

FFY 2022 UNIFIED PLANNING WORK PROGRAM

MONTACHUSETT METROPOLITAN PLANNING ORGANIZATION

MPO ENDORSED MAY 19, 2021



Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation. The views and opinions of the Montachusett Regional 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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Montachusett Metropolitan Planning Organization (MMPO)
and Montachusett Regional Planning Commission (MRPC)
Title VI Coordinator
MRPC
464 Abbott Ave.
Leominster, MA 01453
(978) 345-7376
geaton@mrpc.org

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

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Portuguese: Caso esta informação seja necessária em outro idioma, favor contar o Coordenador em Título VI do MRPC pelo telefone 978-345-7376.

French: Si cette information est nécessaire dans une autre langue, s'il vous plaît communiquer avec le coordonnateur MRPC Titre VI au 978-345-7376.

MONTACHUSETT

REGIONAL PLANNING COMMISSION

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MPO ENDORSEMENT FFY 2022 UNIFIED PLANNING WORK PROGRAM

The Unified Planning Work Program (UPWP) for the Montachusett Metropolitan Planning Organization (MPO) is a financial programming tool developed annually as part of the federally certified transportation planning process. In accordance with federal guidelines, the FFY 2022 (October 1, 2021 - September 30, 2022) Unified Planning Work Program for the Montachusett MPO was developed and submitted for a 21-day public review and comment period. Comments received have been addressed and are reflected in the final FFY 2020 Unified Planning Work Program. The Montachusett Joint Transportation Committee (MJTC) has reviewed the document and has recommended its endorsement by the members of the MPO.

The Committee of Signatories representing the Montachusett Metropolitan Planning Organization (MMPO) by a majority vote hereby endorses the FFY 2022 UPWP for the Montachusett MPO with the chair signing on behalf of all members.

*Jamey Tesler, Secretary and CEO
Massachusetts Department of Transportation*

5/19/2021

Date

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MONTACHUSETT METROPOLITAN PLANNING ORGANIZATION SIGNATORIES

Massachusetts Department of Transportation (MassDOT) Acting Secretary	Jamey L. Tesler
MassDOT Highway Division Administrator	Jonathan L. Gulliver
Montachusett Regional Planning Commission (MRPC) Chairman	Guy Corbosiero
Montachusett Regional Transit Authority (MART) Chairman/Mayor City of Leominster	Mayor Dean Mazzearella
Mayor City of Gardner	Mayor Michael J. Nicholson
Mayor City of Fitchburg	Mayor Stephen DiNatale
Winchendon Board of Selectmen <i>Subregion 1</i>	Barbara Anderson
Ashburnham Board of Selectmen <i>Subregion 2</i>	Rosemarie Meissner
Lunenburg Board of Selectmen <i>Subregion 3</i>	Michael-Ray Jeffreys
Lancaster Board of Selectmen <i>Subregion 4</i>	Jay M. Moody

MPO SUB-SIGNATORY COMMITTEE MEMBERS

David Mohler, Director OTP, MassDOT, for Acting Secretary Jamey L. Tesler
Arthur Frost, Project Development Engineer for Administrator Jonathan L. Gulliver
Glenn Eaton, Executive Director, MRPC, for Chairman Guy Corbosiero
Mohammed H. Khan, Administrator, MART, for Chairman Mayor Dean Mazzearella

EXOFFICIO MEMBERS

Jeffrey H. McEwen, Division Administrator	Federal Highway Administration
Peter Butler, Administrator	Federal Transit Administration

MONTACHUSETT REGIONAL PLANNING COMMISSION (MRPC) OFFICERS

Guy Corbosiero, Chairman	Winchendon
John Telepciak, Vice Chairman	Phillipston
Laura Shifrin, Treasurer	Townsend
Roger Hoyt, Asst. Treasurer	Ashburnham
Secretary	

MONTACHUSETT JOINT TRANSPORTATION COMMITTEE (MJTC) OFFICERS

Jon Wyman, Chairman	Westminster
Nicolas Bosonetto, P.E., Vice Chairman	Fitchburg
Tracy Murphy, Secretary	Winchendon

MONTACHUSETT REGIONAL PLANNING COMMISSION STAFF

Glenn Eaton, Executive Director
Linda Parmenter, Administrative/Human Resources Director
Linda Quinlivan, Fiscal Manager
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Brad Harris, Transportation Project Director
George Snow, Principal Transportation Planner
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Brian Doherty, AICP, Principal Transportation Planner
George Kahale, Transit Director
John Hume, Planning and Development Director
Karen Chapman, Senior Planner
Jonathan Vos, Regional Planner
Jason Stanton, GIS Director
Kayla Kress, GIS Analyst

MONTACHUSETT JOINT TRANSPORTATION COMMITTEE

COMMUNITY

APPOINTED BY SELECTMEN/MAYOR

APPOINTED BY PLANNING BOARD

Ashburnham
 Ashby
 Athol
 Ayer
 Clinton
 Fitchburg
 Gardner
 Groton
 Harvard
 Hubbardston
 Lancaster
 Leominster
 Lunenburg
 Petersham
 Phillipston
 Royalston
 Shirley
 Sterling
 Templeton
 Townsend
 Westminster
 Winchendon

Dick Kilhart

 Phil Duffy
 Nicolas Bosonetto
 Trevor Beauregard

 Travis Brown

 David DiGiovanni
 Paula Bertram
 Nancy Allen
 Gordon Robertson
 Roland Hamel

 Richard Maki

 Don Klein

 Brian Croteau

Roger Hoyt
 Alan Pease

 Mark Archambault

 Paula Caron

 Russell Burke
 Erin McBee
 Alice Livdahl
 Michael Antonellis
 Peter Latchis
 Matthew Brenner

 Janet Tice
 Kirsten Newman
 Charles Carroll II
 Beth Faxon
 Jon Wyman
 Guy Corbosiero

EXOFFICIO MEMBERS

Bryan Pounds	Office of Transportation Planning (OTP), Massachusetts Department of Transportation (MassDOT)
Jeffrey H. McEwen	Federal Highway Administration (FHWA), Division Administrator
Peter Butler	Federal Transit Administration (FTA), Administrator
	Department of Environmental Protection (DEP)
Paula Simmons	MassDOT Highway Division - District 2
Arthur Frost	MassDOT Highway Division - District 3
	Montachusett Regional Planning Commission (MRPC)
Mohammed Khan	Montachusett Regional Transit Authority (MART)

ORGANIZATION MEMBERS

Al Futterman	Nashua River Watershed Association (NRWA)
	Amalgamated Transit Union #690 (ATU 690)
Richard Liberatore	Fitchburg Airport Commission
Roy M. Nascimento	North Central MA Chamber of Commerce
Joan Goodwin	Fitchburg Council on Aging
Jessica Strunkin	Mass Development
Peter Lowitt	Devens Enterprise Commission (DEC)
Patricia Pistone	Montachusett Opportunity Council, Inc.
Kristen Lamoureux	The ARC of Opportunity

INTRODUCTION

The Unified Planning Work Program (UPWP) for the Montachusett Metropolitan Planning Organization (MPO) is a financial programming tool developed annually as part of the federally certified transportation planning process. This document contains task descriptions of the transportation-planning program of the MPO, with associated budget information and funding sources for the FFY 2022 program year.

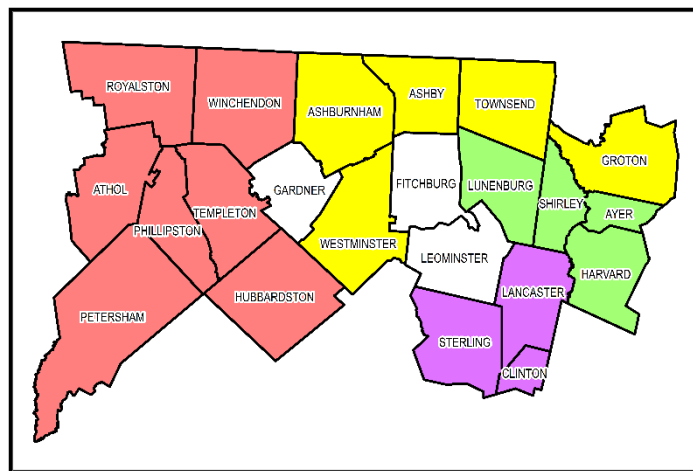
The purpose of the UPWP is to ensure a comprehensive, cooperative, and continuous (3C) transportation planning process in the Leominster - Fitchburg Urbanized Area and the Montachusett Region. In addition, this document provides for the coordination of planning efforts between communities in the Montachusett Region.

MONTACHUSETT METROPOLITAN PLANNING ORGANIZATION (MMPO)

All urbanized areas with a population greater than 50,000 are required by the U.S. Department of Transportation (USDOT) Federal regulations to designate an MPO for the area. The establishment of an MPO is necessary for the State to receive Federal transportation funds. In the Montachusett Region, the Montachusett Regional Planning Commission (MRPC) serves as staff for the MPO. The MRPC staff annually produces a Transportation Improvement Program (TIP) and Unified Planning Work Program (UPWP). In addition, a Regional Transportation Plan is updated every four years to reflect the changing transportation needs of the area. In July of 2019, the MPO endorsed the most recent 2020 Regional Transportation Plan.

The MPO in the Montachusett Region (after reorganization in October 2001) is currently comprised of:

- the Secretary and CEO of the Massachusetts Department of Transportation (MassDOT);
- the Administrator of MassDOT Highway Division;
- the Chairman of the MRPC;
- the Chairman of the Montachusett Regional Transit Authority (MART);
- the Mayors of Fitchburg, Leominster and Gardner and;
- one Selectman from each of four geographically defined sub Regions.



These sub regions are composed as such:

- Subregion 1) Athol, Hubbardston, Petersham, Phillipston, Royalston, Templeton, and Winchendon;
- Subregion 2) Ashburnham, Ashby, Groton, Townsend, and Westminister;
- Subregion 3) Ayer, Harvard, Lunenburg and Shirley and;
- Subregion 4) Clinton, Lancaster, and Sterling.

Legend	
MPO Membership	
Fitchburg/Gardner/Leominster	• Secretary & CEO of MassDOT
Representative Subregion 1	• Administrator, Highway Division, MassDOT
Representative Subregion 2	• Chair of the MRPC
Representative Subregion 3	• Chair of MART
Representative Subregion 4	

These 10 members serve as the MPO Policy Board for the regional "3C" transportation planning process. It was felt that increasing the MPO to 10 members would allow for more local input and greater public participation and as such an inter-agency Memorandum of Understanding, entitled "Memorandum of Understanding (MOU) Relating to the Comprehensive,

Montachusett MPO	
Signatories	Representing
Secretary & CEO	Massachusetts Department of Transportation (MassDOT)
Administrator	Massachusetts Department of Transportation (MassDOT) Highway Division
Chair	Montachusett Regional Planning Commission (MRPC)
Chair	Montachusett Regional Transit Authority (MART)
Mayor	City of Fitchburg
Mayor	City of Gardner
Mayor	City of Leominster
Representative	Subregion 1 - Athol, Hubbardston, Petersham, Phillipston, Royalston, Templeton, Winchendon
Representative	Subregion 2 - Ashburnham, Ashby, Groton, Townsend, Westminster
Representative	Subregion 3 - Ayer, Harvard, Lunenburg, Shirley
Representative	Subregion 4 - Clinton, Lancaster, Sterling

Continuing and Cooperative Transportation Planning Process for the Montachusett Region Metropolitan Planning Organization”, defining the expanded MPO, was formally agreed to in September 2001. This MOU was reviewed, revised, updated and endorsed by the MPO on February 4, 2009. The makeup and composition of the MPO remained the same but a revised method to select subregion representatives was adopted. On April 13, 2011, the MOU was updated and endorsed to reflect the Massachusetts Transportation Reform Act enacted on June 26, 2009 that established the Massachusetts Department of Transportation. During the fall/winter of 2015/2016, the representatives and

alternates for the four identified subregions went through a selection process to update membership and participation. These individuals will serve for an approximate three-year period beginning in September/October. Staff will review the overall selection process in order ensure a comprehensive input process.

In addition to the MPO signatories, members/representatives from various federal, state and regional agencies are identified as Ex-Officio Members to the MPO that provide valuable input and guidance to all MPO actions and decisions. The Ex-Officio Members are identified on page vii of this document.

TRANSPORTATION/TRANSIT PLANNING IN THE MONTACHUSETT REGION

During the FFY 2022 program year, the MRPC will continue its efforts to maintain a viable transportation planning process through several tasks outlined in this UPWP. If necessary and the current MRPC staff are unable to meet the requirements of a particular work effort, ex. engineering design, etc., an outside agency may be sought. Staff will coordinate and seek approval from MassDOT and FHWA staff before a decision is reached. Each task describes the efforts to be made to address a particular issue or area of concern along with intended products, timeframes, budgets and funding sources.

MRPC staff will continue to work on keeping an up to date trail database through the newly developed trail data application. This application serves as a tool to allow communities to update their trail data on their own through our GIS platform. The goal is to continuously keep the regional trail data updated so that our 5-year update will be a smooth process. As part of this, staff will continue to meet and work with the Montachusett Regional Trail Coalition (MRTC) on a regular basis.

Staff will also continue to work on assisting communities with the development of the transportation aspects of local ADA transition plans. In the upcoming program year, staff will continue to assist communities when asked in the collection of Public Right of Way (PROW) data that can be utilized in the development of self-evaluation and prioritization sections of their local ADA transition plans.

The Geographic Information System (GIS) department will continue to support various work activities under several UPWP tasks as well as provide local assistance through our program of providing 8 free hours of GIS service to member communities.

In addition, the GIS Department will continue work to expand and improve the MRPC's online GIS web mapping program, MRMapper. Several datalayers and applications continue to be updated on the site such as traffic counts, roadway functional classification information, crash data and analysis, and trail locations.

In addition to these tasks, MRPC will continue its Data Collection & Analysis Program. This task has evolved from the collection of traffic counts to include additional data needs for the continued maintenance of several online databases such as regional pavement conditions and crash locations. This task will be expanded to include assisting communities when requested in the collection of Public Right of Way (PROW) data that can be utilized in the development of their local ADA transition plans. The traffic counting aspect of this program consists of the use of automatic traffic recorder counts necessary to determine average daily traffic (ADT) throughout the region. These counters also allow us to determine speed and classification data as well. Requests for ADT information often come from local communities concerned about safety or future highway improvements. Additionally, the MRPC participates in the MassDOT statewide traffic counting program. Over the last few program years, the MRPC has acquired a video traffic counting system known as Miovision in order to collect data at locations previously too difficult or complex to do by traditional means. The MRPC has also acquired two radar counter units that are utilized throughout the region at problem locations. In the FFY 2018 program year, the MRPC acquired a bicycle and pedestrian counter. Although set up problems have limited the use of this counter, the MRPC will conduct a more vigorous effort to collect bike and pedestrian data at locations throughout the Region. Locations will focus on known trails such as the North Central Pathway in Gardner and Winchendon and the Nashua River Rail Trail in Ayer and Groton.

Public participation is also a vital element of the transportation planning process. Community representatives of the Montachusett Joint Transportation Committee (MJTC) meet every month on the second Wednesday to discuss transportation projects and issues of regional importance. Membership on the MJTC is solicited every April to June from communities and organizations. Certain communities lack membership on the MJTC through non-appointments. Staff continues to reach out and work with communities in an attempt to encourage new appointments to and attendance at the MJTC. Every so often, staff conducts a survey of MJTC members to determine if a different start time for the monthly meeting would help to promote additional attendance. Prior efforts resulted in the MJTC moving from the third to the second Wednesday of the month with the start time changed from 6:30 PM to 2:30 PM. Attendance has also increased with the option of remote attendance via the Go To Meeting application. Interested individuals should check the meeting schedule on MRPC website (www.mrpc.org) for the most up to date information.

An updated and revised Public Participation Plan (PPP), developed to assist and guide the Montachusett MPO in its outreach efforts, was endorsed by the MPO in May of 2016. This PPP was submitted for a 45-day public review and comment period in March – May 2016. The PPP attempts to more closely follow the state's PPP as well as feedback from the MassDOT Office of Diversity and Civil Rights (ODCR). Issues of Environmental Justice and Title VI of the Civil Rights Act of 1964 and their relationship to the MRPC will continue to be reviewed during the upcoming program year. In April of 2017, the PPP was amended to change the duration of the public comment periods for the TIP, UPWP and RTP from 30 days to 21 days. This change has allowed the MPO to maintain a more consistent meeting schedule throughout the year. Additionally, the PPP will be reviewed and updated following along the recommendations developed in the state's PPP. This includes information on Virtual Public Involvement for regional meetings. In an effort to improve the outreach process and our contact lists, surveys of local governments as well as information from the MassDOT Engage website will be conducted in order to develop Title VI, EJ and LEP contact groups. The MPO also endorsed an updated Limited English Proficiency (LEP) Access Plan in late 2019. Additionally, the submittal of any annual reports related to Title VI and EJ will be undertaken to ensure that state and federal regulations are and will continue to be met. As part of the overall outreach process, the MRPC will continue to update and maintain its web page at www.mrpc.org. This will include the posting of meeting agendas, announcements, documents and any related material needed to improve and enhance public awareness, outreach and participation.

The Unified Planning Work Program (UPWP) also continues to demonstrate a high level of cooperation between MRPC and the Montachusett Regional Transit Authority (MART).

Prior federal provisions have identified the Massachusetts Department of Transportation as the recipient of statewide Section 5303 program funds and to also have the responsibility under present state law to administer FTA grants and to establish a statewide transit-planning program in cooperation with the MPO. The Montachusett MPO has been allocated \$64,575 in federal and \$16,144 in state for a total of \$80,719 in FY2022 Section 5303 funds. The MMPO holds harmless this allocation.

During this program year, the MPO will continue to be involved in several planning areas relating to mass transit and will continue to coordinate with other transportation related activities undertaken by the MPO. The planning areas include coordination with 3C management process, continuation of monitoring services and updating mass transit activities in the Montachusett Region, cooperation in developing transit related funding categories for the TIP and conducting special studies.

During the FFY 2020 program year, staff completed data collection and analysis on the on-time performance of the existing fixed route bus services in Fitchburg, Leominster and Gardner and provided MART with recommendations.

In the FFY 2021 program year, staff focused on assessing the accessibility of the bus stops in the Montachusett Regional Transit Authority (MART) Region. The purpose of the study was to determine the level of accessibility of each stop in MART system by collecting field information and determines its ranking for capital improvement (critical, high, medium, low). The higher the “score” the less a bus stop complies with accessibility requirements and the more it is in need of capital improvement. This is a multiyear project to cover all the stops in the MART system.

PRIOR YEAR UPWP TASK RESULTS

During the prior program year from October 1, 2020 to September 30, 2021, the following studies and/or tasks were undertaken. Some tasks were under development at the time of the writing of this UPWP. In those cases, the anticipated outcome is identified. For more detailed information regarding any of these tasks, please contact the MRPC.

Task 2.1 Regional Demographics & Model

- Identification of Census Tracts and Block Groups through the PSAP
- Title VI and Environmental Justice data sets
- Updated development data for MassBuilds
- Regional and Community Demographic Data
- Status – Ongoing;

Task 2.2 GIS Mapping and Analysis

- MRMapper maintenance and updates
- ADA PROW Application Development
- Trail Inventory Databases
- Traffic Count data updates/mapping (2014-2021);
- Title VI Mapping (2014, 2017, 2019)
- Limited English Proficiency Access Plan Mapping
- General GIS/Data Warehouse Maintenance
- Status – Ongoing;

Task 2.3 Data Collection and Analysis Program

- Traffic counts taken at approximately 40 locations around the region
- GIS mapping of various datasets – including traffic counts & high crash locations
- Safety analysis of high crash locations developed for the region

- MassDOT GIS crash data for years 2016-2018 was downloaded and utilized Status – Safety Analysis Ongoing; Count Program Ongoing;

Task 2.4 Pavement Management Systems

- Database of roads to be inventoried compiled
- Field surveys to be conducted in the Summer months
- Status – Ongoing

Task 2.5 Performance Measures

- Continued monitoring of regional Performance Measures through the Performance Measure Dashboard
- Coordinated with MassDOT on support and adoption of state PM1 Safety Performance Measures for CY 2021
- Updated CY 2021 PM1 Safety Performance Measures for the TIP and UPWP
- Public Transportation Agency Safety Plan (PTASP) targets adopted
- Updates made to Statewide PM 3 System Performance emission figures
- Status – Ongoing; approximately 30 to 40% completed

Task 2.6 Intersection Analysis

- Analysis conducted in Fitchburg by WPI students
- Analysis planned for additional locations in Townsend
- Status – Ongoing

Task 3.1 Walkability Studies

- Inventoried existing conditions in Sterling & Townsend
- Identified gaps in existing infrastructure
- Identified potential projects to close gaps
- Status- Ongoing; approximately 50% completed

Task 3.2 Fitchburg Corridor Study

- Utilized MassDOT GIS crash data for years 2015-2019 to conduct safety analysis of the corridor
- Status – Ongoing and on schedule

Task 3.3 Climate Change Program

- Updated the Vulnerable Infrastructures database
- Status – Ongoing and on schedule

Task 3.4 Regional Pedestrian Plans

- Inventoried existing pedestrian facilities
- Identified gaps/future projects
- Identified strategies to increase walking as transportation options
- Status – Ongoing and on schedule; Delays expected with public outreach and meetings

Task 3.5 ADA PROW Database

- Completed draft ADA PROW Transition plans for Lancaster, Lunenburg, Winchendon
- Developed sidewalk, curb ramp, crosswalk, accessible pedestrian signal data collection surveys and guides for the ADA PROW Surveys Data Collection app. The data collection app will be field tested in Ayer and Athol with the assistance of the communities
- Status – Ongoing and on schedule

Task 3.6 Roundabouts and the Montachusett Region

- Inventoried the circular intersections in the MRPC region
- Began draft report
- Status – Ongoing and on schedule

Task 4.4 Bus Route Performance Evaluation

- Examined Bus Stops in MART fixed Bus Route System.
- Developed Bus Stop digital survey.
- Reviewed and discussed Survey data analyses with RTA.

- Analyze results using quantitative and qualitative methods.
- Identify key themes and concerns addressed in data.
- Status – Ongoing Data collection

UPWP DISTRIBUTION OF STUDIES AND TASKS

As part of the development of the UPWP, the Montachusett MPO has conducted a geographic and social equity analysis of past and current tasks undertaken in this and prior UPWPs.

For these analyses, the 2014-2018 American Community Survey 5-year estimates were utilized. For some of the data, census estimates were only available at the Census Tract level. This data dealt with Foreign Born, Disabilities and Non-English Spoken at Home. The remaining census data estimates were available at the Block Group level. The tables below list the ACS data sources as well as whether they were broken down to the Census Tract or Block Group level. These tables, therefore, were used to determine Environmental Justice (EJ) and Title VI designated areas.

2014-2018 ACS 5-Year Estimates

By Block Group

Variable	2014-2018 ACS Table
Total Population	B03002
Majority Population	B03002
Poverty Determined Population	B17021
Below Poverty Population	B17021
Population 65 Years or Older Population	B09020
Median Household Income	B19013
Limited English Proficiency (LEP) Households	C16002

2014-2018 ACS 5-Year Estimates

By Census Tract

Variable	2014-2018 ACS Table
Total Population	B05002
Foreign Born	B05002
Individuals with Disabilities	S1810
Percent Household Limited English Proficiency (LEP)	S1602
Percent Language Spoken at Home – Non-English	DP02

EJ and Title VI populations are defined differently by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). In addition, EJ analysis is based on different criteria, ex. poverty based on the statewide median income rather than the regional median income. The tables below define the Title VI and EJ criteria utilized in the regional analysis.

