,816,717 (inflated 12% from 2018 cost) = \$1,107,389 2021 CMAQ + \$4,389,060 2021 STP + \$442,956 2021 HSIP + \$351,000 2021 TAP + \$1,107,389 2022 CMAQ + \$8,566,584 2022 STP + \$442,956 2022 HSIP + \$351,000 2022 TAP + \$58,383 FY 2023; c) AC Year 2 of 3 = \$10,467,929; d) TEC = 11.17 out of 18;	
STIP program	Project #	Merrimack Valley	Municipalities	Description	District	Funding	\$ -	\$ -	\$ -		
Regionally Prioritized Projects subtotal ▶							\$ 10,467,929	\$ 8,418,639	\$ 2,049,290	◀ 80% Federal + 20% Non-Federal	

Section 1A / Fiscal Constraint Analysis

Section 1A Instructions: MPO Template Name) Choose Regional Name from dropdown list to populate header and MPO column; **Column C)** Enter ID from ProjectInfo; **Column E)** Choose Municipality Name from dropdown list; **Column H)** Choose the Funding Source being used for the project - if multiple funding sources are being used enter multiple lines; **Column I)** Enter the total amount of funds being programmed in this fiscal year and for each funding source; **Column J)** Federal funds autocalculates. Please verify the amount and only change if needed for flex. **Column K)** Non-federal funds autocalculates. Please verify the split/match - if matching an FTA flex, coordinate with Rail & Transit Division before programming; **Column L)** Enter Additional Information as described - please do not use any other format.

Total Regional Federal Aid Funds Programmed ▶	\$ 10,467,929	\$ 10,467,929	◀Total	\$ 0	Target Funds Available
STP programmed ▶	\$ 8,566,584	\$ 8,566,584	◀ Max STP	\$ 0	STP available
HSIP programmed ▶	\$ 442,956	\$ 442,956	◀ Min. HSIP	\$ (0)	HSIP recommended met
CMAQ programmed ▶	\$ 1,107,389	\$ 1,107,389	◀ Min. CMAQ	\$ 0	CMAQ recommended not met
TAP programmed ▶	\$ 351,000	\$ 351,000	◀ Min. TAP	\$ 0	TAP recommended not met
Remaining HSIP, CMAQ, and TAP Funds \$ 0					

2022 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable: a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information</i>
► Section 1B / Earmark or Discretionary Grant Funded Projects											
► Other Federal Aid											
	Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
	Earmark Discretionary	Project #	Merrimack Valley	Municipalities	Description	District	HPP	\$ -	\$ -	\$ -	
Other Federal Aid subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Section 2A / State Prioritized Reliability Projects											
► Bridge Program / Inspections											
	Bridge Program	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Bridge Program / Inspections subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Bridge Program / Off-System											
	Bridge Program	Project #	MPO	Municipalities	Description	District	STP-BR-OFF	\$ -	\$ -	\$ -	
Bridge Program / Off-System subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Bridge Program / On-System (NHS)											
AMENDMENT: Add Funding Source	Bridge Program	605306	Merrimack Valley	Haverhill	Haverhill- BRIDGE REPLACEMENT, H-12-039, I-495 (NB & SB) OVER MERRIMACK RIVER	4	NHPP-On	\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	AC Year 5 of 5, Total Cost \$116,603,655
Bridge Program / On-System (NHS) subtotal ►								\$ 23,320,731	\$ 18,656,585	\$ 4,664,146	◀ Funding Split Varies by Funding Source
► Bridge Program / On-System (Non-NHS)											
Bridge Program / On-System (Non-NHS) subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Bridge Program / Systematic Maintenance											
	Bridge Program								\$ -	\$ -	
Bridge Program / Systematic Maintenance subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Interstate Pavement											
	Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◀ 90% Federal + 10% Non-Federal
► Non-Interstate Pavement											
	Non-Interstate Pavement	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Non-Interstate Pavement subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Roadway Improvements											
	Roadway Improvements	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
Roadway Improvements subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Safety Improvements											
	Safety Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -	
Safety Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2022 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
► Section 2B / State Prioritized Modernization Projects											
► ADA Retrofits											
	ADA Retrofits	Project #	MPO	Municipalities	Description	District	STP	\$ -	\$ -	\$ -	
ADA Retrofits subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Intersection Improvements											
	Intersection Improvements	Project #	MPO	Municipalities	Description	District	HSIP	\$ -	\$ -	\$ -	
Intersection Improvements subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source
► Intelligent Transportation Systems											
	Intelligent Transportation	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Intelligent Transportation System subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Roadway Reconstruction											
	Roadway Reconstruction	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Roadway Reconstruction subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Section 2C / State Prioritized Expansion Projects											
► Bicycles and Pedestrians											
	Bicycles and Pedestrians	Project #	Merrimack Valley	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Bicycles and Pedestrians subtotal ►								\$ -	\$ -	\$ -	◀ 80% Federal + 20% Non-Federal
► Capacity											
	Capacity	Project #	MPO	Municipalities	Description	District	CMAQ	\$ -	\$ -	\$ -	
Capacity subtotal ►								\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

2022 Merrimack Valley Region Transportation Improvement Program

Amendment / Adjustment Type ▼	STIP Program ▼	MassDOT Project ID ▼	Metropolitan Planning Organization ▼	Municipality Name ▼	MassDOT Project Description ▼	MassDOT District ▼	Funding Source ▼	Total Programmed Funds ▼	Federal Funds ▼	Non-Federal Funds ▼	Additional Information ▼ <i>Present information as follows, if applicable:</i> a) Planning / Design / or Construction; b) total project cost and funding sources used; c) advance construction status; d) MPO project score; e) name of entity receiving a transfer; f) name of entity paying the non-state non-federal match; g) earmark details; h) TAP project proponent; i) other information
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► Section 3 / Planning / Adjustments / Pass-throughs

► Planning / Adjustments / Pass-throughs

Planning / Adjustments / Pass-throughs	Project #	MPO	Municipalities	Description	District	NHPP	\$ -	\$ -	\$ -	
Other Statewide Items subtotal ►							\$ -	\$ -	\$ -	◀ Funding Split Varies by Funding Source

► Section 4 / Non-Federally Aided Projects

► Non-Federally Aided Projects

Non Federal Aid	Project #	MPO	Municipalities	Description	District	NFA	\$ -	\$ -	
Non-Federal Aid subtotal ►							\$ -	\$ -	◀ 100% Non-Federal

2022 Summary

	TIP Section 3: ▼	TIP Section 4: ▼	Total of All Projects ▼	
Total ►	\$ 33,788,660	\$ -	\$ 33,788,660	◀ Total Spending in Region
Federal Funds ►	\$ 27,075,224	\$ -	\$ 27,075,224	◀ Total Federal Spending in Region
Non-Federal Funds ►	\$ 6,713,436	\$ -	\$ 6,713,436	◀ Total Non-Federal Spending in Region

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

Part B. Project Listings (Cont.)

Transit Projects



**TIP 2018 - 2022
2018**

5307

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0005637	MVRTA		ADA Operating Expense		\$1,130,695	\$282,675	\$0	\$0	\$1,413,370
RTD0005638	MVRTA		Preventive Maintenance Expense		\$2,522,325	\$630,580	\$0	\$0	\$3,152,905
RTD0005639	MVRTA		Refurbish Engine/trans 8 model year 2012 buses		\$211,200	\$52,800	\$0	\$0	\$264,000
RTD0005642	MVRTA	300900	OPERATING ASSISTANCE		\$321,505	\$321,505	\$0	\$0	\$643,010
RTD0005643	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$20,000	\$100,000
RTD0005656	MVRTA	111202	Replace 6 Model Yr 2004 buses delivery 2018		\$2,151,600	\$537,900	\$0	\$0	\$2,689,500
RTD0005662	MVRTA	114211	Replace 1 Model Yr 2013 Support Vehicle		\$38,200	\$9,550	\$0	\$0	\$47,750
					\$6,455,525	\$1,835,010	\$0	\$20,000	\$8,310,535

Other NonFederal

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0005665	MVRTA	113303	Newburyport Intermodal Transit Facility Year 1		\$0	\$2,500,000	\$0	\$0	\$2,500,000
					\$0	\$2,500,000	\$0	\$0	\$2,500,000
					6,455,525	4,335,010	0	20,000	10,810,535

4/12/2017



TIP 2018 - 2022 2019

5307

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0005640	MVRTA		Preventative Maintenance Expense		\$2,600,075	\$650,020	\$0	\$0	\$3,250,095
RTD0005641	MVRTA		ADA Operating Expense		\$1,165,135	\$291,285	\$0	\$0	\$1,456,420
RTD0005644	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$20,000	\$100,000
RTD0005645	MVRTA	300900	OPERATING ASSISTANCE		\$390,125	\$390,125	\$0	\$0	\$780,250
RTD0005657	MVRTA	111302	Purchase 3 new 35' buses delivery 2019	2018 - \$1,075,800	\$1,075,800	\$268,950	\$0	\$0	\$1,344,750
RTD0005663	MVRTA	114211	Replace 1 Model Yr 2013 Support Vehicle		\$39,200	\$9,800	\$0	\$0	\$49,000
					\$5,350,335	\$1,610,180	\$0	\$20,000	\$6,980,515

Other NonFederal

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0006082	MVRTA	113303	Newburyport Intermodal Transit Facility Year 2		\$0	\$2,500,000	\$0	\$0	\$2,500,000
RTD0006381	MVRTA	111202	Replacement Buses - cleaner fuel (CMAQ Match on HWY TIP)		\$0	\$139,708	\$0	\$0	\$139,708
					\$0	\$2,639,708	\$0	\$0	\$2,639,708
					5,350,335	4,249,888	0	20,000	9,620,223

4/12/2017



**TIP 2018 - 2022
2020**

5307

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0005646	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,678,075	\$669,520	\$0	\$0	\$3,347,595
RTD0005647	MVRTA	117C00	NON FIXED ROUTE ADA PARA SERV		\$1,200,090	\$300,020	\$0	\$0	\$1,500,110
RTD0005648	MVRTA	442400	SHORT RANGE TRANSIT PLANNING	2019 - \$80,000	\$80,000	\$0	\$0	\$20,000	\$100,000
RTD0005649	MVRTA	300900	OPERATING ASSISTANCE		\$462,475	\$462,475	\$0	\$0	\$924,950
RTD0005658	MVRTA	111202	Replace 3 Model Yr 2007 buses delivery 2020	2019 - \$1,097,315	\$1,097,315	\$274,330	\$0	\$0	\$1,371,645
					\$5,517,955	\$1,706,345	\$0	\$20,000	\$7,244,300
					5,517,955	1,706,345	0	20,000	7,244,300

4/12/2017



TIP 2018 - 2022 2021

5307

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0005653	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,758,415	\$689,605	\$0	\$0	\$3,448,020
RTD0005654	MVRTA	117C00	NON FIXED ROUTE ADA PARA SERV		\$1,236,090	\$309,025	\$0	\$0	\$1,545,115
RTD0005655	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$20,000	\$100,000
RTD0005659	MVRTA	111203	Replace 9 Model Yr 2009 buses delivery 2021		\$3,357,795	\$839,445	\$0	\$0	\$4,197,240
RTD0005660	MVRTA	300901	OPERATING ASSISTANCE 2021		\$508,725	\$508,725	\$0	\$0	\$1,017,450
RTD0005661	MVRTA	111215	Replace 16 Model Yr 2015 vans with new		\$875,650	\$218,910	\$0	\$0	\$1,094,560
					\$8,816,675	\$2,565,710	\$0	\$20,000	\$11,402,385
					8,816,675	2,565,710	0	20,000	11,402,385

4/12/2017



**TIP 2018 - 2022
2022**

5307

Project Number	Agency	Line Item	Project Description	Carry Over	Federal Funds	State Funds	TDC	Local Funds	Total
RTD0006084	MVRTA	117A00	PREVENTIVE MAINTENANCE		\$2,841,165	\$710,290	\$0	\$0	\$3,551,455
RTD0006085	MVRTA	117C00	NON FIXED ROUTE ADA PARA SERV		\$1,273,170	\$318,290	\$0	\$0	\$1,591,460
RTD0006086	MVRTA	442400	SHORT RANGE TRANSIT PLANNING		\$80,000	\$0	\$0	\$20,000	\$100,000
RTD0006087	MVRTA	300901	OPERATING ASSISTANCE 2022		\$523,985	\$523,985	\$0	\$0	\$1,047,970
RTD0006088	MVRTA	111202	Replace 6 Model Yr 2011 buses delivery 2023 6 of 8		\$2,328,960	\$0	\$0	\$582,240	\$2,911,200
					\$7,047,280	\$1,552,565	\$0	\$602,240	\$9,202,085
					7,047,280	1,552,565	0	602,240	9,202,085

4/12/2017

Summary of Highway Project Listings by Town

**Summary of Highway Projects by Town
(2018 to 2022 Regional Target Funds)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2019-2020	Amesbury	Amesbury - Reconstruction of Elm Street (# 602418)	\$12,064,000
2021	Groveland	Groveland - Reconstruction of Route 97 (School Street) from Parker Street to Gardner Street (# 605753)	\$4,049,510
2019	Groveland	Groveland - Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,835,573
2020	Haverhill	Haverhill – Bradford Rail Trail Extension from Route 125 to Railroad Street (# 608027)	\$1,176,240
2019	MVRTA	Flex to FTA for MVRTA new bus upgrade to cleaner fuel buses (# MV0001)	\$698,541
2018	North Andover	North Andover - Intersection & Signal Improvements at Route 125 & Massachusetts Avenue (# 606159)**	\$3,614,644
2021-2022*	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Drive-way (# 608095)	\$16,758,334*
2018	Salisbury	Salisbury - Multi-use Trail Extension (Borders to Boston Trail) Includes new Bridge S-02-004 (# 605020)	\$5,918,500

* This project is being Advance Constructed (AC'd) with a total project cost of \$16,816,717 being reimbursed from 2021 through 2023. Only the 2021 to 2022 funds programmed in this TIP are shown in this table.

