

CHAPTER 1

Coordinating Comprehensive Transportation Planning in the Region: What is the Unified Planning Work Program?

The Boston Region Metropolitan Planning Organization (MPO) plans for the transportation future of the Boston region (Figure 1-1). The MPO is guided by a 25-year vision for a modern, safe, equitable, sustainable, and technologically advanced transportation system for the region, which is described in the MPO's Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*. An integral part of achieving this regional vision is the transportation planning work funded through the Unified Planning Work Program (UPWP).

The UPWP is a financial plan that the MPO produces annually in compliance with the federally mandated metropolitan planning process. This process requires transportation decision-making in urbanized areas based on a continuing, comprehensive, and cooperative planning process (the 3C process) that involves coordination of state and local governments as well as the public.

The UPWP documents the federal funding that will be spent on surface transportation studies and programs in the Boston region during a given federal fiscal year (FFY). This plan also serves as the basis for financing the ongoing work of the staff to the Boston Region MPO.

This chapter explains the UPWP, its connection to the overall regional vision developed in the LRTP, and how the planning work of the MPO is funded.

certified as an MPO by the federal government, and to be eligible to receive and distribute federal transportation dollars. Work in this category includes preparing federally required financial plans, including the LRTP and the Transportation Improvement Program (TIP). The LRTP allocates funding for regionally significant transportation construction projects and programs over a 25-year period, while the TIP allocates funding for projects to be implemented in the near-term, during the next five years. Air quality conformity and environmental justice-related compliance associated with the LRTP and TIP are also included in this category. Other administrative work funded through the UPWP includes managing data and computer resources as well as maintaining the MPO's regional travel demand model, which is used to forecast the potential impacts and changes that the transportation system will have on traffic congestion and transit ridership. See Chapters 5 and 8 for more detail on these areas of work.

2. **Ongoing/continuing work programs:** These are areas of work that support technical analyses and planning studies for cities and towns in the region. Examples of these ongoing/continuing programs include Bicycle and Pedestrian Support Activities, Regional Transit Service Planning Technical Support, and Community Transportation Technical Assistance. See Chapter 6 for more detail on these studies and technical analyses.
3. **New studies:** Every year, a certain amount of funding is available for new studies to be undertaken by MPO staff. These efforts are conducted to enhance knowledge of the practice, augment analytical methods, and evaluate strategies. Examples of these studies in the FFY 2018 UPWP include Transportation Mitigation of Major Developments: Review of Strategies; Potential Impacts of Connected and Autonomous Vehicles; and Review of and Guide to Regional Transit Signal Priority. See Chapter 6 for more detail on these new studies.
4. **Agency Studies and Technical Analyses:** CTPS conducts planning analyses and studies funded by state transportation agencies, including the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport). These agency-funded studies are described in more detail in Chapter 7.

1.2 HOW ARE FUNDING DECISIONS MADE?

The MPO's UPWP Committee works with the MPO staff to develop the UPWP for the upcoming FFY. Numerous sources of guidance are considered when compiling the UPWP and making decisions about the new and ongoing work that will be carried out. The amount of available funding plays an important role in determining what work will be done in a given FFY.

1.2.1 The Guiding Vision of the LRTP

The chief framework that directs decisions about what to fund through the UPWP incorporates the goals and objectives of the LRTP, which guide the MPO in its overall decision-making. As described in more detail in Section 1.2.2, each new proposed study is evaluated based on how it helps the region achieve the goals and objective outlined in the LRTP.

Figure 1-2 shows the goals and objectives in the MPO’s most recent LRTP, *Charting Progress to 2040*, endorsed by the MPO in July 2015.

Figure 1-2: LRTP Goals and Objectives

Central Vision Statement

The Boston Region Metropolitan Planning Organization envisions a modern transportation system that is safe, uses new technologies, provides equitable access, excellent mobility, and varied transportation options—in support of a sustainable, healthy, livable, and economically vibrant region.

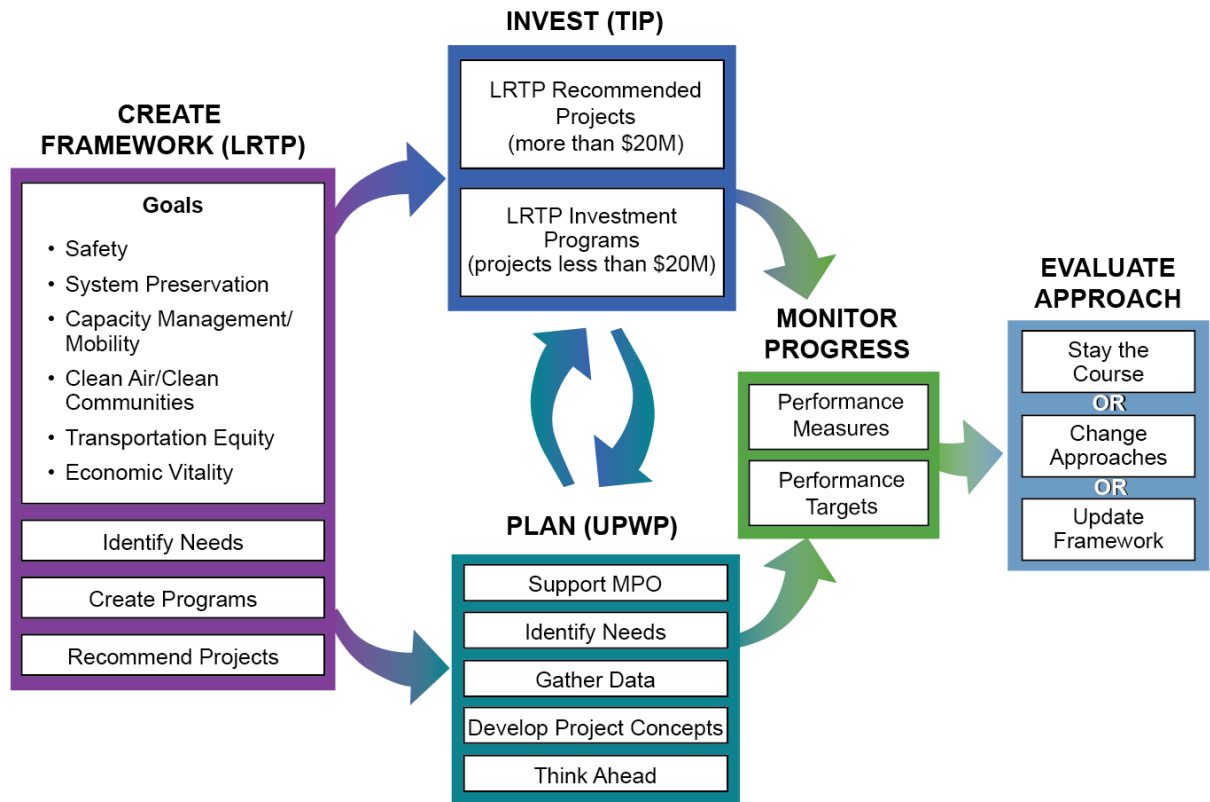
GOALS	OBJECTIVES
SAFETY	
Transportation by all modes will be safe	<ul style="list-style-type: none"> • Reduce number and severity of crashes, all modes • Reduce serious injuries and fatalities from transportation • Protect transportation customers and employees from safety and security threats <p>(Note: The MPO action will be to incorporate security investments into capital planning.)</p>
SYSTEM PRESERVATION	
Maintain the transportation system	<ul style="list-style-type: none"> • Improve condition of on- and off-system bridges • Improve pavement conditions on MassDOT-monitored roadway system

	<ul style="list-style-type: none"> • Maintain and modernize capital assets, including transit assets, throughout the system • Prioritize projects that support planned response capability to existing or future extreme conditions (sea level rise, flooding, and other natural and security-related man-made hazards) • Protect freight network elements, such as port facilities, that are vulnerable to climate-change impacts
CLEAN AIR/CLEAN COMMUNITIES	
Create an environmentally friendly transportation system	<ul style="list-style-type: none"> • Reduce greenhouse gases generated in the Boston region by all transportation modes as outlined in the Global Warming Solutions Act • Reduce other transportation-related pollutants • Minimize negative environmental impacts of the transportation system • Support land use policies consistent with smart and healthy growth
CAPACITY MANAGEMENT/MOBILITY	
Use existing facility capacity more efficiently and increase healthy transportation capacity	<ul style="list-style-type: none"> • Improve reliability of transit • Implement roadway management and operations strategies, constructing improvements to the bicycle and pedestrian network, and supporting community-based transportation • Create connected network of bicycle and accessible sidewalk facilities (at both regional and neighborhood scale) by expanding existing facilities and closing gaps • Increase automobile and bicycle parking capacity and usage at transit stations • Increase percentage of population and places of employment within one-quarter mile of transit stations and stops • Increase percentage of population and places of employment with access to bicycle facilities

	<ul style="list-style-type: none"> • Improve access to and accessibility of transit and active modes • Support community-based and private-initiative services and programs to meet last mile, reverse commute and other non-traditional transit/transportation needs, including those of the elderly and persons with disabilities • Eliminate bottlenecks on the freight network • Enhance intermodal connections • Emphasize capacity management through low-cost investments; give priority to projects that focus on lower-cost O&M-type improvements such as intersection improvements and Complete Streets solutions
TRANSPORTATION EQUITY	
Provide comparable transportation access and service quality among communities, regardless of income level or minority population	<ul style="list-style-type: none"> • Target investments to areas that benefit a high percentage of low-income and minority populations • Minimize any burdens associated with MPO-funded projects in low-income and minority areas • Break down barriers to participation in MPO decision-making
ECONOMIC VITALITY	
Ensure that our transportation network provides a strong foundation for economic vitality	<ul style="list-style-type: none"> • Respond to the mobility needs of the 25–34-year-old workforce • Minimize the burden of housing and transportation costs for residents in the region • Prioritize transportation investments that serve targeted development sites • Prioritize transportation investments consistent with the compact-growth strategies of MetroFuture

Figure 1-3 depicts the relationship between the framework established in the LRTP, the planning foundation of the MPO (the UPWP), the near-term investment plan of the MPO (the TIP), and the feedback loop for monitoring progress towards the region’s goals as well as continuously evaluating our approach to achieving them.