Environmental Justice and Title VI Definitions for Analysis

Environmental Justice Block Groups	Analysis Criteria
1. Block group whose annual median household income is equal to or less than 65 percent (%) of the statewide median (\$79,835 in 2018);	Statewide Median Income: \$79,835 65% of Median Household Income: \$51,893 Geography: Block Group
2. Twenty-five percent (25%) or more of the residents identifying as minority;	Minority Population Equal or Greater Than 25% Geography: Block Group
3. Twenty-five percent (25%) or more of the households having no one over the age of 14 who speaks English only or very well - Limited English Proficiency (LEP).	Limited English Proficiency Equal or Greater Than 25% Geography: Block Group

FTA Title VI Communities	Analysis Criteria
1. Minority – Percent of population including Hispanic or Latino of any race that is considered non-white and is higher than the regional average	Regional Average: 11.53% Geography: Block Group
2. Low Income - Percent estimated below poverty level that is higher than the regional average	Regional Average: 11.00% Geography: Block Group

FHWA Title VI Communities	Analysis Criteria
1. Elderly – Percent of Total Population > 65 that is higher than the regional average	Regional Average: 15.44% Geography: Block Group
2. Individuals with Disabilities – Percent of population with a disability that is higher than the regional average	Regional Average: 12.82% Geography: Census Tract
3. Minority – Percent of population including Hispanic or Latino of any race that is considered non-white and is higher than the regional average	Regional Average: 11.53% Geography: Block Group
4. Foreign Born – Percent of population that is Foreign Born and is higher than the regional average	Regional Average: 8.66% Geography: Census Tract
5. Language – Percent of Population Spoken Language Other than English that is higher than the regional average	Regional Average: 16.13% Geography: Census Tract

Listed below are tasks from the past five UPWPs (FFY 2017 to FFY 2021) as well as tasks in this FFY 2022 UPWP. The tasks identified for this analysis were limited to specific reports or studies attributable to a community or group of communities. Some tasks involve work or analysis that covers the entire region as a whole, i.e. Traffic Counts, Crash Data Analysis, etc. The identified tasks were then referenced against communities with either Block Groups or Census Tracts that meet the above referenced definitions for Environmental Justice and/or Title VI populations. Geographic equity was also analyzed.

Five Year Task Review												
UPWP Year	Community	Description	Task #	Funding	EJ Block Groups			Title VI Block Groups		Title VI Census Tracts		
					Income	Minority	LEP HH	Elderly	Minority	Disabilities	Foreign Born	Language
2017	Fitchburg Leominster	Sidewalk Inventory & Bicycle/Pedestrian Connections	2.52	\$30,500	X X	X X	X	X X	X X	X X	X X	X X
2017	Athol	Route 2 at South Athol Road Interchange Study	3.12	\$45,000	*	*		X	*	X	*	
2017	Athol Phillipston	Route 2 Before and After Safety Analysis	3.32	\$40,500	*	*		X	*	X X	*	
2017	Shirley	Shirley Railroad Crossing Review and Analysis	3.52	\$35,500		X		*	X		X	X
2018	Gardner	Sidewalk Inventory & Bicycle/Pedestrian Connections	2.53	\$25,500	X	X		X	X	X		
2018	Regionwide (All 22 MRPC Communities)	Regional Development Initiative	2.73	\$19,500	X	X	X	X	X	X	X	X
2018	Athol	South Athol Road/Route 2 Interchange Analysis	3.13	\$39,500	*	*		X	*	X	*	
2018	Fitchburg Leominster	Climate Change Program (Merriam Ave./South St. Bottleneck Study)	3.33	\$36,000	* *	X *	*	X X	X *	X X	* X	X X
2018	Regionwide (All 22 MRPC Communities)	Local ADA Transition Plan Development	3.53	\$33,500	X	X	X	X	X	X	X	X
2018	Regionwide (All 22 MRPC Communities)	Regional Bike & Ped Trail Update	3.73	\$23,000	X	X	X	X	X	X	X	X
2018	Fitchburg Leominster Gardner	Coordinated Transit Plan Update	4.43	\$31,250	X X X	X X X	X	X X X	X X X	X X X	X X	X X
2018	Fitchburg Leominster Gardner	Ridership Survey Distribution	4.53	\$15,750	X X X	X X X	X	X X X	X X X	X X X	X X	X X
2019	Regionwide (All 22 MRPC Communities)	Fatal Crash Corridor Analysis	2.54	\$26,250	X	X	X	X	X	X	X	X
2019	Lancaster Lunenburg Winchendon	Local ADA Transition Plan Development	3.54	\$68,500	X			X X X	X X	X	X	X
2019	Lunenburg	Town Center Walkability and Parking Study	3.64	\$29,500				X				

2019	Fitchburg Leominster Gardner	Bus Route Performance Evaluation	4.44	\$30,000	X X X	X X X	X	X X X	X X X	X X X	X X X	X X X
2020	Fitchburg Lancaster	Before & After Safety Study	2.51	\$28,250	X	X		X X	X X	X X	X X	X X
2020	Fitchburg Leominster Gardner	Travel Options & Rideshare Programs	3.11	\$44,250	X X X	X X X	X	X X X	X X X	X X X	X X X	X X X
2020	Regionwide (All 22 MRPC Communities)	Travel by Tourism	3.21	\$34,500	X	X	X	X	X	X	X	X
2020	Regionwide (All 22 MRPC Communities)	Regional Bike Plan	3.41	\$41,500	X	X	X	X	X	X	X	X
2020	Westminster Ayer	Local ADA Transition Plan Development	3.51	\$37,750				X X	X		X	
2021	Hubbardston	Pavement Management Assistance	2.4	\$26,000				X				
2021	Fitchburg	Corridor Study	2.5	\$40,000	X	X		X	X	X	X	X
2021	Fitchburg Hubbardston Townsend	Intersection Analysis	2.6	\$37,500	X	X		X X X	X	X	X	X
2021	Sterling Townsend	Walkability Studies	3.1	\$45,000				X X				

* represent projects that have specific locations (an intersection, a section of road, etc.) and the project itself does not fall within an EJ/Title VI tract/block group but the project is within a community that has a tract/block group with that EJ/Title VI demographic.

FFY 2022 Task Review												
UPWP Year	Community	Description	Task #	Funding	EJ Block Groups			Title VI Block Groups		Title VI Census Tracts		
					Income	Minority	LEP HH	Elderly	Minority	Disabilities	Foreign Born	Language
2022	Regionwide (All 22 MRPC Communities)	Mobility & Access Planning	3.1	\$46,750	X	X	X	X	X	X	X	X
2022	Ashburnham Shirley	Corridor Profiles	3.2	\$65,000		X		X X	X		X	X
2022	Sterling Winchendon	Community Trail Planning	3.4	\$40,000	X			X X	X	X		
2022	Hubbardston Leominster	Intersection Analysis	3.5	\$45,760	X	X	X	X X	X	X	X	X

A review of the work tasks identified over the past five-year period, i.e. from FY 2018 to FY 2022, shows:

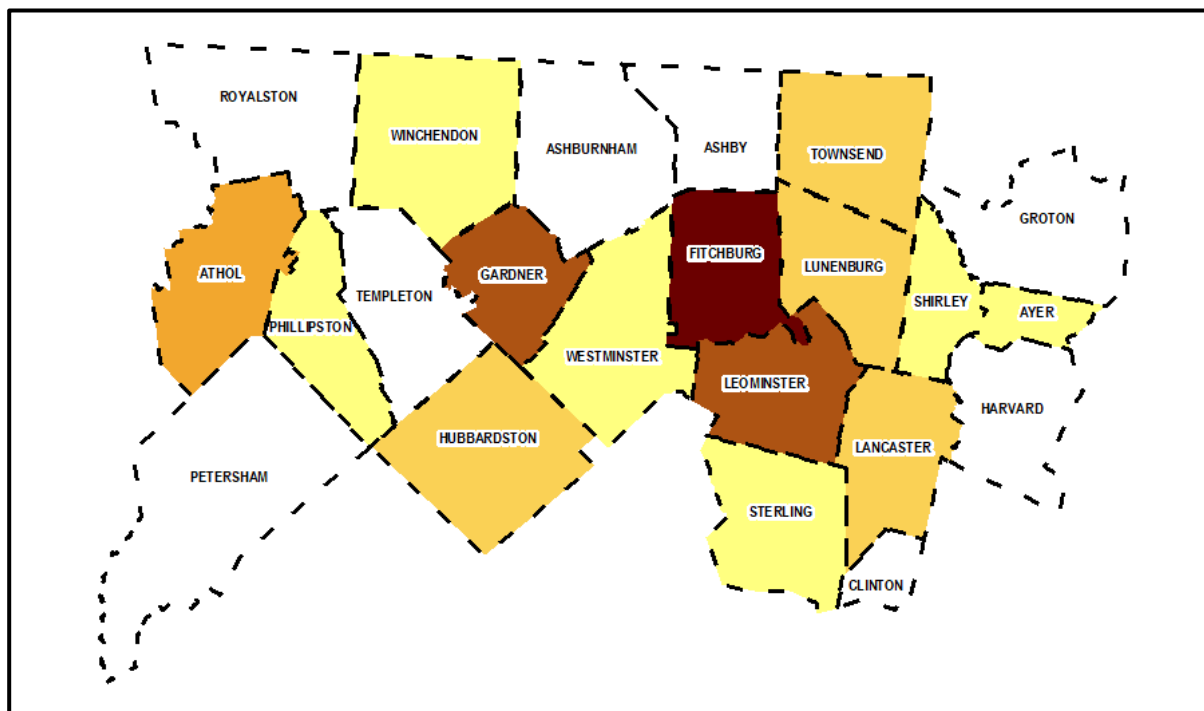
- Eight (8) communities were identified as having one or more Block Groups meeting the definitions for Environmental Justice populations, i.e. Low Income, Minority or LEP. Based upon the identified community specific work tasks over the prior five federal fiscal years, six (6) of these communities, or 75%, had work conducted within them.

- Of the 13 identified FTA Title VI communities, community specific tasks were conducted in nine (9), or 69%, of those municipalities.
- Of the 21 identified FHWA Title VI communities with block groups meeting the definitions for Minority or Elderly populations, community specific tasks were conducted in twelve (12), or 57%, of those municipalities.
- Of the 13 identified FHWA Title VI communities with census tracts meeting the definitions for Disabled, Foreign Born or LEP, nine (9), or 69%, had community specific tasks conducted in them.
- Identified EJ communities that lacked a community specific work task were Clinton and Harvard.
- FTA Title VI communities that lacked a community specific task are Clinton, Groton, Harvard, and Templeton.
- FHWA Title VI only communities with identified populations based on block groups that lacked a community specific work task include Ashburnham, Ashby, Clinton, Groton, Harvard, Hubbardston, Petersham, Royalston, and Templeton. All of these municipalities were identified as having at least one Elderly population block group that exceed the regional average that identified them as FHWA Title VI communities.

It should be noted that several tasks identified over the past five work program years, involved all 22 communities of the Montachusett Region and would likely entail some level of work in all of these identified communities. This includes data collection efforts, crash data analysis, pavement management inventories, tourism destinations and bike infrastructure inventory.

The map below shows the geographic equity analysis that was also conducted based on the projects conducted over the past five years for those specific communities. The regionwide projects were left out of this analysis. The darker color shows where the most projects were conducted (5+) and the communities shown in white had no projects that were specific to that community over the past five years.

Past Five-Year (2017-2021) Geographic Equity for Projects



Based upon this analysis and review, it would appear that the Montachusett MPO is making an effort to address transportation planning issues in Title VI and EJ communities in the Region. Projects or work tasks, compiled in the last five years have been developed in an attempt to locate them in communities which either have an Environmental Justice population, FHWA Title VI population, FTA Title VI population, or a combination of all three. Future efforts should focus on the communities of Ashburnham, Ashby, Clinton, Groton, Harvard, Hubbardston, Petersham, Royalston, Sterling, Templeton, and Townsend. For geographic distribution, it is clear that the major cities of Fitchburg, Gardner and Leominster are where the bulk of the community specific projects are located. The map also shows that more effort could be made in the northern and southern communities and that the communities along the Route 2 corridor seem to be where the major project focus lies.

AMENDMENT AND ADJUSTMENT PROCEDURES FOR THE UPWP

All 3C documents (TIP, LRTP, UPWP, PPP, etc.) endorsed by the MPO must follow a standardized procedure regarding amendments and/or administrative adjustments to the document. The procedures must also be clearly outlined in narrative form within the documents themselves. Below are general guidelines regarding the conditions that constitute an administrative adjustment or amendment to the Unified Planning Work Program (UPWP). All proposed administrative adjustments or amendments must be presented to the MPO for consultation prior to endorsement. Both adjustments and amendments must be voted on by the MPO members and amendments must be released for a 21-day comment period (or shorter if deemed necessary as outlined in the Public Participation Plan (PPP) for the MMPO) prior to endorsement.

The conditions that identify and constitute what is considered an administrative adjustment or an amendment is as follows:

UPWP Administrative Adjustment - Reallocation of budget funds under 25% of the total task budget
- Change in start/completion dates within the originally intended federal fiscal year(s)
- Minor change to project scope

UPWP Amendment
- Reallocation of budget funds over 25% of the total task budget
- Addition or removal of UPWP task(s)
- Change in start/completion dates outside of originally intended federal fiscal year(s)
- Significant change in project scope, cost and/or time allocation
- Funding increase above the originally approved UPWP overall budget

Additionally, the following must be adhered to for the Submission of a Budget Reallocation Request:

When submitting the standard Budget Reallocation Request form to MassDOT Office of Transportation Planning (OTP), all fields must be filled out with clear indication that the MPO was consulted prior to submission. Back up documentation must be submitted, including the UPWP description of the task(s) affected, original budget, revised budget, and justification for request.

A Significant Change is defined as a change to a project scope, budget, and/or project schedule when it alters the original intent of the project or intended conclusions of the project.

SOURCES FOR THE MONTACHUSETT UPWP

FHWA allocates Metropolitan Planning Funds (PL) to MassDOT who in turn distributes those funds to the state's RPAs based upon an agreed apportionment formula. As part of this process, each RPA enters into a yearly "3C" (Continuous, Cooperative and Comprehensive) transportation planning contract. Fiscal years for PL funds follow federal fiscal years, i.e. October 1 to September 30.

FTA also distributes funds to MassDOT for allocation to RPA's as Section 5303 monies for the conduct of transit planning activities. Section 5303 funds are used for planning and technical studies related to transit. Unless otherwise noted, FTA funds follow federal fiscal year time frames. The Section 5303 match was previously provided by the Montachusett Regional Transit Authority but is now provided by MassDOT as part of the combined PL/5303 contract administered by the FHWA.

Program years described in this UPWP therefore are as follows:

<u>Funding Source</u>	<u>Program Year</u>
FHWA/MassDOT	FFY 2021 October 1, 2021 - September 30, 2022
FTA/Section 5303/MassDOT	FFY 2021 October 1, 2021 - September 30, 2022

STATE AND FEDERAL POLICIES AND PROGRAMS

The FAST Act and Planning Factors

On December 4, 2015, President Obama signed into law the new Federal Surface Transportation Authorization known as Fixing America's Surface Transportation (FAST) Act. The FAST Act "largely maintains current structures and funding shares between highways and transit" and "makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects, providing new safety tools, and establishing new programs to advance critical freight projects" (source: U. S. DOT website). The FAST Act retains most of the planning requirements of prior federal regulations, i.e. Moving Ahead for Progress in the 21st Century (MAP-21) and the Safe Accountable Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The FAST Act did add two additional factors to the eight planning factors for both metro and statewide planning identified in MAP-21:

- 1. Economic Vitality** – Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- 2. Safety** – Increase the safety of the transportation system for motorized and nonmotorized users;
- 3. Security** – Increase the ability of the transportation system to support homeland security and to safeguard the personal security of motorized and non-motorized users;
- 4. Mobility** – Increase the accessibility and mobility of people and freight;
- 5. Environment** – Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
- 6. System Integration** – Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

7. System Management – Promote efficient system management and operation;

8. System Preservation – Emphasize preservation of the existing transportation system.

9. Reliability - Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and

10. Travel and Tourism - Enhance travel and tourism.

These ten (10) planning factors must be considered by MPOs in their UPWP's. This UPWP seeks to incorporate these planning factors through the various tasks identified.

UPWP Tasks	Planning Factors									
	Economic Vitality	Safety	Security	Mobility	Environment	System Integration	System Management	System Preservation	Reliability	Travel and Tourism
1.5 EJ/Title VI				X	X					
2.1 Reg Demo & Model	X			X		X	X			X
2.2 GIS	X	X			X		X	X	X	X
2.3 Data Collection	X	X					X	X	X	
2.4 Pavement Management		X	X	X		X	X		X	X
2.5 Performance Measures	X			X	X	X		X		X
2.6 RTP Update		X	X	X		X	X	X	X	
3.1 Mobility & Access Planning	X	X		X	X	X				X
3.2 Corridor Profiles	X	X	X	X		X	X	X		X
3.3 Climate Change Program	X			X	X	X				X
3.4 Community Trail Planning	X			X	X	X				X
3.5 Intersection Analysis	X	X	X	X		X	X			
4.4 Bus Stop ADA Accessibility	X			X		X			X	

Transit Asset Management

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) mandated, and in 2015 the Fixing America's Surface Transportation Act (FAST) reauthorized, FTA to develop a rule to establish a strategic and systematic process of operating, maintaining and improving public transportation capital assets effectively through their entire life cycle. FTA's national Transit Asset Management System Rule:

- Defines "state of good repair"
- Requires grantees to develop a TAM plan
- Establishes performance measures
- Establishes annual reporting requirements to the National Transit Database
- Requires FTA to provide technical assistance

In July 2016, FTA published a Final Rule for Transit Asset Management. The rule requires FTA grantees to develop asset management plans for their public transportation assets, including vehicles, facilities, equipment, and other infrastructure.

TAM requirements in this final rule are part of a larger performance management context. MAP-21 created a performance-based and multimodal program to strengthen the U.S. transportation system, which is comprised of a series of nine rules overseen by FTA and the Federal Highway Administration (FHWA). FTA is tasked with developing other rules, including the National Public Transit Safety Plan and the Public Transportation Agency Safety Plan, and has worked jointly with FHWA on a rule to manage Statewide and Metropolitan Planning.

MART continues to update the TAM Plan and sets new targets goals annually. MART's Board approved the Safety Plan on 11/17/20 and it was Self Certified by MART on 11/18/20.

As dictated by the Final Rule, a Tier I TAM Plan must include the following nine elements:

1. Inventory of Capital Assets – An inventory of the number and type of capital assets. The inventory must include all capital assets that a provider owns, except equipment with an acquisition value under \$50,000 that is not a service vehicle.
2. Condition Assessment – A condition assessment of those inventoried assets for which a provider owns or has direct capital responsibility
3. Identification of Decision Support Tool or Processes – A description of analytical processes or decision-support tools that a provider uses to estimate capital investment needs over time and develop its investment prioritization
4. Investment Prioritization – A project-based prioritization of investments
5. TAM and SGR policy – A TAM policy is the executive-level direction regarding expectations for transit asset management; a TAM strategy consists of the actions that support the implementation of the TAM policy.
6. Implementation strategy – The operational actions that a transit provider decides to conduct, in order to achieve its TAM goals and policies.
7. List of key annual activities – The actions needed to implement a TAM plan for each year of the plan's horizon.
8. Identification of resources – A summary or list of the resources, including personnel, that a provider needs to develop and carry out the TAM plan.
9. Evaluation plan – An outline of how a provider will monitor, update, and evaluate, as needed, its TAM plan and related business practices to ensure the continuous improvement.

Public Transportation Agency Safety Plan (PTASP)

On July 1, 2018, The Federal Transit Administration (FTA) published the [Public Transportation Agency Safety Plan \(PTASP\) Final Rule](#) for Public Transportation Agency Safety Plans (PTASP) as authorized by the Moving Ahead for Progress in the 21st Century Act (MAP-21). This final rule requires States and certain operators of public transportation systems that receive Federal financial assistance under FTA's Urbanized Area Formula Grants (49 U.S.C. Chapter 53) to develop Public Transportation Agency Safety Plans based on the Safety Management System (SMS) approach processes and procedures. Operators of public transportation systems will be required to implement the safety plans. The development and implementation of safety plans will help ensure that public transportation systems are safe nationwide.

- The PTASP rule became effective on July 19, 2019.
- FTA published a Notice of Enforcement Discretion on April 22, 2020 effectively extending the PTASP compliance deadline from July 20, 2020 to December 31, 2020.

The plan must include safety performance targets. Find additional guidance on planning and target setting on FTA's [Performance-Based Planning](#) pages. Transit operators also must certify they have a safety plan in place meeting the requirements of the rule by December 31, 2020. The plan must be updated and certified by the transit agency annually.

"In light of the extraordinary challenges presented by the COVID-19 public health emergency, on December 11, 2020 FTA issued a second [Notice of Enforcement Discretion](#) for the Public Transportation Agency Safety Plan (PTASP) regulation (49 CFR Part 673). FTA will refrain from taking enforcement action until **July 21, 2021** for recipients and subrecipients unable to certify

compliance with the PTASP regulation. Please visit FTA's [COVID-19 FAQs page](https://www.transit.dot.gov/PTASP) for more information about the Notice." (Source: <https://www.transit.dot.gov/PTASP>)

Statewide and Regional Transportation Performance Management

FHWA defines Transportation Performance Management as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. In short, Transportation Performance Management:

- Is systematically applied, a regular ongoing process;
- Provides key information to help decision makers allowing them to understand the consequences of investment decisions across transportation assets or modes;
- Improving communications between decision makers, stakeholders, and the traveling public;
- Ensuring targets and measures are developed in cooperative partnerships and based on data and objective information;

On a regional level, MRPC relies on its regional Performance Measures (systems information) to inform the TEC process (investment and policy decisions) to achieve regional performance goals. On the national level, FHWA has established its own Performance Measures to inform decision making.

Effective on April 14, 2016 FHWA established a final rule on the first of its Performance Measures, Safety Measures (PM1). Targets related to PM 1 were then set by MassDOT and adopted by the Montachusett MPO for Calendar Year (CY) 2020 on January 22, 2019. Subsequently, FHWA established two additional performance measures that state Departments of Transportation and MPOs needed to adopt and track. The National Highway System Bridge and Pavement Condition Performance Measure (PM2) and the Systems Performance Measures, Congestion, Reliability and Emissions (PM3) were required to be established by the end of 2018. MassDOT then provided statewide target information for PM2 and PM3 to the Montachusett MPO for their review and either their adoption by the MPO or the establishment of their own regional PM2 and PM3. After review and discussion, the Montachusett formally adopted the statewide PM2 targets on October 17, 2018 and PM3 targets on September 19, 2019.