**Route 125 at Mass. Ave. in North Andover is also funded with \$25,394 of Earmark funding that is not part of the designated “Regional Target” funding.

**Summary of Programmed Highway Funds by Town
(2018 to 2022 Regional Target Funds)**

Project Description	Total Cost Programmed
Amesbury Total	\$12,064,000
Groveland Total	\$5,885,083
Haverhill Total	\$1,176,240
MVRTA Total	\$698,541
North Andover Total	\$20,372,978
Salisbury Total	\$5,918,500
Regional Total	\$46,115,342

**Summary of Highway Projects by Town
(2018 to 2022 Statewide and Regional Target Funds)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2019-2020	Amesbury	Amesbury - Reconstruction of Elm Street (# 602418)	\$12,064,000
2018	Amesbury / Salisbury	Amesbury - Salisbury - Trail Connector @ I-95 (# 607737)	\$2,574,805
2020	Georgetown / Boxford	Georgetown - Boxford Border to Boston Trail, from Georgetown Road to West Main Street (Route 97) (# 607541)	\$1,874,028
2021	Georgetown / Newbury	Georgetown - Newbury Border to Boston Trail, (Northern Georgetown to Byfield Section) (# 607542)	\$4,341,120
2021	Groveland	Groveland - Reconstruction of Route 97 (School Street) from Parker Street to Gardner Street (# 605753)	\$4,049,510
2019	Groveland	Groveland - Groveland Community Trail, from Main Street to King Street (# 608298)	\$1,835,573
2020	Haverhill	Haverhill – Bradford Rail Trail Extension from Route 125 to Railroad Street (# 608027)	\$1,176,240
2018-2022	Haverhill	Haverhill - Bridge Replacement, H-12-039, I-495 (NB & SB) over Merrimack River (# 605306)	\$116,603,655

**Summary of Highway Projects by Town
(2018 to 2022 Statewide and Target Funds) (Cont.)**

Year (s) Programmed	City / Town	Project Description	Total Cost Programmed
2018	Lawrence / North Andover	Lawrence - North Andover - Resurfacing and related work on Route 114 (# 608809)	\$2,123,453
2019	MVRTA	Flex to FTA for MVRTA new bus up- grade to cleaner fuel buses (# MV0001)	\$698,541
2021	Newbury - Newburyport - Salisbury	Newbury - Newburyport - Salisbury - Resurfacing and related work on Route 1 (# 608494)	\$11,854,752
2019	Newburyport	Newburyport - Improvements at Nock Middle School & Molin Upper Elemen- tary School (SRTS) (# 608792)	\$1,593,600
2018	North Andover	North Andover - Intersection & Signal Improvements at Route 125 & Massa- chusetts Avenue (# 606159)	\$3,640,038
2021-2022*	North Andover	North Andover - Corridor Improvements on Route 114, between Route 125 (Andover Street) & Stop & Shop Drive- way (# 608095)	\$16,758,334*
2018	Salisbury	Salisbury - Multi-use Trail Extension (Borders to Boston Trail) Includes new Bridge S-02-004 (# 605020)	\$5,918,500

* This project is being Advance Constructed (AC'd) with a total project cost of \$16,816,717 being reimbursed from 2021 through 2023. Only the 2021 to 2022 funds programmed in this TIP are included in this table.

**Summary of Programmed Highway Funds by Town
(2018 to 2022 Statewide and Regional Target Funds)**

Project Description	Total Cost Programmed
Amesbury Total	\$13,351,402
Boxford	\$937,014
Georgetown	\$3,107,574
Groveland Total	\$5,885,083
Haverhill Total	\$117,779,895
Lawrence Total	\$1,061,726
MVRTA Total	\$698,541
Newbury Total	\$6,122,144
Newburyport Total	\$5,545,184
North Andover Total	\$21,460,099
Salisbury Total	\$11,157,487
Regional Total	\$187,106,149

Part C. Federal Requirements

Part C.1. Highway Program Financial Plan

Funding levels for Federal Fiscal Years 2018-2022 have been developed cooperatively between the State and the MPOs as part of the TIP development process. The following five tables depict the resulting financial plan for each of the five 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. In FFY 2017 MassDOT ended funding for the regional major infrastructure program after the I-91 Viaduct in Springfield project had been completed. These funds will be reallocated to the Regional Target program for prioritization by MPOs across the state.

Inflation increases project costs and therefore project costs have been increased 4% per year.

Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)		
2018	Base obligation authority	\$ 598,178,885				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 648,178,885				
	ABP GANS Repayment	\$ (62,985,000)				
Total non-earmarked funding available		\$ 585,193,885	\$ 132,056,924	\$ 717,250,809		
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.		\$ 30,000,000	\$ 7,500,000	\$ 37,500,000		
Metropolitan planning		\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research		\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails		\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings		\$ 4,250,000	\$ 472,222	\$ 4,722,222		
MassRides program		\$ -	\$ -	\$ -		
<i>subtotal of planning / adjustments / pass-throughs</i>		\$ 58,133,689	\$ 13,943,144	\$ 72,076,833		
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program		\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program		\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant		\$ 144,370,142	\$ 36,092,536	\$ 180,462,678		
<i>subtotal of funding for regional priorities</i>		\$ 177,952,000	\$ 43,238,000	\$ 221,190,000		
regional share %						
		CMAQ	HSIP	TAP	STPBG	Total
3.5596%	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,627,701	\$ 7,873,577
42.9671%	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 77,071,365	\$ 95,038,936
4.5851%	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,331,266	\$ 10,141,874
8.6901%	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 15,689,750	\$ 19,221,701
2.5397%	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,728,753	\$ 5,617,664
0.3100%	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 577,131	\$ 685,620
4.4296%	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 7,896,392	\$ 9,797,737
4.4596%	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,217,005	\$ 9,864,087
0.2200%	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 409,577	\$ 486,569
3.9096%	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 6,997,392	\$ 8,647,664
4.5595%	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,144,607	\$ 10,085,255
10.8099%	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 19,581,351	\$ 23,910,460
8.9601%	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,190,387	\$ 19,818,854
Highway Division programs		\$ 349,108,196	\$ 74,875,779	\$ 423,983,975		
Reliability programs		\$ 303,108,196	\$ 64,764,668	\$ 367,872,864		
Bridge program		\$ 170,824,000	\$ 42,706,000	\$ 213,530,000		
	<i>Inspections</i>	\$ 14,320,000	\$ 3,580,000	\$ 17,900,000		
	<i>Systematic maintenance</i>	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
	<i>On-system NHS (minimum)</i>	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
	<i>On-System Non-NHS</i>	\$ 25,104,000	\$ 6,276,000	\$ 31,380,000		
	<i>Off-system</i>	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 46,605,000	\$ 5,178,333	\$ 51,783,333		
Non-interstate DOT pavement program		\$ 54,879,196	\$ 12,277,557	\$ 67,156,753		
Roadway improvements program		\$ 3,500,000	\$ 875,000	\$ 4,375,000		
Safety improvements program		\$ 27,300,000	\$ 3,727,778	\$ 31,027,778		
Modernization programs		\$ 30,000,000	\$ 6,111,111	\$ 36,111,111		
ADA retrofits program		\$ -	\$ -	\$ -		
Intersection improvements program		\$ 15,000,000	\$ 2,361,111	\$ 17,361,111		
Intelligent Transportation Systems program		\$ 10,000,000	\$ 2,500,000	\$ 12,500,000		
Roadway reconstruction program		\$ 5,000,000	\$ 1,250,000	\$ 6,250,000		
Expansion programs		\$ 16,000,000	\$ 4,000,000	\$ 20,000,000		
Bicycles and pedestrians program		\$ 16,000,000	\$ 4,000,000	\$ 20,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 648,178,885	\$ 132,056,924	\$ 717,250,809		

5/3/17

Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority <i>(federal aid only)</i>	Matching funds	Total funding <i>(federal aid + match)</i>		
2019	Base obligation authority	\$ 611,680,644				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 661,680,644				
	ABP GANS Repayment	\$ (66,015,000)				
Total non-earmarked funding available		\$ 595,665,644	\$ 138,437,244	\$ 734,102,889		
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.		\$ 25,000,000	\$ 6,250,000	\$ 31,250,000		
Metropolitan planning		\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research		\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails		\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings		\$ 3,800,000	\$ 422,222	\$ 4,222,222		
MassRides program		\$ 2,660,000	\$ 665,000	\$ 3,325,000		
<i>subtotal of planning / adjustments / pass-throughs</i>		\$ 55,343,689	\$ 13,308,144	\$ 68,651,833		
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program		\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program		\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant		\$ 151,362,142	\$ 37,840,536	\$ 189,202,678		
<i>subtotal of funding for regional priorities</i>		\$ 184,944,000	\$ 44,986,000	\$ 229,930,000		
regional share %						
		CMAQ	HSIP	TAP	STPBG	Total
3.5596%	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,938,814	\$ 8,184,689
42.9671%	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 80,826,690	\$ 98,794,261
4.5851%	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,732,008	\$ 10,542,616
8.6901%	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,449,267	\$ 19,981,218
2.5397%	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,950,727	\$ 5,839,638
0.3100%	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 604,223	\$ 712,712
4.4296%	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,283,535	\$ 10,184,880
4.4596%	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,606,770	\$ 10,253,853
0.2200%	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 428,803	\$ 505,795
3.9096%	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,339,092	\$ 8,989,364
4.5595%	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,543,111	\$ 10,483,760
10.8099%	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,526,138	\$ 24,855,247
8.9601%	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,973,500	\$ 20,601,967
Highway Division programs		\$ 355,377,955	\$ 80,143,100	\$ 435,521,055		
Reliability programs		\$ 277,657,955	\$ 62,379,767	\$ 340,037,722		
Bridge program		\$ 147,807,955	\$ 36,951,989	\$ 184,759,944		
	<i>Inspections</i>	\$ -	\$ -	\$ -		
	<i>Systematic maintenance</i>	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
	<i>On-system NHS (minimum)</i>	\$ 96,000,000	\$ 24,000,000	\$ 120,000,000		
	<i>On-System Non-NHS</i>	\$ 15,307,955	\$ 3,826,989	\$ 19,134,944		
	<i>Off-system</i>	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 27,650,000	\$ 3,072,222	\$ 30,722,222		
Non-interstate DOT pavement program		\$ 69,200,000	\$ 17,300,000	\$ 86,500,000		
Roadway improvements program		\$ 2,000,000	\$ 500,000	\$ 2,500,000		
Safety improvements program		\$ 31,000,000	\$ 4,555,556	\$ 35,555,556		
Modernization programs		\$ 41,400,000	\$ 8,683,333	\$ 50,083,333		
ADA retrofits program		\$ 2,400,000	\$ 600,000	\$ 3,000,000		
Intersection improvements program		\$ 19,000,000	\$ 3,083,333	\$ 22,083,333		
Intelligent Transportation Systems program		\$ 11,000,000	\$ 2,750,000	\$ 13,750,000		
Roadway reconstruction program		\$ 9,000,000	\$ 2,250,000	\$ 11,250,000		
Expansion programs		\$ 36,320,000	\$ 9,080,000	\$ 45,400,000		
Bicycles and pedestrians program		\$ 36,320,000	\$ 9,080,000	\$ 45,400,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 661,680,644	\$ 138,437,244	\$ 734,102,889		