Figure 1-3: Links between LRTP, TIP, and UPWP



1.2.2 The Process of Creating and Monitoring the UPWP

Each year, the UPWP Committee considers new studies for funding. The UPWP documents these new studies (as well as studies that are continuing from previous UPWPs), and it provides updates on the MPO’s ongoing programs that fulfill the federally required 3C transportation-planning process.

The UPWP Committee met with the MPO staff five times in FFY 2017 to consider and provide guidance on the UPWP development process, including proposed budgets for ongoing and continuing activities, new study ideas, and the prioritization of these ideas. These meetings resulted in the Committee’s recommendation for the Draft FFY 2018 UPWP. The MPO approved the UPWP Committee’s recommendations for public review of Draft FFY 2018 UPWP on May 4, 2017.

Below are more details about the process for selecting studies and programs for the FFY 2018 UPWP.

Developing the New Federal Fiscal Year UPWP

To develop new planning studies for the FFY 2018 UPWP, the MPO drew from the following sources to generate a universe of proposed new studies for evaluation by MPO staff and the MPO's UPWP Committee.

1. Public outreach: Meetings were held to gain input from subregional planning groups. These groups, which are organized by an MPO member agency, MAPC, involve municipal representatives who are focused on regional planning topics (Figure 1-1). Two additional targeted TIP and UPWP public meetings were held in the region in December 2016 and January 2017.
2. Regional Transportation Advisory Council (Advisory Council): MPO staff met with the Advisory Council, an independent body that brings public viewpoints and advice on transportation planning to the MPO, to present preliminary drafts of the FFY 2018 Universe of New Studies and gain ideas and input on transportation planning priorities.
3. UPWP Committee: MPO staff met with the UPWP Committee of the MPO throughout development of the UPWP. The committee oversaw the entire document development process and contributed to the generation and analysis of new study ideas.
4. Existing planning documents: Various plans and programs developed and conducted by the MPO and other state agencies document transportation issues that require further study. These include the Congestion Management Process (CMP), which monitors the transportation network to identify locations and sources of congestion; the Program for Mass Transportation (PMT), the MBTA's long-range capital plan; the MPO's long-range planning documents, including the former LRTP, *Paths to a Sustainable Region*, and the LRTP Needs Assessment for the current LRTP, *Charting Progress to 2040*; MetroFuture, a long-range plan for smart growth developed by MAPC; and other recent studies.
5. Past guidance: The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issue guidance on addressing the planning emphasis areas.
6. FFY 2017 UPWP public comment letters and study proposals.
7. Consultations with MassDOT, the MBTA, and MAPC.
8. MPO staff-identified needs.

In an effort to increase public input into the Universe of New Studies, the MPO has new and additional public involvement planned in coming years, including using more social media, holding outreach meetings with advocacy groups,

conducting outreach at more convenient locations, and concentrating outreach on traditionally less-involved municipalities in the region.

Proposed planning studies are documented in the FFY 2018 UPWP Universe of Proposed New Studies (see Appendix C). Selected studies for FFY18 are summarized in Table 1-1 and described in detail in Chapter 6.

Evaluating and Selecting New Studies

Each new proposed study in the Universe of New Studies was evaluated based on the following criteria: how it helps the region accomplish the LRTP goals, the mode(s) it addresses, the scale of the study, the time frame and type of impact it is anticipated to result in, whether it furthers some body of existing work, and whether it has been funded in the past or is a completely new idea.

The evaluation process provides an important tool for the MPO and stakeholders to understand the amount of spending on studies across the following criteria:

- **Focus on LRTP goal areas:** whether a study addresses, either as a primary focus or a secondary focus, one of the six LRTP goal areas:
 - Safety
 - System Preservation
 - Clean Air/Clean Communities
 - Transportation Equity
 - Capacity Management/Mobility
 - Economic Vitality
- **Mode:** whether a study primarily addresses roadway, bicycle and pedestrian, or transit issues.
- **Study scale:** whether a study primarily impacts one or two specific communities in the region or the region as a whole.
- **Time frame and type of impact:** whether a study results in research and findings that enhance the state of transportation planning practice in the Boston Region, low-cost/short-term implementation of improvements, or long-term implementation (for transportation studies leading to construction projects that need to go through the MassDOT design process).
- **Connection to existing work:** whether a study furthers analysis or conclusions developed from a previous study.

- **Continuing or new study:** whether a study has been conducted previously at a specific location/roadway and is being conducted again at a new location, or whether a study is a completely new idea that has never been undertaken by the MPO.

In addition to the study evaluation process, MPO staff defined general scopes and estimated costs for proposed planning studies and considered potential study feasibility issues. These various factors, along with the availability of funds for new studies, were considered as staff identified a recommended set of new proposed planning studies for review by the UPWP Committee. The FFY 2018 Universe of Proposed Studies, along with the estimated costs of each study; the evaluation results of how each supports the LRTP goals; and any supporting comments about each study are documented in the FFY 2018 UPWP Universe of Proposed New Studies in Appendix C.

Table 1-1 shows the studies in the FFY 2018 Universe that were chosen for funding in FFY 2018. These are described in more detail in Chapter 6.

Updates to Ongoing and Continuing Activities

In addition to the process of selecting new discrete transportation planning studies, the MPO reviews activities for ongoing programs and work. MPO staff identifies and develops budgets for these continuing programs that will be carried out in the upcoming FFY. If there are changes to the budget of any program as a result of revisions to planned activities, these changes are proposed.

Examples of ongoing and continuing activities include work that is required of the MPO, including certification requirements (see Chapter 5), administration and resource management activities (see Chapter 8), and ongoing technical assistance to municipalities (see Chapter 6).

The annual study and program review and budget development process defines the amount of 3C funding (from federal grants that support the 3C process) that is available for new studies in the UPWP. After accounting for 3C-funded continuing and ongoing programs, the remaining funding is available for new studies.

**Table 1-1
FFY 2018 New Discrete Funded Studies**

Universe ID	Category	Project Name	Estimated Cost	Page Number
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A-3	Active transportation	Bicycle Level-of-Service Metric	\$55,000	
L-1	Land use, environment, and economy	Transportation Mitigation of Major Developments: Review of Strategies	\$50,000	
M-1	Multimodal mobility	Safety and Operations Analysis at Selected Intersections	\$70,000	
M-5	Multimodal Mobility	Potential Impacts of Connected and Autonomous Vehicles	\$50,000	
M-7	Multimodal mobility	Travel Alternatives to Regional Traffic Bottlenecks	\$70,000	
M-9	Multimodal mobility	Addressing Safety, Mobility, and Access on Subregional Priority Roadways	\$120,000	
M-10	Multimodal mobility	Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment	\$120,000	
T-3	Transit	Low-Cost Improvements to MBTA Rapid Transit Service	\$50,000	
T-13	Transit	First- and last-mile Shuttle Partnership Models	\$35,000	
T-14	Transit	Review of and Guide to Regional Transit Signal Priority	\$65,000	
O-1	Other technical support	MPO Staff-Generated Research Topics	\$20,000	
	Total		\$705,000	

Public Review of the Draft UPWP

Descriptive and financial information about ongoing and new UPWP studies, along with information about the UPWP development process and other major transportation-planning studies occurring in the region, are incorporated into the draft UPWP. Once the MPO votes to release the draft for public review, MPO staff posts the document for downloading from the MPO website (www.bostonmpo.org) and provides notice of its availability through various media and MPO communication outlets.

As noted above, public outreach forms a major part of the input into the UPWP each FFY. After the draft UPWP is approved by the MPO, there is a 30-day public comment period. During this time, MPO staff members solicit public input through the MPO website, social media outlets, open houses, and public meetings held in conjunction with MassDOT and the MBTA. All public comments received during this period are compiled and presented to the MPO. Information about the public review process for the Draft FFY 2018 UPWP is available in Appendix B.

Monitoring Progress of UPWP Studies

The following procedures for monitoring the studies in the FFY 2018 UPWP were approved by the MPO:

- Work programs supported by federal 3C planning funds must be approved by the MPO prior to expenditure.
- Work scopes supported by other funds (e.g., agency) for CTPS work must be approved by the MPO with the assurance that the new work will not impact the MPO-funded work by CTPS.
- Monthly progress reports on all active studies and work programs must be submitted to the respective funding agency (FHWA or FTA) by the agency conducting the work (CTPS and/or MAPC). The reports must include the following information for each study or work program:
 - Brief narrative describing the work accomplished
 - Key personnel attendance at meeting(s) held each week
 - Objectives and planned activities for the next month
 - Percent of work completed
 - Some measure of actual resources (e.g., hours, funds, etc.) charged to the contract over the past month
 - Comparison of actual cumulative resources expended compared to the contract budget

- CTPS presents a quarterly report comparing the UPWP study budgets with the actual spending.
- MPO approval for release of a 3C-funded study's work products is based on whether the objectives stated in the work program were met and whether the stated deliverables were produced.