Safety Performance Measures (PM1)

Montachusett MPO has chosen to adopt the statewide safety performance measure targets set by MassDOT for Calendar Year (CY) 2021. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) in order to calculate 5-year, rolling average trend lines for all FHWA-defined safety measures. For CY 2021 targets, four of the five (5) safety measures - total number of fatalities, rate of fatalities per 100 million vehicle miles traveled (see Figure 1 below), total number of serious injuries, and rate of serious injuries per 100 million VMT (see Figure 2 below)—were established by extending their trend lines into the 2017-2021 5-year period. All four of these measures reflect a modest decrease in statewide trends. The fifth safety measure, the total number of combined serious injuries and fatalities for non-motorized modes (see Figure 3 below), is the only safety measure for which the statewide trend depicts an increase until 2016 but have decreased modestly starting in 2017. MassDOT's effort to increase non-motorized mode share throughout the Commonwealth has posed a challenge to simultaneously reducing non-motorized serious injuries and fatalities. Rather than adopt a target that depicts an increase in the trend line, MassDOT has elected to establish a target of non-motorized serious injuries and fatalities and for CY 2021 that remains constant from the rolling average for 2015-2019. In recent years, MassDOT and the Montachusett MPO have invested in "complete streets," bicycle and pedestrian infrastructure, intersection, and safety improvements in both the Capital Investment Plan (CIP) and Statewide

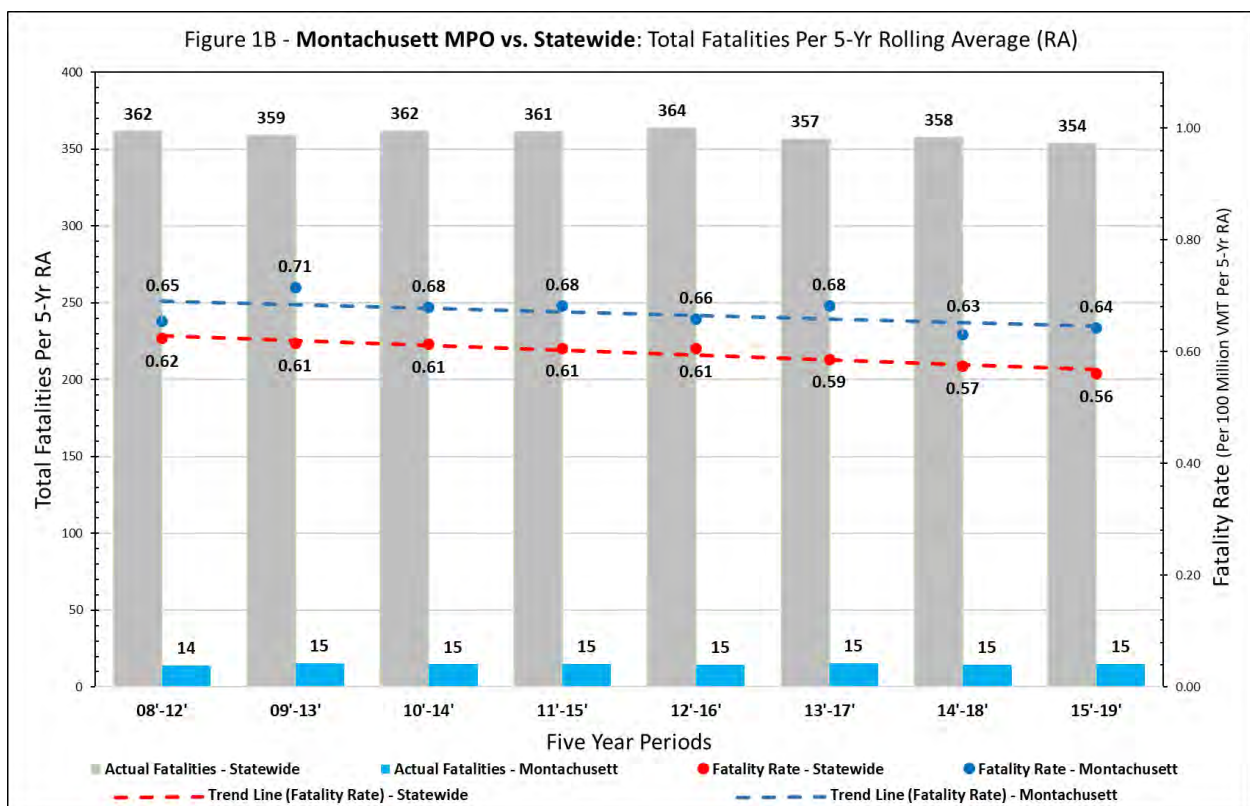
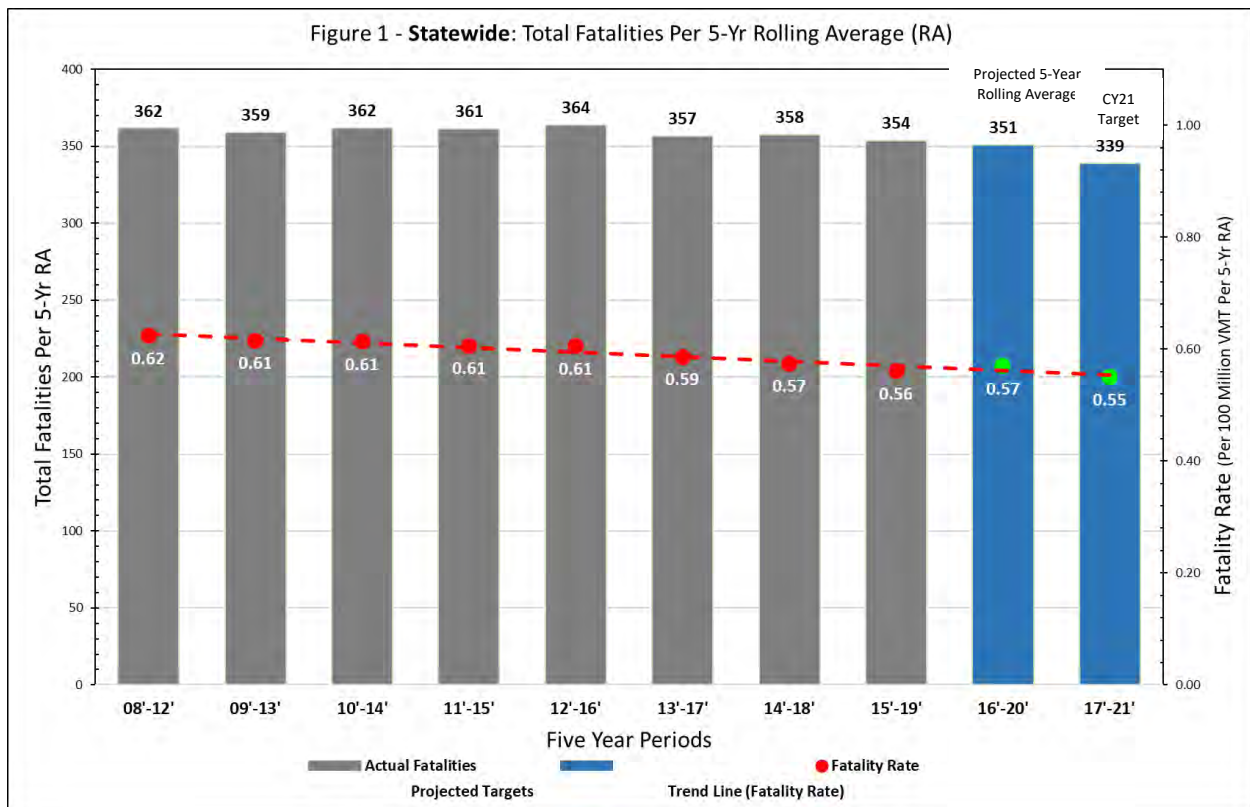
Transportation Improvement Program (STIP) to address increasing mode share and to incorporate safety mitigation elements into projects. Moving forward, Montachusett MPO, alongside MassDOT, is actively seeking to improve data collection and methodology for bicycle and pedestrian VMT counts and to continue analyzing crash clusters and crash counts that include both motorized and non-motorized modes in order to address safety issues at these locations.

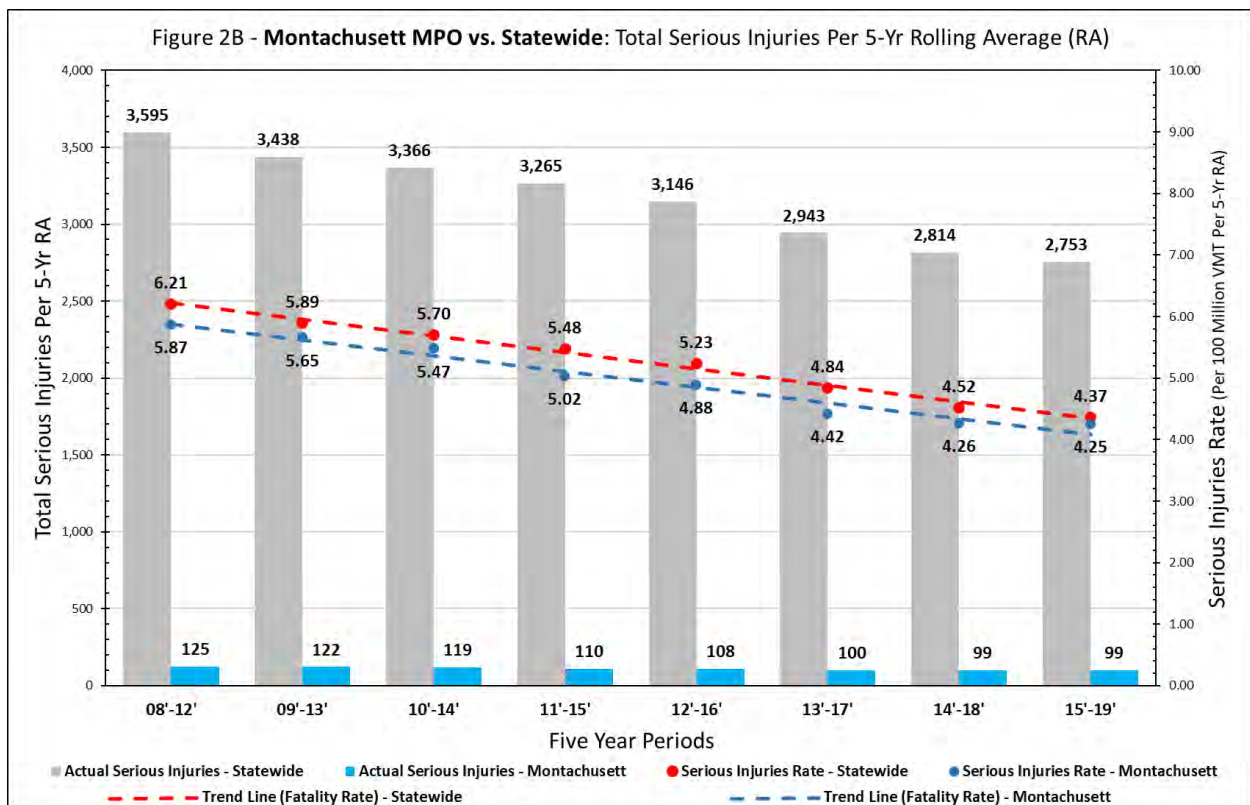
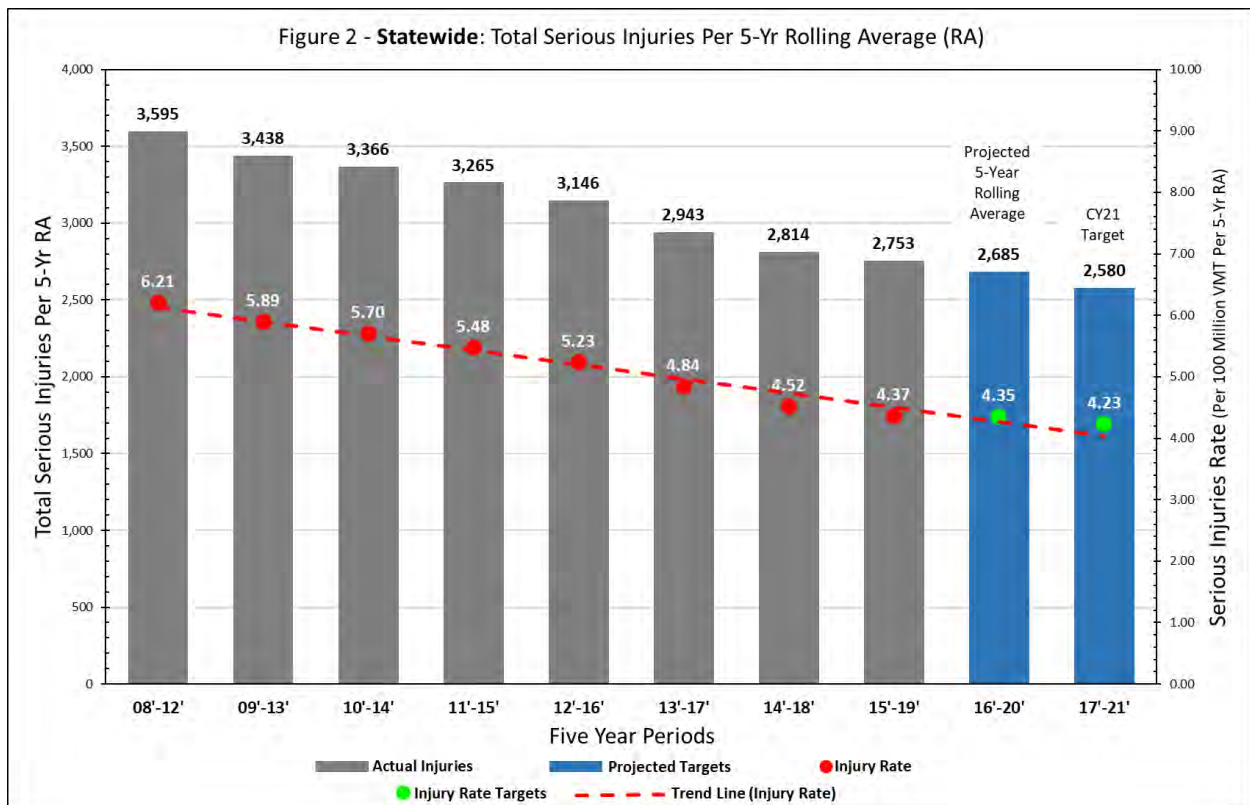
In all safety categories, MassDOT has established a long-term target of “Toward Zero Deaths” through MassDOT’s Performance Measures Tracker¹ and will be establishing safety targets for the MPO to consider for adoption each calendar year. While the MPO is not required by FHWA to report on annual safety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

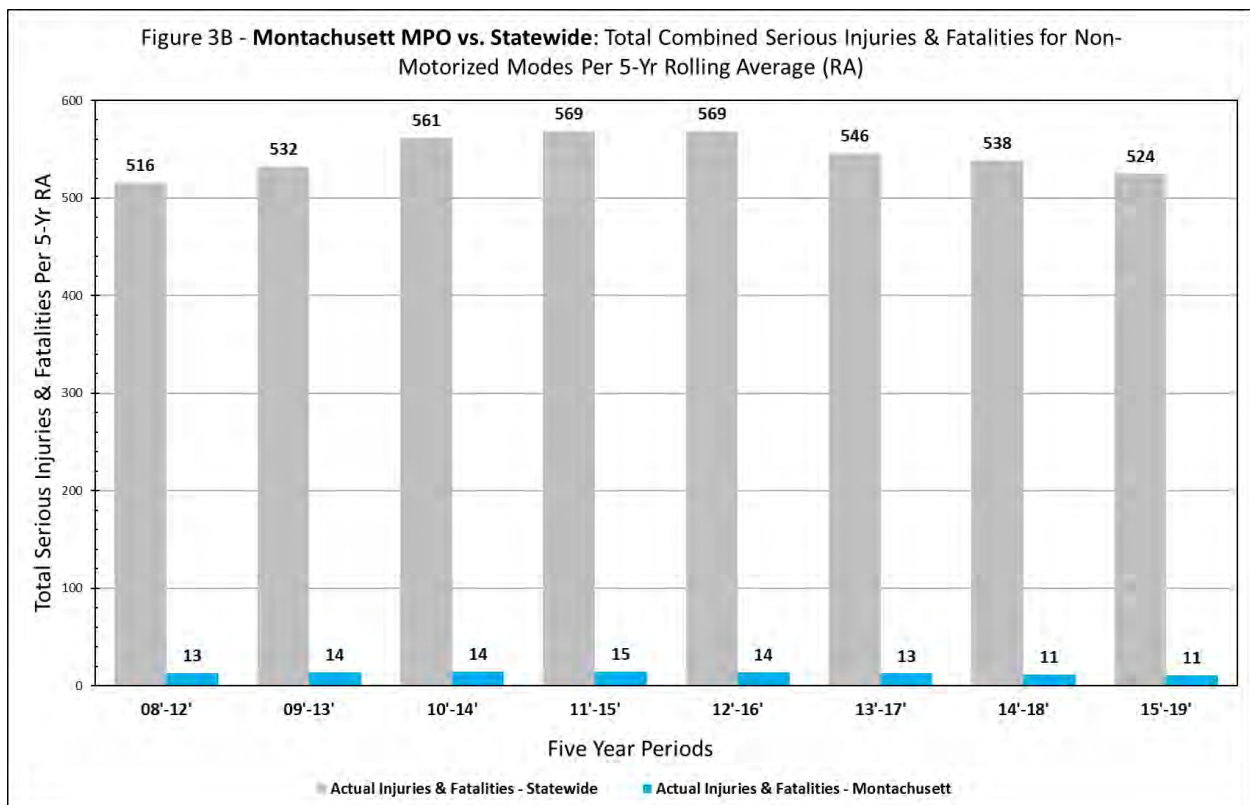
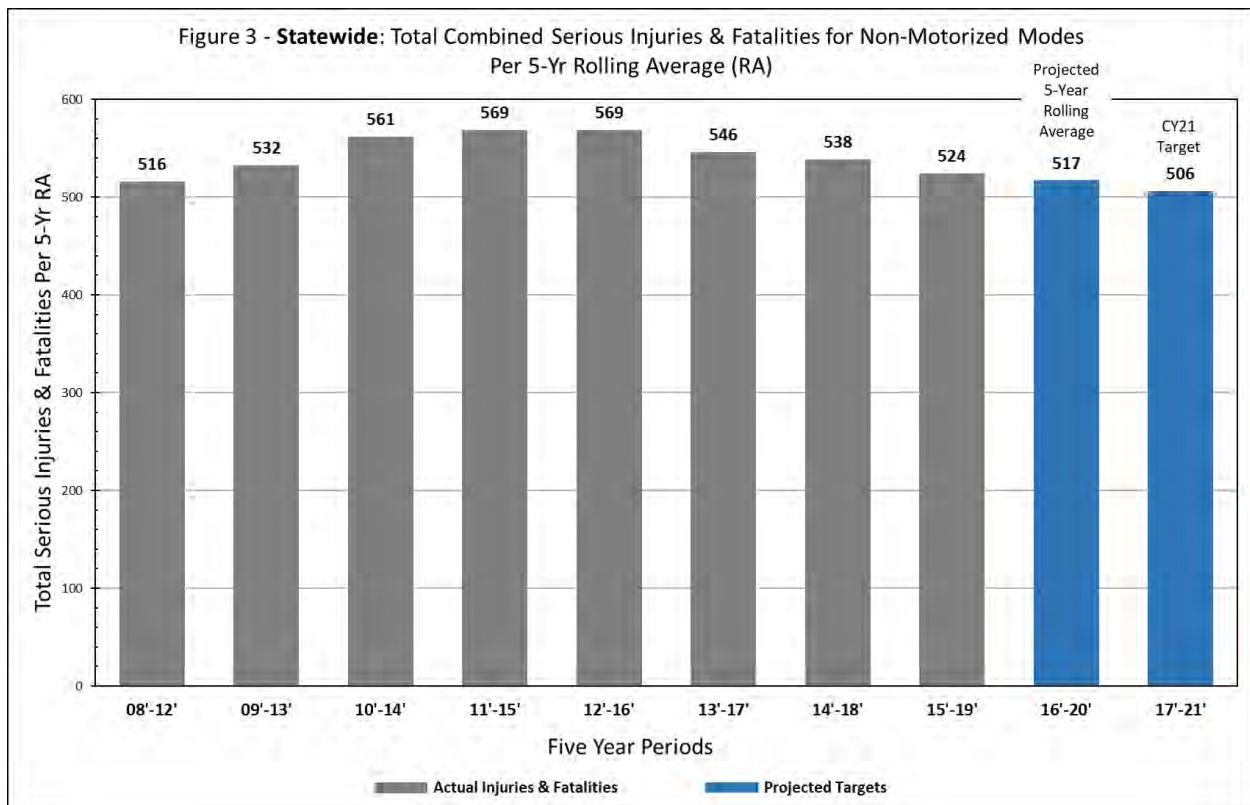
The safety measures MassDOT has established for CY 2021, and that the Montachusett MPO has adopted, are as follows:

- 1) **Fatalities:** MassDOT’s long-term goal is zero deaths and injuries. That said, the target number for fatalities for CY 2021 is 339, down from an average of 354 fatalities for the years 2015-2019 (see Figure 1 below). In the Montachusett region, the 5-year average fatalities for the years 2015-2019 was 15 (see Figure 1B below).
- 2) **Rate of Fatalities per 100 million VMT (rate):** The target fatality rate for CY 2021 is 0.55, down from a 0.56 average for years 2015-2019 (see Figure 1 below). In the Montachusett region, the average fatality rate for years 2015-2019 was 0.64 and generally follows the same downward trend as the Statewide trend (see Figure 1B below).
- 3) **Serious Injuries:** The target number for serious injuries for CY 2021 is 2,580, down from the average of 2,753 for years 2015-2019 (see Figure 2 below). In the Montachusett region, the 5-year average number of serious injuries for the years 2015-2019 was 99 (see Figure 2B below).
- 4) **Rate of Serious Injuries per 100 million VMT (rate):** The target serious injury rate for CY 2021 is 4.23, down from the 4.37 average for years 2015-2019 (see Figure 2 below). In the Montachusett region, the 5-year average serious injuries rate for the years 2015-2019 was 4.25 and generally follows the same downward trend as the Statewide trend (see Figure 2B below).
- 5) **Total Number of Combined Serious Injuries and Fatalities for Non-Motorized Modes:** The CY 2021 target number of combined serious injuries and fatalities for non-motorists is 506 per year, down from the average of 524 for years 2015-2019 (see Figure 3 below). In the Montachusett region, the 5-year average total number of combined serious injuries and fatalities for non-motorized modes for the years 2015-2019 was 11 (see Figure 3B below).

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







Source of Data: MassDOT, Office of Transportation Planning

Bridge & Pavement Performance Measures (PM2)

Montachusett MPO has chosen to adopt the 2-year (2020) and 4-year (2022) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and percent of non-Interstate pavement in poor condition. All of the above performance measures are tracked in greater detail in MassDOT's Transportation Asset Management Plan (TAMP), which is due to be finalized in July 2019.

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

Performance targets for pavement-related performance measures were based on a single year of data collection, and thus were set to remain steady under the guidance of FHWA. These measures were reviewed and a decision was made to maintain the target levels as is.

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

Performance Measure	Current (2017)	2-year target (2020)	4-year target (2022)
Bridges in good condition	15.22%	15%	16%
Bridges in poor condition	12.37%	13%	12%
Interstate Pavement in good condition	74.2%	70%	70%
Interstate Pavement in poor condition	0.1%	4%	4%
Non-Interstate Pavement in good condition	32.9%	30%	30%
Non-Interstate Pavement in poor condition	31.4%	30%	30%

Reliability, Congestion, & Emissions Performance Measures (PM3)

Montachusett MPO has chosen to adopt the 2-year (2020) and 4-year (2022) statewide reliability, congestion, and emissions performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by May 20th, 2018, with MPOs either adopting the statewide target or establishing their own by November 2018.

MassDOT followed FHWA regulation in measuring Level of Travel Time Reliability (LOTTR) on both the Interstate and non-Interstate NHS as well as Truck Travel Time Reliability (TTTR) on the Interstate system using the National Performance Management Research Dataset (NPMRDS) provided by FHWA. These performance measures aim to identify the predictability of travel times on the roadway network by comparing the average travel time along a given segment against longer travel times. For LOTTR, the performance of all segments of the Interstate and of the non-Interstate NHS are defined as either reliable or unreliable based on a comparison between the 50th percentile travel time and the 80th percentile travel time, and the proportion of reliable segments is reported. For TTTR, the ratio between the 50th percentile travel time and the 90th percentile travel time for trucks only along the Interstate system is reported as a statewide measure. As this data set has but one year of consistent data, FHWA guidance has been to set conservative targets and to adjust future targets once more data becomes available. To that end, MassDOT's reliability performance targets are set to remain the same.

Montachusett MPO — an agency whose planning area includes communities in the Boston Urbanized Area (UZA), and as a signatory to the 2018 Boston UZA Memorandum of Understanding (Boston UZA MOU)—has also adopted 2-year (2020) and 4-year (2022) Boston UZA-wide congestion performance measure targets. These performance measures are the percentage of non-single occupancy vehicle (SOV) travel and the Peak Hour Excessive Delay (PHED). Targets were developed in coordination with state Departments of Transportation and neighboring MPOs with planning responsibility for portions of the Boston UZA.