5/3/17

Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority <i>(federal aid only)</i>	Matching funds	Total funding <i>(federal aid + match)</i>		
2020	Base obligation authority	\$ 626,330,019				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 676,330,019				
	ABP GANS Repayment	\$ (104,275,000)				
Total non-earmarked funding available		\$ 572,055,019	\$ 132,099,079	\$ 704,154,098		
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.		\$ 25,000,000	\$ 6,250,000	\$ 31,250,000		
Metropolitan planning		\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research		\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails		\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings		\$ 2,000,000	\$ 222,222	\$ 2,222,222		
MassRides program		\$ 2,660,000	\$ 665,000	\$ 3,325,000		
<i>subtotal of planning / adjustments / pass-throughs</i>		\$ 53,543,689	\$ 13,108,144	\$ 66,651,833		
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program		\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program		\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant		\$ 149,938,142	\$ 37,484,536	\$ 187,422,678		
<i>subtotal of funding for regional priorities</i>		\$ 183,520,000	\$ 44,630,000	\$ 228,150,000		
regional share %		CMAQ	HSIP	TAP	STPBG	Total
3.5596%	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 6,875,452	\$ 8,121,328
42.9671%	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 80,061,875	\$ 98,029,447
4.5851%	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,650,392	\$ 10,461,000
8.6901%	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,294,583	\$ 19,826,534
2.5397%	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 4,905,519	\$ 5,794,430
0.3100%	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 598,705	\$ 707,194
4.4296%	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,204,689	\$ 10,106,034
4.4596%	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,527,390	\$ 10,174,472
0.2200%	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 424,888	\$ 501,880
3.9096%	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,269,501	\$ 8,919,773
4.5595%	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,461,951	\$ 10,402,600
10.8099%	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,333,721	\$ 24,662,830
8.9601%	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 16,814,010	\$ 20,442,477
Highway Division programs		\$ 334,991,330	\$ 74,360,935	\$ 409,352,265		
Reliability programs		\$ 280,591,330	\$ 62,844,268	\$ 343,435,598		
Bridge program		\$ 154,820,000	\$ 38,705,000	\$ 193,525,000		
<i>Inspections</i>		\$ 14,320,000	\$ 3,580,000	\$ 17,900,000		
<i>Systematic maintenance</i>		\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
<i>On-system NHS (minimum)</i>		\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
<i>On-System Non-NHS</i>		\$ 9,100,000	\$ 2,275,000	\$ 11,375,000		
<i>Off-system</i>		\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 37,585,665	\$ 4,176,185	\$ 41,761,850		
Non-interstate DOT pavement program		\$ 65,185,665	\$ 16,296,416	\$ 81,482,081		
Roadway improvements program		\$ 3,000,000	\$ 750,000	\$ 3,750,000		
Safety improvements program		\$ 20,000,000	\$ 2,916,667	\$ 22,916,667		
Modernization programs		\$ 34,400,000	\$ 6,516,667	\$ 40,916,667		
ADA retrofits program		\$ -	\$ -	\$ -		
Intersection improvements program		\$ 17,000,000	\$ 2,166,667	\$ 19,166,667		
Intelligent Transportation Systems program		\$ 10,000,000	\$ 2,500,000	\$ 12,500,000		
Roadway reconstruction program		\$ 7,400,000	\$ 1,850,000	\$ 9,250,000		
Expansion programs		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Bicycles and pedestrians program		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 676,330,019	\$ 132,099,079	\$ 704,154,098		

5/3/17

Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)		
2021	Base obligation authority	\$ 641,988,270				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 691,988,270				
	ABP GANS Repayment	\$ (107,700,000)				
Total non-earmarked funding available		\$ 584,288,270	\$ 137,774,209	\$ 722,062,479		
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Metropolitan planning		\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research		\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails		\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings		\$ 2,000,000	\$ 222,222	\$ 2,222,222		
MassRides program		\$ 2,660,000	\$ 665,000	\$ 3,325,000		
<i>subtotal of planning / adjustments / pass-throughs</i>		\$ 48,543,689	\$ 11,858,144	\$ 60,401,833		
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program		\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program		\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant		\$ 154,162,142	\$ 38,540,536	\$ 192,702,678		
<i>subtotal of funding for regional priorities</i>		\$ 187,744,000	\$ 45,686,000	\$ 233,430,000		
regional share %						
		CMAQ	HSIP	TAP	STPBG	Total
3.5596%	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 7,063,402	\$ 8,309,277
42.9671%	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 82,330,538	\$ 100,298,110
4.5851%	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 8,892,488	\$ 10,703,096
8.6901%	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 16,753,422	\$ 20,285,373
2.5397%	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 5,039,618	\$ 5,928,529
0.3100%	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 615,071	\$ 723,561
4.4296%	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,438,570	\$ 10,339,915
4.4596%	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,762,855	\$ 10,409,937
0.2200%	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 436,502	\$ 513,495
3.9096%	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,475,928	\$ 9,126,200
4.5595%	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,702,695	\$ 10,643,344
10.8099%	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 20,904,485	\$ 25,233,594
8.9601%	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 17,287,104	\$ 20,915,571
Highway Division programs		\$ 348,000,581	\$ 80,230,065	\$ 428,230,646		
Reliability programs		\$ 239,280,581	\$ 54,577,842	\$ 293,858,423		
Bridge program		\$ 140,500,000	\$ 35,125,000	\$ 175,625,000		
	<i>Inspections</i>	\$ -	\$ -	\$ -		
	<i>Systematic maintenance</i>	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
	<i>On-system NHS (minimum)</i>	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
	<i>On-System Non-NHS</i>	\$ 9,100,000	\$ 2,275,000	\$ 11,375,000		
	<i>Off-system</i>	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 24,744,581	\$ 2,749,398	\$ 27,493,979		
Non-interstate DOT pavement program		\$ 54,036,000	\$ 13,509,000	\$ 67,545,000		
Roadway improvements program		\$ 3,000,000	\$ 750,000	\$ 3,750,000		
Safety improvements program		\$ 17,000,000	\$ 2,444,444	\$ 19,444,444		
Modernization programs		\$ 80,720,000	\$ 18,652,222	\$ 99,372,222		
ADA retrofits program		\$ 1,400,000	\$ 350,000	\$ 1,750,000		
Intersection improvements program		\$ 16,000,000	\$ 2,472,222	\$ 18,472,222		
Intelligent Transportation Systems program		\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
Roadway reconstruction program		\$ 55,320,000	\$ 13,830,000	\$ 69,150,000		
Expansion programs		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Bicycles and pedestrians program		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 691,988,270	\$ 137,774,209	\$ 722,062,479		

5/3/17

Final 2018-2022 State Transportation Improvement Program Budgets

		Obligation authority (federal aid only)	Matching funds	Total funding (federal aid + match)		
2022	Base obligation authority	\$ 658,744,163				
	Planned redistribution request	\$ 50,000,000				
	Total Estimated Funding Available	\$ 708,744,163				
	ABP GANS Repayment	\$ (116,770,949)				
Total non-earmarked funding available		\$ 591,973,214	\$ 139,255,869	\$ 731,229,083		
Planning / Adjustments / Pass-throughs						
Award adjustments, change orders, etc.		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Metropolitan planning		\$ 8,670,263	\$ 2,167,566	\$ 10,837,829		
State planning and research		\$ 14,026,697	\$ 3,506,674	\$ 17,533,371		
Recreational trails		\$ 1,186,729	\$ 296,682	\$ 1,483,411		
Railroad grade crossings		\$ 2,000,000	\$ 222,222	\$ 2,222,222		
MassRides program		\$ 2,660,000	\$ 665,000	\$ 3,325,000		
<i>subtotal of planning / adjustments / pass-throughs</i>		\$ 48,543,689	\$ 11,858,144	\$ 60,401,833		
Funding sources for regional priorities						
Congestion Mitigation Air Quality Improvements		\$ 20,000,000	\$ 5,000,000	\$ 25,000,000		
Highway Safety Improvement Program		\$ 9,000,000	\$ 1,000,000	\$ 10,000,000		
Transportation Alternatives Program		\$ 4,581,858	\$ 1,145,465	\$ 5,727,323		
Surface Transportation Program Block Grant		\$ 156,474,142	\$ 39,118,536	\$ 195,592,678		
<i>subtotal of funding for regional priorities</i>		\$ 190,056,000	\$ 46,264,000	\$ 236,320,000		
regional share %						
		CMAQ	HSIP	TAP	STPBG	Total
3.5596%	Berkshire	\$ 889,911	\$ 355,964	\$ -	\$ 7,166,275	\$ 8,412,151
42.9671%	Boston	\$ 10,741,776	\$ 4,296,710	\$ 2,929,085	\$ 83,572,288	\$ 101,539,859
4.5851%	Cape Cod	\$ 1,146,285	\$ 458,514	\$ 205,809	\$ 9,024,998	\$ 10,835,606
8.6901%	Central Mass	\$ 2,172,533	\$ 869,013	\$ 490,405	\$ 17,004,566	\$ 20,536,518
2.5397%	Franklin	\$ 634,937	\$ 253,975	\$ -	\$ 5,113,017	\$ 6,001,928
0.3100%	Martha's Vineyard	\$ 77,492	\$ 30,997	\$ -	\$ 624,030	\$ 732,519
4.4296%	Merrimack Valley	\$ 1,107,389	\$ 442,956	\$ 351,000	\$ 8,566,584	\$ 10,467,929
4.4596%	Montachusett	\$ 1,114,889	\$ 445,955	\$ 86,238	\$ 8,891,736	\$ 10,538,818
0.2200%	Nantucket	\$ 54,995	\$ 21,998	\$ -	\$ 442,860	\$ 519,852
3.9096%	Northern Middlesex	\$ 977,402	\$ 390,961	\$ 281,909	\$ 7,588,916	\$ 9,239,188
4.5595%	Old Colony	\$ 1,139,886	\$ 455,954	\$ 344,808	\$ 8,834,466	\$ 10,775,114
10.8099%	Pioneer Valley	\$ 2,702,480	\$ 1,080,992	\$ 545,638	\$ 21,216,891	\$ 25,546,001
8.9601%	Southeastern Mass	\$ 2,240,026	\$ 896,010	\$ 492,430	\$ 17,546,051	\$ 21,174,518
Highway Division programs		\$ 353,373,525	\$ 81,133,725	\$ 434,507,250		
Reliability programs		\$ 246,873,525	\$ 56,592,058	\$ 303,465,583		
Bridge program		\$ 154,820,000	\$ 38,705,000	\$ 193,525,000		
	<i>Inspections</i>	\$ 14,320,000	\$ 3,580,000	\$ 17,900,000		
	<i>Systematic maintenance</i>	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
	<i>On-system NHS (minimum)</i>	\$ 94,900,000	\$ 23,725,000	\$ 118,625,000		
	<i>On-System Non-NHS</i>	\$ 9,100,000	\$ 2,275,000	\$ 11,375,000		
	<i>Off-system</i>	\$ 28,500,000	\$ 7,125,000	\$ 35,625,000		
Interstate pavement program		\$ 22,909,525	\$ 2,545,503	\$ 25,455,028		
Non-interstate DOT pavement program		\$ 51,144,000	\$ 12,786,000	\$ 63,930,000		
Roadway improvements program		\$ 1,000,000	\$ 250,000	\$ 1,250,000		
Safety improvements program		\$ 17,000,000	\$ 2,305,556	\$ 19,305,556		
Modernization programs		\$ 78,500,000	\$ 17,541,667	\$ 96,041,667		
ADA retrofits program		\$ -	\$ -	\$ -		
Intersection improvements program		\$ 15,000,000	\$ 1,666,667	\$ 16,666,667		
Intelligent Transportation Systems program		\$ 8,000,000	\$ 2,000,000	\$ 10,000,000		
Roadway reconstruction program		\$ 55,500,000	\$ 13,875,000	\$ 69,375,000		
Expansion programs		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Bicycles and pedestrians program		\$ 28,000,000	\$ 7,000,000	\$ 35,000,000		
Capacity program		\$ -	\$ -	\$ -		
Total Budgeted Funding		\$ 708,744,163	\$ 139,255,869	\$ 731,229,083		