Amendments and Administrative Modifications to the UPWP

If necessary, amendments and administrative modifications may be made to the UPWP throughout the year. All 3C documents (TIP, LRTP, UPWP, etc.) endorsed by MPOs must follow standardized procedures regarding amendments and/or administrative adjustments. If an amendment is under consideration, the Regional Transportation Advisory Council and other interested parties, including any affected communities, are notified. The MPO follows the procedures specified in the MPO's Public Participation Plan.

Below are general guidelines regarding the conditions that constitute an administrative adjustment or amendment to the UPWP.

**Table 1-2
UPWP Amendment and Administrative Adjustment Guidelines**

UPWP Administrative Adjustment	UPWP Amendment
Reallocation of budget funds	Addition or Removal of UPWP task(s)
Change in start/completion dates within the originally intended federal fiscal year(s)	Change in start/completion dates, outside of originally intended federal fiscal year(s)
Adjustment to project scope	Significant change in project scope, cost, and/or time allocation

All proposed administrative adjustments and 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 30-day public comment period prior to endorsement. Members of the public may attend and present comments at UPWP Committee meetings and MPO meetings, at which amendments and administrative modifications are discussed. Administrative modifications may be made by the MPO without a public review period, although this can be provided at the MPO's discretion.

When submitting the standard Budget Reallocation Request form to MassDOT's 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 change to a project scope, budget, and/or project schedule is considered significant when it alters the original intent of the project or intended deliverables of the project.

Other Regionally-Significant Transportation Planning Studies

To provide a comprehensive perspective of transportation planning in the Boston region, the UPWP also includes a list of other major transportation planning activities in the region. This list includes projects that are not funded with the MPO's planning funds, but which are being funded and implemented by individual transportation agencies, municipalities, or academic institutions. Often, these efforts also use the expertise and tools that CTPS is uniquely able to provide. These are described in Appendix A.

1.3 HOW IS THE WORK FUNDED?

The funding for the studies and programs included in this UPWP (presented in Chapters 5 through 8) comes from a variety of federal and state sources, as described below. The source of funds has important implications with regard to which agency or organization is responsible for programming them and for the MPO's vote to approve both the UPWP and the subsequent work programs for the studies. The chapters of this UPWP are organized based on funding source: MPO-funded (3C-funded) studies and agency/other client-funded studies.

- **FHWA 3C Planning (PL)/MassDOT Local Match:** These are FHWA planning funds distributed to MassDOT's OTP, according to an allocation formula established by federal legislation, to carry out the 3C planning process. OTP distributes these funds to Massachusetts MPOs according to a formula based on population. The FFY 2018 3C PL funding allocation for the Boston Region is \$3,694,506, which includes \$738,901 in state matching funds.
- **FTA 3C Planning (\$5303)/MassDOT Local Match:** FTA provides 3C planning funds for transit projects to MPOs under Section 5303 of the Federal Transit Act. These funds require a local match, are distributed according to an allocation formula, and are administered by MassDOT. The FFY 2018 FTA allocation for the Boston Region, including a total local match, is \$2,181,986. The total amount programmed in this UPWP for studies to be conducted by MPO staff, MassDOT, and MAPC on behalf of

the MPO is \$1,868,216. Of the total FTA 3C funds allocated to the region, MassDOT, MAPC, and the MPO receive a portion, as described below:

- **MPO FTA 3C Planning (§5303)/MassDOT Local Match:** The total amount of FTA funds, including a local match, programmed in this UPWP for work conducted by MPO staff is \$1,274,278.
- **MassDOT FTA 3C Planning (§5303)/MassDOT Local Match:** The total amount of FTA funds, including a local match, allocated to MassDOT for FFY 2018 is \$266,639. MassDOT uses these funds to issue a contract to the MPO for transit-planning assistance throughout the FFY (referred to as MassDOT Transit Planning Assistance).
- **MAPC FTA 3C Planning (§5303)/MassDOT Local Match:** A portion of the Boston Region FTA allocation also goes to MAPC. MAPC uses these funds to conduct their transit-planning studies programmed through the UPWP. The total amount of FTA funds, including a local match, allocated to MAPC for FFY 2018 is \$327,297.
- **FHWA Statewide Planning and Research (SPR)/MassDOT Local Match:** As in the case of 3C PL funds, FHWA provides State Planning and Research (SPR) funds to OTP according to a distribution formula. OTP uses these funds to carry out planning and research projects throughout the state. This UPWP describes only the SPR studies that will be conducted in the Boston Region MPO area; however, OTP provides a complete listing of how these funds are distributed statewide in a document called the SPR Transportation-Planning Work Program. SPR funds in the amount of (including in state matching funds) are programmed in this UPWP for studies to be conducted by MPO staff. The MPO's role in these studies is crucial to the 3C process because it provides an opportunity to coordinate studies with other related transportation work efforts that may be planned for the same area.
- **MassDOT:** Funds in the amount of for MassDOT studies are included in this UPWP.
- **MBTA:** The MBTA provides in funding for this UPWP for transit studies to be conducted by CTPS.
- **Massport:** This UPWP also includes in funding provided by Massport for work being conducted by CTPS on its behalf.

**[Table 1-3: FFY 2017 Unified Planning Work Program Budget—Summary of
FFY 2018 Budgets for CTPS]**

**[Table 1-4: FFY 2017 Unified Planning Work Program Budget—Summary of
FFY 2018 Budgets for MAPC]**

CHAPTER 2

Transportation Planning and the Boston Region MPO

This chapter explains the transportation-planning process in the Boston Region Metropolitan Planning Organization (MPO) area and the composition of the Boston Region MPO.

Decisions about how to spend transportation funds in a metropolitan area are guided by information and ideas garnered from a broad group of people, including elected officials, municipal planners and engineers, transportation advocates, and other interested people. MPOs are the bodies responsible for providing a forum for this decision-making process. Each metropolitan area in the United States with a population of 50,000 or more—also known as an urbanized area—has an MPO, which decides how to spend federal transportation funds for capital projects and planning studies for the area.

2.1 THE TRANSPORTATION PLANNING PROCESS

The federal government regulates the funding, planning, and operation of surface transportation through the federal transportation program (enacted into law through Titles 23 and 49 of United States Code). The most recent reauthorization of the surface transportation law is called the Fixing America's Surface Transportation (FAST) Act.

FAST Act legislation, as with previous federal transportation laws, sets policies related to metropolitan transportation planning. The law requires all MPOs to carry out a continuing, comprehensive, and cooperative (3C) transportation-planning process.

2.1.1 3C Transportation Planning

Title 23, Section 134 of the Federal-Aid Highway Act and Section 5303 of the Federal Transit Act, as amended, require that urbanized areas, in order to be eligible for federal funds, conduct a 3C transportation-planning process, resulting in plans and programs consistent with the planning objectives of the metropolitan area. The Boston Region MPO is responsible for carrying out the 3C planning process in the Boston region and has established the following objectives for the process:

- Identify transportation problems and develop possible solutions

- Balance short- and long-range considerations so that beneficial incremental actions adequately reflect an understanding of probable future consequences and possible future options
- Represent both regional and local considerations, as well as both transportation and non-transportation objectives and impacts, in the analysis of project issues
- Assist implementing agencies in effecting timely policy and project decisions with adequate consideration of environmental, social, fiscal, and economic impacts, and with adequate opportunity for participation by other agencies, local governments, and the public
- Help implementing agencies to prioritize transportation activities in a manner consistent with the region's needs and resources
- Comply with the requirements of the FAST Act, the Americans with Disabilities Act of 1990 (ADA), the Clean Air Act (CAA), the Civil Rights Act of 1964, Executive Order 12898 (regarding environmental justice), Executive Order 13166 (regarding outreach to populations with limited English-language proficiency), and Executive Order 13330 (regarding the coordination of human-services transportation)

As part of its 3C process, the Boston Region MPO annually produces the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP). These documents, along with the quadrennial Long-Range Transportation Plan (LRTP), are referred to as Certification Documents (described in Section 2.1.2), and are required for the MPO's process to be certified as meeting federal requirements; this certification is a prerequisite for receiving federal transportation funds. In addition to the requirement to produce the LRTP, TIP, and UPWP, the MPO must establish and conduct an inclusive public participation process, as well as maintain transportation models and data resources to support air quality conformity determinations and long- and short-range planning work and initiatives.

2.1.2 Certification Documents

An essential aspect of maintaining an open and transparent 3C transportation planning and programming process in conformance with federal and state requirements and guidelines is development of the MPO's certification documents.

- The **LRTP** guides investment in the transportation system of the Boston metropolitan region for the next 25 years. It defines an overarching vision of the future of transportation in the region, establishes goals and objectives that will lead to achieving that vision, and allocates projected

revenue to transportation projects and programs consistent with established goals and objectives. The Boston Region MPO produces an LRTP every four years. *Charting Progress to 2040*, the current LRTP, was endorsed by the MPO in 2015 and guided the development of this document.