The percentage of non-SOV travel is approximated using the U.S. Census Bureau's American Community Survey (ACS) Journey-to-Work data. In the Boston UZA, the proportion of non-SOV travel has been steadily increasing and is projected to continue increasing at a rate of 0.32% annually.

PHED is measured by totaling the number of hours spent in excessive delay (defined as travel time at 20 miles per hour or at 60% of the posted speed limit, whichever is greater) in peak hours (between 6:00am and 10:00, and between 3:00pm and 7:00pm) divided by the total UZA population. As of target-setting, there was only one year of data available. As such, the performance targets have been set flat until further data is available.

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

Measure	Current (2017)	2-year (2020)	4-year (2022)
Non-Interstate LOTTR	80%	80%	80%
Interstate LOTTR	68%	68%	68%
TTTR	1.85	1.85	1.85
PHED (Boston UZA)	18.31	18.31	18.31
% non-SOV (Boston UZA)	33.6% (2016)	34.82%	35.46%
Emissions Reductions	Baseline (FFY 14–17)	1,622 CO 497.9 Ozone	TBD CO (Springfield) 1.1 Ozone

Global Warming Solutions Act (GWSA)

The Global Warming Solutions Act (GWSA), which was signed into law in August 2008, makes Massachusetts a leader in setting aggressive and enforceable GHG reduction targets, and implementing policies and initiatives to achieve these targets. In keeping with the law, on December 29, 2010 the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA), in consultation with other state agencies and the public, released the Massachusetts Clean Energy and Climate Plan for 2020. In December 2014, DEP issued new regulations that require MPOs to quantify impacts from project investments, track progress towards reductions, and consider impacts in the prioritization of project investments. The targets for overall statewide GHG emissions are:



The Commonwealth's MPOs are integrally involved in supporting the GHG reductions mandated under the GWSA. The MPOs are most directly involved in helping to achieve the GHG emissions reductions through the promotion of healthy transportation modes through prioritizing and programming an appropriate balance of roadway, transit, bicycle and pedestrian investments – and assisting smart growth development patterns through the creation of a balanced multi-modal transportation system. This is realized through the transportation goals and policies espoused in the 2016 Regional Transportation Plans (RTPs); the major projects planned in those RTPs; and the mix of new transportation projects that are programmed and implemented through the TIPs. GHG tracking and evaluation processes enable the MPOs to identify anticipated GHG impacts of planned and programmed projects, and also to use GHG impacts as a criterion in prioritizing transportation projects.

weMove Massachusetts

MassDOT released weMove Massachusetts (WMM): Planning for Performance, the Commonwealth of Massachusetts' 2040 Long-Range Transportation Plan (LRTP) in May of 2014. This plan includes seven major components:

1. Transportation Reform - emphasis on customers, innovation, accountability, performance management, efficiency, stewardship and stronger collaboration across transportation divisions;
2. Data and Analysis - critical to sound decision making;
3. Transportation System Needs Identification– to help choose the right transportation investments;
4. youMove Massachusetts Themes - ten value statements that capture the diverse values users;
5. Customer and Stakeholder Engagement– incorporate the priorities of customers and stakeholders;
6. Statewide Transportation Plans– implement modal plans;
7. Statewide Priorities and Policies– ensure accountability.

The policies of the Commonwealth will be reviewed, considered and incorporated in the planning studies developed as part of the work tasks outlined in this UPWP. Recommendations derived from these studies will be consistent with state policies.

Healthy Transportation Policy Directive

On September 20, 2013, MassDOT announced the Healthy Transportation Policy Directive designed to increase bicycling, transit and walking options. The directive is intended to promote multimodal access for users of the transportation networks and systems.

Elements included in the Directive are as follows:

- All MassDOT facilities will consider adjacent land uses and be designed to include wider sidewalks, landscaping, crossing opportunities and other features to enhance healthy transportation options;
- Reviews will be conducted of cluster sites where incidents have occurred with healthy transportation users;
- MassDOT will develop a guide to assist communities proposing Shared Use Paths on or along rail beds in order to accelerate the path design process.

Coordination in the Montachusett UPWP

The policies and goals of the Commonwealth, such as *the Global Warming Solutions Act*, will be reviewed, considered and incorporated in the planning studies developed as part of the work tasks outlined in this UPWP, i.e. 1.4 Development of TIP, 2.1 Regional Demographics & Model, 2.6 Intersection Analysis, 3.1 Walkability Studies, 3.2 Fitchburg Corridor Study, 3. 4 Regional Pedestrian Plan, 3.6 Roundabout Study. Recommendations derived from these studies will be consistent with state policies.

Commission on the Future of Transportation in the Commonwealth

In January 2018, Governor Charlie Baker signed Executive Order No. 579 which created a Commission on the Future of Transportation in the Commonwealth to provide recommendations to the Baker-Polito Administration on how to best account for potential changes in transportation in the future. “The Commission will explore anticipated changes in technology, climate, land use, and the economy to determine likely impacts on transportation between 2020 and 2040. This work will be conducted through a robust grounding in facts and trends, development of plausible future scenarios, and formulation of recommendations to the Governor, Lieutenant Governor, and other key decision makers. The Commission will meet monthly and will provide a report on the analysis of members and make recommendations by December 1, 2018” (www.mass.gov)

Based on this criterion, the following topics were examined;

1. Climate and Resiliency
2. Transportation Electrification
3. Autonomous and Connected Vehicles
4. Transit and Mobility Services
5. Land Use and Demographics

The Commission on the Future of Transportation in the Commonwealth completed their work in early 2019 and released a two-volume report. These reports outline the current trends in the five topic areas and, through scenario planning, provides recommendations to prepare the transportation system in Massachusetts for the future in 2040. Reference to this report was made by staff in the development of the Montachusett 2020 Regional Transportation Plan (RTP).

1.0

MANAGEMENT AND SUPPORT

UPWP TASK NO. 1.1 – SUPPORT OF 3C PROCESS

Objective:

To assist, support, and provide the capability to maintain an open, comprehensive, cooperative, and continuing (3C) transportation/air quality planning and programming process at all levels of government; in conformance with applicable Federal and State requirements and guidelines, as described in the Memorandum of Understanding, and consistent with the DOT/EPA agreement. The task will include the presentation and preparation of transportation related planning activities, including those related to the Transportation Improvement Program (TIP), the Unified Planning Work Program (UPWP), the Regional Transportation Plan (RTP) and other major documents, to various committees and groups; analysis and review of related documents and studies; attendance at federal and state transportation related workshops and meetings; and coordination and liaison with federal, state and local officials.

This task will provide continued technical assistance and liaison with various coalitions/task forces including: the Montachusett Regional Trail Coalition (MRTC), the Montachusett Regional Transit Authority (MART), the Montachusett Regional Emergency Planning Committee (MREPC), the Community Health Network Area 9 (CHNA 9), the Fitchburg Line Working Group and the Montachusett Joint Transportation Committee (MJTC).

The Montachusett Regional Trail Coalition was established in early 2012 through the joint efforts of the Nashua River Watershed Association, local trail advocates and the MRPC to “advance local and regional connectivity, community commitment, and enthusiasm for trails in the Montachusett Region.”

The cities of Fitchburg, Leominster and the town of Lunenburg have formed the Montachusett Regional Emergency Planning Committee (MREPC) to address emergency management issues for the three communities. Support services are provided to continue to work with the MREPC on evacuation and security planning.

The Community Health Network of North Central Massachusetts (CHNA 9) is one of 17 CHNAs across Massachusetts, created by the Department of Public Health in 1992. CHNAs are an initiative to improve health through local collaboration. CHNA 9 is a partnership between the Massachusetts Department of Public Health, the Central MA Center for Healthy Communities, residents, hospitals, local service agencies, schools, faith communities, businesses, boards of health, municipalities, and other concerned citizens working together to: identify the health needs of member communities, find ways to address those needs and improve a broad scope of health in these communities. The Community Health Improvement Plan (CHIP) includes Transportation and Access as one of four priority areas.

The Fitchburg Line Working Group is a group of local officials that has worked with consultants and the Massachusetts Bay Transportation Authority (MBTA) to examine options for improving commuter rail service on the Fitchburg Line. The special advisory commission was established through state legislation with the purpose of “promoting and facilitating inter-local and inter-regional cooperation and to investigate, propose, evaluate and vote on recommendations to,” (MassDOT) “on the need for transportation improvements, enhancements, and alternatives for the municipalities and regions serviced by the Fitchburg MBTA commuter rail line.” The Advisory Commission is comprised of 24 members including the MRPC.

The MJTC is a sub-committee of the MRPC that focuses on transportation and transit issues. In addition to acting as a sounding board for the development of all “3C” documents, the MJTC serves as a public outreach forum to solicit input from all members of the public.

Additionally, the MRPC will continue to work with MassDOT related to the implementation of regulations and requirements related to the federal transportation authorization.

The current Memorandum of Understanding defining the MPO and the Transportation Planning process enacted in 2010 will be reviewed in cooperation with MassDOT and FHWA to determine any and all necessary updates.

Previous Work:

During FY 2021, the Montachusett Regional Planning Commission staff:

- Administered a viable 3C transportation planning process under the directives of the MPO, as outlined in the previous Unified Planning Work Program (UPWP);
- Scheduled, conducted and maintained an active citizen-participation process including private sector participation through the Montachusett Joint Transportation Committee (MJTC);
- Scheduled, conducted and maintained the operation of the Montachusett Metropolitan Planning Organization (MMPO);
- Coordinated the transportation planning program with local community planning and engineering departments;
- Maintained liaison and coordination with federal and state agencies;
- Administered all requirements and activities of the 3C planning contract.
- Led South Athol Road and Route 2 Studies Advisory Group, 2016 – Ongoing;
- Participation in the CHNA 9, 2017- Ongoing;
- Member and participant in the Worcester County Highway Association, 2014 – Ongoing;
- Participant and lead in the Montachusett Regional Trail Coalition, 2012 – Ongoing;
- Participant in the Montachusett Emergency Regional Planning Committee, 2006- Ongoing;

Methodology:

General 3C Support:

- Provide administrative and technical support to the 3C process such as:
 - Provide liaison and short-term planning assistance to all communities on transportation planning matters.
 - Review Federal and State transportation programs and regulations as required or necessary.
- Administer the UPWP, 3C Contract, FTA/The Office of Transportation Planning Technical Studies and other transportation related grants.
- Provide for and support public participation and private enterprise involvement in the 3C Process, FTA and Air Quality Programs.
- Participation in informational programs on transportation, air quality, hazardous waste, energy conservation and accessibility planning.
- Coordinate work with agencies involved in the 3C Contract, FTA and Air Quality Planning Programs.
- Review MassDOT "084" Forms which affect highway capacity, speed, or VMT as part of the MPO's annual Air Quality Consistency Review.
- Provide for participation of staff in educational development programs and conferences with concurrence with the Office of Transportation Planning and other agencies as needed.
- Review and comment on traffic studies submitted to member municipalities by developers under the MEPA process or as needed/requested.
- Ensure that transportation/air quality decisions are consistent with regional policies, goals, objectives, and the State Implementation Plan (SIP).
- Distribute for endorsement all necessary certification documents; maintain all MPO documentation records and files, and act as the general secretariat for the MPO in the Montachusett Region.
- Work with and assist MassDOT and OTP with the implementation of rules and regulations related to MAP-21 and the FAST Act.

- Coordinate work with state and regional agencies involved in the unified or combined Massachusetts state plan of the Federal WIOA.

Montachusett Regional Trail Coalition

- Continue participation with the Trail Coalition;
- Coordinate and liaison with local trail advocates;
- Provide feedback and support related to trail development and implementation through the TIP process as well as other potential funding sources.

Fitchburg Line Working Group:

- Continue participation on and liaison with the working group;
- Continue interaction and work with local officials, MBTA and Devens Enterprise Commission to review information, analysis and recommendations regarding study as developed by consultant, and continue process for development of projects for funding through the TIP, etc.

Montachusett Regional Emergency Planning Committee

- Continue participation on and liaison with MREPC;
- Provide feedback and support services related to evacuation and emergency planning issues;
- Coordinate with local Regional Transit Authority on emergency issues and agreements.

Montachusett Joint Transportation Committee

- Continue scheduling, coordination, and participation of and with the MJTC;
- Provide support services related to meetings and issues raised by the MJTC;
- Coordinate development of federal certification documents with MJTC.

Product:

The maintenance and certification of a viable 3C transportation planning process.

- Montachusett Regional Trail Coalition - Meeting and event support as needed.
- Fitchburg Line Working Group - Project list for the Fitchburg Commuter Rail Line within the Montachusett Region for use as input to the MBTA's Capital Improvement Plan and where appropriate.
- Montachusett Regional Emergency Planning Committee - Support maps and data as requested and where appropriate.
- Montachusett Joint Transportation Committee - Meeting support as needed & coordination with federal certification documents.

Schedule:

Management and support activities on a continuing basis throughout the program year.

Task Force and Organization activities to be carried out throughout the program year.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Support Activities												
Public Input												

Task 1.1

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$63,200		20 weeks
MassDOT	\$15,800		5 weeks
TOTAL	\$79,000		25 weeks

UPWP TASK NO. 1.2 – UNIFIED PLANNING WORK PROGRAM

Objective:

To develop and obtain MPO endorsement of an annual Unified Planning Work Program (UPWP) that provides a description of the overall transportation/air quality planning activities, ongoing and anticipated in the region, including funding sources and agency responsibilities. Distribution and notification of documents, drafts and applicable items will follow and be consistent with the Montachusett Public Participation Plan (PPP).

Previous Work:

Previous Unified Planning Work Programs and other Federal and State grant applications (including Prospectus) produced annually.

Methodology:

In conformance with applicable Federal and State guidelines, prepare and continually maintain a Unified Planning Work Program that describes all transportation-related planning activities anticipated within the Region during the next or upcoming program year regardless of funding sources. The UPWP will include tasks and budget information based upon federal and state guidance.

Maintain the current UPWP during the program year and revise, adjust or amend the UPWP as needed. Adjustments and amendments will be based upon criteria previously identified in this document. Any and all public comment periods will follow procedures outlined in the current Montachusett PPP.

Products:

- Annual Unified Planning Work Program endorsed by the MPO.
- Amendments, as necessary, endorsed by the MPO.

Schedule:

Update and endorsed annually during the middle segment of each Program Year. Development schedule is designed to coordinate with the state timeline for the Capital Investment Plan (CIP). Meetings to occur throughout the process from December 2021 to May/June 2022 time period. Draft documents prepared March to May 2022. MPO endorsement to be sought no later than June 2022.

Amendments are prepared and endorsed as necessary.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Start of Draft												
Public Input												
Draft for Comment												
MPO Endorsement												

Task 1.2

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$14,000	4 weeks
MassDOT	\$ 3,500	2 weeks
TOTAL	\$17,500	6 weeks

UPWP TASK NO. 1.3 – PUBLIC PARTICIPATION PROGRAM

Objective:

Under this task the Montachusett MPO will continue to support, review and update the Public Participation Plan (PPP) developed for the UPWP, TIP and Regional Transportation Plan (RTP). These processes outline the public outreach procedures to be followed by the MPO in developing and amending the Region's RTP, TIP, UPWP and other major documents as required. It is designed to ensure that all interested public and private agencies, organizations, including non-profits, and citizens have equal access to all transportation related policies, projects, and decisions made within the region. The encouragement of meaningful participation of local individuals in metropolitan transportation planning is one of the most important goals of the "3C" (continuous, cooperative, and comprehensive) process and the Public Participation Program.

An updated and revised Montachusett PPP was developed and endorsed in May 2016 in accordance with federal and state guidelines and regulations. In addition, input from the MassDOT Office of Diversity and Civil Rights (ODCR) related to Title VI was incorporated as necessary. Utilizing the state's PPP as a model, the updated PPP was subject to a 45-day public review period. The PPP will continue to be reviewed and any subsequent revision or amendment will be implemented as deemed appropriate. Any action related to the PPP will seek endorsement by the MPO. Coordination with MassDOT's ODCR will also continue to be maintained and encouraged to ensure a viable and workable PPP.

In addition, staff will continue to monitor, support and encourage public participation through the MJTC, the Montachusett MPO and the MRPC. Staff will continue to prepare for and attend public meetings, seek to identify underserved and underrepresented groups, populations and organizations, identify methods to improve participation in the MJTC, MPO and MRPC and examine new and innovated methods to disseminate materials in order to meet environmental justice, Title VI and other federal and state requirements. Staff will continue to expand virtual public engagement methods to the extent possible. Currently, the MRPC utilizes the GoToMeeting.com application for online meetings. However, staff continually examines available technologies in order to expand and improve the VPI process.

The MRPC website went through a significant update and redesign in spring 2013 and continues to be refined and updated to improve accessibility as needed. This update has allowed staff to better maintain the site and by extension improve the experience and usage by the general public. Within the last few years, features related to online translation of the website have been incorporated across all webpages. Continued refinements to the MRPC web page (www.mrpc.org) will continue to be undertaken. Efforts will continue to examine ways to make the MRPC website more accessible and easier to navigate for the public especially in relation to Title VI and Limited English Proficiency (LEP) needs or requirements.

Previous Work:

- Limited English Proficiency Plan update – November 2019
- Montachusett Public Participation Plan – May 2016.
- Title VI Annual Report – September 2017, December 2018
- Title VI Annual Report – July 2015
- MRPC website redesign – 2013 and Ongoing
- Montachusett Public Participation Plan Amendment – April 2010
- Montachusett Public Participation Plan – June 2007

Methodology:

As part of the continued development of the MRPC website:

- Prepare, publish, update and enhance the MRPC web page with information that indicates the status of transportation activities and programs in the region.
- Continue refinements to the site in order to meet Title VI and LEP needs and requirements to better serve all the interested public.
- When appropriate, hard copies of information contained on the web site will be distributed to the MPO, the MJTC, local planning boards, selectmen and the general public.

As part of the Public Participation Program/Plan;

- Conduct review of state Public Participation Program and related Title VI input/comments from ODCR.
- Identify elements of the PPP that need refinement and/or correction.
- Update the Public Participation Program that details efforts to involve citizens in the transportation planning process in accordance with FHWA/FTA Planning Regulations as related to MAP-21 and any/all Title VI requirements.
 - Provide a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions and supports early and continuing public involvement in developing UPWP's, Regional Transportation Plans, and TIP's and meets the eleven requirements and criteria specified in the regulations.
 - Continue efforts to broaden participation to include environmental, public health, elderly and disabled and other public and private interest groups for air quality and accessibility planning.
 - Continue efforts to address issues related to Title VI and public outreach and involvement to those identified populations.
- Identify Innovative Public Participation Techniques and Processes: Based on the update process, staff will attempt to identify innovative public participation techniques and programs that will enhance public participation. This will include and emphasize virtual participation options as well.
- Identify Underserved/Underrepresented Groups: Under the Final Rule on Metropolitan Planning, MPO's are required to reach out to those groups who have been traditionally underserved in the provision of transportation services. MRPC staff will identify these groups as well as others who, while not underserved, are not participating in the transportation planning process and attempt to get them more involved.
- Provide for Open Review of the Implementation of this Process: It is very likely that the Public Participation Program will require continued revision and refinement. MRPC will make sure that interested parties and the general public are involved in developing new and/or additional outreach procedures and will have ample opportunity to voice their opinions on these changes once proposed.
- Implement Public Participation Plan in All Aspects of MPO Planning: In addition to its use in developing/amending the RTP, TIP, and UPWP, the Public Participation Plan will be used, where appropriate, in other aspects of the MPO planning process.
- Present Transportation Plans and programs to the public for appropriate action.
- Utilize MRPC internet web page to promote and solicit public input and involvement in all planning aspects. Actively promote availability of web page.
- Continue to ensure that individuals who need a reasonable accommodation to fully participate in MPO sponsored activities and meetings, such as a tape of the draft document, a sign interpreter, large print materials, transportation, etc. are encouraged to contact the MRPC office at (978) 345-7376 for assistance.
- Maintain an ongoing review of the PPP to continue to address issues related to Environmental Justice and Title VI compliance. Update/change the PPP as needed.
- Continue review of Limited English Proficiency Plan (LEP) and its relation to the PPP. Update LEP and PPP as needed to effectively address MAP-21 and FAST Act rules and regulations.
- The PPP, where appropriate, seeks to address the needs of individuals with limited English-speaking proficiency as well as all Title VI populations. In addition, the PPP seeks to recognize where appropriate that the development of Regional

Transportation Plans will include consultations, as appropriate, with state and local officials responsible for Land Use Management, Natural Resources, Environmental Protection, Conservation, and Historic Preservation.

Product:

- Revised/updated PPP that address Title VI and other issues identified and highlighted by MassDOT's ODCR as well as through federal and state rules and regulations.
- Updated Web Page; Print copies as needed.
- Continued maintenance of a viable Public Participation Plan for the TIP, RTP, UPWP and where appropriate, other aspects of MPO planning.

Schedule:

To be carried out throughout the program year.

Update/revision to the PPP to be completed and endorsed by the MPO as needed.

Website to be updated on a continuing basis as information developed.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Web Revisions												
PPP Review												

Task 1.3

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$28,000		9 weeks
MassDOT	\$ 7,000		2 weeks
TOTAL	\$35,0000		11 weeks

UPWP TASK NO. 1.4 – DEVELOPMENT OF TRANSPORTATION IMPROVEMENT PROGRAM

Objective:

To develop and maintain a financially constrained staged multi-year program of transportation/air quality improvement projects that is consistent with the Regional Transportation Plan, the State Implementation Plan, EPA's Air Quality Conformity Regulations and FHWA/FTA Planning Regulations; and to conduct, on an as needed basis, amendments and administrative adjustments to the TIP regarding new project selection, air quality reviews, etc. based upon procedures outlined within the TIP. Amendments and adjustments would include development of draft and final documents, public and MPO notification, etc. Staff developed in 2019, a revised Transportation Evaluation Criteria (TEC) scoring mechanism based upon MJTC and MPO review and input. The TEC continues to be reviewed and updated as new MAP-21 and FAST Act regulations are promulgated as related to performance measures. It was recently revised and updated to improve relevance based on MJTC and MPO input.

The recently launched electronic STIP (eSTIP) application will be used as part of the annual development of the Transportation Improvement Program (TIP). Distribution and notification of documents, drafts and adjustments/amendments will follow and be consistent with the Montachusett Public Participation Plan (PPP) adopted in 2016 and updated in this UPWP program year.

Previous Work:

- Transportation Evaluation Criteria (TEC) Revision for the Montachusett Region – 2019
- Prior TIP's and Amendments developed on an annual basis.
- Regional Performance Measures and Goals through the 2016 Regional Transportation Plan - 2015
- MAP-21 Regionally developed Performance Measures – 2015/2016

Methodology:

GENERAL

- The TIP is a staged, multi-year, Intermodal program of transportation projects which are consistent with the Regional Transportation Plan (RTP). It is a management and project tracking tool that is used to monitor the progress in implementing the RTP;
- It seeks to ensure early involvement of key stakeholders and citizens through adherence with the Public Participation Plan prepared under the 3C Task;
- The TIP includes sections on:
 - Description of funding categories and amounts of Federal funds proposed to be obligated during each program year;
 - Previously funded projects and programs from the last TIP year;
 - A description of the criteria and Project Selection Process for prioritizing projects;
 - Air quality significance and relationship of the TIP to the State Implementation Plan (SIP);
 - A financial plan that compares revenue needs to revenue sources for highway and transit programs and identifies operating and maintenance costs for the existing transportation system. The MRPC recognizes the need to develop a financially constrained TIP and will work with all members of the MPO to ensure the development of such a document;
- The TIP utilizes Transportation Evaluation Criteria in the review and prioritization process for identified projects. A continued review of the revised TEC will be conducted in order to ensure a regionally specific TEC. Performance Measures as developed during the development of the 2016 RTP and additional measures developed by federal and state officials according to MAP-21 and FAST Act requirements will be incorporated into the TEC as they come online.