5/3/17

Final 2018-2022 State Transportation Improvement Program Budgets

	2018	2019	2020	2021	2022
Base obligation authority	\$ 598.18	\$ 611.68	\$ 626.33	\$ 641.99	\$ 658.74
Planned redistribution request	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Total obligation authority	\$ 648.18	\$ 661.68	\$ 676.33	\$ 691.99	\$ 708.74
ABP GANS Repayment	\$ (62.99)	\$ (66.02)	\$ (104.28)	\$ (107.70)	\$ (116.77)
Total federal funding with match	\$ 717.25	\$ 734.10	\$ 704.15	\$ 722.06	\$ 731.23
Planning / Adjustments / Pass-throughs					
Award adjustments, change orders, etc.	\$ 37.50	\$ 31.25	\$ 31.25	\$ 25.00	\$ 25.00
Metropolitan planning	\$ 10.84	\$ 10.84	\$ 10.84	\$ 10.84	\$ 10.84
State planning and research	\$ 17.53	\$ 17.53	\$ 17.53	\$ 17.53	\$ 17.53
Recreational trails	\$ 1.48	\$ 1.48	\$ 1.48	\$ 1.48	\$ 1.48
Railroad grade crossings	\$ 4.72	\$ 4.22	\$ 2.22	\$ 2.22	\$ 2.22
MassRides program	\$ -	\$ 3.33	\$ 3.33	\$ 3.33	\$ 3.33
subtotal of planning / adjustments / pass-throughs	\$ 72.08	\$ 68.65	\$ 66.65	\$ 60.40	\$ 60.40
Funding sources for regional priorities					
Congestion Mitigation Air Quality Improvements	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00	\$ 25.00
Highway Safety Improvement Program	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00
Transportation Alternatives Program	\$ 5.73	\$ 5.73	\$ 5.73	\$ 5.73	\$ 5.73
Surface Transportation Program Block Grant	\$ 180.46	\$ 189.20	\$ 187.42	\$ 192.70	\$ 195.59
regional share % subtotal of funding for regional priorities	\$ 221.19	\$ 229.93	\$ 228.15	\$ 233.43	\$ 236.32
3.5596% Berkshire	\$ 7.87	\$ 8.18	\$ 8.12	\$ 8.31	\$ 8.41
42.9671% Boston	\$ 95.04	\$ 98.79	\$ 98.03	\$ 100.30	\$ 101.54
4.5851% Cape Cod	\$ 10.14	\$ 10.54	\$ 10.46	\$ 10.70	\$ 10.84
8.6901% Central Mass	\$ 19.22	\$ 19.98	\$ 19.83	\$ 20.29	\$ 20.54
2.5397% Franklin	\$ 5.62	\$ 5.84	\$ 5.79	\$ 5.93	\$ 6.00
0.3100% Martha's Vineyard	\$ 0.69	\$ 0.71	\$ 0.71	\$ 0.72	\$ 0.73
4.4296% Merrimack Valley	\$ 9.80	\$ 10.18	\$ 10.11	\$ 10.34	\$ 10.47
4.4596% Montachusett	\$ 9.86	\$ 10.25	\$ 10.17	\$ 10.41	\$ 10.54
0.2200% Nantucket	\$ 0.49	\$ 0.51	\$ 0.50	\$ 0.51	\$ 0.52
3.9096% Northern Middlesex	\$ 8.65	\$ 8.99	\$ 8.92	\$ 9.13	\$ 9.24
4.5595% Old Colony	\$ 10.09	\$ 10.48	\$ 10.40	\$ 10.64	\$ 10.78
10.8099% Pioneer Valley	\$ 23.91	\$ 24.86	\$ 24.66	\$ 25.23	\$ 25.55
8.9601% Southeastern Mass	\$ 19.82	\$ 20.60	\$ 20.44	\$ 20.92	\$ 21.17
	31%	31%	32%	32%	32%
Highway Division programs	\$ 423.98	\$ 435.52	\$ 409.35	\$ 428.23	\$ 434.51
Reliability programs	\$ 367.87	\$ 340.04	\$ 343.44	\$ 293.86	\$ 303.47
Bridge program	\$ 213.53	\$ 184.76	\$ 193.53	\$ 175.63	\$ 193.53
Inspections	\$ 17.90	\$ -	\$ 17.90	\$ -	\$ 17.90
Systematic maintenance	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00
On-system NHS (minimum)	\$ 118.63	\$ 120.00	\$ 118.63	\$ 118.63	\$ 118.63
On-System Non-NHS	\$ 31.38	\$ 19.13	\$ 11.38	\$ 11.38	\$ 11.38
Off-system	\$ 35.63	\$ 35.63	\$ 35.63	\$ 35.63	\$ 35.63
Interstate pavement program	\$ 51.78	\$ 30.72	\$ 41.76	\$ 27.49	\$ 25.46
Non-interstate DOT pavement program	\$ 67.16	\$ 86.50	\$ 81.48	\$ 67.55	\$ 63.93
Roadway improvements program	\$ 4.38	\$ 2.50	\$ 3.75	\$ 3.75	\$ 1.25
Safety improvements program	\$ 31.03	\$ 35.56	\$ 22.92	\$ 19.44	\$ 19.31
Modernization programs	\$ 36.11	\$ 50.08	\$ 40.92	\$ 99.37	\$ 96.04
ADA retrofits program	\$ -	\$ 3.00	\$ -	\$ 1.75	\$ -
Intersection improvements program	\$ 17.36	\$ 22.08	\$ 19.17	\$ 18.47	\$ 16.67
Intelligent Transportation Systems program	\$ 12.50	\$ 13.75	\$ 12.50	\$ 10.00	\$ 10.00
Roadway reconstruction program	\$ 6.25	\$ 11.25	\$ 9.25	\$ 69.15	\$ 69.38
Expansion programs	\$ 20.00	\$ 45.40	\$ 25.00	\$ 35.00	\$ 35.00
Bicycles and pedestrians program	\$ 20.00	\$ 45.40	\$ 25.00	\$ 35.00	\$ 35.00
Capacity program	\$ -	\$ -	\$ -	\$ -	\$ -
Total Budgeted Funding	\$ 717.25	\$ 734.10	\$ 704.15	\$ 722.06	\$ 731.23

5/3/17

The following table shows the total federal programmed amounts in this TIP for each of the five 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.

Highway Program Financial Plan Table

Merrimack Valley Metropolitan Planning Organization

FY 2018-2022 Transportation Improvement Program

(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*
2018	\$29.09	\$8.49	\$37.58	\$37.84
2019	\$30.53	\$4.13	\$34.66	\$35.01
2020	\$28.18	\$3.05	\$31.23	\$35.30
2021	\$45.52	\$4.34	\$49.86	\$49.86
2022	\$33.79	\$0	\$33.79	\$33.79

* Millions of dollars

The financial plan contained herein is financially constrained and indicates that the Merrimack Valley Metropolitan Planning Organization's FFYs 2018-2022 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.

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

Summary of Highway Funding Categories

The following tables 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.

Cost Estimates and Available Resources

Summary By Funding Category

Highway Projects Federal Fiscal Year 2018 as Amended through January 2018

Highway FFY 2018	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 if not Statewide Category)
Regional Target Congestion Mitigation/AQ	\$2,572.15	\$3,215.18	\$3,215.18
Regional Target Highway Safety (HSIP)	\$398.66	\$442.95	\$442.96
Regional Target Surface Transportation Program (STP)	\$2,537.35	\$3,171.69	\$3,436.28
Regional Target Transportation Alternatives (TAP)	\$2,162.65	\$2,703.32	\$2,703.32
Regional Target Subtotals	\$7,670.81	\$9,533.14	\$9,797.74
Statewide (SW) Bridges On-System (NHPP-On)	\$18,656.59	\$23,320.73	\$23,320.73
Statewide Other Federal Aid Earmark Demo ID MA 175	\$20.32	\$25.39	\$25.39
SW Non-Interstate Pavement (NHPP)	\$1,698.76	\$2,123.45	\$2,123.45
Statewide Bicycles and Pedestrians (CMAQ)	\$2,059.84	\$2,574.81	\$2,574.81
Total FFY 2018	\$30,106.32	\$37,577.52	\$37,842.12

Cost Estimates and Available Resources
Summary By Funding Category
Highway Projects Federal Fiscal Year 2019

Highway FFY 2019	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 if not Statewide Category)
Regional Target Congestion Mitigation/AQ (CMAQ)	\$885.91	\$1,107.39	\$1,107.39
Regional Target Highway Safety (HSIP)	\$0.00	\$0.00	\$442.96
Regional Target Surface Transportation Program (STP)	\$6,648.43	\$8,310.54	\$8,310.54
Regional Target Transportation Alternatives (TAP)	\$259.20	\$323.99	\$323.99
Regional Target Subtotals	\$7,793.54	\$9,741.92	\$10,184.88
Statewide On-System Bridges (NHPP-On)	\$18,656.58	\$23,320.73	\$23,320.73
Statewide Roadway Reconstruction SRTS (TAP)	\$1,274.88	\$1,593.60	\$1,593.60
Total FFY 2019	\$27,725.00	\$34,656.25	\$35,099.21

Cost Estimates and Available Resources
Summary By Funding Category
Highway Projects Federal Fiscal Year 2020

Highway FFY 2020	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 if not Statewide Category)
Regional Target Congestion Mitigation/AQ	\$0	\$0	\$1,107.39
Regional Target Highway Safety (HSIP)	\$0	\$0	\$442.96
Regional Target Surface Transportation Program (STP)	\$4,770.86	\$5,963.58	\$8,204.69
Regional Target Transportation Alternatives (TAP)	\$55.08	\$68.85	\$351.00
Regional Target Subtotals	\$4,825.94	\$6,032.43	\$10,106.04
Statewide On System Bridges (NHPP-On)	\$18,656.59	\$23,320.73	\$23,320.73
Statewide Bicycles and Pedestrians (CMAQ)	\$1,499.22	\$1,874.03	\$1,874.03
Total FFY 2020	\$24,981.75	\$31,227.19	\$35,300.80

**Cost Estimates and Available Resources
Summary By Funding Category
Highway Projects Federal Fiscal Year 2021**

Highway FFY 2021	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 if not Statewide Category)
Regional Target Congestion Mitigation/AQ	\$885.91	\$1,107.39	\$1,107.39
Regional Target Highway Safety (HSIP)	\$398.66	\$442.96	\$442.96
Regional Target Surface Transportation Program (STP)	\$6,750.86	\$8,438.57	\$8,438.57
Regional Target Transportation Alternatives (TAP)	\$280.80	\$351.00	\$351.00
Regional Target Subtotals	\$8,316.23	\$10,339.92	\$10,339.92
Statewide On System Bridges (NHPP-On)	\$18,656.58	\$23,320.73	\$23,320.73
SW Non-Interstate Pavement (NHPP)	\$9,483.80	\$11,854.75	\$11,854.75
Statewide Bicycles and Pedestrians (CMAQ)	\$3,472.90	\$4,341.12	\$4,341.12
Total FFY 2021	\$39,929.51	\$49,856.52	\$49,856.52

**Cost Estimates and Available Resources
Summary By Funding Category
Highway Projects Federal Fiscal Year 2022**

Highway FFY 2022	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 if not Statewide Category)
Regional Target Congestion Mitigation/AQ	\$885.91	\$1,107.39	\$1,107.39
Regional Target Highway Safety (HSIP)	\$398.66	\$442.96	\$442.96
Regional Target Surface Transportation Program (STP)	\$6,853.27	\$8,566.58	\$8,566.58
Regional Target Transportation Alternatives (TAP)	\$280.80	\$351.00	\$351.00
Regional Target Subtotals	\$8,418.64	\$10,467.93	\$10,467.93
Statewide On-System Bridges (NHPP-On)	\$18,656.58	\$23,320.73	\$23,320.73
Total FFY 2022	\$27,075.22	\$33,788.66	\$33,788.66

Part C. 2. Transit Program Financial Plan

Planning Justification for Transit Projects

The Merrimack Valley region's FFYs 2018-2022 TIP federal aid transit projects are to be carried out using Sections 5307 received by the MVRTA from the FTA 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 2018-2022.

MVRTA Financial Status

The FAST Act 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 2018-2022 TIP meet this criterion.