- The **TIP** is a multiyear, multimodal program of transportation improvements that is consistent with the LRTP. It describes and prioritizes transportation projects that are expected to be implemented during a five-year period. The types of transportation projects funded include major highway reconstruction and maintenance, arterial and intersection improvements, public transit expansion and maintenance, bicycle paths and facilities, and improvements for pedestrians. The TIP contains a financial plan that shows the revenue source or sources, current or proposed, for each project. The TIP serves as the implementation arm of the MPO's LRTP, and the Boston Region MPO updates the TIP annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program (STIP) for submission to the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Environmental Protection Agency for approval.
- The **UPWP** contains information about transportation planning studies that will be conducted by MPO staff. Generally, the work described throughout the following chapters has a scope defined by the federal fiscal year (FFY), October 1 through September 30. The UPWP also describes all of the supportive planning activities undertaken by the MPO, including data resources management, preparation of the federally required certification documents, and ongoing regional transportation planning assistance. The UPWP is produced annually and it can be a good way for transportation projects and alternatives to be studied before they are advanced for further design, construction, and possible future programming through the TIP. As described throughout this document, the studies and work products programmed for funding through the UPWP are integrally related to other planning initiatives conducted by the Boston Region MPO as well as by the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), the Massachusetts Port Authority (Massport), the Metropolitan Area Planning Council (MAPC), and the municipalities.

2.2 THE BOSTON REGION MPO

The Boston Region MPO consists of a 22 voting member board that includes state agencies, regional organizations, and municipalities; its jurisdiction extends from Boston north to Ipswich, south to Duxbury, and west to Interstate 495.

There are 101 cities and towns that make up this area (see Chapter 1, Figure 1-1).

The permanent MPO voting members are:

- MassDOT
- MAPC
- MBTA
- MBTA Advisory Board
- Massport
- City of Boston
- Regional Transportation Advisory Council (Advisory Council)

The elected MPO voting members are municipalities. A municipality from each of the eight MAPC subregions has a seat, and there are four at-large municipal seats. The current elected members are:

- City of Beverly – North Shore Task Force
- City of Braintree – South Shore Coalition
- City of Everett – At-Large City
- City of Newton – At-Large City
- City of Somerville – Inner Core Committee
- City of Woburn – North Suburban Planning Council
- Town of Arlington – At-Large Town
- Town of Bedford – Minuteman Advisory Group on Interlocal Coordination
- Town of Framingham – MetroWest Regional Collaborative
- Town of Lexington – At-Large Town
- Town of Medway – SouthWest Advisory Planning Committee
- Town of Norwood – Three Rivers Interlocal Council

In addition, FHWA and the FTA participate in the MPO as advisory (nonvoting) members. Figure 2-1 shows MPO membership and organization of the Central Transportation Planning Staff (CTPS) staff to the MPO. Details about MPO voting members are provided below.

MassDOT was established under Chapter 25 (“An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts”) of the Acts of 2009. It includes four divisions: Highway, Rail and Transit, Aeronautics, and Registry of Motor Vehicles. The MassDOT Board of Directors, comprised of 11 members appointed by the Governor, oversees all four divisions and MassDOT operations, including the MBTA. The MassDOT Board was expanded to 11 members by the legislature in 2015 based on a recommendation by Governor Baker’s Special Panel, comprised of transportation leaders, which was assembled to review structural problems with the MBTA and deliver recommendations for improvements. MassDOT has three seats on the MPO, including the Highway Division and the MBTA.

The Highway Division of MassDOT has jurisdiction over the roadways, bridges, and tunnels of the former Massachusetts Highway Department and the Massachusetts Turnpike Authority. The Highway Division also has jurisdiction over many bridges and parkways that previously were under authority of the Department of Conservation and Recreation. The Highway Division is responsible for the design, construction, and maintenance of the Commonwealth’s state highways and bridges. It is also responsible for overseeing traffic safety and engineering activities for the state highway system. These activities include operating the Highway Operations Control Center to ensure safe road and travel conditions.

The Rail and Transit Division oversees MassDOT’s freight and passenger rail program, and provides oversight of Massachusetts’s 15 regional transit authorities (RTAs), as well as intercity bus, MBTA paratransit (THE RIDE), and a statewide mobility-management effort.

The **MBTA**, created in 1964, is a body politic and corporate, and a political subdivision of the Commonwealth. Under the provisions of Chapter 161A of the Massachusetts General Laws (MGL), it has the statutory responsibility within its district of operating the public transportation system, preparing the engineering and architectural designs for transit development projects, and constructing and operating transit development projects. The MBTA district comprises 175 communities, including all of the 101 cities and towns of the Boston Region MPO area. In April 2015, as a result of a plan of action to improve the MBTA, a five-member Fiscal and Management Control Board (FMCB) was created. The FMCB will enforce new oversight and management support, and increase accountability over a three-to-five-year time frame. The goals will target governance, finance, and agency structure and operations through recommended executive and legislative actions that embrace transparency and develop stability in order to earn public trust. By statute, the MBTA FMCB consists of five members, one with

experience in transportation finance, one with experience in mass transit operations and three who are also members of the MassDOT Board.

The **MBTA Advisory Board** was created by the Massachusetts Legislature in 1964 through the same legislation that created the MBTA. The Advisory Board consists of representatives of the 175 cities and towns that compose the MBTA district. Cities are represented by either the city manager or mayor, and towns are represented by the chairperson of the board of selectmen. Specific responsibilities of the Advisory Board include review of and comment on the MBTA's long-range plan, the Program for Mass Transportation (PMT), proposed fare increases, and the annual MBTA Capital Investment Program; review of the MBTA's documentation of net operating investment per passenger; and review of the MBTA's operating budget. The MBTA Advisory Board advocates for the transit needs of its member communities and the riding public.

Massport has the statutory responsibility under Chapter 465 of the Acts of 1956, as amended, for planning, constructing, owning, and operating such transportation and related facilities as may be necessary for developing and improving commerce in Boston and the surrounding metropolitan area. Massport owns and operates Boston Logan International Airport, the Port of Boston's Conley Terminal, Cruiseport Boston, Hanscom Field, Worcester Regional Airport, and various maritime/waterfront properties, including parks in East Boston, South Boston, and Charlestown.

MAPC is the regional planning agency for the 101 cities and towns in the MAPC/MPO region. It is composed of the chief executive officer (or her/his designee) of each of the 101 cities and towns in the MAPC region, 21 gubernatorial appointees, and 12 ex-officio members. It has statutory responsibility for comprehensive regional planning in its region under Chapter 40B of the MGL. It is the Boston Metropolitan Clearinghouse under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966 and Title VI of the Intergovernmental Cooperation Act of 1968. Also, its region has been designated an economic development district under Title IV of the Public Works and Economic Development Act of 1965, as amended. MAPC's responsibilities for comprehensive planning encompass the areas of technical assistance to communities, transportation planning, and development of zoning, land use, demographic, and environmental studies. MAPC activities that are funded with federal metropolitan transportation planning dollars are included in this UPWP.

The **city of Boston, six elected cities (currently Beverly, Braintree, Everett, Newton, Somerville, and Woburn), and six elected towns (currently Arlington, Bedford, Framingham, Lexington, Medway, and Norwood)** represent the 101 municipalities in the Boston Region MPO area. The City of

Boston is a permanent MPO member and has two seats. There is one elected municipal seat for each of the eight MAPC subregions and four seats for at-large elected municipalities (two cities and two towns). The elected at-large municipalities serve staggered three-year terms, as do the eight municipalities representing the MAPC subregions.

The **Regional Transportation Advisory Council**, the MPO's citizen advisory group, provides the opportunity for transportation-related organizations, non-MPO member agencies, and municipal representatives to become actively involved in the decision-making processes of the MPO as it develops plans and prioritizes the implementation of transportation projects in the region. The Advisory Council reviews, comments on, and makes recommendations regarding certification documents. It also serves as a forum for providing information on transportation topics in the region, identifying issues, advocating for ways to address the region's transportation needs, and generating interest among members of the general public in the work of the MPO.

Two members participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the LRTP, TIP, UPWP, and other facets of the MPO's planning process to ensure compliance with federal planning and programming requirements:

- **FHWA** and the **FTA** oversee the highway and transit programs, respectively, of the U.S. Department of Transportation under pertinent legislation and the provisions of the FAST Act.

[MPO Organization Chart]

CHAPTER 3

Regulatory Framework

The Boston Region Metropolitan Planning Organization (MPO) plays a critical role in helping the region move closer to achieving federal, state, and regional transportation goals and policies. Therefore, a central step in producing the Unified Planning Work Program (UPWP) is ensuring that the MPO's planning activities align with federal and state regulatory guidance. This chapter describes all of the regulations taken into consideration by the MPO during development of the federal fiscal year (FFY) 2018 UPWP.