- The TIP conducts a review and analysis where required to determine compliance and applicability to the Commonwealth's Global Warming Solutions Act. This includes an evaluation and tracking of Green House Gas (GHG) emissions and impacts of projects within the four years of the TIP.

DEVELOPMENT PROCESS OF THE FIVE-YEAR PROGRAM OF PROJECTS

- Update the list of all transit, highway, or air quality projects that are expected to require federal transportation funds for planning and engineering, construction or purchase during the federal fiscal years that the TIP is prepared for;
- Prepare a list of all regionally significant transportation projects or programs that require FHWA or FTA approval that are not using Federal transportation funds;
- For informational purposes list all regionally significant projects proposed to be funded with Federal funds other than from FHWA and FTA;
- For informational purposes list all regionally significant projects proposed to be funded with Non-Federal funds;
- The list of projects shall include:
 - The official MassDOT identifying project title;
 - Project description;
 - Transportation Evaluation Criteria Score;
 - Estimated total cost;
 - The amount of Federal funds proposed to be obligated during each program year;
 - Proposed source of Federal and non-Federal funds;
 - Identification of the recipient/sub recipient and State and local agencies responsible for carrying out the project;
 - Identification of those projects which will implement ADA plans.
- Project descriptions shall be of sufficient detail to permit air quality analysis in accordance with the U.S. EPA conformity requirements;
- The total costs of projects, seeking Federal funds, in each program year shall be in line with anticipated federal funds. Year of Expenditure (YOE) costs will be determined for projects contained within Years 2, 3, 4 and 5 for the TIP;
- The projects will be reviewed by MPO Staff, MassDOT Planning and MassDOT Highway Districts 2 and 3 based upon the procedures outlined in the Transportation Evaluation Criteria. Initial scores will be determined and reviewed by the MPO in order to establish the TIP;
- Projects will be reviewed and analyzed using MassDOT developed AQ spreadsheets in order to determine GHG impacts and/or reductions.

AIR QUALITY

- Prepare all documentation necessary for an air quality consistency determination required by EPA's recent regulations of "Criteria and Procedures for Determining Conformity to State of Federal Implementation Plans of Transportation Plans, Programs, Projects Funded or Approved Under Title 23 U.S.C. of the Federal Transit Act".
- A review of the past year's accomplishments within the Transportation element of the SIP.
- The TIP is based upon a conforming Regional Transportation Plan (RTP) and is therefore a conforming document. As such a quantitative air quality analysis of all regionally significant projects will be conducted only as needed and, on those projects, not contained within the conforming RTP. Major air quality projects are defined as those that change vehicular speed, reduce VMT or affect travel delay; as promulgated and endorsed by the State Air Quality Task Force. This as needed analysis will include projects which require an Environmental Impact Study (EIS), Environmental Impact Report (EIR) or Finding of No Significant Impact (FONSI); and will utilize methodology endorsed by the State Air Quality Task Force. The analysis will be based on a network-based transportation demand model which will be used to compare the action (build) alternatives to the baseline (no-build) alternative relative to air quality impacts.
- Prepare and review GHG emission impacts in order to assist in meeting requirements of the Commonwealth's Global Warming Solutions Act.

PUBLIC PARTICIPATION

- There will be reasonable opportunity for public comment in accordance with the Public Participation Plan developed and endorsed by the MPO in 2016 as well as the updated plan to be developed under this UPWP;
- The proposed and approved TIP will be published or otherwise made readily available for informational purposes.

CONSULTATION

- Through the TIP development process, consultation with various state and local officials as well as other groups/organizations and stakeholders is required by applicable federal and state rules and regulations. Through meetings with MassDOT and the MJTC, as well as the procedures outlined in the Montachusett Public Participation Plan, notification will be made to a number of “agencies and officials responsible for other planning activities within the Metropolitan Planning Area (MPA) that are affected by transportation” of the development of the TIP. Further coordination and/or consultation will occur as early as possible and as needed and requested. All efforts will be documented within the TIP.

TIP APPROVAL

- The above completed documents will be reviewed and endorsed by the MPO. The endorsed product will serve as the required air quality consistency documentation necessary for DOT (FHWA/FTA) and EPA conformity determination.

ADJUSTMENT/AMENDMENT/MODIFICATIONS

- Amendments and Adjustments to the TIP will require MPO approval and action. Procedures outlined in the Montachusett Public Participation Plan will be followed.

SELF CERTIFICATION

- During the development of the TIP and at the time of endorsement by the MPO, the MRPC will conduct an annual Self Certification Compliance. This will certify that the Comprehensive, Continuing, Cooperative Transportation Planning Process for identified fiscal year in the Montachusett Metropolitan Planning Organization is addressing major issues facing the region and is being conducted in accordance with all applicable requirements.
- Additionally, a self-certification will be conducted related to the Global Warming Solutions Act Requirements that will indicate compliance with applicable requirements of State Regulation 310 CMR 60.05.

PERFORMANCE AND ECONOMIC MEASURES

- When and where applicable, performance and economic impacts will be examined so as to be used as part of TIP development and Transportation Evaluation Criteria process. Performance measure impacts will be judged based upon the projects ability to address certain PM characteristics, such as Safety or Infrastructure both from a state and regional perspective. Economic impacts will be based upon whether a project helps to promote growth or access to identified commercial, industrial or other areas in a community. The TEC was updated in the winter of 2018 to improve the scoring process. Further refinements will continue to be examined.

Product:

An MPO endorsed Transportation Improvement Program, including, Year 1, 2, 3, 4 and 5 elements, a ranking of the projects based upon the Transportation Evaluation Criteria process, a quantitative analysis of all transportation related emissions as a result of the implementation of the TIP and a demonstration that its implementation is consistent with the SIP and meets EPA/DEP conformity criteria and disbursed in accordance with the latest distribution matrix.

Adjustments/amendments to the TIP as required. Amendments or administrative action based upon criteria outlined within the TIP.

The TIP and any adjustment or amendment will be a fiscally constrained document for each fiscal year covered.

Performance and economic measures based upon project types that can be used as part of evaluation criteria for TIP development.

Schedule:

The TIP will be submitted as required by MassDOT during the second/third quarter of the required Program year.

Draft document to be developed for public release and review in March 2022 to April 2022 time period.

Final and MPO Endorsed documents to be released in May 2022. Development schedule is designed to coordinate with the state timeline for the Capital Investment Plan (CIP). MPO endorsement to be sought no later than May 2022.

Amendments to the TIP are processed as needed.

Performance measures analysis ongoing throughout the year.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
TIP Start												
Public Input												
Draft												
MPO Endorsement												
TIP Amendments												

Task 1.4

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$47,600	14 weeks
MassDOT	\$11,900	4 weeks
TOTAL	\$59,500	18 weeks

UPWP TASK NO. 1.5 – ENVIRONMENTAL JUSTICE AND TITLE VI

Objective:

To continue to integrate the basic principles of Environmental Justice (EJ) and Title VI (compliance to the Civil Rights Act of 1964) into the 3C Transportation Planning Process. Attempts will continue to be made to expand upon and incorporate recommendations previously developed and agreed to by the MRPC. A recent revision of the Public Participation Plan (PPP) was completed in 2016 that sought to improve, encourage and expand participation and access in the transportation planning process by all area individuals. Issues related to Environmental Justice and its inclusion in local technical assistance reports, studies, etc. will continue to be reviewed to ensure the process contains no public involvement barriers to target populations. Methods to measure EJ efforts conducted through other studies/plans will be reviewed and compiled to allow for consistent “tracking” of regional efforts. The MRPC will continue efforts to meet Title VI requirements in accordance with state and federal policies. This includes the continued review and revision of the MPO Endorsed Limited English Proficiency Plan (LEP) as well as annual reports and updates to MassDOT regarding Title VI compliance and procedures. The MRPC will continue to work with the MassDOT Office of Diversity and Civil Rights (ODCR) towards the creation of a more robust Title VI program. Work efforts under this task will include continued work with MassDOT, ODCR, MassDOT’s Title VI Coordinator and the Massachusetts Office of Disability (MOD) to address areas identified by Federal Highway Administration (FHWA) and their incorporation into the planning process within the Montachusett Region. In addition, an equity analysis will be conducted for any 3C document that is developed.

Previous Work:

- 2020 Regional Transportation Plan;
- Update/Revised Limited English Proficiency Plan - 2019
- Updated/Revised Public Participation Plan – May 2016
- Public Participation Plan & Amendment – 2007 & April 2010;
- Montachusett Title VI Report – 2011, 2012, 2015, 2017, 2018, 2019
- Updated MRPC website – ongoing;

Methodology:

- Continue to identify procedures and methods to encourage and improve involvement and participation of all groups in transportation planning process.
- Coordinate discussions and meetings with MassDOT, FHWA and MRPC regarding Title VI issues;
- Continue to review PPP in relation to EJ and Title VI issues as necessary.
- Compile and submit on an annual basis to MassDOT a Title VI Report related to efforts and activities undertaken to meet applicable requirements.
- Continue to review and revise the Montachusett LEP Access Plan to reflect latest federal requirements.
- Continue to work and coordinate with MassDOT Office of Diversity and Civil Rights, MassDOT’s Title VI Coordinator and the Massachusetts Office of Disability (MOD) to address FHWA Title VI issues and needs.
- Continue to conduct equity analysis for Title VI and EJ populations for developed 3C documents, ex. the TIP and UPWP.
- Continue to update and revise the email contact database within MassDOT’s “Engage” Tool.

Product:

- Technical assistance memorandum, reports and workshops as needed.
- Mailing lists of EJ and Title VI related groups and organizations.
- Reports on efforts as needed.
- Limited English Proficiency Plan Updates

- Website updates and refinements
- Annual Title VI report
- Equity analysis of benefits and burdens within developed 3C documents.

Schedule:

To be carried out during the program year. Annual Title VI reports prepared and submitted – As required

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Public Input												
Fed/State Coordination												

Task 1.5

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$39,000		12 weeks
MassDOT	\$ 9,750		3 weeks
TOTAL	\$48,750		15 weeks

2.0

DATA COLLECTION AND ANALYSIS FOR REGIONAL TRANSPORTATION PLANNING

UPWP TASK NO. 2.1 - REGIONAL DEMOGRAPHICS & MODEL

Objective:

MPO staff will examine, collect and compile available data from various sources in order to establish and maintain a comprehensive demographic database for the region.

- MPO staff will continue to collect and update socioeconomic American Community Survey (ACS) data at the block group, tract, and community level as it pertains program initiatives. MPO staff will also collect 2020 Census data when it becomes available.
- MPO staff will seek to establish and incorporate data and demographic links to other RPA projects and reports including the Montachusett Region Comprehensive Economic Development Strategy (MRCEDS) plan.
- MPO staff will initiate development of a database related to resiliency in the region. Various critical and at risk infrastructure will be identified and pertinent information will be collected. This database will be used for current and future climate change analysis.
- MPO staff will continue to collect and analyze data on Title VI and Environmental Justice populations. This will include data on vulnerable populations based on income, race, color, national origin, disability, age, and sex.
- MPO staff will begin to review and document what impacts the COVID pandemic had upon regional data, i.e. traffic volumes, travel patterns, regional developments, etc.

MPO staff will continue efforts to develop a viable regional model to assist with planning efforts. Current efforts have been limited due to staff resources, however, the availability of other state resources will be examined in order to improve and expand model capabilities.

- Data from the Massachusetts Travel Survey (MTS) will be examined and utilized for calibrating a regional travel demand model. The MTS was a large-scale effort that collected information on residents' travel patterns, preferences, and behavior in order to help build a fuller, more accurate picture of transportation needs.
- MPO staff will examine resources such as Conveyal and the Accessibility Observatory (AO) data provided by MassDOT. Data derived through these sources will assist staff with congestion planning, economic development and other regional planning efforts.

To review, update and monitor regional population, household, and employment projections:

- MPO staff will work with the statewide Socio-Economic Projection Working Group in the development and review of population projections produced by MassDOT. Comparisons to projections from past years will be conducted as needed leading to new projections to be utilized with the next Regional Transportation Plan Update. This process is expected to continue into the next program year.
- MPO staff, where possible, will collect data on housing developments, both affordable and otherwise, in the region. Available information will be added to the MassBuilds (massbuilds.com/maps) development database that includes information on affordable housing units completed, under construction, or projected.

MPO staff will also continue to provide support services as part of the 2020 U. S. Census:

- Prior work has included participation in the Participant Statistical Area Program (PSAP) conduct by the Census Bureau to help improve the identification of Census Tracts and Block Groups. It is anticipated that as data becomes available, additional work will be required to review, analyze and distribute pertinent information to all departments of the MRPC as well as in response to local requests.

Previous Work:

During the previous program years, the following has been accomplished:

- Updated development data for MassBuilds

- Collection of updated ACS data
- Updated regional and community demographic data
- Identification of Census Tracts and Block Groups through the PSAP
- Regional Profiles
- Title VI and Environmental Justice data sets

Methodology:

MPO staff will seek to undertake the following:

Regional Demographics

- Review input data for regional demographics and demographic projections
 - Review US Census websites for the most recent updates to 2020 Census and ACS information.
 - Review, establish and compile data and various linkages to MRPC departments and plans including the Montachusett Region Comprehensive Economic Development Strategy (MRCEDS) plan.
 - Compile listings of critical infrastructure and obtain available data for at risk and climate change analysis.
 - Collect and analyze data on Title VI and Environmental Justice populations.
 - Construct a development database of recent, current, or anticipated residential and commercial development projects in the Region. Collected data will be added to MassBuilds to document data on housing developments, both affordable and otherwise.
 - Staff will attend and work with the statewide Socio-Economic Projection Working Group in the development and review of population projections.

Model Development

MPO staff will continue the ongoing process of compiling a viable regional model in through TransCAD. Further development of the model will continue with the guidance of state officials, consultants, and other RPA's. Staff will also make use of available MassDOT resources such as Conveyal and the Accessibility Observatory (AO) data. Massachusetts Travel Survey (MTS) will be utilized as needed.

Regional Greenhouse Gas Analysis

MPO staff will continue to use existing methodologies to analyze the GHG impacts of transportation projects as well as identified in the TIP and other project level studies as needed.

2020 Census

Staff will continue to coordinate with the U. S. Census Bureau in order to provide support services as the results of the 2020 Census proceeds.

During the program year, the products developed from the models and the compiled databases will be reviewed, evaluated, and utilized as part of the development of the Transportation Improvement Program and other applicable studies/projects for the Region.

Interim documents, if produced, will be forwarded to the MassDOT Office of Transportation Planning and MassDOT Highway Division Districts as completed.

Products:

Regional Demographics

Updated demographic data that will be used to develop demographic projections, modeling, and for a variety of other planning purposes in the Region. Beneficiaries include all the communities in the MRPC region.

Regional Demographics Projections

Through work with the MassDOT Socio-Economic Working Group, any updated demographic projections will be used when applicable for a variety of planning purposes in the Region. Beneficiaries include all the communities in the MRPC region.

Regional Models

MassDOT supported models such as Conveyal, Accessibility Observatory (AO) data and MassBuilds analysis results incorporated in various regional reports. In addition, a model of the major road networks that can be expanded upon as needed and utilized for travel demand projecting will continue to be examined. Various outputs will be generated based upon the needs of the MRPC, local officials and MassDOT. Beneficiaries include all the communities in the MRPC region.

2020 Census Participation

Improved census data analysis throughout the Region. Beneficiaries include all the communities in the MRPC region.

Schedule:

Regional Demographics

To be carried out between October 2021 to September 2022.

Regional Demographics Projections

To be carried out through participation in the MassDOT Socio-Economic Working Group based upon their schedule. Updated regional projections based on updated methodologies and feedback on state-wide projections as needed between October 2021 to September 2022.

Regional Models

To be carried out as follows: model review – October 2021 to February 2022; model applications – January 2022 to September 2022; as needed model products – March 2022 to September 2022

2020 Census Participation

To be carried out throughout the program year

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Regional Demographics												
Regional Demographic Projections												
Regional Models												
<i>Model Review</i>												
<i>Model Applications</i>												
<i>Model Products</i>												
GHG Model												
2020 Census Participation												

Task 2.1

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$20,000	6 weeks
MassDOT	\$5,000	2 weeks
TOTAL	\$25,000	8 weeks

UPWP TASK NO. 2.2 – GIS MAPPING AND ANALYSIS

Objective:

The MRPC will continue to improve and develop staff capabilities with the Geographic Information Systems (GIS) purchased during previous program years. The GIS allows the MRPC to store, display, manage and analyze transportation, demographic, land use, environmental, etc. data for different work tasks under this UPWP as well as within the entire organization. GIS assistance on projects conducted as part of this UPWP include road inventory file updates, traffic count data and locations, trail data, pavement and crash data management, transit analysis, Economic Development mapping of priority development areas, Title VI and Environmental Justice data collection, mapping of affordable housing and other data collection/development needs. Data will continue to be developed and updated as part of various transportation analysis projects that can be utilized in the decision-making process.

MRPC will also continue to develop and enhance its web-based mapping system for use by member municipalities. This online system is entitled “MRMapper.” Developed in 2012, the online web mapping system allows users to view, query and edit data utilizing advanced spatial analysis and geoprocessing tools. Prior information available to end users includes traffic count locations and data, functional classifications of roads, pavement conditions, crash locations, trails, environmental features, road jurisdiction and federal aid eligibility. As more data layers are developed and as requests come in from member municipalities, the MRMapper system will continue to be expanded and updated. Staff will also continue its outreach efforts to educate local communities about the MRMapper system and its applicability to their needs. Presentations will be provided to local communities and organizations as requested.

Staff will also continue to develop and release various mobile applications in response to data needs and projects. In the past, MRPC has introduced or enhanced apps for handheld tablets that assisted communities with abandoned building locations, data collection efforts related to targeted neighborhoods for grant applications, evacuation scenario and critical infrastructure data collection and collection of infrastructure data for sewer systems. In 2019, requirements in the most recent EPA storm water MS4 permit resulted in web and mobile application development to assist member communities. In the past UPWP, online applications were developed to assist in the collection of ADA Public Right of Way (PROW) data. Four separate digital survey apps that can be utilized in the field, allow for the collection of curb ramp, sidewalk, crosswalk and accessible pedestrian signal information. Separate data collection guides were also developed to assist users.

MRPC staff will continue to:

- Utilize MaPIT, the Massachusetts Project Intake Tool, to initiate new highway projects and define project needs, scopes, costs, timelines, impacts, and responsibilities. Staff will provide technical assistance in the utilization of this web application to local municipalities as requested.
- Maintain, develop, and archive digital data for the Region. Current hardware and software requirements for the GIS will be evaluated and upgraded as appropriate. Approval on expenditures over \$1,000 will be obtained prior to purchase.
- Support member communities as part of the MRPC GIS Technical Assistance program. MRPC provides each member community with 8 free hours per calendar year of GIS technical assistance on various mapping and analysis projects. Staff consistently reviews the latest GIS principles and products and attempts to work with communities to identify areas where assistance and support can be provided. Prior work has included development of official town street maps, refinements to zoning maps, assistance in implementing online assessor maps, local pavement conditions and cemetery mapping.
- Provide communities with feedback and assistance in developing their GIS capabilities, technical support related to equipment/software, mobile app development and data acquisition.
- Collect and map data related to Title VI, Environmental Justice and other vulnerable populations (i.e. based on income, race, color, national origin, disability, age, and sex). Data related to seniors and disabilities will be reported separately.

- Based upon other MRPC work, staff will seek to collect and map affordable housing data in the region. Staff will work to incorporate appropriate data, i.e. affordable housing units completed, under construction, or projected, into the MassBuilds development database.
- Collect existing information on sidewalks and sidewalk coverage in the region for mapping.
- As part of MRPC work related to economic development, staff will work to identify Priority Development Areas (PDAs), 43D Priority Development Sites, and Transformative Development Initiative Districts (TDIs) within the Montachusett region.
- Identify and map:
 - Transit routes and bus stops;
 - Park & Ride lots and facilities;
 - Congestion corridors and/or bottleneck locations and;
 - Vulnerable infrastructure assets that are at risk of climate change impacts.

Previous Work:

- Establishment of Technical Assistance Program for member communities.
- MRMapper online web-based GIS mapping system (2012-2021);
- Mobile applications development (2014-2021);
- Montachusett Regional Transit Authority Transit Route update maps (2014-2021);
- Local educational meetings related to the use of MRMapper (2014-2021);
- Update Trail Inventory Databases (2014-2021);
- Regional Trail Guide (2018-2019);
- Pavement data updates/mapping (2014-2021);
- General GIS/Data Warehouse Maintenance (2014-2021);
- Traffic Count data updates/mapping (2014-2021);
- Title VI Mapping (2014, 2017, 2019)
- Fitchburg/Leominster Bus Route Sidewalk Inventory (2017);
- Shirley Village Railroad Crossing (2017-2018);
- Transportation Improvement Plan (2017-2021);
- Coordinated Public Transit - Human Services Plan Update (2017-18);
- Roadway Safety Improvement Project (2018-2021);
- Shirley Complete Streets (2018);
- Fitchburg Trail Brochure (2018-2019);
- Gardner Sidewalk Inventory (2018);
- Climate Change Mapping (2018-2020);
- Project Equity Mapping (2018);
- Sidewalk/Walkability Mapping – Lunenburg (2019);
- Regional Transportation Plan Mapping and Public Comment Map Journal Development (2020);
- Limited English Proficiency Access Plan Mapping (2020);
- Census 2020 Participant Statistical Areas Program Mapping and Management (2020);
- Freight Corridor Mapping (2019);
- Lunenburg Heavy Vehicle Exclusion Mapping (2019);
- Travel by Tourism (2020);
- Regional Bicycle Infrastructure Inventory (2020-2021);
- Regional Sidewalk Inventory – Pedestrian Plan Mapping (2021);
- Trail Data Collection Application Development (2020-2021);
- ADA PROW Application Development (2020-2021);
- Sidewalk/Walkability Mapping – Sterling (2020-2021);

- Sidewalk/Walkability Mapping – Townsend (2020-2021);
- Sterling Complete Streets (2021)

Methodology:

- Assist member communities with the MaPIT tool as necessary.
- Maintain and incorporate GPS data as collected.
- Continue support and enhancement of MRMapper online GIS program.
- Provide local support related to the use of MRMapper.
- Ongoing training and enhancement of staff and system abilities.
- Continued collection, analysis and refinement of data sets in order to provide inputs for various planning tasks.
- Integration of existing databases (accident and road inventory) into the GIS as appropriate.
- Support of UPWP tasks and special reports where appropriate and necessary.
- Produce handheld applications based upon project needs. Process will include:
 - Identification of transportation related need, ex. count locations, crash data collection, etc.
 - Define applicable data sets available.
 - Define required data inputs for application.
 - Compile application.
 - Test application on various platforms.
 - Refine, correct, and/or improve based on testing.
 - Disseminate application to interested individuals or municipalities.
 - Provide support services as needed.
- Provide local support related to developed apps as requested.
- Local GIS Technical Assistance support.

Products:

Continue updating of a data report/listing of archived GIS data for member communities.

Base map and overlay files that can be utilized for numerous tasks including: travel demand modeling, traffic assignment, capacity analysis, accident reporting and analysis, pavement management, transit routing, environmentally sensitive areas, economic development, title VI and Environmental Justice data, affordable housing, etc.

MRMapper Online Web based mapping system with relational data for MRPC communities.

Handheld apps as project needs are developed.