Transit Program Financial Plan Table

Merrimack Valley Metropolitan Planning Organization
 FFYs 2018-2022 Transportation Improvement Program
 (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*
2018	\$8.21	\$0.10	\$8.31	\$8.31
2019	\$5.54	\$1.44	\$6.98	\$6.98
2020	\$7.14	\$0.10	\$7.24	\$7.24
2021	\$11.30	\$0.10	\$11.40	\$11.40
2022	\$9.10	\$0.10	\$9.20	\$9.20

* Millions of dollars

**Cost Estimates and Available Resources
Summary by Funding Category
2018 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2018	Regional TIP FFY 2018	Balance FFY 2018
Section 5307 Capital and Planning Formula	\$5,904,705	\$2,518,955	\$3,385,750
Section 5307 Transit Enhancements			
Subtotal	\$5,904,705	\$2,518,955	\$3,385,750
Section 5307 Capital and Planning Formula Carryover	\$3,936,570	\$3,936,570	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$3,936,570	\$3,936,570	\$0
Section 5307 Total	\$9,841,275	\$6,455,525	\$3,385,750
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Section 5339 Bus and Bus Related Equipment and Facilities			
Federal Aid Total	\$9,841,275	\$6,455,525	\$3,385,750
Other Transit Funding (Non-Federal Aid)	\$2,500,000	\$2,500,000	\$0

**Cost Estimates and Available Resources
Summary by Funding Category
2019 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2019	Regional TIP FFY 2019	Balance FFY 2019
Section 5307 Capital and Planning Formula	\$5,993,280	\$1,964,585	\$4,028,695
Section 5307 Transit Enhancements			
Subtotal	\$5,993,280	\$1,964,585	\$4,028,695
Section 5307 Capital and Planning Formula Carryover	\$3,385,750	\$3,385,750	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$3,385,750	\$3,385,750	\$0
Section 5307 Total	\$9,379,030	\$5,350,335	\$4,028,695
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$9,379,030	\$5,350,335	\$4,028,695
Other Transit Funding (Non-Federal Aid)	\$2,500,000	\$2,500,000	\$0

**Cost Estimates and Available Resources
Summary by Funding Category
2020 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2020	Regional TIP FFY 2020	Balance FFY 2020
Section 5307 Capital and Planning Formula	\$6,083,175	\$1,489,260	\$4,593,915
Section 5307 Transit Enhancements			
Subtotal	\$6,083,175	\$1,489,260	\$4,593,915
Section 5307 Capital and Planning Formula Carryover	\$4,028,695	\$4,028,695	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$4,028,695	\$4,028,695	\$0
Section 5307 Total	\$10,111,870	\$5,517,955	\$4,593,915
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$10,111,870	\$5,517,955	\$4,593,915
Other Transit Funding			

**Cost Estimates and Available Resources
Summary by Funding Category
2021 Transit Projects**

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2021	Regional TIP FFY 2021	Balance FFY 2021
Section 5307 Capital and Planning Formula	\$6,174,425	\$4,222,760	\$1,951,665
Section 5307 Transit Enhancements			
Subtotal	\$6,174,425	\$4,222,760	\$1,951,665
Section 5307 Capital and Planning Formula Carryover	\$4,593,915	\$4,593,915	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$4,593,915	\$4,593,915	\$0
Section 5307 Total	\$10,768,340	\$8,816,675	\$1,951,665
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$10,768,340	\$8,816,675	\$1,951,665
Other Transit Funding			

Summary of Transit Funding Categories

Cost Estimates and Available Resources

Summary by Funding Category

2022 Transit Projects

FTA Funding Program Summaries (Federal dollars only)

Merrimack Valley Regional Transit Authority FTA Funding Programs	Estimated Authorization FFY 2022	Regional TIP FFY 2022	Balance FFY 2022
Section 5307 Capital and Planning Formula	\$6,267,040	\$5,095,615	\$1,171,425
Section 5307 Transit Enhancements			
Subtotal	\$6,267,040	\$5,095,615	\$1,171,425
Section 5307 Capital and Planning Formula Carryover	\$1,951,665	\$1,951,665	\$0
Section 5307 Operating Carryover			
Section 5307 Transit Enhancements Carryover			
Subtotal	\$1,951,665	\$1,951,665	\$0
Section 5307 Total	\$8,218,705	\$7,047,280	\$1,171,425
Section 5309 Bus			
Section 5309 Fixed Guideway			
Section 5309 Total			
Section 5310 Elderly and Disabled			
Section 5310 Elderly and Disabled Carryover			
Federal Aid Total	\$8,218,705	\$7,047,280	\$1,171,425
Other Transit Funding (Non-Federal Aid)			

MVRTA Transit Operations and Maintenance Summary Table

State Fiscal Year 2016 (Actual), 2017 (Adopted Budget), and 2018 to 2022 (Projected)

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

	Audit	Adopted Budget	Adopted Budget	Projected	Projected	Projected	Projected
Operating Revenue	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2016	2017	2018	2019	2020	2021	2022
Farebox	\$ 1,940,040	\$2,021,190	\$2,081,145	\$2,142,860	\$2,208,420	\$2,271,870	\$2,335,480
Section 5307	\$3,526,185	\$3,787,950	\$3,806,450	\$3,974,325	\$4,155,335	\$4,340,640	\$4,449,315
Section 5311	-						
CMAQ/TDM	-						
Fully Funded*	-						
Job Access/ Reverse Commute	-						
New Freedom	-						
Advertising	\$9,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Interest Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0

MVRTA Transit Operations and Maintenance Summary Table

State Fiscal Year 2016 (Actual), 2017 (Adopted Budget), and 2018 to 2022 (Projected) (Continued)

	Audit	Adopted Budget	Adopted Budget	Projected	Projected	Projected	Projected
Operating Revenue	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2016	2017	2018	2019	2020	2021	2022
Rental Income	-						
State Contract Assistance **	\$6,836,165	\$6,836,165	\$7,182,245	\$7,361,800	\$7,545,850	\$7,734,445	\$7,927,805
Local Assessment	\$3,306,515	\$3,429,440	\$3,516,215	\$3,605,785	\$3,696,420	\$3,789,970	\$3,884,720
Other: (Define)	\$933,800	\$942,580	\$970,610	\$990,020	\$1,009,825	\$1,030,020	\$1,050,620
Total Revenue	\$16,551,705	\$17,042,425	\$17,581,665	\$18,099,790	\$18,640,850	\$19,099,945	\$19,672,940

MVRTA Transit Operations and Maintenance Summary

State Fiscal Year 2016 (Actual), 2017 (Adopted Budget), and 2018 to 2022 (Projected) (Continued)

Operating Expenses ***	Actual	Current	Yr One	Yr Two	Yr Three	Yr Four	Yr Five
	2016	2017	2018	2019	2020	2021	2022
Total (See Below)	\$16,551,705	\$17,042,425	\$17,581,665	\$18,099,790	\$18,640,850	\$19,099,945	\$19,672,940

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. 3. Status on Implementation of FFY 2017 TIP Projects
FFY 2017 Highway Project List

Regional Target Projects

Project ID	Location	Project Description	Mass DOT District	Funding Category	Total Programmed Funds	Project Status as of May 24, 2017
606669	Amesbury	Amesbury – Powwow Riverwalk Construction	4	STP and TAP	\$671,207	100% package received as of 4/18/2017, Ch. 91 License Application Submitted.
607573	Haverhill	Haverhill – Reconstruction on Route 97 (Broadway) from Silver Birch Lane to Research Drive	4	STP & CMAQ	\$6,526,912	Advertised 5/13/2017.
608261	Lawrence	Lawrence – Intersection improvements at Marston Street & Ferry Street / Commonwealth Drive	4	HSIP & STP	\$1,350,694	25% Design. Design Public Hearing May 31, 2017.
604585	NA	Flex to FTA for MVRTA new bus upgrade to cleaner fuel buses	4	CMAQ	\$645,840	Grant submitted- being processed by FTA

**Part C. 3. Status on Implementation of FFY 2017 TIP Projects
FFY 2017 Highway Project List (Cont.)**

Statewide Projects

Project ID	Location	Project Description	Mass DOT District	Funding Category	Total Programmed Funds	Project Status as of May 24, 2017
607561	Andover - Methuen	Andover - Methuen Interstate Maintenance and related work I - 93	4	NHPP & STP-TE	\$13,932,707	Advertised 4/15/17.
605306	Haverhill	Haverhill – Superstructure replacement, H-12-039, I-495 (NB & SB) over Merrimack River	4	NHPP	Yr 1 = \$12,000,000 Total Cost = \$50,772,179	25% Design. Moved to start FFY 2018, AC FFY 2018-2021 and changed to Bridge Replacement.
608002	Lawrence	Lawrence – Safe Routes to School (Bruce Elementary)	4	TAP	\$2,016,148	PS&E received 3/17/2017. ROW sent to MassDOT in May.

Part C. 3. Status on Implementation of FFY 2017 TIP Projects

FFY 2017 Transit Project List

Project ID	Location	Project Description	MassD OT District	Funding Category	Total Programmed Funds	Project Status as of May 2017
604585	NA	Flex to FTA for MVRTA new bus upgrade to cleaner fuel buses	4	CMAQ	\$645,840	Grant submitted- being processed by FTA

State Match Sources (RTACAP, MAP, TDC and SCA)

FTA Program	RTA	Project Description	Federal Funds	State Match Sources				Local Funds	Total Cost	Project Status as of May 24, 2017
				RTA-CAP	MAP	TDC	SCA			
5307	MVRTA	Capital funding used for Preventive Maintenance and considered as an operating expense for FY 2018 (O)	\$2,443,850				\$610,960	\$3,054,810	File FTA Grant 6/1/2017	

Part C. 3. Status on Implementation of FFY 2017 TIP Projects

FFY 2017 Transit Project List (Continued)

FTA Program	RTA	Project Description	Federal Funds	State Match Sources				Local Funds	Total Cost	Project Status as of May 24, 2017
				RTA-CAP	MAP	TDC	SCA			
5307	MVRTA	Capital funding used for operating ADA service and considered as an operating expense for FY 2018 (O)	\$1,097,465				\$274,365	\$1,371,830	File FTA Grant 6/1/2017	
5307	MVRTA	MVPC Short Range Transit Planning & Technical Support UPWP FY 2018 (20% match from MVPC) (N)	\$80,000				\$20,000	\$100,000	File FTA Grant 6/1/2017	
5307	MVRTA	Refurbish Engine/ Transmission on 8 Model Year 2011 Transit Buses (M)	\$224,000	\$56,000				\$280,000	Contract awarded to Cummins Engine.	

Part C. 3. Status on Implementation of FFY 2017 TIP Projects

FFY 2017 Transit Project List (Continued)

FTA Program	RTA	Project Description	Federal Funds	State Match Sources				Local Funds	Total Cost	Project Status as of May 24, 2017
				RTACAP	MAP	TDC	SCA			
5307	MVRTA	Replace Parking Facilities Revenue Collection Equipment	\$240,000	\$60,000					\$300,000	Should have contract by early June.
5307	MVRTA	Bus/Van Mobile Location Project (C)	\$240,000	\$60,000					\$300,000	Should have contract by early June.
5307	MVRTA	Replace 7 Model Year 2004 buses with new (M)	\$2,391,200	\$597,800					\$2,989,000	Delivered.
5307	MVRTA	Replace 1 Model Yr 2013 Support Vehicle (M)	\$37,080	\$9,270					\$46,350	Delivered.
5307	MVRTA	Operating Assistance FY 2018 (O)	\$628,525				\$628,525		\$1,257,050	File FTA Grant 6/1/2017

Part C. 4. Air Quality Conformity

Meeting Air Quality Goals in Transportation Massachusetts Department of Transportation (MassDOT) and the Metropolitan Planning Organizations (MPOs)

Introduction

This report documents recent progress made by MassDOT and the MPOs in meeting air quality goals established through state and (currently former) federal regulations applicable to Massachusetts. It consists of two parts: 1) A “progress report” that documents future carbon dioxide (CO₂) emission estimates from the transportation sector as part of meeting greenhouse gas (GHG) reduction goals established through the Commonwealth’s Global Warming Solutions Act (GWSA), and 2) An informational analysis of future vehicle emissions of ozone precursor pollutants – formerly a federal “air quality conformity” requirement for areas of Massachusetts.

Section 1

GWSA Transportation Status: Future Carbon Dioxide Emissions Reductions

The Global Warming Solutions Act of 2008 requires statewide reductions in greenhouse gas (CO₂) emissions of 25 percent below 1990 levels by the year 2020, and 80 percent below 1990 levels by 2050. As part of the GWSA, the Executive Office of Energy and Environmental Affairs developed the Massachusetts Clean Energy and Climate Plan (CECP), which outlines programs to attain the 25 percent reduction by 2020 – including a 7.6 percent reduction that would be attributed to the transportation sector.

The Commonwealth’s thirteen metropolitan planning organizations (MPOs) are integrally involved in helping to achieve greenhouse gas reductions mandated under the GWSA. The MPOs work closely with the Massachusetts Department of Transportation (MassDOT) and other involved agencies to develop common transportation goals, policies, and projects that would help to reduce GHG emission levels statewide, and meet the specific requirements of the GWSA regulation – *Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation* (310

CMR 60.05). The purpose of this regulation is to assist the Commonwealth in achieving their adopted GHG emission reduction goals by:

- Requiring MassDOT to demonstrate that its GHG reduction commitments and targets are being achieved.
- Requiring each MPO to evaluate and track the GHG emissions and impacts of both its Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP).
- Requiring each MPO, in consultation with MassDOT, to develop and utilize procedures to prioritize and select projects in its RTP and TIP based on factors that include GHG emissions and impacts.

Meeting the requirements of this regulation is being achieved through the transportation goals and policies contained in the 2016 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 Transportation Improvement Program (TIPs). The GHG tracking and evaluation processes enable the MPOs and MassDOT 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. This approach is consistent with the greenhouse gas reduction policies of promoting healthy transportation modes through prioritizing and programming an appropriate balance of roadway, transit, bicycle and pedestrian investments; as well as supporting smart growth development patterns through the creation of a balanced multi-modal transportation system. All of the MPOs and MassDOT are working toward reducing greenhouse gases with “sustainable” transportation plans, actions, and strategies that include (but are not limited to):

- Reducing emissions from construction and operations
- Using more fuel-efficient fleets
- Implementing and expanding travel demand management programs
- Encouraging eco-driving
- Providing mitigation for development projects
- Improving pedestrian, bicycle, and public transit infrastructure and operations (healthy transportation)
- Investing in higher density, mixed use, and transit-oriented developments (smart growth)

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 2012 RTPs, which were adopted in September 2011. This collaboration has continued for the MPO's 2016 RTPs and 2018-2022 TIPs. 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, as a supplement to the 2016 RTPs. Using the Boston MPO's regional travel demand model and the newly updated statewide travel demand model for the remainder of the state, GHG emissions have been projected for 2020 no-build (base) and build (action) conditions, and for 2040 no-build (base) and build (action) conditions. The results of this modeling are presented at the end of this section.