3.1 FEDERAL REGULATIONS AND GUIDANCE

3.1.1 Fixing America's Surface Transportation (FAST) Act: National Goals

The purpose of the national transportation goals (23 United States Code [USC] 150) is to increase the accountability and transparency of the Federal-Aid Highway Program as well as to improve decision-making through performance-based planning and programming. The national transportation goals include:

1. **Safety:** Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2. **Infrastructure condition:** Maintain the highway infrastructure asset system in a state of good repair
3. **Congestion reduction:** Achieve significant reduction in congestion on the National Highway System
4. **System reliability:** Improve efficiency of the surface transportation system
5. **Freight movement and economic vitality:** Improve national freight network, strengthen ability of rural communities to access national and international trade markets, and support regional economic development
6. **Environmental sustainability:** Enhance performance of the transportation system while protecting and enhancing the natural environment
7. **Reduced project delivery delays:** Reduce project costs, promote jobs and the economy, and expedite movement of people and goods by accelerating project completion by eliminating delays in project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

3.1.2 FAST Act: Planning Factors

Because transportation-planning studies are programmed for funding in the UPWP, specific consideration is given to the federal planning factors (23 USC 134). The FAST Act added two new planning factors to the eight factors established in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) transportation legislation. In accordance with the legislation, studies and strategies undertaken by the MPO shall

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
2. Increase the safety of the transportation system for all motorized and nonmotorized users
3. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users
4. Increase accessibility and mobility of people and freight
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

Table 3-1 illustrates how studies and ongoing work conducted by the MPO and funded through federal formula grant programs address the federal planning factors.

[TABLE 3-1: 3C-funded UPWP Studies and Programs: Relationship to Federal Planning Factors]

3.1.4 1990 Clean Air Act Amendments

Air quality conformity determinations must be performed for capital improvement projects that receive federal funding and for those that are considered regionally significant, regardless of the funding source. These determinations must show that projects in the MPO's LRTP and TIP will not cause or contribute to any new air quality violations, will not increase the frequency or severity of any existing air quality violations in any area, and will not delay the timely attainment of air quality standards in any area.

In the most recent LRTP, *Charting Progress to 2040*, the air quality conformity determination concluded that the emissions levels from the Boston area carbon monoxide (CO) maintenance area, including emissions resulting from implementation of the LRTP, are in conformance with the State Implementation Plan (SIP) according to state and federal conformity criteria. Specifically, the CO emissions for the build scenarios of the MPO's regional travel demand model set are less than the projections for analysis for the years 2020 through 2040 for the nine cities in the Boston CO maintenance area. In accordance with Section 176(c) (4) of the Clean Air Act as amended in 1990, the Boston Region MPO has completed this review and hereby certifies that the LRTP, and its latest conformity determination, conditionally conforms with federal (40 CFR Part 93) and Massachusetts (310 CMR 60.03) regulations and is consistent with the air quality goals in the Massachusetts SIP.

Transportation control measures (TCMs) identified in the SIP for attaining air quality standards are federally enforceable and must be given first priority when using federal funds. Such projects include the parking-freeze program in Boston, the statewide rideshare program, rapid transit and commuter rail extension programs, park-and-ride facilities, residential parking-sticker programs, and the operation of high-occupancy-vehicle lanes. The United States Environmental Protection Agency 40 CFR Parts 51 and 93 Conformity Regulation established the policy, criteria, and procedures for demonstrating air quality conformity in the MPO region.

As of April 1, 2016, the Boston Region MPO has been classified as attainment for CO. Therefore, the MPO is in attainment for all of the criteria pollutants (ozone and CO) and is not required to perform air quality analyses for these pollutants as part of the LRTP and TIP. The MPO, however, is still required to report on the TCMs as part of air quality conformity determinations in these documents. In addition, the MPO is still required to perform air quality analyses

for carbon dioxide as part of the state's Global Warming Solutions Act (see below).

3.1.5 Non-discrimination Mandates

The Boston Region MPO complies with Title VI of the Civil Rights Act of 1964, the American with Disabilities Act of 1990 (ADA), and other federal and state non-discrimination statutes and regulations in all programs and activities. The MPO, as well as its plans and programs, does not discriminate on the basis of race, color, national origin, English-language proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, gender identity or expression, or military service. The major federal requirements are discussed below.

Title VI of the Civil Rights Act of 1964

This statute requires that no person be excluded from participation in, be denied the benefits of, or be subjected to discrimination on the basis of race, color, or national origin, under any program or activity provided by an agency receiving federal financial assistance.

Executive Order 13166, dated August 11, 2000, extends Title VI protections to persons who, as a result of national origin, have limited English-language proficiency (LEP). Specifically, it calls for improved access to federally conducted and federally assisted programs and activities, and requires MPOs to develop and implement a system by which LEP persons can meaningfully participate in the transportation-planning process.

MPO activities that meet these requirements are discussed in the Boston Region MPO Title VI Report, the Massachusetts Department of Transportation (MassDOT) Title VI Program, and the Massachusetts Bay Transportation Authority (MBTA) Title VI Program Monitoring. These projects are discussed in more detail in Chapters 5 and 7.

Environmental Justice Executive Orders

Executive Order 12898, dated February 11, 1994, further expands upon Title VI, requiring each federal agency to achieve environmental justice by identifying and addressing any disproportionately high adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority or low-income populations.

On April 15, 1997, the U.S. Department of Transportation (US DOT) issued its Final Order to Address Environmental Justice in Minority Populations and Low-

Income Populations. Among other provisions, this order requires programming and planning activities to

- Explicitly consider the effects of transportation decisions on minority and low-income populations
- Provide meaningful opportunities for public involvement by members of minority and low-income populations
- Gather (where relevant, appropriate, and practical) demographic information such as race, color, national origin, and income level of populations affected by transportation decisions
- Minimize or mitigate any adverse impact on minority or low-income populations

The 1997 Final Order was updated in 2012 with DOT Order 5610.2(a), which provided clarification while maintaining the original framework and procedures.

The ADA

Title III of the ADA requires all transportation projects, plans, and programs to be accessible to people with disabilities. At the MPO level, this means that public meetings must be held in accessible buildings and be conducted in a manner that provides for accessibility. MPO materials must also be made available in accessible formats.

Executive Order 13330

Executive Order 13330, dated February 26, 2004, calls for the establishment of the Interagency Transportation Coordinating Council on Access and Mobility under the aegis of the US Secretary of Transportation. This executive order reinforces both environmental justice and ADA requirements by charging the council with developing policies and methods for improving access for persons with disabilities or low incomes, and the elderly.

3.2 STATE GUIDANCE AND TRANSPORTATION PRIORITIES

As described in Chapters 6 through 8, much of the work funded through the UPWP focuses on encouraging mode shift and diminishing greenhouse gas (GHG) emissions through improving transit service, enhancing bicycle and pedestrian networks, and studying emerging transportation technologies. All of this work helps the Boston Region contribute to statewide progress towards the priorities discussed in this section.

3.2.1 You Move Massachusetts and We Move Massachusetts

You Move Massachusetts, a statewide initiative designed as a bottom-up approach to transportation planning, developed ten core themes derived from a broad-based public participation process that articulated the expressed concerns, needs, and aspirations of Massachusetts residents that are related to their transportation network. These themes were considered in the development of this UPWP.

We Move Massachusetts (WMM) is MassDOT's statewide strategic multimodal plan. The initiative is a product of the transportation reform legislation of 2009, You Move Massachusetts civic engagement process, wider outreach to environmental justice and Title VI communities, and other outreach activities. In May 2014, MassDOT released We Move Massachusetts: Planning for Performance, the Commonwealth of Massachusetts' 2040 LRTP. WMM identifies high-level policy priorities that were considered in the development of this UPWP. WMM also incorporates performance management into investment decision-making to calculate the differences in performance outcomes resulting from different funding levels available to MassDOT. In the future, MassDOT will use the scenario tool, described in WMM, to update and refine investment priorities.

3.2.2 Global Warming Solutions Act

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

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

3.2.3 GreenDOT

GreenDOT, an initiative that MassDOT launched in June 2010, is a comprehensive environmental responsibility and sustainability policy that has three primary objectives:

- reduce GHG emissions
- promote healthy transportation options of walking, bicycling, and public transit
- support smart-growth development

GreenDOT applies to MassDOT divisions and contractors, as well as to Massachusetts's MPOs and regional transit authorities. It responds to several critical laws and policies, including:

- The GWSA of 2008, which establishes legally enforceable requirements that Massachusetts significantly reduce its GHG emissions
- The Healthy Transportation Compact (HTC), which is discussed in section 3.2.5
- Executive Orders 484 (Leading by Example) and 515 (Environmental Purchasing Policy), which require state agencies to invest public resources in ways that support environmental sustainability by conserving energy and water, implementing efficiency measures, and producing or purchasing renewable energy

The GreenDOT Implementation Plan serves as the framework for incorporating the sustainability principles of GreenDOT into MassDOT's core business practices. The plan details 16 broad sustainability goals and related measurable tasks and performance indicators.

3.2.4 MassDOT's Statewide Mode-Shift Goal

MassDOT's statewide mode-shift goal aims to triple the current mode shares of bicycling, public transit, and walking by 2030. The statewide mode-shift goal is an important part of MassDOT's strategy for meeting the Commonwealth's commitments under the GWSA. In 2013, MassDOT built upon the mode shift goal by passing the Healthy Transportation Policy Directive to formalize its commitment to the implementation and maintenance of transportation networks that serve all modes. The directive will ensure that all MassDOT projects are designed and implemented in a way that provides all customers with access to safe and comfortable walking, bicycling, and transit options.

3.2.5 Healthy Transportation Compact

The HTC is a key requirement of the Massachusetts landmark transportation reform legislation that took effect on November 1, 2009. It is an interagency initiative that will help ensure that the transportation decisions the Commonwealth makes balance the needs of all transportation users, expand mobility, improve public health, support a cleaner environment, and create stronger communities.