Schedule:

- To be carried on throughout the program year.
- Technical support: As needed throughout program year.
- MRMapper applications and updates throughout the program year based on needs.
- Handheld applications developed throughout the program year based on needs.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Technical Support												
MRMapper Updates												
App Development												
Data Layer Maintenance												
Various Identified Map Sets												

Task 2.2

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$62,800		20 weeks
MassDOT	\$15,700		5 weeks
TOTAL	\$78,500		25 weeks

UPWP TASK NO. 2.3 – DATA COLLECTION & ANALYSIS PROGRAM

Objective:

The objective of this task is to continue to develop and maintain a region wide database of information related to regional transportation issues that can be used in the development of studies, analyses, and the decision-making process.

Included in this task is the yearly traffic counting program that utilizes automatic traffic recorders (ATRs) and the intersection Turning Movement Count (TMC) program to determine Level of Service (LOS) at major intersections. MRPC also utilizes a video traffic counting system purchased in early 2013 known as Miovision to conduct TMCs, volume counts, pedestrian/bicycle counts as well as other non-traditional/difficult counts. Two Radar counters purchased in 2015 assist with speed studies. A bicycle and pedestrian counter (Eco Counter) has been purchased to conduct bicycle and pedestrian data along roadways, rail trails and hiking trails. This data will assist with identifying gaps in our bicycle and trail networks as well as the bikeability and/or walkability for a particular area.

This program will also cover the regular data collection begun under prior work programs related to pavement conditions on federal aid eligible roads as part of the Pavement Management task. There are approximately 660 miles of Federal Aid roads in the Montachusett Region that will continue to be surveyed through a 2-year inventory program.

Under the MRPC Regional Safety Review Program, staff will continue to cooperate with the FHWA to meet the goal of the MAP-21 Safety Planning Factor and the vision of the 2018 MassDOT Strategic Highway Safety Plan (SHSP) which is to create “a roadway system with zero deaths and serious injuries”. Staff will seek to improve safety at Fatality / Serious Injury Locations and Corridors (High Crash Locations (HCLs) / High Crash Corridors (HCCs)) through the Highway Safety Improvement Program (HSIP). HSIP is a data driven program that includes crash report gathering and analysis, identification of HCLs and HCCs prioritization, implementation of projects that improve safety at HCLs and HCCs and evaluation of the effectiveness of those safety improvement projects. Staff will continue to refine and update our GIS Regional Crash Database as new crash data is obtained both from the state and local municipalities and to work with the MassDOT Road Safety Audit (RSA) program. Staff will seek to meet with communities in the region to identify and encourage safety improvement project development at HCLs and HCCs.

In addition, staff will provide data support as needed to address local and regional issues as they are identified. These areas will also include an examination of the the following datasets:

- Park & Ride Lot Occupancy - Data will be collected at Park & Ride Lots within the region that are outside of MassDOT owned Park & Ride Lots. Counts will be conducted in alignment with MassDOT procedures.
- Asset Management – Staff will seek data based upon coordination with MassDOT and local municipalities.
- Bicycle and Pedestrian Count Data – Staff seek to collect data at identified trails using current equipment. Staff will also review MassDOT informational guidance currently under development in order to assure compatibility with the state.
- Transit – Staff will update data and maps on the existing fixed route system.
- Sidewalk Coverage – Staff will collect and map existing sidewalk data in the Region. Additional data locations will be examined for further data collection. Any data generated will be shared with MassDOT.

Previous Work:

Traffic Count Program:

- Traffic counts taken since the initiation of the program in FY 84-85;
- Computerized file system of historical traffic volumes on a town/roadway basis;

- Online maps and database of historical traffic count data;
- Video traffic counting system – 2013
- Radar traffic counting system – 2015
- Bicycle and Pedestrian counting system - 2018

Pavement Management Inventory Program:

- Database of Federal Aid Eligible Roads and Road Conditions
- 2011 – 2020 annual reports “Regional Pavement Profile”
- 4 Year Inventory Schedule
- Montachusett Regional Transportation Plan Infrastructure Chapter
- Montachusett Pavement Inventory Program – 2008 - Present
- Establishment of GIS Datasets for MRPC
- Technical Support Groups (Pavement Management Users Group)

Regional Safety Review Program:

- MRPC Regional Crash Database (ongoing)
- MRPC HCLs and HCCs website application (ongoing)
- MRPC Fatal Crash Corridor Analysis 2018 / MRPC Region Fatal Crashes Report 2019 (ongoing)
- RSA - Old Union Turnpike at Route2, Exit34, Lancaster – 2020
- Before & After Safety Performance Report: Roundabout at John Fitch Highway & Ashby State Rd (Rt 31), Fitchburg - 2020
- South Athol Road Interchange Study, Athol - 2019
- RSA - South Street at Wanoosnoc Road, Fitchburg - 2019
- RSA - Greenville Rd (Rt 31) at Turnpike Rd, Ashby - 2018
- RSA - Main Street Corridor - Prichard St to Summer St & Water St at Laurel St, Fitchburg - 2018
- RSA - Uptown Rotary (Central/Pearl/Elm/Green), Rt 101 at Woodland, Rt 101 at Chestnut, Gardner - 2017
- Before & After Safety Performance Report: Roundabout at Rt 70 & Old Union Turnpike, Lancaster - 2017
- Route 2 Before and After Safety Performance Analysis - 2017
- Shirley Railroad Crossing Review and Analysis - 2017
- RSA - Lunenburg Rd (Rt 70) at Main St (Rt 117), Lancaster RSA - 2017
- RSA - John Fitch Highway at North St & Pearl St, Fitchburg RSA - 2017
- RSA - Westminster Street at Ashburnham Street, Fitchburg RSA - 2017
- RSA - Westminster Street at Simonds Road, Fitchburg RSA - 2017
- RSA - Route 12 at Nelson Lindell Hamilton, Leominster RSA - 2017

Methodology:

The FY22 Traffic Count Program will consist of the following sub-tasks:

- Provide assistance to MassDOT's state-wide traffic counting program. MRPC will count approximately 32 locations in the region normally taken as a part of the MassDOT traffic count program;
- Maintain a testing program of traffic counters to ensure accuracy of data based upon MassDOT procedures;
- Continue to establish database link of regional counts to GIS;
- Maintain ADT computer file system on a town/roadway basis;
- Continue to develop, refine and implement a permanent regional traffic counting program of approximately 300 locations;
- Conduct Turning Movement Counts (TMC) at major intersections region wide as part of the regional traffic counting program to determine Level of Service (LOS) for those locations.
- Provide for special count requests within the region as requested for local technical assistance.
- Update traffic count data posted on MRPC website (www.mrpc.org).

- Implement Video Traffic Counting System at various locations to collect TMCs, volumes, bicycle/pedestrian trail counts, etc.
- Conduct Bicycle and Pedestrian counts along various trails and roadways to determine bike and walkability as well as identify multimodal gaps.
- Upload all traffic count data to the statewide MS2 website.

For the Regional Safety Review program, the following sub-tasks will be undertaken:

- Staff will attend SHSP and HSIP meetings and receive training as needed.
- To update the GIS Regional Crash Database the following will be undertaken:
 - Receive and collect crash data from MassDOT and communities;
 - Review, verify and correct crash data at selected locations;
 - Coordinate crash data with GIS for mapping purposes;
 - Update crash data.
- Develop a candidate Top 100 HCLs and HCCs List Report to inform communities of the need to improve safety for the purpose of seeking the development of safety improvement projects.
- Create individual community reports of candidate Top 100 HCLs and HCCs as needed or requested.
- Seek to meet with communities in the MRPC region to discuss developing projects or to recommend further study at the candidate Top 100 HCLs and HCCs or other locations identified through safety analysis, local requests, state request, local or regional studies or other data.
- Continue to work cooperatively with the MassDOT RSA program to conduct RSAs at candidate Top HCLs and HCCs to meet the goal of the state HSIP to develop safety improvement projects for the TIP. An RSA will be sought on any TIP project that has candidate Top 100 HCLs and HCCs.
- Recommend further study into implementing low-cost safety improvements that can be constructed relatively quickly to help remediate a safety problem at candidate Top 100 HCLs and HCCs.

As part of the additional data collection tasks, the following will be undertaken:

- Identify non-MassDOT owned Park & Ride Lots in the Region and establish data collection parameters that are comparable to MassDOTs;
- Coordinate with MassDOT regarding data requirements of Asset Management planning. Work with local municipalities to collect available data as needed.
- Continue to update bicycle and pedestrian infrastructure using the MrMapper web application that was created in 2019 and identify locations for regular data collection.
- Staff will compile existing sidewalk data and identify locations and/or municipalities for additional data collection.

Product:

Traffic Count Program

- Complete 75 to 100 traffic counts throughout the Region (including approximately 32 MassDOT permanent coverage stations);
- Complete 10 to 20 TMC at intersections throughout the Region;
- Complete 3-5 bicycle and pedestrian counts throughout the Region;
- Maintain a file of traffic counts on a town/roadway basis and a datalayer of regional counts with GIS;
- Maintain documentation/records of testing procedures and accuracy of equipment utilized in data collection
- Update and maintain count data on MRPC website and statewide MS2 site.

Regional Safety Review Program

- Updated GIS Regional Crash Database;

- Updated Candidate Top 100 HCLs and HCCs MRPC website application;
- Regional and Community Candidate Top 100 HCL and HCC Report which is a list of potential safety improvement projects;
- Completed RSAs for various Candidate Top 100 HCLs and HCCs;
- List of HSIP Projects for TIP.

Regional Data Sets

- Park & Ride Lot Vehicle Counts
- Regional Asset Management Database
- Regional Sidewalk Locations

Schedule:

Most data collection to occur from April through November, depending upon local weather conditions. Other support efforts likely to occur throughout the program year, i.e. LOS analysis, Travel time analysis, etc.

Regional Safety Review Program and Data Collection and Review – October 2021 to August 2022; Community Reports and outreach – November 2021 to September 2022.

Sidewalk Inventory & Pedestrian/Bicycle Connections Program – Data collection and Review – October 2021 to August 2022 depending on weather conditions.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Traffic Counts												
Safety Data Collection												
<i>Safety Analysis</i>												
<i>Safety Review</i>												
Community Safety Reports												
Road Safety Audits												
Sidewalk Inventory												
Ped & Bike Program												
Data Collection – Other Sets												

Task 2.3

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$48,000	15 weeks
MassDOT	\$12,000	4 weeks
TOTAL	\$60,000	19 weeks

UPWP TASK NO. 2.4 – PAVEMENT MANAGEMENT SYSTEMS

Objective:

The objective of this task is to continue regional efforts to maintain a Pavement Management program for federal aid eligible roads.

The Pavement Management Program, begun under prior work programs, will continue to evaluate federal aid eligible roadways within the Region. There are approximately 660 miles of Federal Aid roads in the Montachusett Region that will continue to be surveyed and incorporated into the pavement management program. MRPC has established a four-year program to inventory and analyze these roads. RoadManager Software will be used as the MRPC continues to build its database. The annual “Regional Pavement Profile” report will include a comprehensive analysis comparing the condition of these roadways and the trends over the years.

In addition, this task will allow for our participation in the RPA/State Pavement Management User Group, a group of RPA pavement management users from across Massachusetts which meets as needed to share best practices, as well as other potential work based upon arrangements and directives from MassDOT and FHWA.

Staff will also continue its outreach to area DPW Superintendents, Planning Directors, etc. to provide communities with pertinent data and materials. Communities utilize their limited Chapter 90 funds to address local road condition issues based upon various local parameters. To assist them in attempting to maximize the value of funding, this program will continue to provide available data related to their towns through various outreach methods. If a community wishes to consult with staff on the benefits of a pavement management program, how one functions, or have staff demonstrate the benefits of a program to a specific group or board in the community, this task will allow time to do so.

Staff will also maintain its membership and participation in the Worcester County Highway Association.

Previous Work:

- Database development under new RoadManager Software
- RoadManager software program purchase and training
- Data migration to Road Manager system
- 2020 Montachusett Regional Transportation Plan
- 2016 Montachusett Regional Transportation Plan
- 2012 Montachusett Regional Transportation Plan
- 2011 – 2020 reports “Regional Pavement Profile”
- Database of Federal Aid Eligible Roads
- 4 Year Inventory Schedule
- Montachusett Pavement Inventory Program – 2008 - 2020
- Technical Support Groups (Pavement Management Users Group)

Methodology:

- Data collection based on Road Manager input requirements
- Analysis reports utilizing new Road Manager software
- Develop local condition maps for member communities.
- Participation in RPA Pavement Management Users Group as needed.
- Technical assistance to MassDOT Highway as part of state PMS program based upon mutually agreeable scope.
- Update PMS database, including recent repair/reconstruction activities.

- Assist interested communities with PMS programs as requested.
- Public outreach and presentation where necessary and requested
- Conduct project specific pavement analysis and profiles as needed
- Assist communities in the compilation of local projects, the PNF/PIF process and public awareness as needed.

Products:

- Distribution of annual mailing consisting of pavement related activities including but not limited to: Report information, Ch. 90 information, Questionnaires, Services, etc.
- Year-end report “Regional Pavement Profile” analyzing region and municipal pavement data
- Individual municipal specific profiles as needed
- Pavement Management database for federal aid eligible roads.
- Integration of data and analysis into project level reports as needed.
- Community condition maps.
- PNF/PIF’s for federal aid eligible roads based upon community needs

Schedule:

Pavement Management – Data collection efforts to be carried out during October/November 2021 and April to September 2022. Analysis and review of data to be conducted from December 2021 to September 2022. Annual mailing occurs on an as needed basis, typically in the spring. Year end report will be available in September 2022.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Pavement Data Collection												
Pavement Analysis												

Task 2.4

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$17,600		5 weeks
MassDOT	\$ 4,400		2 weeks
TOTAL	\$22,000		7 weeks

UPWP TASK NO. 2.5 – PERFORMANCE MEASURES

Objective:

The creation of Performance Measures (PMs) was a main focus of the 2016 Montachusett Regional Transportation Plan (RTP). PMs remain a priority under the federal authorization “Fixing America’s Surface Transportation (FAST) Act”. PMs are meant to inform and improve the MPO decision making process. PMs are set to achieve a desired set of goals for a multimodal transportation network. After an MPO develops their set of goals and PMs they are tracked over time to determine the progress in meeting them. In addition, the 2020 RTP has expanded on those PMs originally set in 2016.

This task includes continued work on maintaining a centralized database of PMs (or PM Dashboard) which was originally created during the 2016/2017 UPWP. This PM Dashboard is designed to monitor PM progress and inform MPO data needs throughout the program year. The PM Dashboard will also inform the public on the conditions in the transportation network and progress being made towards goals which have been set. The PM dashboard will be made available on the MRPC website during this program year.

This task will also include the coordination of existing regional PMs with state and federal PMs.

Effective on April 14, 2016 FHWA established a final rule on the first of its Performance Measures. Safety Measures (PM 1), Pavement and Bridge Condition Measures (PM2) and Performance of NHS, Freight and CMAQ Measures (PM3) were established by MassDOT and adopted by the Montachusett MPO in 2018. MPO staff will work with MassDOT to monitor and present these Performance Measures to the MPO as needed. MPO staff will work with MassDOT to monitor, amend and present these Performance Measures to the MPO as needed.

In July 2016, FTA published a Final Rule for Transit Asset Management (TAM). The rule requires FTA grantees to develop asset management plans for their public transportation assets, including vehicles, facilities, equipment, and other infrastructure. MPO staff will work with MART to monitor and present their TAM plan to the MPO as needed. Additionally, MART developed and presented their Public Transit Agency Safety Plan (PTASP) to the MPO in late 2020 and early 2021 where the safety targets developed were adopted. As MART continues to monitor and update items as needed, the MRPC will work to ensure appropriate action is taken.

Previous Work:

- Roadway Safety Improvement Project Selection Report – 2018
- Adopted MassDOT PMs for Federal Highway Reporting – 2018
- PM Dashboard and Data Warehouse – 2017
- Montachusett Regional Transportation Plan – 2016 & 2020
- Goals & Objectives for the 2016 Regional Transportation Plan - 2015
- Regional PMs and Targets - 2015
- Regional Crash Database (ongoing)
- Traffic Counting Program (ongoing)
- Geographic Information System for the Region (ongoing)
- Pavement Management Regional Report (ongoing)
- Regional Trail Inventory (ongoing)
- Climate Change and Transportation in the Montachusett Region (ongoing)
- Road Safety Audits (ongoing)
- Roadway & Alternate Mode Access to Commuter Rail in the Region

- Siting of Renewable Energy Facilities

Methodology:

The following activities will be undertaken as part of the development of this program:

- Filling data needs and gaps (December 2021 – September 2022)
- Maintenance of PM Dashboard (February – September 2022); Information will be presented related to existing statewide PMs as adopted by the MPO as well as the measures developed for the prior RTP. Users should be able to ascertain how the MPO is proceeding related to these PMs.
- Coordinate regional PMs with state and federal PMs as they are developed - throughout program year

Products:

Updated PMs and PM Dashboard through an excel spreadsheet. Online posting will be incorporated.

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
List of New Data Needs												
Data Collection												
Refinements												
Present and Adopt PM1												
Update Dashboard												
PM Coordination												

Task 2.5

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$18,400	5 weeks
MassDOT	\$ 4,600	2 weeks
TOTAL	\$23,000	7 weeks

UPWP TASK NO. 2.6 – REGIONAL TRANSPORTATION PLAN UPDATE

Objective:

The objective of this task is to begin the development of an update to the 2020 Regional Transportation Plan (RTP) for the Montachusett Region that was endorsed by the Montachusett MPO on July 17, 2019. Federal regulations require that the RTP be updated and revised every 4 years. The RTP is a comprehensive, multi-modal transportation plan which is used to enhance the decision-making capability of local, regional, and state officials by identifying both short range and long-range improvements to the regional transportation system. The RTP comprehensively examines the existing transportation network in the region, identifies those issues and problems which either require or will require improvement, and outlines possible courses of action designed to facilitate these improvements. It considers virtually all forms of transportation in the region and is developed so that it is consistent with the region's comprehensive, long-term land use plans as well as any social, economic, environmental, and energy conservation goals and objectives. This effort will reflect the 3C process and will be based on federal and state policies, regional goals and objectives, detailed technical data and analysis, input from local technical assistance activities conducted by the RPA, and citizen participation.

The 2020 RTP was developed in accordance with federal and state requirements and the update for the 2024 RTP will likewise be developed in accordance with all necessary requirements contained within any current or new federal and state legislation.

To properly address all aspects of the RTP, it is important that planning efforts for this document begin as soon as possible. With a target date of July 2023 for a fully endorsed RTP, staff will seek to initiate efforts to meet this goal. The overall objective for this program year will be to set the framework for proper public participation and input to this update. Utilizing available options and methods, staff will work to ensure that the public as well as local stakeholders will have access to the development of an updated 2024 RTP. All meetings convened as part of this process will have a Virtual Public Involvement approach. During the pandemic, online meetings proved to be a popular option for individuals interested in the planning process. The MRPC will retain this online presence even when in person meetings resumes.

Previous Work:

- 2020 Montachusett Regional Transportation Plan - July 17, 2019
- Adopted MassDOT PM1 , 2 and 3 targets for Federal Highway Reporting – 2018, 2020
- Roadway Safety Improvement Project Selection Report - 2018
- Pavement Management Systems - 2018
- Traffic Count Program - 2018
- Regional Crash Database - 2018
- Geographic Information System for the Region - 2018
- Road Safety Audits - 2018
- Regional Travel Demand Model - 2018
- Public Participation Plan - 2018
- Regional Trail Inventory - 2018
- Roadway Safety Improvement Project Selection Report - 2018
- Climate Change and Transportation in the Montachusett Region - 2018
- Sidewalk Inventory and Pedestrian/Bicycle Connections – 2018
- Freight Corridor Identification and Screening - 2018
- Regional Development Initiative - 2018
- Route 2 at South Athol Road Proposed Interchange Study - 2018
- Coordinated Transit Plan Update - 2018

- Ridership Survey Distribution - 2018
- Local ADA Transition Plan Development - 2018
- Regional Transportation Needs Assessment - 2018
- Montachusett PMs Report - 2018
- Montachusett Trail Map & Visitor Guide - 2018

Methodology:

The following will be conducted/developed in order to maximize public participation in the revision process:

1. Identify various stakeholders within the region and coordinate meetings with individuals/groups to incorporate and integrate their thoughts/ideas/input/plans into the RTP. Efforts will be made to conduct outreach efforts as early as possible in the process. Stakeholders are considered members of the public, the business community, various local and state agencies, governments and other interested parties.
2. Update and re-launch RTP specific website.
3. Schedule outreach meetings with identified stakeholders. Appropriate documents, meeting announcements, handouts, surveys, etc. will be posted in accessible formats.
4. Work with stakeholders to identify any possible language and or accessibility issues. Efforts will then be made to address these accessibility issues to improve outreach efforts and participation.
5. Conduct local meetings and workshops both in person (when appropriate) or virtually to discuss various aspects of the RTP.
6. Development of the Plan will continue into the next program year with an emphasis on completion of a final document.

Interim documents, if produced, will be forwarded to MassDOT as completed.

Products:

The final product will be an improved and comprehensive public outreach program that maximizes the ability for any interested party to be part of the overall RTP development process. Efforts will focus developing an easy to use input and comment process for all individuals in the Region.

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Identify Stakeholders												
Review Outreach Procedures												
Establish RTP Website												
Conduct Outreach Meetings												

Task 2.6

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$17,800	5 weeks
MassDOT	\$ 4,450	2 weeks
TOTAL	\$22,250	7 weeks

3.0

TRANSPORTATION PLANNING STUDIES

UPWP TASK NO. 3.1 – MOBILITY AND ACCESS PLANNING

Objective:

This task will combine existing reports, materials and data related to mobility and access in order to examine mobility and accessibility across the region for employment, medical, shopping and recreation. Areas of concern will be identified, such as congested intersections or lack of available sidewalks, etc., that impede movement and access. Gaps in the network will be identified to establish potential projects, etc.

Previous Work:

- Regional Bike & Pedestrian Plans
- Walkability Reports – Sterling & Townsend
- Travel by Tourism
- Lunenburg Walkability & Parking Study
- Regional Trail Inventory Update
- Sidewalk Inventory & Pedestrian/Bicycle Connections (Fitchburg/Leominster/Gardner)
- Trail Connections
- Safe Routes to School Reports
- Walkability Reports – Westminster & Groton

Methodology:

1. Compile all prior reports and studies related to mobility and access
2. Review and coordinate needs within Statewide Modal Plans
3. Identify and locate Park & Ride locations along with Transit connections
4. Identify and map congestion corridors and/or bottlenecks
5. Identify gaps in the transportation network
6. Prioritize gaps for closure & potential projects
7. Conveyal and Accessibility Observatory data will be used where appropriate

Products:

The final product will be a report showing the current mobility and access conditions regionwide and will identify prioritized areas for gap closures within the transportation network.

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Inventory Options												
Community Involvement												
Prioritize Options												
Impact Analysis & Final Report												

Task 3.1

	Budget		Estimated Staff Effort
FHWA PL/FTA-5303	\$37,400		12 weeks
MassDOT	\$ 9,350		3 weeks
TOTAL	\$46,750		15 weeks

UPWP TASK NO. 3.2 – CORRIDOR PROFILES

Objective:

The objective of this task will be to conduct a corridor study along the Route 12 (Main Street) corridor in the Town of Ashburnham between the Corey Hill/Williams Road intersection and River Styx Road in the town center and along Lancaster Avenue in the Town of Shirley from the Lancaster Town Line to Leominster Road. Commercial and residential activity is present along both corridors. In addition, the planned THRIVE Cultivation and Dispensary, LLC, when opened, will be located on Lancaster Avenue in Shirley and will also be examined as part of the study.

A corridor profile “correlates the information generated by the transportation management systems along a particular corridor and analyzes performance-based data, recommends short-term operational and physical improvements, and identifies candidates for further study.”

It is anticipated that congestion and capacity analysis will be conducted at the major crossings and that if required Road Safety Audits (RSA) will be conducted at various locations. The study will identify specific and general problems and provide alternative improvements that will improve the safety and traffic flow along both corridors.