- All of the MPOs have addressed GHG emission reduction projections in their RTPs (including these supplemental statewide estimates), along with a discussion of climate change and a statement of MPO support for reducing GHG emissions as a regional goal.

MassDOT’s statewide estimates of CO₂ emissions resulting from the collective list of all recommended projects in all the Massachusetts RTPs combined are presented below. Emissions have been estimated using the new (2014) MOVES model, and also incorporate the latest planning assumptions including updated socio-economic projections for the Commonwealth:

Massachusetts Statewide CO₂ Emissions Estimates
(all emissions in tons per summer day)

Year	CO₂ Action Emissions	CO₂ Base Emissions	Difference (Action – Base)
2012	185,324.3	185,324.3	n/a
2020	138,611.3	138,638.1	-26.7
2030	89,631.6	89,645.3	-13.7
2040	70,010.7	70,035.5	-24.8

This analysis measures only projects that are included in the travel demand models. Many other types of projects that cannot be accounted for in the model (such as bicycle and pedestrian facilities, shuttle services, intersection improvements, etc.), are covered in the regional TIPs with either “qualitative” assessments of likely CO₂ change, or actual quantitative estimates listed for each project.

As shown above, collectively, all the projects in the RTPs in the 2020 Action scenario provide a statewide reduction of over 26 tons of CO₂ per day compared to the base case. The 2040 Action scenario estimates a reduction of nearly 25 tons of CO₂ emissions compared to the base case.

These results demonstrate that the transportation sector is expected to make positive progress in meeting the GHG reduction targets and complying with the requirements of the GWSA. MassDOT and the MPOs will continue to advocate for steps needed to accomplish the Commonwealth’s long-term goals for greenhouse gas reductions.

Section 2

Statewide Ozone Precursor Analysis (for informational purposes only)

Legislative Background on Ozone

The 1970 Clean Air Act defined a one-hour national ambient air-quality standard (NAAQS) for ground-level ozone. The 1990 Clean Air Act Amendments further classified degrees of nonattainment of the one-hour standard based on the severity of 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; this was later extended first to 2003, then to 2007.

In 1997, the U.S. Environmental Protection Agency (EPA) proposed a new, eight-hour ozone NAAQS to replace the one-hour standard, effective June 15, 2005. The new standard was challenged in court, and after a lengthy legal battle, the courts upheld the standard, which was finalized in June 2004. The eight-hour standard was 0.08 parts per million (ppm), 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 eight-hour values. Massachusetts as a whole was classified as being in moderate nonattainment for the eight-hour standard, but it was separated into two nonattainment areas—Eastern Massachusetts and Western Massachusetts. Both nonattainment areas were required to reduce its emissions of VOCs and NO_x to achieve attainment of the eight-hour ozone NAAQS by 2009.

In March 2008, EPA published revisions to the eight-hour ozone NAAQS that established a level of 0.075 ppm (March 27, 2008; 73 FR 16483). After reviewing data from Massachusetts monitoring stations, the EPA sent a letter on December 16, 2011, proposing that only Dukes County would be designated as being in nonattainment for the new, proposed 0.075 ozone standard. Massachusetts concurred with these findings.

On May 21, 2012, the final rule (77 FR 30088) 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 (77 FR 30160), published on May 21, 2012, revoked the 1997 ozone NAAQS; the rule was to become effective one year after the 2008 NAAQS became effective (July 20, 2012). Also on May 21, 2012, the air-quality designation areas for the 2008 NAAQS were published in the Federal Register. In this Federal Register, the only

area in Massachusetts that was designated as being in nonattainment for ozone was Dukes County. All other counties were classified as unclassifiable/ attainment. Therefore, the 13 MPOs are not required to perform a conformity determination for ozone for their LRTP.

All the Massachusetts MPOs and MassDOT continue to meet the requirements of air quality conformity according to the Code of Federal Regulations, and as evaluated through inter-agency consultation. Specifically, on March 6, 2015, (80 FR 12264, effective April 6, 2015) EPA published the Final Rulemaking, "Implementation of the 2008 National Ambient Air Quality Standards (NAAQS) for Ozone: State Implementation Plan Requirements; Final Rule." This rulemaking removed transportation conformity to the 1997 Ozone NAAQS (the standard referenced by the Conservation Law Foundation and the subject of a December 23, 2014 DC Circuit Court decision). Link to Final EPA Rulemaking: <http://www.gpo.gov/fdsys/pkg/FR-2015-03-06/pdf/2015-04012.pdf>

Since the LRTPs have been developed, reviewed, and approved after April 6, 2015, air quality conformity determinations to the 1997 Ozone NAAQS are no longer required, as those standards and all associated area designations have been permanently replaced by the 2008 NAAQS, which (with actually a stricter level of allowable ozone concentration than the 1997 standards) no longer designate Massachusetts as a non- attainment area(s) for ozone except for Dukes County as discussed above.

Legislative Background on Carbon Monoxide

Although this document reports on statewide ozone precursor emissions, reporting on another criteria pollutant, carbon monoxide (CO) is still federally required for some MPOs in Massachusetts. The cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville within the Boston Region MPO were classified as being in attainment for CO emissions. As part of the Boston MPO LRTP, an air-quality conformity analysis is still completed for these communities, as they have a carbon monoxide maintenance plan approved as part of the SIP. This information can be found in Chapter 8 of [Charting Progress to 2040](#), the Boston MPO's current LRTP.

The Lowell, Waltham, Worcester and Springfield carbon monoxide areas are classified attainment with a limited maintenance plan in place. No regional air quality analysis is required in limited maintenance plan areas as emissions may be treated as essentially

not constraining for the length of the maintenance period because it is unreasonable to expect that such areas will experience so much growth in that period that a violation of the carbon monoxide NAAQS would result. Therefore, in areas with approved limited maintenance plans, Federal actions requiring conformity determinations under the transportation conformity rule are considered to satisfy the “budget test.” All other transportation conformity requirements under 40 CFR 93.109(b) continue to apply in limited maintenance areas, including project level conformity determinations based on carbon monoxide hot spot analyses under 40 CFR 93.116.

Ozone Analysis Criteria

The ozone analysis was prepared using the following criteria:

- The horizon years for the travel demand model analysis are established as 2012 (base year), 2020, 2030, and 2040.
- Projections for future population, employment, and households were developed jointly by MassDOT, the Metropolitan Area Planning Council, and the Donahue Institute of the University of Massachusetts. This was a cooperative and iterative process conducted throughout 2014 and into 2015, with input and comments from each MPO in the Commonwealth.
- Projections were incorporated into the statewide and Boston region travel demand models, along with updated travel characteristics, obtained through the 2010-2011 Massachusetts Travel Survey.
- The transit service assumptions for the MBTA were included in this analysis and were based on MBTA service in the spring of 2012. Travel demand model calibration was performed using the Ridership and Service Statistics, MBTA Blue Book, 2012 and the MBTA Systemwide Passenger Survey, 2008–09.
 - Factors used for calculating emissions changes were determined using the EPA’s latest emissions model, Motor Vehicle Emissions Simulator (MOVES) 2014. Inputs used for 2012 through 2040 were received from the DEP and include information about

programs that were submitted to the EPA as the strategy for the Commonwealth to attain ambient air-quality standards.

- The Federal Highway Administration’s Highway Performance Monitoring System (HPMS) is used to track daily vehicle-miles of travel (VMT). For each MPO region, adjustment factors that compare the 2012 HPMS VMT to the 2012 base year VMT estimated by the travel demand models transportation model VMT were developed. The adjustment factors were then applied to all modeled VOC and NOx emissions for the years 2020 through 2040 to ensure consistency with EPA-accepted procedures.

Inclusion of Regionally Significant Transportation Projects

Only “regionally significant” projects are included in the travel-demand modeling. Regionally significant projects are defined as follows:

A transportation project (other than an exempt project) that is on a facility that serves regional transportation needs (such as access to and from the area outside of the MPO region; major activity centers in the region; major planned developments, such as new retail malls and sport complexes; and transportation terminals (as well as most terminals themselves) and would be included in the modeling of a metropolitan area’s transportation network, including at a minimum all principal arterial highways and all fixed-guideway transit facilities that offer an alternative to regional highway travel.

The following table lists the regionally significant projects proposed in the LRTPs in the Commonwealth:

Regionally Significant Projects Included in the Travel Demand Models

Analysis	Community	Project Description
2020	Bedford and Billerica	Middlesex Turnpike Improvements, From Crosby Drive North to Manning Road, Phase III
2020	Newton and Needham	Reconstruction of Highland Avenue, Needham Street and Charles River Bridge, from Webster Street to Route 9
2020	Weymouth and Abington	Reconstruction and Widening on Route 18 (Main Street) From Highland Place to Route 139
2020	Woburn	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street
2020	Woburn	Bridge Replacement, New Boston Street over MBTA
2030	Boston	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square
2030	Framingham	Intersection Improvements at Route 126 and Route 135/MBTA and CSX Railroad
2030	Lexington	Route 4/225 (Bedford Street) and Hartwell Avenue
2030	Natick	Bridge Replacement, Route 27 (North Main St.) over Route 9 (Worcester St.) and Interchange Improvements
2030	Somerville and Medford	Green Line Extension Project (Phase 2), College Avenue to Mystic Valley Parkway/Route 16
2030	Somerville	McGrath Boulevard Project
2040	Barnstable	Hyannis Access Improvements
2030	Westborough	Route 9 Improvements
2030	Oxford	Route 20 capacity improvement
2030	Millbury	Turnpike/Route 146 int. improve.
2030	Worcester	I-290 Bridge Expansion

Regionally Significant Projects Included in the Travel Demand Models (Cont.)

2030	North Andover	Route 114 Reconstruction
2030	Athol	Route 2 Interchange @ S. Athol Rd
2040	Westford	Route 110 wid-
2040	Tewksbury, Andover	Lowell Junction Interchange
2020	Abington, Weymouth	Route 18 Widening (funded in Boston Region)
2020	Wilbraham	Boston Road Reconstruction
2020	Hadley	Route 9 Phase 1
2030	Hadley	Route 9 Phase 2
2030	Hadley	Route 9 Phase 3
2030	Middleborough	Routes 44/28/18 Rotary
2040	Taunton	Routes 24 & 140 Improvements
2040	Fall River	Route 79 Blvd

Emissions Inventory Assumptions

Although Massachusetts is currently in conformity for ozone, this informational analysis was done in relation to the State Implementation Plan mobile-source ozone emission projections that were approved in March 2008 for the revoked 1997 eight-hour NAAQS for VOC and NOx. The VOC mobile-source emission budget for 2009 for the Eastern Massachusetts Ozone Nonattainment Area was set at 63.50 tons per summer day, and at 10.73 tons per summer day for the Western Massachusetts Ozone Nonattainment Area. The NOx mobile-source emission budget for 2009 for the Eastern Massachusetts Ozone Nonattainment Area was set at 174.96 tons per summer day, and at 27.73 tons per summer day for the Western Massachusetts Ozone Nonattainment Area.

The Massachusetts Department of Transportation, Office of Transportation Planning (MassDOT Planning) estimated the results for the Eastern and Western Massachusetts Ozone Nonattainment Areas using the Statewide and Boston Region MPO regional travel demand model sets, based on the latest planning assumptions (as outlined in this document).

Ozone Analysis Results

MassDOT OTP conducted an air-quality analysis for the Commonwealth’s 13 MPO’s LRTP. The test used in this analysis was to show that the LRTPs are consistent with the emission budgets set for the revoked 1997 eight-hour ozone NAAQS as described above. The results are shown in the tables below. They include emissions from regionally significant projects as derived from the travel demand models and off-model emissions from commuter rail, commuter boat, and buses:

**VOC Emissions Estimates
Eastern Massachusetts Ozone Nonattainment Area
(all emissions in tons per summer day: tpsd)**

Year	VOC Action Emissions	VOC Budget	Difference (Action – Budget)
2012	30.56	n/a	n/a
2020	11.25	63.50	-52.25
2030	7.06	63.50	-56.44
2040	5.79	63.50	-57.71

NOx Emissions Estimates
Eastern Massachusetts Ozone Nonattainment Area (tpsd)

Year	NOx Action Emissions	NOx Budget	Difference (Action – Budget)
2012	116.97	n/a	n/a
2020	36.37	174.96	-138.59
2030	17.81	174.96	-157.15
2040	13.36	174.96	-161.60

VOC Emissions Estimates
Western Massachusetts Ozone Nonattainment Area (tpsd)

Year	VOC Action Emissions	VOC Budget	Difference (Action – Budget)
2012	3.61	n/a	n/a
2020	1.58	10.73	-9.15
2030	0.89	10.73	-9.84
2040	0.76	10.73	-9.97

NOx Emissions Estimates
Western Massachusetts Ozone Nonattainment Area (tpsd)

Year	NOx Action Emissions	NOx Budget	Difference (Action – Budget)
2012	13.10	n/a	n/a
2020	4.36	27.73	-23.37
2030	1.86	27.73	-25.87
2040	1.42	27.73	-26.31

Based on the preceding estimates, MassDOT Planning has found that the combined emission levels from transportation projects contained in the 2016 Regional Transportation Plans and 2016-2019 Transportation Improvement Programs – for both former ozone nonattainment areas in Massachusetts – would demonstrate conformity with the SIP, the Clean Air Act, and the EPA conformity regulations (40 CFR part 51).