Participating agencies work together to achieve positive health outcomes by coordinating land use, transportation, and public health policy. HTC membership is made up of the Secretary of Transportation or designee (co-chair), the Secretary of Health and Human Services or designee (co-chair), the Secretary of Energy and Environmental Affairs or designee, the MassDOT Highway

Administrator or designee, the MassDOT Transit Administrator or designee, the Commissioner of Public Health or designee, and the Secretary of Housing and Economic development or designee. The HTC will also promote improved coordination among the public sector, private sector, and advocacy groups, as well as among transportation, land use, and public health stakeholders.

3.3 REGIONAL GUIDANCE AND TRANSPORTATION PRIORITIES

3.3.1 The MBTA's Program for Mass Transportation (PMT)

In 2009, the MBTA adopted its current Program for Mass Transportation (PMT). The PMT was developed with extensive public involvement and was approved by the MBTA Advisory Board.

The next PMT, Focus40, is under development. Focus40 is the 25-year investment plan to position the MBTA to meet the needs of the greater Boston Region in 2040. The Focus40 process will create a long-term investment vision that recognizes current infrastructure challenges and shifting demographics, changing climate, and evolving technology that may alter the role that the MBTA will play in greater Boston in the future. Focus40 will 1) emphasize performance and reliability; 2) support economic growth; 3) support inclusive growth; 4) support climate change mitigation and adaptation; and 5) provide a seamless multimodal experience.

In 2016, the Focus40 team examined the existing conditions and future context for the transit system, developed goals, collected feedback and ideas for improvements through an extensive public-engagement process. During 2017, the team will finalize Focus40's framework and objectives, propose programs and strategies that align with that framework, develop a recommended strategy, and finalize the plan. Recommendations from Focus40 will support MassDOT's capital investment plans. The Boston Region MPO continues to monitor development of Focus40 to inform its decision-making about transit capital investments.

3.3.2 MetroFuture

MetroFuture, which was developed by MAPC and adopted in 2008, is the long-range plan for land use, housing, economic development, and environmental preservation in the Boston region. It includes a vision for the region's future and a set of strategies for achieving that vision, and is the foundation for land use projections used in the MPO's LRTP, *Charting Progress to 2040*. Work being done to support MetroFuture implementation and updates is detailed in the MetroFuture Implementation project description in Chapter 6. MetroFuture's goals, objectives, and strategies were considered in developing this UPWP.

3.3.3 The MPO's Congestion Management Process (CMP)

The purpose of the CMP is to monitor and analyze performance of facilities and services, develop strategies for managing congestion based on the results of monitoring, and move those strategies into the implementation stage by providing decision-makers in the region with information and recommendations for improving the transportation system's performance. The CMP monitors roadways and park-and-ride facilities in the MPO region for safety, congestion, and mobility, and identifies "problem" locations. Studies that help address problems identified in the most recent CMP monitoring were considered for inclusion in this UPWP, including Priority Corridors for LRTP Needs Assessment: FFY 2018. Work that is currently being performed in accordance with the FFY 2018 CMP is detailed in Chapter 5.

CHAPTER 5

Certification Requirements

5.1 INTRODUCTION

The projects described in this chapter are categorized as certification requirements because they include work that the Boston Region Metropolitan Planning Organization (MPO) must do to maintain its certification by Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The projects also include activities that are necessary to comply with federal and state laws, such as the federal Clean Air Act Amendments, Title VI of the federal Civil Rights Act, and the Americans with Disabilities Act of 1990.

The budget tables for the individual projects in this chapter describe the salary and overhead costs associated with these projects. Any direct costs associated with the projects are included in the Direct Support budget table in Chapter 8, Administration, Resource Management, and Support Activities.

Table 5-1 summarizes the funding in federal fiscal year (FFY) 2017 and FFY 2018 as well as the work progress and products for the ongoing programs conducted as part of the MPO's certification requirements. Although many of these programs generally comprise the same type of task from year to year, often there are variations in budgets that reflect greater or lesser emphasis in certain efforts. For example, MPO staff may undertake new or additional data collection and/or analysis under specific line items; the tasks undertaken as part of one line item in one year may be folded into an ongoing activity in a subsequent year; or, there simply may be fluctuations in staffing levels. Where appropriate, these differences are explained in the table.

[Table 5-1: FFY 2017/FFY 2018 Certification Requirements]

5.2 CERTIFICATION REQUIREMENT ACTIVITIES

This section describes the certification requirement activities and plans that MPO staff conducts during the FFY.

3C Planning and MPO Support

Project ID Number	See Individual Tasks Below
FHWA 3C PL Funds	\$433,121
FTA Section 5303 Funds	\$176,909
FFY 2018 Total Budget	\$610,030

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The work described below consists of the 3C activities that support the federally mandated transportation-planning process that is continuing, comprehensive, and cooperative. This process creates numerous products and materials and furthers MPO operations and decision-making.

Approach

The activities included in this category of certification requirements are separated into the specific work areas detailed below.

SUPPORT TO THE MPO

Project ID 9117: Support to the MPO and Its Committees

The work task *Support to the MPO and Its Committees* includes implementing MPO policies on planning and programming, planning and coordinating delivery of information for MPO decision-making, and supporting the work and operation of the MPO and its committees. It involves providing support for MPO meeting management and planning, delivering MPO communications, and implementing various aspects of the MPO's public participation program.

Some tasks related to MPO meetings, MPO committee meetings, Regional Transportation Advisory Council (Advisory Council) meetings, and other MPO-sponsored meetings include:

- Developing meeting agendas
- Preparing and distributing informational materials, including documents posted on the MPO's website and via email
- Conducting meeting site selection and logistics planning
- Setting up audio/visual equipment for meetings
- Attending and recording meetings
- Completing meeting follow up activities, such as maintaining the information flow for members of the MPO and the public, processing approved work scopes, preparing audio-recording files, and documenting meeting minutes

Technical and process support is provided to the MPO's Unified Planning Work Program (UPWP) Committee, Administration and Finance (A&F) Committee, Congestion Management Process (CMP) Committee, and other ad hoc committees that are formed as needed.

- The UPWP Committee meets as needed throughout the year to develop a UPWP for the upcoming federal fiscal year (FFY) and to monitor expenditures and the progress of studies and programs in the current fiscal year.
- The CMP Committee meets as needed throughout the year to discuss the federally required CMP. Activities include developing and reviewing its Transportation Improvement Program (TIP) Intersection Improvement Program and making recommendations to the MPO.
- The A&F Committee meets periodically to make recommendations to the MPO on the staff's operating budget, legal matters, and other administrative functions.

This work program also includes consultation with other entities and agencies involved with or interested in 3C planning activities, collaboration with other Massachusetts MPOs (with more detailed coordination with those in the Boston Region urbanized area), and communication with Metropolitan Area Planning Council (MAPC) subregional groups.

MPO support also includes conducting metropolitan transportation planning and implementing planning activities for the MPO. The goal of this work is to ensure compliance with federal regulations and requirements and to provide excellence in transportation planning processes, techniques, and outcomes. The work involves researching, analyzing, and reporting information on 3C planning topics, including those identified in federal reauthorization legislation, and issues related

to other federal policies, regulations, and guidance. It also involves responding to federal recommendations or requirements for certification documents or MPO certification, and incorporating new requirements into the MPO's 3C program. MPO staff will continue to implement Fixing America's Surface Transportation (FAST) Act requirements (see Chapter 2 and Chapter 3) as guidance from this federal legislation is communicated to the MPO, and staff will also be prepared to implement future legislation.

Other activities include day-to-day oversight of 3C-program-related activities, reports on the progress of projects listed in the UPWP, collecting and fielding day-to-day comments and inquiries, and responding to requests for information and support.

Project ID 9317: Regional Transportation Advisory Council Support

The Advisory Council is the MPO's citizens' advisory committee. MPO staff provides operations support to this body and its subcommittees. This includes planning programs and meetings, scheduling speakers, and preparing and distributing agendas, meeting notices, informational packets, and meeting minutes. It also includes helping to conduct meetings; attending and making presentations at meetings; organizing and conducting field trips; soliciting new members; implementing and updating the bylaws; coordinating other activities, such as Advisory Council elections; and maintaining contact lists.

MPO staff regularly provides information, updates, and briefings on MPO activities, studies, and reports; requests and coordinates comments on MPO documents; and works with the Advisory Council and its committees as they conduct their programs, planning, and reviews.

Project ID 9617.04: TRANSREPORT

The MPO's electronic newsletter (blog), TRANSREPORT, is an important part of the MPO's public involvement program. MPO staff is responsible for soliciting, researching, and writing articles about MPO studies and activities. This work includes managing all aspects of the blog's production: writing and editing, creating graphics, proofreading, and distributing the newsletter via email (and US mail, upon request).

Project ID 9617: Public Participation Process

MPO staff implements the MPO's Public Participation Program according to the MPO's Public Participation Plan. The program includes coordinating and implementing the MPO's public outreach activities, which are opportunities to involve all members of the public, including:

- Local, regional, state, and federal officials and agencies
- Transportation, environmental, and social service advocacy groups
- The elderly, minorities, people with low incomes, people with disabilities, people with limited English-language proficiency, youth, veterans, and people living in zero-vehicle households
- Freight operators
- Transit service providers
- Other interested parties and other members of the general public

This program provides information to these parties and collects input from them for the MPO to use in its planning, decision-making, and development of certification documents, including programming the region's transportation funding. The program supplements the involvement of the Regional Transportation Advisory Council.

Communication is ongoing and conducted through a variety of means.