Previous Work:

- Route 12 Corridor Profile in Fitchburg - 2021
- Montachusett Regional Pavement Profile – 2019
- Westminster/Gardner/Winchendon Route 140 North Corridor Profile – 2012
- Sterling/Princeton/Westminster Route 140 Corridor Profile – 2010
- Route 117 Corridor Profile Lancaster - 2013
- Roadway Safety Improvement Project Development Report - 2018
- Montachusett Traffic Count Database – 2019
- 2020 Regional Transportation Plan

Methodology:

The Corridor Profile contains a review of several management systems including: Traffic Counting; Congestion Management; Safety; Pavement Management System; MassDOT Bridge Management System (BMS) and Freight Movement.

Corridor Profile Tasks will include:

1. Review and analysis of adjacent land uses, environmental constraints and collected data.
2. Develop and identify potential short, medium- and long-term improvements based upon issues and feedback from the community.
3. Right of way analysis and cost estimates will be determined to the extent feasible.
4. Develop and prepare final report.
5. Conduct public outreach meetings as needed.

Interim documents, if produced, will be forwarded to MassDOT as completed.

Products:

The final product will be a corridor profile for Route 12 in Ashburnham and Lancaster Avenue in Shirley that identifies congestion, safety issues and problems and establishes alternatives and recommendations/actions to address them. Potential future projects for inclusion in the TIP will likely be identified.

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Scope Development/Local Issues Identified												
Data Collection & Analysis												
Recommendation/Alternatives Development												
Final Report & Public Presentation(s)												

Task 3.2

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$52,000	16 weeks
MassDOT	\$13,000	4 weeks
TOTAL	\$65,000	20 weeks

UPWP TASK NO. 3.3 – CLIMATE CHANGE PROGRAM

Objective:

An annual part of our Climate Change Program is updating the vulnerable infrastructures identified in the 2016 RTP. This data is to be included in transportation decision making. Major roadways and rail lines will be identified and mapped to assess their proximity to various flood zones in order to assess vulnerability. The MRPC has developed Pre-Disaster Mitigation Plans for individual communities in the Region. Data from these reports will be incorporated where applicable.

Congestion Mitigation:

Congestion mitigation and greenhouse gas reduction is an important part of combating the effects of climate change. Staff will identify an area in the region which a bottleneck exists and conduct a bottleneck study. This study will include analysis of existing conditions, determine causes of congestion and alternatives for improvement. Accessibility Observatory (AO) data provided by MassDOT will be included where applicable. This study stems from a goal set in the 2016 Regional Transportation Plan to “reduce congestion and improve mobility”. One performance measure set under this goal was to “identify one (1) bottleneck location and conduct a study every 2 years in order to develop and/or implement corrective measures”. The corridors selected for bottleneck study areas are determined through local knowledge of congested area’s in the region, areas of concern from past RTP surveys and the MRPC’s data collection programs.

MRPC staff will also continue to work with and assist MassDOT in relation to GreenDOT initiatives. This includes the analysis and calculation of possible Greenhouse Gas Emissions (GHG) of transportation projects within the Transportation Improvement Program (TIP) where appropriate.

During the 2016/2017 work program MRPC developed a Stormwater Data Collection App which was made available to member communities required to abide by the EPA’s MS4 Permit. Any request for assistance or training on this application will be covered under this task.

Previous Work:

- Community Pre-Disaster Mitigation Plans – 2016
- Merriam Avenue – South Street Corridor Bottleneck Report
- 2016 Montachusett Regional Transportation Plan – August 2015
- Travel Time Data and Analysis – 2014, 2015, 2016
- GIS Datalayer – Travel Time 2014, 2015
- Stormwater App – 2016-17
- Climate Change Data Update 2016, 2017, 2018, 2019

Methodology:

- Map major roadways and rail lines within flood zones within the region;
- Assess flood vulnerability of identified roads and rail lines;
- Conduct GHG analysis of applicable TIP projects based upon MassDOT guidelines
- Identify bottleneck study area, develop study, produce report
- Assist communities with Stormwater App as needed

Products:

- GHG emissions analysis for TIP projects (May 2022)
- Updated vulnerable infrastructures database (August 2022)

- Bottleneck Study (September 2022)
- Consider a mapping structure similar to the Cape Cod Coastline - <https://www.capecodcoast.org>

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Data Research												
Data Collection												
Database Updates												
Flood Zone Mapping												
Vulnerability Analysis												
GHG Analysis												

Task 3.3

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$26,600	8 weeks
MassDOT	\$ 6,650	2 weeks
TOTAL	\$33,250	10 weeks

UPWP TASK NO. 3.4 – COMMUNITY TRAIL PLANNING

Objective:

The objective of this task is to assist all Montachusett communities, with a focus on Sterling and Winchendon, with community trail planning. Many communities in the Montachusett Region have expressed interest in furthering their community trail planning, especially now that more people are out on the trails during the COVID 19 pandemic. MRPC staff will use previously collected trail data and assist with public outreach efforts to determine where trail planning efforts should be focused. Making trail connections, as well as connecting bicycle and pedestrian infrastructure, will be a priority for this task.

Previous Work:

- Walkability Reports – Sterling & Townsend (2021)
- Regional Bike & Pedestrian Plans (2020)
- Lunenburg Walkability and Parking Study (2019)
- Montachusett Regional Trails Coalition work (2012-present)
- Regional Trail Inventory Update (2012 & 2018)
- Sidewalk Inventory & Pedestrian/Bicycle Connections (Fitchburg/Leominster/Gardner)
- Trail Connections (2016)
- Safe Routes to School Reports (2008-2011)
- Walkability Reports – Westminster & Groton (2012)

Methodology:

- Engage the Montachusett Regional Trails Coalition and other stakeholders
- Update existing trail infrastructure
- Identify gaps/future projects based on sidewalks, bike lanes, rail trails, etc.
- Identify strategies to advance trail projects

Products:

The final product will be a report and mapping effort showing the region with current pedestrian conditions and recommendations. These recommendations could result in the programming of future TIP projects. Maps will show existing and potential sidewalk and pathway data as well as other datasets as deemed appropriate. This task is a continued effort from the trail inventory work and bicycle and pedestrian planning that have been done over prior years.

Schedule:

To be carried out throughout the program year as requests are received:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Engage Stakeholders												
Inventory Existing Infrastructure												
Identify Gaps												
Identify Strategies												

Task 3.4

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$32,000	10 weeks
MassDOT	\$ 8,000	2 weeks
TOTAL	\$40,000	12 weeks

UPWP TASK NO. 3.5 – INTERSECTION ANALYSIS

Objective:

The objective of this task will be to conduct intersection analyses of the intersections listed below. These intersections were identified by the individual communities as locations of particular interest to the municipality. The communities identified problems related to safety for pedestrians, bikers, and vehicles. Changes to the land usage at or around these intersections have raised concerns that now need to be addressed. An intersection analysis analyzes the information generated by the MRPC transportation management systems for an intersection, recommends short-term and long-term operational and physical improvements and the possible need for further study.

It is anticipated that congestion analyses, capacity analyses and safety analyses will be conducted at the intersections. The analyses will identify specific and general problems and provide improvement alternatives to improve safety, vehicular and pedestrian traffic flow as needed at the intersections.

- Hubbardston - Route 68 at High St Intersections (two intersections);
- Leominster - Mechanic St/Leominster Connector at Commercial Rd;

Previous Work:

- Intersection Analysis: Route 12 at Route 31 Intersection, Fitchburg - 2021

Methodology:

- Meet with communities to determine thoughts/concerns at the intersections;
- Conduct vehicle and pedestrian traffic counts;
- Examine the intersections using Level of Service analysis, Average Daily Traffic analysis, Signal Warrant analysis, Safety analysis, Land Use analysis and Existing Geometry and Design Conditions analysis;
- Develop improvement recommendations aiming to diagnose and rectify issues at the intersections;

Products:

- Reports of the various intersections similar to the *Intersection Analysis: Route 12 at Route 31 Intersection, Fitchburg* report completed in 2021;

Schedule:

To be carried out throughout the program year as follows:

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Scope Development/Local Issues Identified												
Data Collection & Analysis												
Recommendation/Alternatives Development												
Final Report & Public Presentations												

Task 3.5

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$36,608	11 weeks
MassDOT	\$ 9,152	3 weeks
TOTAL	\$45,760	14 weeks

4.0

TRANSIT PLANNING ACTIVITIES

UPWP TASK NO. 4.1 – TRANSPORTATION EQUITY AND PUBLIC INVOLVEMENT

Objective:

The objective of this task is for the staff to participate in the Montachusett Joint Transportation Committee (MJTC) and the Montachusett Regional Planning Commission (MRPC) for transit involvement issues to represent the needs of the Montachusett Regional Transit Authority (MART). Staff will also continue to work with the Montachusett Regional Emergency Planning Committee (MREPC) on evacuation and security plans in an emergency situation. Also, staff will continue to participate in the Fitchburg Line Working Group to improve rail service on the Fitchburg Line in the Montachusett Region; the Leominster Crime Stoppers Group to continue to educate the public in participating in the crime stopper program; the North Central Regional Coordinating Council (NCRCC) to identify unmet needs, formulate regional priorities, and build coalitions around new transportation projects and coordinate existing services at the local level to serve more people and increase the sustainability of services; and the Human Service Transportation (HST) Coordination Advisory Group to assist MART, other RTAs, and the communities in their effort to improve access to transportation services for persons with special mobility needs.

In addition, staff will continue efforts to meet applicable Title VI requirements, including any updates to the MPO endorsed Limited English Proficiency (LEP) Access Plan as well as other issues related to Environmental Justice, Title VI, and state and federal policies as necessary. In particular, staff will address Federal Transit Administration (FTA) requirements and transit issues regarding Title VI, Environmental Justice, and LEP as they are raised and as they relate to any underserved populations that see environmental justice planning as an opportunity to address local transit issues. This task also includes efforts to encourage private enterprise and minority business participation throughout the planning process.

Previous Work:

- North Central Regional Coordinating Council (NCRCC) – ongoing
- Montachusett Regional Transportation Plan (RTP) Update – 2019
- Montachusett MPO Endorsed Limited English Proficiency (LEP) Access Plan Update – 2019
- Public Participation Plan Updated with Amendment No. 1 – 2017
- Public Participation Plan Amendment- 2015
- Regional Low-Income Threshold- 2016
- Montachusett Regional Transportation Plan (RTP) Update - 2016
- Montachusett MPO Endorsed Limited English Proficiency (LEP) Access Plan – 2013
- Annual Title VI Report – 2011-2012; 2015, 2017, 2019
- Montachusett Regional Emergency Planning Committee (MREPC) - ongoing
- The Human Service Transportation (HST) Coordination Advisory Group- ongoing
- Fitchburg Line Working Group - ongoing
- MinuteVan Regional Transit Group- ongoing
- North Central Massachusetts Community Reinvestment Act Coalition (NCMCRA) - ongoing
- Montachusett Region Comprehensive Economic Development Strategy (MRCEDS) - ongoing
- Leominster Crime Stoppers Group - ongoing

Methodology:

- Coordinate planning activities through participation in the MJTC.
- Prepare required information/data which can assist in ongoing efforts to identify clients and available public transit services.

- In addition, issues related to Environmental Justice and Title VI will be reviewed and addressed through the various aspects of this task. Where appropriate action will be taken through the various coalitions and participation plans to improve the involvement of those traditionally not part of the planning process.
- Interim documents, if produced, will be forwarded to MassDOT as completed.

Product:

Regionwide database of relevant socioeconomic data based upon collected information.

Schedule:

Ongoing throughout the program year.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Public Participation												

Task 4.1

	Budget
FHWA PL/FTA-5303	\$4,000
MassDOT	\$1,000
TOTAL	\$5,000

Estimated Staff Effort
2 weeks
1 week
3 weeks

UPWP TASK NO. 4.2 – SHORT RANGE TRANSIT/TRANSPORTATION PLANNING

Objective:

Provide technical support services to the Montachusett Regional Transit Authority (MART) related to the improvement of the commuter rail service facilities in the Montachusett Region. Efforts will include assistance to MART in assessing commuter rail parking lots, the identification and assessment of park-and-ride lots, the review of commuter rail station construction plans, bid documents, and the continued monitoring of transit construction projects.

Previous Work:

- 2020 Montachusett Regional Transportation Plan (RTP) – 2019
- 2016 Montachusett Regional Transportation Plan - 2015
- Fitchburg Commuter Rail Line Improvement Project – ongoing
- Wachusett Station and Layover Facility – 2020
- 2012 Montachusett Regional Transportation Plan - 2011
- Wachusett Extension Environmental Assessment – 2010
- North Leominster Commuter Rail Station Parking Expansion – 2013
- Shirley MBTA Station Commuter Parking Improvements - ongoing
- Ayer Depot Square Pedestrian Plaza - ongoing
- Ayer Commuter Rail Parking Expansion – 2020
- Assisted MART and the Town of Ayer with the location, design, and funding of the Ayer Commuter Rail Parking Facility including:
 - Preparation of appropriation request.
 - Preparation of the parking alternatives;
 - Preparation of responses to MassDOT concerns regarding financial constraint and handicapped accessibility;
 - Meetings with Town Officials to discuss federal funding of Ayer Commuter Rail Station.
- Littleton Commuter Rail Station improvement – 2016
- Ayer Parking Garage Impact Analysis - 2009
- Wachusett – Gardner Extension (Phase I: Feasibility Screening) – 2009
- Fitchburg Commuter Rail Line Improvement Project (Alternatives Analysis Report) - 2007

Methodology:

MRPC will continue to review the commuter rail services in Fitchburg/Leominster and assist in the technical support and implementation of improvements to the region's facilities. This will include all stops along the Fitchburg MBTA line from Littleton to Fitchburg (and Gardner).

Product:

Support services at meetings and presentations related to improvements to area facilities. Where appropriate technical documents and reports will be developed.

Schedule:

To be carried out during the program year.

Ayer Depot Square Pedestrian Plaza Projects – October 2021 to September 2022.

Shirley MBTA Station Commuter Parking Improvements – October 2021 to September 2022.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Ayer												
Shirley												

Task 4.2

	Budget
FHWA PL/FTA-5303	\$8,400
MassDOT	\$2,100
TOTAL	\$10,500

Estimated Staff Effort
2 weeks
1 week
3 weeks

UPWP TASK NO. 4.3 – TECHNICAL ASSISTANCE TO MART

Objective:

To provide technical planning services and assistance to the Montachusett Regional Transit Authority (MART) which will include the coordination of special transit planning projects, GIS assistance and mapping on identified transit projects such as transit and impact analyses, technical assistance at RTA board meetings and with MART's Job Access Reverse Commute Program (JARC).

Previous Work:

- 2020 Montachusett Regional Transportation Plan (RTP) – 2019
- 2016 Montachusett Regional Transportation Plan (RTP) - 2015
- GIS mapping of Fixed-Route Transit Services and Updates – 2012-2013, 2015-2017, 2018-2019, 2020
- Solar Voltaic Energy Production and Energy Management System Project – 2013-2014
- 2012 Montachusett Regional Transportation Plan (RTP) - 2011
- Categorical Exclusions for Ayer Commuter Rail Parking Improvements - 2011
- Expansion of MART Storage Facility Leominster – 2010
- Categorical Exclusions for Acquisition of Property in Leominster for Temporary Parking- 2010
- Wachusett Extension Application for TIGER Discretionary Grant – 2009
- Fitchburg Commuter Rail Line – License Plate Survey – 2009
- Gardner MART Storage and Maintenance Facility - 2008

Methodology:

The FY22 MART technical assistance activities will consist of the following sub-tasks:

- Provide planning and management services as needed, including the maintenance of record-keeping systems.
- Coordinate short-range transit planning projects with long-range transit goals and planning for the Region.
- Provide technical planning assistance to MART and member communities.
- Assist MART in meeting federal reporting requirements related to fixed-route services.
- Assess and evaluate bus and van routes, schedules, and fare structures.
- Prepare information and data for FTA reports.
- Conduct and review air quality-related analysis and data for transit projects.

Product:

Reports to public groups concerning MART activities.

Schedule:

The planning assistance program to the RTA is to be carried out continuously during the program year.

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
LTA												

Task 4.3

	Budget	Estimated Staff Effort
FHWA PL/FTA-5303	\$10,400	3 weeks
MassDOT	\$ 2,600	1 week
TOTAL	\$13,000	4 weeks

UPWP TASK NO. 4.4 – BUS STOP ADA ACCESSIBILITY EVALUATION

Objective:

The Path to Accessible Transit Infrastructure (PATI) is assessing the accessibility of the bus stops in the Montachusett Regional Transit Authority (MART) Region. the purpose of the study is to determine the level of accessibility of each stop in the MART system by collecting field information and determines its ranking for capital improvement (critical, high, medium, low). The higher the “score” the less a bus stop complies with accessibility requirements and the more it needs capital improvement. Data will be collected utilizing a Personal Digital Assistant (PDA) unit equipped with ArcPad and GPS technology, which was developed in the previous year. This will be a multi-year project to cover all the stops in the MART system.

Previous Work:

- Fixed Route Service Maps, Fitchburg/Leominster/Gardner- 2007-2008
- Transit Development Program Update – Fitchburg and Leominster 2013;
- Transit Development Program Update – Fitchburg and Leominster 2003; 2008
- Transit Development Program Update – GLink 2005;
- Transit Development Program Update – Gardner 2000
- Ridership Survey Development – UPWP 2016-2017
- Coordinated Public Transit-Human Services Plan 2007
- Coordinated Public Transit-Human Services Plan 2015
- Coordinated Public Transit-Human Services Plan 2018
- Bus Routes Performance Evaluation – 2019
- Development of Personal Digital Assistant (PDA) Survey for (PATI) - 2021

Methodology:

MRPC Staff will:

- Examine all Bus Stops in MART fixed Bus Route System
- Bus Stop Survey Information:
Location, Amenities, Landing Pad, Roadway, and Sidewalk Condition and Signages.
- Analyze results using quantitative and qualitative methods.
- Identify key themes and concerns addressed in data.
- Produce a report summarizing the findings from the study and provide recommendations.

Products:

A report will examine and determine the level of accessibility of each stop in the MART system by collecting field information using the newly developed (PDA) technology and determines its ranking for capital improvement.

Schedule:

To be carried out throughout the program year.

Examine Bus Stops and Select Study Period: October 2021- January 2022

Data Collection and Bus Stops Conditions: January 2022 – September 2022

Initial Analysis of Results: Ongoing

Production of Final Report: Anticipated completion by 2023/2024

	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022	July 2022	Aug 2022	Sep 2022
Examine Bus Stops												
Data Collection												
Analysis												
Final Report												

Task 4.4

	Budget
FHWA PL/FTA-5303	\$14,575
MassDOT	\$ 3,644
TOTAL	\$18,219

Estimated Staff Effort
4 weeks
2 weeks
6 weeks

Montachusett Regional Planning Commission			
FFY 2022 Program Year Staffing Report			
Staff	Title	Expected Time on PL/FTA Contract	Estimated Time on Transit Tasks
Bradford Harris	Transportation Project Director	100%	-
George Kahale	Transit Project Director	100%	95%
George Snow	Principal Transportation Planner	100%	-
Sheri Bean	Principal Planner	100%	2%
Brian Doherty	Principal Planner	100%	2%
Jason Stanton	GIS Project Director	65%	15%
Kayla Kress	GIS Analyst	65%	15%
	Transportation Intern(s)	100%	-

Please note that staff will be devoting some of their time to Transit related planning efforts as outlined within this UPWP.

UPWP BUDGET				
MONTACHUSETT REGIONAL PLANNING COMMISSION				
October 1, 2021 to September 30, 2022				
UPWP Annual Budget				
Task No.	Task Description	PL/FTA	MassDOT	Total Budget
1.0 Management and Support				
1.1	Support of 3C Process	\$63,200.00	\$15,800.00	\$79,000.00
1.2	Unified Planning Work Program	\$14,000.00	\$3,500.00	\$17,500.00
1.3	Public Information & Participation Program	\$28,000.00	\$7,000.00	\$35,000.00
1.4	Development of TIP	\$47,600.00	\$11,900.00	\$59,500.00
1.5	Environmental Justice/Title VI	\$39,000.00	\$9,750.00	\$48,750.00
	<i>Subtotal:</i>	<i>\$191,800.00</i>	<i>\$47,950.00</i>	<i>\$239,750.00</i>
2.0 Highway Surveillance				
2.1	Regional Demographics & Model	\$20,000.00	\$5,000.00	\$25,000.00
2.2	GIS Mapping and Analysis	\$62,800.00	\$15,700.00	\$78,500.00
2.3	Data Collection & Analysis Program	\$48,000.00	\$12,000.00	\$60,000.00
2.4	Pavement Management Systems	\$17,600.00	\$4,400.00	\$22,000.00
2.5	Performance Measures	\$18,400.00	\$4,600.00	\$23,000.00
2.6	Regional Transportation Plan Update	\$17,800.00	\$4,450.00	\$22,250.00
	<i>Subtotal:</i>	<i>\$184,600.00</i>	<i>\$46,150.00</i>	<i>\$230,750.00</i>
3.0 Transportation Plan				
3.1	Mobility & Access Planning	\$37,400.00	\$9,350.00	\$46,750.00
3.2	Corridor Profiles	\$52,000.00	\$13,000.00	\$65,000.00
3.3	Climate Change & Resiliency Program	\$26,600.00	\$6,650.00	\$33,250.00
3.4	Community Trail Planning	\$32,000.00	\$8,000.00	\$40,000.00
3.5	Intersection Analysis	\$36,608.00	\$9,152.00	\$45,760.00
	<i>Subtotal:</i>	<i>\$184,608.00</i>	<i>\$46,152.00</i>	<i>\$230,760.00</i>
4.0 Multimodal Planning Activities				
4.1	Transportation Equity & Public Involvement	\$4,000.00	\$1,000.00	\$5,000.00
4.2	Short Range Transportation Planning	\$8,400.00	\$2,100.00	\$10,500.00
4.3	Technical Assistance to MART	\$10,400.00	\$2,600.00	\$13,000.00
4.4	Bus Stop ADA Accessibility Evaluation	\$14,575.00	\$3,644.00	\$18,219.00
	<i>Subtotal:</i>	<i>\$37,375.00</i>	<i>\$9,344.00</i>	<i>\$46,719.00</i>
TOTAL		\$598,383.00	\$149,596.00	\$747,979.00

SUMMARY OF FUNDING BY SOURCE AND ELEMENT									
PROGRAM YEAR FFY 2022									
ELEMENT		PL/FTA			MassDOT			TOTAL	
1		\$191,800			\$47,950			\$239,750	
2		\$184,600			\$46,150			\$230,750	
3		\$184,608			\$46,152			\$230,760	
4		\$37,375			\$9,344			\$46,719	
TOTAL		\$598,383			\$149,596			\$747,979	

SUMMARY OF FUNDING BY SOURCE AND GRANTEE			
PROGRAM YEAR FFY 2022			
GRANTEE			TOTAL
MRPC			\$598,383
MassDOT			\$149,596
TOTAL			\$747,979

MRPC FEDERAL FISCAL YEAR "PL" ALLOCATIONS					
FY		ANNUAL ALLOCATION		CUMULATIVE	
1974-2004		\$1,434,456		\$5,875,735	
2005		\$506,127		\$6,381,862	
2006		\$496,737		\$6,878,599	
2007		\$508,486		\$7,387,085	
2008		\$546,217		\$7,933,302	
2009		\$567,231		\$8,500,533	
2010		\$582,543		\$9,083,076	
2011		\$563,751		\$9,646,827	
2012		\$563,751		\$10,210,578	
2013		\$555,297		\$10,765,875	
2014		\$570,098		\$11,335,973	
2015		\$544,557		\$11,880,530	
2016		\$585,751		\$12,466,281	
2017		\$621,347		\$13,087,628	
2018		\$647,248		\$13,734,876	
2019		\$661,145		\$14,396,021	
2020		\$676,534		\$15,072,555	
2021		\$671,457		\$15,744,012	
2022		\$667,260		\$16,411,272	*

MRPC "PL" EXPENDITURES					
CONTRACT #		AMOUNT		SPENT	CUMULATIVE
18281-88006-24717		\$1,442,781.61		\$1,396,386.79	\$1,396,386.79
6047		\$165,000.00		\$165,000.00	\$1,561,386.79
94022		\$772,599.00		\$678,525.78	\$2,239,912.57
96506		\$1,278,009.00		\$930,861.89	\$3,170,774.46
30049		\$1,427,409.00		\$1,427,134.28	\$4,597,908.74
4034020		\$1,941,815.00		\$1,528,445.40	\$6,126,354.14
52453		\$2,354,263.00		\$2,081,355.65	\$8,207,709.79
69656		\$2,429,837.00		\$2,205,964.00	\$10,413,673.79
88872		\$2,423,436.64		\$2,410,117.51	\$12,823,791.30
108057		\$676,534.00		\$676,502.06	\$13,500,293.36
112305		\$671,457.00		\$261,461.93	\$13,761,755.29
				Cumulative PL Allocation	\$16,411,272.00
				- Cumulative Amount Spent	\$13,761,755.29
				- Overhead rate adj. from Contract #22725	\$4,287.57
					\$2,645,229.14
				Approved Addn'l Funds from PL Balance 9/12/2005	\$25,000.00
				Estimated remaining bank balance	\$2,620,229.14
*Estimated Expenditure Through February 28, 2021					

2022
Unified Planning Work Program Funding

	FFY 22 (PL)	FFY 21 (PL)	Δ
apportionment	\$ 9,837,301	\$ 9,699,164	
obligation authority	91.0%	91.0%	
federal PL funds only	\$ 8,951,944	\$ 9,009,258	-0.6%
matching funds added	\$ 11,189,930	\$ 11,260,322	

FFY 21 (Actual)
\$ 9,634,967.00

The recommended PL Allocation Formula was developed by the Massachusetts Association of Regional Planning Agencies and recommended by MassDOT to FHWA. It is based upon the following three factors: 40% of available funds divided equally among the ten MPOs, 30% is allocated based on each MPO's relative share of Massachusetts population, and 30% is allocated based on each MPO's relative share of urbanized population. These factors result in the percentages shown.