Through the interagency air quality consultation process (involving U.S. Department of Transportation, EPA, DEP, MassDOT, and the MPOs) the latest EPA rulemakings, and the referenced legislative background and legal issues, currently applicable ozone standards, area designations, and requirements were all reviewed.

The ozone analysis outlined in this section demonstrates that the implementation of the 2016 RTPs and TIPs meets the “budget test,” and would therefore satisfy the air quality ozone conformity criteria, and is consistent with the air quality goals in the Massachusetts SIP.

Part C. 5. 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.

Part C. 6. Title VI Notice to Beneficiaries

The Merrimack Valley Planning Commission (MVPC) operates its programs, services and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of **race, color or national origin** (including **limited English proficiency**) be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both, prohibit discrimination on the basis of **age, sex and disability**. These protected categories are contemplated within MVPC's Title VI Program consistent with federal interpretation and administration. Additionally, MVPC provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

MVPC also complies with the Massachusetts Public Accommodation Law, M.G.L. Chapter 272, Sections 92a, 98, and 98a prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based upon **race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry**. Likewise, MVPC complies with the Governor's Executive Order 526, Section 4 requiring that all of its programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for shall be conducted without unlawful discrimination based upon **race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status** (including Vietnam-era veterans), or **background**.

Additional Information

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

Title VI Program Coordinator
Merrimack Valley Metropolitan Planning Organization
c/o Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830-5061
(978) 374-0519, extension 15
akomornick@mvpc.org

Complaint Filing

To file a complaint alleging a violation of Title VI or related federal nondiscrimination law, contact the Title VI Program Coordinator (above) within one hundred and eighty (180) days of the alleged discriminatory conduct.

To file a complaint alleging a violation of the Commonwealth's Public Accommodation Law, contact the Massachusetts Commission Against Discrimination within three hundred (300) days of the alleged discriminatory conduct at:

Massachusetts Commission Against Discrimination (MCAD)
One Ashburton Place, 6th Floor
Boston, MA 02109
(617) 994-6000
TTY: (617) 994-6196

Translation

English

If this information is needed in another language, please contact the MVMPO Title VI/Nondiscrimination Coordinator at 978-374-0519 ext. 15.

Spanish

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

Portuguese

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

Chinese Simple

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

Chinese Traditional

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

Vietnamese

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

French Creole

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

Russian

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

French

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

Italian

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

Mon-Khmer, Cambodian

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

Arabic

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

Part C. 7. Environmental Justice

Environmental Justice from a transportation perspective is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of transportation laws, regulations, and policies.

"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

MVMPO Merrimack Valley Transportation Committee Nondiscrimination Working Group

The MVMPO MVTC's purpose is to advise the MVMPO and participate in the MVMPO region's federally certified transportation planning process. Its membership provides for the involvement of local government officials, transportation professionals, transportation providers, and individuals experienced in economic development, freight, commuter rail, smart growth, environmental issues, regional planning, and other interest groups, ensuring broad representation and a geographical balance of its participants.

MVTC Nondiscrimination Working Group

The MVMPO is responsible for promoting, securing and evaluating public involvement in its transportation planning process. In particular, it is responsible for identifying and seeking meaningful participation of the region's minority and low-income (Environmental Justice) populations – and in working to reduce participation barriers for such populations.

The MVMPO's established EJ process includes identification of Census-based statistical areas within its region where:

- a) the percentage of minority populations exceeds the average percentage of minority population for the region as a whole;
- b) household incomes are 80% or less of area median income (AMI), and
- c) there are concentrations of households with limited English proficiency (LEP).

The MVMPO MVTC Nondiscrimination Working Group's purpose is to provide the MVMPO members, its MVTC and the public with the perspectives of individuals and organizations representing low-income, minority populations. It is also an opportunity for MVMPO staff and EJ

stakeholders to exchange information, evaluate policies, plans and projects, and generate ideas for future projects.

Membership is comprised of at least five (5), and no more than ten (10), members with individual and/or collective knowledge and expertise in working with EJ populations on

- a) Disabilities
- b) Education
- c) English proficiency
- d) Elder Affairs
- e) Faith-based community service
- f) Minority advocacy
- g) Neighborhood organization
- h) Non-profit community development
- i) Public Health
- j) Veterans Affairs
- k) Workforce training and development

Working Group members would serve two-year terms.

The MVMPO staff administers the Nondiscrimination Working Group's membership, activities and reporting tasks according to the same process as the full MVTC. The MVMPO must approve any Nondiscrimination Working Group activities. The MVMPO staff will be responsible for preparing all Nondiscrimination Working Group notices, agendas, minutes and other materials. Any written and verbal communication from the Nondiscrimination Working Group is addressed to the MVMPO Chair.

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Part C. 8. Equity Analysis

The following tables illustrate a geographic and social equity analysis of highway funding in the Merrimack Valley MPO region. Haverhill, Lawrence and Methuen are designated as Title VI and Environmental Justice (EJ) communities. The Title VI communities have Census Tracts with higher than average percentage of minorities than the regional average percentage and the same three communities are EJ communities with lower than average median income in some Census Tracts.

The table below summarizes the percent of population in Title VI / EJ communities relative to the percent of Federal highway funding programmed.

The following table shows the percent of population in Title VI / EJ communities relative to the percent of Federal highway funding programmed.

	Region Population (ACS 11 to 15)	Percent of Total Population	TIP Project In- vestment	Percent of Projects by Total Investment
Within Title VI / EJ community	189,490	55%	\$119,540,163	64%
Outside Title VI / EJ community	154,420	45%	\$67,565,986	36%
Total	343,910	100%	\$187,106,149	100%

This table illustrates consistency between the percent of population in Title VI / EJ areas and the percent of funding in those areas.

All of the Federal transit funding (100%) is considered to benefit Title VI and EJ communities because all of the MVRTA fixed routes originate in the Title VI / EJ communities of Haverhill or Lawrence, or provide connections to these routes. The paratransit service also provides access to and from the Title VI and EJ communities.

All of the MVMPO region communities have had, or are programmed to have, Federally funded projects from 2013 to 2022. (Looking at the tables that follow it appears that Rowley, which is not a Title VI / EJ community, does not have a federally funded project in the ten year period, however it is included in Statewide projects listed in the Boston MPO Region TIPs in those ten years.)

The tables on the following pages show the projects included in the analysis for FFYs 2018 to 2022 and a summary chart showing the number of projects and the funding by community, and whether the community is a Title VI (high percentage of minorities) and/or an EJ (high percentage of low income households) community. This is followed by a table and analysis chart for projects programmed in FFYs 2013 to 2017.

The results show that for FFYs 2018 to 2022, 19% of the total number projects are in Title VI and EJ communities. Considering the data for percent of funding, 64% of the funding is in Title VI communities and EJ communities.

The results show that for FFYs 2013 to 2017, 50% of the total number projects are in Title VI communities and EJ communities. Considering the data for percent of funding, 58% of the funding is in Title VI communities EJ communities.

All of the Transit funding (100%) is considered to benefit Title VI and EJ communities because all of the MVRTA fixed routes originate in Haverhill or Lawrence, or provide connections to these routes. The paratransit service also provides access to and from the Title VI and EJ communities. The only mappable transit project in the FFYs 2018 to 2022 TIP is the Non-Federal Aid Newburyport Intermodal Transit Facility Project it is labelled on the relevant maps as RTA - 113303. The mappable transit projects in FFYs 2013 to 2017 list are labelled on the 2013 to 2017 relevant maps as follows: RTA - 113402 SGR Buckley Center, RTA – 113403 SGR Gateway, RTA - 114402 SGR Maintenance Facility and RTD-4285 McGovern Center.

Equity Analysis Maps

[MVMPO: FFYs 2018 to 2022 TIP Projects by Community](#)

[MVMPO: FFYs 2013 to 2017 Projects by Community](#)

[MVMPO: FFYs 2018 to 2022 Statewide and Regional Target Highway Projects overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2018 to 2022 Transit Projects and MVRTA Bus Routes overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2013 to 2017 Statewide and Regional Target Highway Projects overlaid on Low Income and Minority Tracts](#)

[MVMPO: FFYs 2013 to 2017 Transit Projects and MVRTA Bus Routes overlaid on Low Income and Minority Tracts](#)

**FFYs 2018 to 2022 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis**

Community	Project Number	Project Description	Total Funding Programmed for Project	Funding for this community	FFY	Title VI Community	EJ Community
Amesbury	602418	Elm St.	\$12,064,000	\$12,064,000	19-20	No	No
Amesbury/ Salisbury	607737	Amesbury / Salisbury Trail Connector @ I-95	\$2,574,805				
Amesbury Part of	607737	Amesbury / Salisbury Trail Connector @ I-95		\$1,287,403	2018	No	No
Georgetown / Boxford	607541	Georgetown / Boxford B to B	\$1,874,028				
Boxford Part of	607541	Georgetown / Boxford B to B		\$937,014	2019	No	No
Georgetown Part of	607541	Georgetown / Boxford B to B		\$937,014	2019	No	No
Georgetown / Newbury	607542	Georgetown / Newbury B to B	\$4,341,120		2021	No	No
Georgetown Part of	607542	Georgetown / Newbury B to B		\$2,170,560	2020	No	No
Groveland	605753	Rt 97 School St (from Parker to Gardner)	\$4,049,510	\$4,049,510	2021	No	No
Groveland	608298	Groveland Community Trail	\$1,835,573	\$1,835,573	2019	No	No
Haverhill	608027	Bradford Rail Trail Extension	\$1,176,240	\$1,176,240	2020	Yes	Yes
Haverhill	605306	Haverhill Bridge Replacement I-495 over Merrimack	\$116,603,655	\$116,603,655	18-22	Yes	Yes
Lawrence / North And- over	608809	Lawrence / North Andover Resurf Rt. 114	\$2,123,453		2018		
Lawrence Part of	608809	Lawrence / North Andover Resurf Rt. 114		\$1,061,727	2018	Yes	Yes
MVRTA	MV0001	Flex to FTA for Cleaner Fuel Buses	\$698,541	\$698,541	2019	Yes	Yes
Newbury/ Newburyport/ Salisbury	608494	Newbury/ Newburyport/ Salisbury Resurf Rt.1	\$11,854,752				
Newbury Part of	608494	Newbury/ Newburyport/ Salisbury Resurf Rt.1		\$3,951,584	2021	No	No
Newbury Part of	607542	Georgetown / Newbury B to B		\$2,170,560	2020	No	No
Newburyport Part of	608494	Newbury/ Newburyport/ Salisbury Resurf Rt.1		\$3,951,584	2021	No	No
Newburyport	608792	Newburyport SRTS	\$1,593,600	\$1,593,600	2019	No	No

**FFYs 2018 to 2022 MVMPO Statewide and Regional Target Highway Funding
Projects by Community for Equity Analysis**

North Andover Part of	608809	Lawrence / North Andover Resurf Rt. 114		\$1,061,727	2018	No	No
North Andover	606159	Rt 125 / Mass Ave	\$3,640,038	\$3,614,644	2018	No	No
North Andover	606159	Rt 125 / Mass Ave		\$25,394	2018	No	No
North Andover	608095	Rt 114 from Andover St to Stop & Shop	\$16,758,334	\$16,758,334	21-22	No	No
Salisbury	605020	Salisbury Multi-use Trail	\$5,918,500	\$5,918,500	2018	No	No
Salisbury Part of	607737	Amesbury / Salisbury Trail Connector @ I-95		\$1,287,403	2018	No	No
Salisbury	608494	Newbury/ Newburyport/ Salisbury Resurf Rt.1		\$3,951,584	2021	No	No
		Total All Projects 2018 to 2022	\$187,106,149	\$187,106,149			