- Website
- Public meetings
- Municipal Outreach via Subregional Meetings

In FFY 2018, the MPO will continue to refine its Public Participation Process, implementing tactics designed to break down barriers to participation for groups currently underrepresented in the planning process. Activities may include:

- Maintain frequent e-based communications, including press releases, public notices, and refreshed website newsflashes/Twitter tweets regarding ongoing planning products and MPO milestones and events
- Team with other entities to conduct joint programs and outreach
- Expand the MPO program to involve people in the region with limited English-language proficiency by translating critical documents (e.g., the Title VI Complaint Process and Form and notices of MPO-sponsored public-participation meetings) into the MPO languages of policy, including Spanish, Portuguese, and Chinese. If information is needed in another language, Boston Region stakeholders are encouraged to contact the MPO's Title VI Specialist.
- Integrate the Title-VI-related Four Factor Analysis for guidance on providing materials in languages other than English

- When planning meetings, take additional steps to understand the language and cultural needs of those who might attend
- Make it a standard practice to solicit comments on the Public Participation Program from meeting participants, and conduct periodic assessments of the effectiveness of public involvement activities
- Encourage public libraries to make MPO information available
- Increase the MPO's use of graphic materials to provide information
- Offer more web-based surveys at timely points in the planning process
- Continue the quest for tools and practices to make outreach activities as interactive, engaging, and easily accessible as feasible
- Expand the use of Twitter and participation in the MPO website's Rich Site Summary (RSS) feed to enhance communication

The MPO's Public Participation Program also involves consultations as specified in federal guidance; arranging, upon request, for the provision of American Sign Language (ASL) and other language interpretation services at meetings; and providing public participation support to MPO member entities.

OTHER 3C PLANNING SUPPORT ACTIVITIES

Project ID 9117.09: Professional Development

MPO staff maintains its technical expertise in part by participating in courses, programs, and workshops offered by FHWA, the FTA, the Transportation Research Board (TRB), the Association of Metropolitan Planning Organizations (AMPO), the Institute of Transportation Engineers (ITE), and other public and private organizations. Previous professional development endeavors have related to topics such as performance-based planning, traffic engineering issues and applications, regional modeling, bicycle/pedestrian issues, transit planning, public involvement, environmental justice, air quality, computer operations and maintenance, database applications, and other areas related to the provision of technical support services.

Project ID 9117.07: General Graphics

Graphics support will be provided by MPO staff to MPO agencies. This includes designing and producing maps, charts, illustrations, report covers, brochures, slides, and photographs; applying other visualization techniques; and creating other products that improve communication.

FFY 2018 Anticipated Outcomes

Staff will prepare materials—including agendas, minutes, notices, document translations, memoranda, reports, correspondence, summaries, and website postings, as well as maps, charts, illustrations and other visual materials—as needed; continue to support the MPO and its committees and the Regional Transportation Advisory Council; conduct communications with the public, including publishing TRANSREPORT; conduct planning to support compliance with federal requirements and guidance; engage in professional-development activities; and remain prepared for unforeseen initiatives as they arise.

Note: The above activities support all other projects in this UPWP in compliance with the 3C planning process. They foster implementation of MPO policies, federal planning factors and guidance, and all applicable orders and requirements, including Executive Order 13166 (governing outreach to persons with limited English-language proficiency). These activities are supported by the Provision of Materials in Accessible Formats project.

Long-Range Transportation Plan

Project ID Number	8118
FHWA 3C PL Funds	\$263,885
FTA Section 5303 Funds	\$107,784
FFY 2017 Total Budget	\$371,669

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

Under the current federal transportation funding legislation, Fixing America's Surface Transportation Act (FAST Act), a new Long-Range Transportation Plan (LRTP) must be produced every four years.

The LRTP guides transportation system investments for the Boston metropolitan region for at least the next 20 years. The MPO adopted its most recent LRTP, *Charting Progress to 2040*, in August 2015. This LRTP serves as the Boston Region MPO's guiding document: it establishes regional goals and objectives that the MPO will use for future decision-making.

While the latest quadrennial LRTP document was endorsed in FFY 2015, the MPO's continuing, comprehensive, and cooperative planning process—including its long-range planning activities—is ongoing. The MPO's robust LRTP development program helps meet Moving Ahead for Progress in the 21st Century Act (MAP-21) and FAST Act requirements, which include measuring and tracking performance of the region's transportation system and the effectiveness of MPO programming in meeting regional goals. This program also supports scenario planning to generate data for decision-making.

Approach

LRTP Needs Assessment

The Needs Assessment has become a foundational resource for the MPO's transportation planning work. Staff developed a Needs Assessment as part of *Charting Progress to 2040*; it is available to the public via the Needs Assessment application on the MPO's website. In FFY 2018, staff will continue to update the Needs Assessment with new information as it becomes available. Staff also will perform additional analyses to keep the Needs Assessment current, and will use

this information for future studies, reports, and deliberations. The updated information will be made available to the public via the website. Data from the Needs Assessment will support two of the MPO's initiatives: its scenario planning activities and its performance-based planning and programming (PBPP) practice.

In FFY 2018, staff will use output from the Needs Assessment to develop and analyze land use and transportation options and scenarios. This information also will be used to monitor performance measures, set MPO performance targets, evaluate progress toward them, and track other indicators of interest.

The LRTP and Performance-Based Planning

The Transportation Improvement Program (TIP) and LRTP programs work together to support the MPO's performance-based planning program. The MPO adopted its goals and objectives and identified an initial set of performance measures in FFY 2015 as part of developing *Charting Progress to 2040*; these were used for scenario planning and evaluating LRTP projects and programs.

Since *Charting Progress to 2040* was adopted, FHWA and the FTA have finalized rules and plans that specify federally required performance measures for which states, MPOs, and public transportation providers will track trends and develop targets. In FFY 2017, the MPO coordinated with MassDOT, the MBTA, other Massachusetts MPOs, and other stakeholders to understand and respond to new PBPP requirements. The MPO also gathered information and data to begin setting targets for federally required performance measures and to establish other measures that the MPO will monitor. The MPO also developed reporting tools, particularly its online performance dashboard, to describe how the Boston region's transportation system performs in various areas.

In FFY 2018, the MPO will expand its PBPP practice as components of the LRTP and TIP programs. Staff will review the MPO's performance measures used in FFYs 2015–2017 under the LRTP program and continue to work with the MPO to establish a set of performance measures for ongoing monitoring and reporting. This suite of measures will include those specified in FHWA and FTA requirements and guidance. Other measures may be based on new Massachusetts Department of Transportation (MassDOT) measures or emerging data sources, or those identified by the MPO. Staff will continue to develop baseline information and a set of targets for the MPO's performance-based planning. The MPO will use the performance measures as part of LRTP and TIP development and to track how well TIP-implemented projects and programs are helping to meet the region's targets and goals.

In the Boston Region MPO, future LRTPs and TIPs will each include a performance report that describes the MPO's progress towards its targets and

the trends of non-target indicators of interest. The LRTP will report progress at the systems and project levels, as applicable, and will include a full assessment of progress made toward the region's goals and targets. The TIP will report on project-level performance and the results of system-level analysis, as applicable, and will describe the anticipated effect of programmed projects towards meeting established targets. Each LRTP and TIP will provide an opportunity to review and document progress in meeting performance goals and, if needed, make programmatic adjustments to meet those goals.

In the future, the MPO will review measures and targets on an ongoing basis and make revisions as needed. LRTP program work in FFY 2018 and future years will include pre-planning for data needs to support performance-based planning. Staff will continue to coordinate internally and externally, as needed, to understand data availability, determine future data needs, and set a plan for meeting those needs.

The LRTP and Scenario Planning

In 2015, the MPO began the ongoing practice of using model-based planning tools and off-model processes to generate forecasts and information about regional conditions and future needs as part of *Charting Progress to 2040*, which it continued in 2016. These tools assess the effects of potential options for changes to the transportation network. The MPO plans to use this information to make policy and capital investment decisions. Throughout FFY 2018, staff will build on its previous work and identify one or more opportunities to explore options and compare various alternative scenarios to understand impacts on transportation, air quality, climate change, mode shift, the economy, and land use better. Using these tools will provide additional and more substantive answers to various planning questions.

Some of this work also may explore policy related implications. In this way, the LRTP program serves as an ongoing resource for current information, insights, and analysis for all those involved in managing and improving the regional transportation network.

Laying the Groundwork for the Next LRTP

Prior to the next LRTP endorsement year (FFY 2019), staff will research, plan, coordinate with interested parties, and review investment priorities. Through ongoing performance-based and scenario planning, MPO staff will generate information that will help guide the investment strategies for the next LRTP. The LRTP program plays an important role in keeping the MPO abreast of current state-of-the-practice communications and planning tools and approaches.

In collaboration with MAPC, the MPO will explore effective ways to gather information, understand the region's needs, and analyze transportation and land use options. As part of FFY 2018 activity, staff will research best practices in metropolitan transportation planning and other facets of planning.

L RTP Amendments

If any changes are made to regionally significant projects in the FFYs 2018–2022 TIP, an amendment to the LRTP might be required. Staff will prepare the informational materials for MPO decision-making and follow MPO procedures for informing and involving the public.