PL funds are provided to the MPOs from the previous year's federal-aid ("forward funded")

	40% of total funds / ten MPOs	30% of funding for relative size of population	30% of funding for relative size of urbanized population	\$5003 Full Amount w/ Match (FFY 21)	\$5003 Full Amount w/ Match (FFY 22)	Total FFY 21 funding by MPO	Total FFY 22 funding by MPO	Δ	Contract #	PARS #
MPOs PL funded	\$ 4,475,972	\$ 3,356,979	\$ 3,356,979	\$ 3,356,979	\$ 3,356,979	\$ 11,189,930	\$ 11,189,930			
Berkshire**	\$ 447,597	131,219	2.03%	\$ 50,081	\$ 50,321	\$ 698,859	\$ 695,143	\$ (3,716)		
Boston	\$ 447,597	3,087,975	47.88%	\$ 1,706,786	\$ 2,106,937	\$ 5,892,268	\$ 5,723,971	\$ (168,297)		
CTPS*	\$ 362,594			\$ 1,362,496	\$ 1,737,877	\$ -	\$ 4,675,962	\$ -		
MAPO	\$ 85,043			\$ 324,289	\$ 369,120	\$ 333,072	\$ 1,047,968	\$ -		
Cape Cod	\$ 447,597	215,888	3.35%	\$ 112,339	\$ 107,940	\$ 784,274	\$ 763,338	\$ (20,936)		
Central Mass	\$ 447,597	556,688	8.63%	\$ 289,760	\$ 247,200	\$ 1,251,817	\$ 1,202,452	\$ (49,365)		
Merrimack Valley	\$ 447,597	333,748	5.17%	\$ 173,715	\$ 167,468	\$ 972,242	\$ 941,381	\$ (30,861)		
Montachusett	\$ 447,597	236,475	3.67%	\$ 123,065	\$ 96,576	\$ 770,478	\$ 747,979	\$ (22,499)		
Northern Middlesex	\$ 447,597	286,901	4.45%	\$ 149,331	\$ 153,668	\$ 911,834	\$ 884,890	\$ (26,944)		
Old Colony	\$ 447,597	362,406	5.62%	\$ 188,632	\$ 158,953	\$ 992,465	\$ 959,201	\$ (33,264)		
Pioneer Valley	\$ 447,597	621,570	9.64%	\$ 303,506	\$ 302,914	\$ 1,403,484	\$ 1,348,622	\$ (54,862)		
Southeastern Mass	\$ 447,597	616,670	9.56%	\$ 300,976	\$ 299,621	\$ 1,416,346	\$ 1,351,900	\$ (64,446)		
	\$ 4,475,972	6,449,550	100.00%	\$ 3,356,979	\$ 3,763,742	\$ 15,024,067	\$ 14,546,876	\$ (477,191)		

	SPR the year before (federal only)	FFY 21 total funding by RPA	FFY 22 total funding by RPA	Δ
RPA's SPR funded				
Franklin**	-0.6%	\$ 452,059	\$ 565,124	\$ (1,565)
Martha's Vineyard**	-0.6%	\$ 259,268	\$ 324,085	\$ (2,039)
Nantucket**	-0.6%	\$ 220,540	\$ 275,675	\$ (1,734)

The SPR funding provided to the RPAs not officially recognized as MPOs is adjusted year-to-year based on the change in funding experienced by the MPOs for their PL funds.
*CTPS 5303 includes MassDOT 5303

APPENDIX A – MRPC FUNDING SOURCES AND PLANNING ACTIVITIES

Other planning activities currently taking place involving the Montachusett Regional Planning Commission include the following:

- MRPC received a Planning Assistance Grant Award from the Federal Economic Development Administration (EDA) for the year April 1, 2021 through March 31, 2022 enabling the MRPC to implement regional economic development strategies, provide economic development technical assistance to municipalities and implement the Montachusett Region Comprehensive Economic Development Strategy.
- MRPC staff put together grant applications to fund the Implementation Plan of the Town of Hubbardston's Master Plan, three Master Plan Chapters for the Town of Sterling, and downtown zoning for the Town of Athol. Grants were due to the state Executive Office of Energy & Environmental Affairs on Friday, May 15, 2020. All three grant applications were funded and work has commenced.
- MRPC put together and submitted a \$400,000 grant application to EDA for the following:
 1. Short-term and long-term economic development planning and coordination to update the Montachusett Comprehensive Economic Development Strategy (CEDS) focused on pandemic recovery and resiliency.
 2. Funding for MRPC to hire a regional Disaster Economic Recovery Coordinator (DERC) for a two-year period to serve the communities and local governments and work with business leaders across the geographic region to stimulate economic growth within the business community.
 3. Enhance MRPC capacity support for coronavirus response, including technology costs and personnel costs for MRPC staff members directly working on or supporting the work of the coronavirus-related economic development response.

On July 21, 2020 MRPC was awarded this two-year duration grant for \$400,000 from EDA. MRPC has hired Economic Development Manager to work on this grant.

- On October 1, 2019, the federal Environmental Protection Agency (EPA) selected the Montachusett Regional Planning Commission (MRPC) for a \$300,000 Community-wide Brownfields Assessment grant for hazardous substances contaminated sites. This three - year grant started on October 1, 2019 and all funds have been utilized or allocated to projects. MRPC intends to seek additional grant funds in fall 2021.
- Ayer ADA Self – Evaluation and Transition Plan. The MRPC has a contract with the Town of Ayer for \$30,000 to complete this plan. The Town is utilizing an ADA Planning Grant Award from the MA Office on Disability to the Town of Ayer and has used DLTA 2020 Grant for matching funds. Moreover, MRPC is contributing to the project in terms of Public Rights of Way (PROW) where MRPC's Unified Planning Work Program (UPWP) (Transportation Department) funds are being used to complete this component.
- MRPC continues to assist the Towns of Royalston, Ashby, Templeton, Lunenburg, and Hubbardston with their Green Communities Grant Awards. Tasks associated with managing the grant awards include reporting, procurement, and data management, as well as project initiation and management. Royalston is looking to complete their Designation Grant projects and submit a competitive grant application this year. Ashby and Lunenburg are looking to close out their existing competitive grant awards and apply for new grant funds. Staff will complete Final Reports for these communities and assist with competitive grant applications. Templeton and Hubbardston are working on projects from their designation grant award.

MRPC prepared and submitted Annual Reports for the towns of Ashby, Athol, Fitchburg, Harvard, Lancaster, Shirley, and Westminster that were due November 6th. John Hume did the same for the Annual Report for Townsend. Questions from reviewers on the Annual Reports are beginning to come in and these will be addressed with the communities.

MRPC submitted a Green Communities Designation application to DOER on December 23rd on behalf of the Town of Clinton. Questions will come back from the application reviewers, which Karen will address. Then we wait for word from the state on designation.

- A grant in the amount of \$104,039 has been received from the MA Department of Energy Resources (DOER). The DOER's Energy Efficiency Division is funding regional planning agencies (RPAs) to develop programs and provide clean energy training to municipal or community organizations that support low-income populations. This funding will allow RPAs to increase knowledge of the Commonwealth's low-income residential clean energy programs, expanding the reach of existing successful programs. The contract began October 9, 2019 and ends September 30, 2021. MRPC is scheduling outreach meetings and training in all our communities as soon as we can under COVID-19 restrictions.
- MRPC was awarded a \$75,000 grant to help all the non-Age Friendly communities in the Montachusett Region become certified as Age Friendly. MRPC received the executed contract on July 24, 2020. MRPC staff are currently finalizing a virtual public forum for all non-Age Friendly communities and several other participating organizations, including Fitchburg State University, to review the Age Friendly process, answer questions, and establish working groups with each participating community. Comprehensive assessment and community engagement plans to serve as benchmark indicators are in the process of being submitted and evaluated by the grant manager.
- The Montachusett Enterprise Center (MEC) was awarded \$48,000 by Mass DOT and MRPC is contracted to do the work. The executed contract was received July 23, 2020 with an end date of June 30, 2021. Seniors and disabled residents within the Montachusett Region have expressed persistent gaps in transportation access for many needs – primarily medical, employment, education, and other health/social services. MRPC staff have been working to identify the resources and partners needed to create a Transportation Connections program to help address these gaps. The Town of Ayer, serving as a regional hub, and MRPC, in conjunction with several community partners aim to create an implementable plan for two strategies. These two strategies are a dedicated shuttle service with a focus of addressing routine transit and local employment needs, and a volunteer driver service to help close the transportation gap for medical/health/social service needs.
- The Montachusett Enterprise Center (MEC) was awarded \$24,000 by MassDOT to create a plan for a volunteer driver initiative in the Town of Winchendon and MRPC is conducting the work. The executed contract was received July 23, 2020 with an end date of June 30, 2021. The Town of Winchendon is a recognized food desert, and residents and community leaders have expressed persistent gaps in transportation access for many needs – primarily food security and medical, along with other health/social services. To address this transportation gap for residents in Winchendon, especially those most vulnerable to being without transit options, MRPC staff members have met with community stake holders on several occasions and have conducted research into comparable volunteer driver programs in other communities, as well as broader regional initiatives.
- MRPC recently signed a contract with Heywood Hospital and Health Alliance. Heywood Healthcare and Health Alliance require assistance from the MRPC to conduct and complete a 2021 Community Health Assessment. Professional services are expected by MRPC to achieve the timely completion of the relevant tasks, by September 30, 2021. The report will consist of a broad scope of data from multiple sources including but not limited to primary and secondary data sources, input from stakeholder interviews,

community member focus groups, and a survey to provide a status of health in the service area. MRPC updated the 2018 Community Health Assessment and this will provide staff with a model.

- MRPC has a signed contract with the Town of Sterling to work on its Complete Streets Program. The MassDOT Complete Streets Funding Program provides technical assistance and construction funding to eligible municipalities. Eligible municipalities must pass a Complete Streets Policy, which Sterling has done, and develop a Prioritization Plan. MRPC has a contract with the Town of Sterling to conduct and complete a Sterling Complete Streets Tier 2 Prioritization Plan. MRPC staff has been compiling existing data and studies and has procured an engineering firm to assist with Project Identification and the Prioritization Plan itself.

SUMMARY OF OTHER MRPC FUNDING SOURCES

Agency	Program	Funding Total
Federal: Department of Commerce Economic Development Administration	Section 203 Area Planning Assistance Grant 4/1/21 - 3/31/22	\$ 70,000
Federal: Environmental Protection Agency	Brownfields 7/1/19 - 9/30/22	\$ 300,000
Federal: Department of Commerce Economic Development Administration	EDA COVID Section 209 & 703 Public Works 7/1/20 - 6/30/22	\$ 400,000
State: Massachusetts Dept of Housing & Community Development DHCD	Shirley CDBG CV 10/13/20 - 12/31/21	\$ 38,622
State: Department of Energy Resources	Affordable Access Regional Coordination AARC 10/1/19 - 9/30/21	\$ 104,039
State: Massachusetts Dept of Housing & Community Development DHCD	District Local Technical Assistance 1/1/21 - 12/31/21	\$ 207,475
State: Executive Office of Energy & Environmental Affairs (EOEEA)	Planning Assistant Grant Sterling, Hubbardston, Athol 11/1/20 - 6/30/22	\$ 98,000
Regional: Montachusett Regional Transit Authority (MART)	Transit Planning Technical Assistance 7/1/21 - 6/30/22	\$ 102,000
Regional: Department of Public Health	Montachusett Age Friendly Project 7/1/20 - 6/30/22	\$ 75,000
Local: Town of Sterling	Sterling Complete Streets 9/30/20 - 8/31/21	\$ 39,839
Local: Town of Hubbardston	Hubbardston Green Community 10/01/20 - 12/31/21	\$ 5,000
Local: Town of Templeton	Templeton Green Community 2/10/21 - 3/31/22	\$ 7,000
Local: Town of Clinton	Health Alliance Clinton Hospital 2/18/21 - 9/30/21	\$ 33,950
Local Communities: All	Local Technical Assistance 7/1/21 - 6/30/22	\$ 83,319
Local Communities: Some	GIS 7/1/21 - 6/30/22	\$ 8,000

APPENDIX B – GLOSSARY/ ACRONYMS

Acronyms and Abbreviations

3C	Continuing, Cooperative and Comprehensive Transportation Planning
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ABP	Accelerated Bridge Program
ADA	Americans with Disabilities Act (1990)
ADT	Average Daily Traffic
AMPO	Association of Metropolitan Planning Organizations
ANR	Approval Not Required Plans
APA	American Planning Association
APTA	American Public Transportation Association
ATR	Automatic Traffic Recorder
AVL	Automatic Vehicle
BMP	Best Management Practice
BMS	Bridge Management System
CAAA	Clean Air Act Amendments of 1990
CDBG	Community Development Block Grant
CEDS	Comprehensive Economic Development Strategy
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
CHNA 9	Community Health Network Area 9
CMAQ	Congestion Mitigation and Air Quality
CMS	Congestion Management System
CRFCs	Critical Rural Freight Corridors
CSS	Context Sensitive Solutions
CUFCs	Critical Urban Freight Corridors
DEP	Department of Environmental Protection
DHV	Design Hour Volume
DLTA	District Local Technical Assistance
DRS	Demand Responsive Service
EDA	Economic Development Administration
EIR	Environmental Impact Report
EIS	Environmental Impact Study/Statement
EJ	Environmental Justice
ENF	Environmental Notification Form
EOEEA	Executive Office of Energy and Environmental Affairs
EPA	Environmental Protection Agency
EPDO	Equivalent Property Damage Only
FAST Act	Fixing America's Surface Transportation Act (2015-2020)
FASTLANE	Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies Grants Program
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year (begins October 1 st to September 30 th)
FHWA	Federal Highway Administration

FO	Functionally Obsolete
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal Year (July 1 st to June 30 th)
GANs	Grant Anticipation Notes
GIS	Geographic Information System
GPS	Global Positioning System
GVW	Gross Vehicle Weight
HAZMAT	Hazardous Material
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HPP	High Priority Project
HSIP	Highway Safety Improvement Program
HTF	Highway Trust Fund
I/M	Inspection and Maintenance
IM	Interstate Maintenance
ISTEA	Intermodal Surface Transportation Efficiency Act (1991-1997)
ITC	Intermodal Transportation Center
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System
JARC	Job Access Reverse Commute
LOS	Level of Service
LRT	Light Rail Transit
L RTP	Long-Range Transportation Plans
MAP	Mobility Assistance Program
MAP-21	Moving Ahead for Progress in the 21 st Century (2012-2015)
MARPA	Massachusetts Association of Regional Planning Agencies
MART	Montachusett Regional Transit Authority
MARTA	Massachusetts Association of Regional Transit Authorities
MBTA	Massachusetts Bay Transportation Authority
MassDOT	Massachusetts Department of Transportation
MEMA	Massachusetts Emergency Management Agency
MIS	Major Investment Study
MJTC	Montachusett Joint Transportation Committee
MMPO	Montachusett Metropolitan Planning Organization
MOE	Measures of Effectiveness
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MRPC	Montachusett Regional Planning Commission
MRTC	Montachusett Regional Trail Coalition
MSA	Metropolitan Statistical Area
MUTCD	Manual on Uniform Traffic Control Devices
NAAQS	National Ambient Air Quality Standards

NARC	National Association of Regional Councils
NEPA	National Environmental Policy Act
NFA	Non-Federal Aid
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NSBP	National Scenic Byways Program
NTP	Notice to Proceed
NTS	National Transportation System
OA	Obligational Authority
OTP	Office of Transportation Planning
PHF	Peak Hour Factor
PHFS	Primary Highway Freight System
PL	Planning Funds
PMS	Pavement Management System
PMT	Personal Miles Traveled
PMUG	Pavement Management User's Group
PPP	Public Participation Program
PRC	Project Review Committee
PS&E	Plans, Specifications & Estimates
PWED	Public Works/Economic Development
RABA	Revenue Aligned Budget Authority
RFP	Request for Proposals
RFQ	Request for Quotes
RFR	Request for Referrals
ROW	Right of Way
RPAs	Regional Planning Agencies
RPOs	Rural Planning Organizations
RRF	Request a Release of Funds
RTA	Regional Transit Authority
RTP	Regional Transportation Plan
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005-2009)
SEIR	Supplemental Environmental Impact Report
SIP	State Implementation Plan
SPR	State Planning and Research Funds
SOV	Single Occupant Vehicle
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TCM	Transportation Control Measure
TCSP	Transportation and Community System Preservation
TDM	Travel Demand Management
TDP	Transit Development Plan
TE	Transportation Enhancement
TEA-21	Transportation Equity Act for the 21 st Century (1998-2003)
TIGER	Transportation Investment Generating Economic Recovery

TIGGER	Transit Investment in Greenhouse Gas and Energy Reduction
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMC	Turning Movement Count
TOD	Transit Oriented Development
TSM	Travel/Transportation System Management
UPWP	Unified Planning Work Program
UZA	Urbanized Areas
V/C	Volume to Capacity Ratio
VMS	Variable Message Sign
VMТ	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VPН	Vehicles Per Hour

APPENDIX C – COMMENTS AND RESPONSES

FFY2022 UPWP Comments	
Action	
Comment 1	MassDOT OTP
	Page xv - updating funding column for FFY 2022 task review
	Page xiv - explain EJ categories & update table
	Page xvii - change ten percent to twenty five percent and add a funding scenerio provided
	Page 50 & 52- Please combine the headings on the table below to reflect that there is only one contract that is administered by FHWA.
	Task 1.1 - under previous work it should say 2021 instead of 2020
	Task 1.3 - shorten task title, reference virtual public participation techniques as part of the PPP, restructure a few sentences
	Task 2.1 - include any COVID related impacts that may have occurred
	Task 2.3 - mentioned that MassDOT is working on a bicycle/pedestrian counter purchasing program to consider
	Task 2.4 - more detail on the RPA/State Pavement Management Group
	Task 2.5 - provide link to the PM Dashboard
	Task 2.6 - reach out to MassDOT's Office of Diversity & Civil Rights to assist with implementation of a number of best practices for public outreach. These should be used for any task that involves public outreach. Also describe whether and to what extent virtual public involvement will be part of this process
	Task 3.1 - reference the new Safe Routes to School Dashboard, which might be useful. Conveyal and the Accessibility Observatory data would assist with the identifying gaps in the networks.
	Task 3.3 - the CCC's website that could be used to potentially inform the format of the mapping of vulnerable assets.
	Task 3.5 - explain how the intersections identified would be beneficial to study
	Task 4.1 - overlap between this task and 1.4 & 1.5. Explain how they are different
	Task 4.2 - description is broad. Refined to specifically reference that this task will involve transit planning.
Response 1	Additions and updates have been made to the narrative.

Comment 2	FHWA
	Ensure the document is 508-compliant. All unreadable graphics should have alternative text included
	Page viii- please make clear if others outside MRPC staff will be responsible for any of these tasks
	Page x - Under “Prior Year UPWP Task Results”: If you're going to include this snapshot summary, please include all UPWP tasks, including Tasks 1.1-1.5; 4.1-4.3. Or some statement as to why they are being excluded here. This is likely not clear to the public. For Task 2.5 Performance Measures, you can also include updates to PM3 and adoption of PTASP targets.
	Page xvii - You state the UPWP will continue to reflect both PL and 5303 funding separately, but it seems each task combines PL and 5303 funds (which is preferable, given consolidated planning grant). Please clarify.
	Page xxv-xxvii - Under PM2 and PM3 Measures: Update narrative and tables with 2020 mid-performance review actions and current data
	Under Task 1.1: missing MOU update here.
	Under Task 1.3: - would be helpful to highlight what virtual public involvement (VPI) methods you have used to date this past year. Since VPI is a key part of the PPP update, would highlight that here and above, perhaps under innovative techniques/processes. Would also make more clear that the PPP update will be a product this year. PPP review/update should have a more specific estimate/goal of completion in the schedule.
	Under Task 1.4: Please include the date that the annual Title VI report is due to MassDOT.
	Under Task 2.4: Please provide estimated completion dates for products above, where applicable (e.g., annual mailing, year-end report, etc.). Like Task 2.3, could be helpful if you organize products under the applicable category (data collection or data analysis).
	Under Task 2.5: Provide updated work on this based on 2020 mid-performance review; There is also the public transportation agency safety plan final rule from 2018. Please include that here as well; Under Schedule: Present/Adopt PM2, PM3, and TAM is this a carry-over from last year. FY22 would likely only be PM1 updates. Please confirm.
	Task 3.1: Under Schedule: It would be helpful if these items more clearly reflect your methodology and anticipated products
	Task 3.2: This corridor study is the same description used in FY21
	Task 3.4: Sterling and Winchendon are called-out here for targeted assistance, but the final product seems to be a regional report. Can you clarify?
	Task 3.5: Clarify which intersections were completed in FY21; Suggest changing “Multimodal Planning Activities” to “Transit Planning Activities” (or something similar) to better reflect what this group of tasks is targeting.

	Task 4.1 - It seems like this task could either be combined with 1.3 or 1.5 OR be reframed to focus on transit and better explain the difference to the related tasks above.
	Task 4.4- This is another task that is the same as FY21, with no difference in previous work reported. Noted that this is a multi-year task, but it is confusing as to where you are in the process. For example, a final report is scheduled for 9/2021 (according to your FY21 UPWP). Is that delayed? If so, please clarify. This section could also benefit from a short summary of work/findings to date. Recommend combining with CPG unless there is a good reason to split PL and 5303.
	Under “other planning activities...” - Two MEC awards included with different award amounts. Please clarify.
Response 2	Updates and changes were made throughout the document.