FFYs 2018 to 2022 MVMPO Equity Analysis Highway Funding

Community	Number of Projects	Percent of Projects	Target Funding	Percent of Funding	Title VI Community	EJ Community
Amesbury	2	10%	\$13,351,403	7.1%	No	No
Andover	0	0%	\$0	0.0%	No	No
Boxford	1	5%	\$937,014	0.5%	No	No
Georgetown	2	10%	\$3,107,574	1.7%	No	No
Groveland	2	10%	\$5,885,083	3.1%	No	No
Haverhill	2	10%	\$117,779,895	62.9%	Yes	Yes
Lawrence	1	5%	\$1,061,727	0.6%	Yes	Yes
Merrimac	0	0%	\$0	0.0%	No	No
Methuen	0	0%	\$0	0.0%	Yes	Yes
Newbury	2	10%	\$6,122,144	3.3%	No	No
Newburyport	2	10%	\$5,545,184	3.0%	No	No
North Andover	3	14%	\$21,460,099	11.5%	No	No
Rowley	0	0%	0	0.0%	No	No
Salisbury	3	14%	\$11,157,487	6.0%	No	No
West Newbury	0	0%	0	0.0%	No	No
MVRTA	1	5%	\$698,541	0.4%	Yes	Yes
Total	21		\$187,106,149			
Percent of Projects in Title VI community =		19%	Percent of Funding in Title VI community =		64%	
Percent of Projects in EJ community =		19%	Percent of Funding in EJ community =		64%	

**FFYs 2013 to 2017 MVMPO Highway Funding
Projects by Community for Equity Analysis**

Community	Project Number	Project Description	TIP Funding	FFY	Title VI Community	EJ Community
Amesbury	603682	Amesbury - Bridge Replacement, A-07-026, Route I-495 (NB & SB)	\$9,310,817	2015	No	No
Amesbury	602033	Route 150	\$4,643,054	2014	No	No
Amesbury	606669	Powwow Riverwalk	\$671,207	2017	No	No
Andover / Lawrence	606574	Andover - Lawrence - IM I-495	\$14,396,000	2016	No/Yes	No/Yes
Andover / Methuen	607561	Andover - Methuen - IM I-93	\$13,932,707	2017	No/Yes	No/Yes
Georgetown/ Newbury/ West Newbury/ Newburyport	606549	Georgetown/ Newbury/ West Newbury/ Newburyport/ IM on I-95	\$21,240,000	2015	No	No
Groveland	605114	Rt 97 (School St & Salem St)	\$4,301,259	2015	No	No
Groveland	605114	Rt 97 (School St & Salem St)	\$2,040,502	2016	No	No
Haverhill	607573	Route 97 (Broadway)	\$6,526,912	2017	Yes	Yes
Haverhill	606161	Improvements on Main St (Rt. 125)	\$3,635,519	2016	Yes	Yes
Haverhill	605720	Haverhill Bradford Rail Trail	\$2,410,718	2014	Yes	Yes
Lawrence/ North Andover	607985	Lawrence / North Andover IM on I-495	\$7,788,000	2015	Yes/No	Yes/No
Lawrence	608075	Lawrence St. / Park St. Intersection	\$1,265,561	2015	Yes	Yes

**FFYs 2013 to 2017 MVMPO Highway Funding
Projects by Community for Equity Analysis**

Community	Project Number	Project Description	TIP Funding	FFY	Title VI Community	EJ Community
Lawrence	608261	Marston St & Ferry St/ Commonwealth Ave	\$1,350,694	2017	Yes	Yes
Lawrence	608002	Safe Routes to School Bruce Elementary	\$2,016,148	2017	Yes	Yes
Lawrence	608407	Signals/ADA along Common & Lowell Sts	\$2,880,512	2016	Yes	Yes
Lawrence	607471	Union Crossing Pedestrian Improvements	\$100,000	2013	Yes	Yes
Merrimac	602469	Merrimac Square	\$6,075,055	2013	No	No
Methuen	605181	I-93/ Rt 110/ Rt 113 Rotary	\$47,379,692	13-14	Yes	Yes
Methuen	607476	Methuen Rt 213 Resurfacing and Bridge Repairs	\$11,987,868	2016	Yes	Yes
Newburyport	606503	Clipper City Rail Trail	\$4,061,158	2015	No	No
North Andover	607776	North Andover - SRTS - N.A. Middle	\$1,086,000	2015	No	No
MVRTA	604585	Flex to FTA for MVRTA Cleaner Fuel Buses	\$645,840	2017	Yes	Yes
		Total Funding 2013 to 2017:	\$169,745,223			

FFYs 2013 to 2017 MVMPO Equity Analysis Highway Funding

Community	Number of Projects	Percent of Projects	Target Funding	Percent of Funding	Title VI Community	EJ Community
Amesbury	3	11%	\$14,625,078	9%	No	No
Andover	2	7%	\$14,164,354	8%	No	No
Boxford	0	0%	\$0	0%	No	No
Georgetown	1	4%	\$5,310,000	3%	No	No
Groveland	1	4%	\$6,341,761	4%	No	No
Haverhill	3	11%	\$12,573,149	7%	Yes	Yes
Lawrence	7	25%	\$18,704,915	11%	Yes	Yes
Merrimac	1	4%	\$6,075,055	4%	No	No
Methuen	3	11%	\$66,333,914	39%	Yes	Yes
Newbury	1	4%	\$5,310,000	3%	No	No
Newburyport	2	7%	\$9,371,158	6%	No	No
North Andover	2	7%	\$4,980,000	3%	No	No
Rowley	0	0%	\$0	0%	No	No
Salisbury	0	0%		0%	No	No
West Newbury	1	4%	\$5,310,000	3%	No	No
MVRTA	1	4%	\$645,840	0%	Yes	Yes
Totals	28		\$169,745,223			
Percent of Projects in Title VI communities =		50%	Percent of Funding in Title VI communities =		58%	
Percent of Projects in EJ communities =		50%	Percent of Funding in EJ communities =		58%	

FFYs 2018 – 2022 MVMPO Transit Projects Funding

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2018	RTD0005637		ADA Operating Expense	\$1,413,370
2018	RTD0005638		Preventive Maintenance	\$3,152,905
2018	RTD0005639		Refurbish Engine/ trans 8 model year 2012 buses	\$264,000
2018	RTD0005642	300900	Operating Assistance	\$643,010
2018	RTD0005643	442400	Short Range Transit Planning	\$100,000
2018	RTD0005656	111202	Replace 6 Model Yr 2004 buses delivery 2018	\$2,689,500
2018	RTD0005662	114211	Replace 1 Model Yr 2013 Support Vehicle	\$47,750
2019	RTD0005640		Preventive Maintenance	\$3,250,095
2019	RTD0005641		ADA Operating Expense	\$1,456,420
2019	RTD0005644	442400	Short Range Transit Planning	\$100,000
2019	RTD0005645	300900	Operating Assistance	\$780,250
2019	RTD0005657	111302	Purchase 3 new 35' buses delivery 2019	\$1,344,750
2019	RTD0005663	114211	Replace 1 Model Yr 2013 Support Vehicle	\$49,000
2020	RTD0005646	117A00	Preventive Maintenance	\$3,347,595

FFYs 2018 – 2022 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2020	RTD0005647	117C00	Non-Fixed Route ADA Para Serv	\$1,500,110
2020	RTD0005648	442400	Short Range Transit Planning	\$100,000
2020	RTD0005649	300900	Operating Assistance	\$924,950
2020	RTD0005658	111202	Replace 3 Model Yr 2007 buses delivery 2020	\$1,371,645
2021	RTD0005653	117A00	Preventive Maintenance	\$3,448,020
2021	RTD0005654	117C00	Non-Fixed Route ADA Para Serv	\$1,545,115
2021	RTD0005655	442400	Short Range Transit Planning	\$100,000
2021	RTD0005659	111203	Replace 9 Model Yr 2009 buses delivery 2021	\$4,197,240
2021	RTD0005660	300901	Operating Assistance	\$1,017,450
2021	RTD0005661	111215	Replace 16 Model Yr 2015 vans with new	\$1,094,560
2022	RTD0006084	117A00	Preventive Maintenance	\$3,551,455
2022	RTD0006085	117C00	Non-Fixed Route ADA Para Serv	\$1,591,460

FFYs 2018 – 2022 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2022	RTD0006086	442400	Short Range Transit Planning	\$100,000
2022	RTD0006087	300901	Operating Assistance	\$1,047,970
2022	RTD0006088	111202	Replace 6 Model Yr 2011 buses delivery 2023 6 of 8	\$2,911,200
	Federal Aid Sect 5307 Subtotal			\$43,139,820
NFA				
2018	RTD0005665	113303	Newburyport Intermodal Transit Facility Year 1	\$2,500,000
2019	RTD0006082	113303	Newburyport Intermodal Transit Facility Year 2	\$2,500,000
2019	RTD0006381	111202	Replacement Buses – cleaner fuel (CMAQ Match on HWY TIP)	\$139,708
			NFA Subtotal	\$5,139,708
	FFYs 2018 to 2022 Transit Projects Total			\$48,279,528

FFYs 2013 – 2017 MVMPO Transit Projects Funding

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2013			ADA Operating Expense	\$1,212,120
2013			Preventive Maintenance	\$2,655,545
2013			Office/ Maintenance Facility Renovations	\$500,000
2013			Replace 4 Support Veh.	\$200,920
2013			Purchase 3 new 45' Com-muter Coaches	\$1,668,500
2013			Short Range Transit Plan-ning	\$50,000
2013			MVPC Technical Support to MVRTA	\$50,000
2014	RTD0000837	117A00	Preventive Maintenance	\$2,936,000
2014	RTD0001469	117C00	ADA Operating Expense	\$1,335,175
2014	RTD0001710	442400	Short Range Transit Plan-ning	\$50,000
2014	RTD0001711	435002	MVPC Technical Support to MVRTA	\$50,000
2014	RTD0005645	300900	Operating Assistance	\$2,006,470
2015	RTD0002279	117C00	ADA Operating Expense	\$1,337,045

FFYs 2013 – 2017 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2015	RTD0002280	117A00	Preventive Maintenance	\$3,034,720
2015	RTD0002690	300900	Operating Assistance	\$2,128,920
2015	RTD0003650	442400	Short Range Transit Planning	\$50,000
2015	RTD0003651	435002	MVPC Technical Support to MVRTA	\$50,000
2015	RTD0004281	111202	Purchase 7 Replacement Buses	\$2,391,200
2015	RTD0004283	114211	Acquire Support Vehicles	\$72,000
2015	RTD0004286	113402	SGR Buckley Center	\$12,000
2015	RTD0004284	114402	SGR Maintenance Facility	\$58,800
2015	RTD0004285	RTD-4285	SGR McGovern Center	\$32,000
2015	RTD0004287	111215	Purchase 5 Replacement Vans	\$256,000
2016			ADA Operating Expense	\$1,311,195
2016			Preventive Maintenance	\$3,131,330
2016			Operating Assistance	\$684,350

FFYs 2013 – 2017 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2016			Short Range Transit Planning	\$50,000
2016			MVPC Technical Support to MVRTA	\$50,000
2016			Replace 5 Model Yr 2011 Paratransit Vehicles	\$320,000
2016			Acquire Support Vehicles	\$90,000
2017	RTD0004541		ADA Operating Expense	\$1,371,830
2017	RTD0004542		Preventive Maintenance	\$3,054,810
2017	RTD0004552	300900	Operating Assistance	\$1,257,050
2017	RTD0004550	442400	Short Range Transit Planning	\$100,000
2017	RTD0004932	111202	Replace 7 Model Yr 2004 Buses with new	\$2,989,000
2017	RTD0004919	113403	Replace Parking Facilities Revenue Collection Equipment	\$300,000
2017	RTD0004989	114209	Bus/ Van Mobile Location Project	\$300,000

FFYs 2013 – 2017 MVMPO Transit Projects Funding (Cont.)

FFY Year	Project Number	Line Number	Project Description	Total Project Cost
2017	RTD0004540		Refurbish Engines on 8 Model Year 2011 Buses	\$280,000
2017	RTD0004990	114211	Replace 1 Model Yr 2013 Support Vehicle	\$46,350
	FFYs 2013 to 2017 Transit Projects Total			\$37,473,330

List of Appendices in Separate File

The following Appendices can be found in a separate file titled “Appendices to Final MVMPO 2018 to 2022 TIP January 2018”

- Appendix A Other Regional Priority Bridge Projects
- Appendix B Other Regional Priority Roadway Projects
- Appendix C Transportation Evaluation Criteria Summary
- Appendix D Sample Project Evaluation Worksheet
- Appendix E Greenhouse Gas (GHG) Monitoring and Evaluation
- Appendix F Completed Highway and Transit Projects GHG Summary
- Appendix G List of Acronyms
- Appendix H Key to Maps Showing Locations of Transportation Projects
- Appendix I Comments Received on Draft MVMPO 2018 to 2022 TIP
- Appendix J October 2017 Amendments and Comments
- Appendix K January 2018 Adjustment