FFY 2018 Anticipated Outcomes

- Expand the MPO's scenario-planning capabilities by using the regional travel demand model set and various planning tools, such as CubeLand, to support the next LRTP and the MPO's performance-based planning and programming process
- Produce summaries of results from transportation scenario analyses for the MPO
- Continue to establish performance measures and develop baselines and targets for federal and MPO goals and objectives
- Prepare memoranda on performance based planning topics such as performance targets and reporting
- Prepare performance reports monitoring measures-of-interest trends and tracking the MPO's progress toward meeting targets
- Conduct public outreach on all LRTP topics, including Needs Assessment updates, scenario planning, and development of performance measures and targets; report results to the MPO for use in all of its planning and programming
- Update details and analyses in the current Needs Assessment to supply the most current information to the MPO and the public
- Prepare amendments to *Charting Progress to 2040*, as needed
- Address comments or changes from FHWA and the FTA or changes to the State Implementation Plan (SIP).

Transportation Improvement Program

Project ID Number	8218
FHWA 3C PL Funds	\$143,133
FTA Section 5303 Funds	\$58,463
FFY 2018 Total Budget	\$201,596

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The Boston Region MPO's TIP presents a multiyear, financially constrained program of planned investments in the metropolitan area's transportation system. Although federal regulations require the TIP to be updated every four years, Massachusetts and its MPOs are committed to producing annual updates.

Approach

Development of the FFYs 2019–2023 TIP

MPO staff coordinates the collection of TIP project-funding requests, evaluates the requests, proposes programming of current and new projects based on anticipated funding levels, supports the MPO in its decision-making about programming those funds, develops a draft document, and facilitates public review of the draft document before the MPO endorses the final TIP.

Outreach and Compilation of the Universe of Projects

MPO staff communicates with the 101 cities and towns in the region through TIP workshops, MAPC subregional meetings with municipalities, and correspondence with municipal TIP contacts and chief elected officials to gather information on existing and new TIP funding requests. MPO staff compiles the projects into a Universe of Projects list for the MPO.

Project Evaluation

The MPO uses TIP project evaluation criteria to identify projects that will help the region attain the vision, goals, and objectives established by the LRTP. The MPO's evaluation criteria enhance decision-making for transportation projects in the region by establishing a transparent, inclusive, and data-driven process.

Staff Recommendation

Staff develops a recommendation that proposes how to prioritize the MPO's Regional Target funding. Typically staff prepares a First-Tier List of Projects using the results of the evaluation ratings and project-readiness information. Staff then develops recommendations, giving strong consideration to the First-Tier List of Projects while also balancing equity of investments across the region and accounting for cost (to comply with the fiscal-constraint requirement).

In addition to preparing a recommendation, MPO staff also prepares and presents the Statewide Infrastructure Items and Bridge Programs and the capital programs for the MBTA, the Cape Ann Transportation Authority (CATA), and the MetroWest Regional Transit Authority (MWRTA) for the MPO's consideration.

TIP Document Preparation and Endorsement

Staff prepares a draft TIP that maintains compliance with federal regulations and requirements for a public review and comment period. During the public comment period, MPO staff compiles and summarizes comments on the draft TIP and relays the comments to the MPO for consideration before endorsing the final TIP document.

Amendments and Administrative Modifications

In a typical year, various projects experience cost or schedule changes that require an amendment or administrative modification to the TIP. MPO staff manages all public review processes regarding TIP amendments and administrative modifications, including posting TIP materials on the website.

Staff estimates that there will be as many as four amendments and/or administrative modifications to the FFYs 2019–2023 TIP during FFY 2018.

For more information about the TIP development process or the administrative modifications and amendments procedures, refer to Chapter 2 of the TIP, available online here: <http://bosmpo.ctps.org/tip>.

Implementing Performance-Based Planning

The FFYs 2019–2023 TIP document will continue to report on the MPO's implementation of its performance-based planning program and the results of monitoring trends in the region and progress toward established goal-setting targets.

FFY 2018 Anticipated Outcomes

The FFYs 2019–2023 TIP, as well as amendments and administrative modifications to the FFYs 2018–2022 TIP will be prepared as described above.

Staff will explore enhancements to the TIP Interactive Database. Continued efforts related to the PBPP will include tracking performance measures and setting targets.

Unified Planning Work Program

Project ID Number	8318
FHWA 3C PL Funds	\$79,896
FTA Section 5303 Funds	32,633
FFY 2018 Total Budget	\$112,529

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The UPWP, a 3C transportation-planning process, prioritizes federal funding for transportation planning work that will be implemented in the 101-municipality area of the Boston region.

The UPWP has two main purposes:

- Provide budget information to federal and state officials about the expenditure of federal funds for transportation-planning projects being carried out by the Boston Region MPO
- Provide information to government officials, local communities, and the general public about surface-transportation-planning projects expected to take place in the Boston Region MPO area

The UPWP document includes descriptions and budgets for work that MPO staff will conduct during the upcoming federal fiscal year, including both 3C-funded work for the MPO and work that is funded by state agencies or other entities. The UPWP also provides supplementary information about other transportation-planning activities in the region that are not funded by the MPO or conducted by MPO staff. The federal government requires that the UPWP comply with federal regulations and address the focus areas recommended by FHWA and the FTA.

Work on the UPWP is ongoing year-round. This work program element focuses on developing the federal fiscal year (FFY) 2019 UPWP and supports the MPO and its UPWP Committee in monitoring FFY 2018 UPWP implementation and considering adjustments and amendments.

An integral part of developing the UPWP is engaging the public throughout the process. Some of the public outreach process for the UPWP is covered as part of the 3C Planning and MPO Support program.

MAPC also provides 3C-funded transportation-planning work, which is described in the UPWP document.

Approach

MPO staff prepares materials for and coordinates all phases of this work, including soliciting, evaluating, and recommending ideas for planning studies and technical assistance programs; conducting background research; preparing budgets and project descriptions; coordinating document development with the MPO's UPWP Committee; responding to federal and state DOT guidance; and preparing draft and final documents.

MPO staff members are responsible for coordinating public participation in the UPWP process, distributing the draft UPWP, preparing the final UPWP, and making administrative modifications and amendments as needed. MPO staff also prepares quarterly reports on the implementation of the UPWP.

FFY 2018 Anticipated Outcomes

- Development of the UPWP Study Recommendations Tracking Database, which would house details of project contacts, proposed improvements, implementation status, milestones, funding, and issues affecting implementation progress. MPO staff would use the database to produce reports for the MPO board detailing topics such as the percentage of planning studies that have advanced to the MassDOT project information system or are in preliminary design. By updating the database every year, the Central Transportation Planning Staff (CTPS) to the Boston Region MPO will have a timely and efficient way to inform the MPO about the status of recommendations from its planning studies.
- Development of, and public outreach for, the FFY 2019 UPWP, with details related to certification requirements and other administration activities, ongoing/continuing work programs, and new studies.
- Planning for relevant meetings, including the MPO's subcommittee.
- Quarterly implementation reports for the FFY 2018 UPWP.
- Amendments and administrative modifications to the FFY 2018 UPWP, as necessary.
- Other informational materials as needed.

Air Quality Conformity and Support Activities

Project ID Number	8418
FHWA 3C PL Funds	\$26554
FTA Section 5303 Funds	\$10,846
FFY 2018 Total Budget	\$37,400

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

1. To ensure that the MPO's plans, programs, and projects comply with the Clean Air Act Amendments (CAAA) of 1990 and to secure federal funding for the Boston Region MPO's transportation system
2. To provide ongoing support services for the MPO regarding air-quality matters and maintain technical expertise in air quality and climate-change matters, including conformance with federal air quality requirements and the state's climate-change policies

Approach

Air-Quality Conformity Determinations

Under the CAAA, states must monitor emissions from transportation vehicles and other sources to determine whether ambient emissions levels exceed health-based allowable levels of air pollutants. Areas in which the emissions exceed the allowable levels are designated as nonattainment areas. For these, the state must develop a SIP that establishes emissions budgets and shows how the plan would reduce emissions in the area sufficiently to comply with national ambient air quality standards. MPOs with nonattainment areas must complete air quality conformity determinations to demonstrate the conformity of transportation plans, programs, and projects with the Massachusetts SIP. Typically, a conformity determination is performed annually for the TIP and every four years for a new LRTP. However, a conformity determination may be required if an LRTP amendment is undertaken during the year. This program covers the tasks needed to demonstrate that an MPO's federally funded transportation programs meet conformity requirements.

The Boston Region MPO area previously had been classified as a nonattainment area for ozone, but it was reclassified as an attainment area under the new 2008

ozone standard. Because the reclassification resulted from a new standard, a maintenance plan was not required, and the area was not classified as a maintenance area. A maintenance area is an area that had been reclassified from nonattainment to attainment; it is an area for which a maintenance plan has been approved as part of the Massachusetts SIP. As an attainment area, the MPO is not required to demonstrate that the LRTP and TIP conform to national standards for the two pollutants that form ozone: volatile organic compounds (VOCs) and nitrogen oxides (NOx). A new ozone standard was recently proposed and released for public comment by the United States Environmental Protection Agency (EPA), and the Boston Region MPO area might again be classified as a nonattainment area if this standard is approved. If the MPO area is reclassified as a nonattainment area, conformity determinations for ozone will be required.

The City of Boston and surrounding cities and towns were classified as a maintenance area for carbon monoxide (CO). However, as of April 1, 2016, the 20-year maintenance period expired and conformity is not required for this area. The city of Waltham, however, is classified as attainment with a limited maintenance plan in place and projects in this city still must comply with certain requirements. The MPO must still show that, it is complying with transportation control measure requirements outlined in the Massachusetts SIP.

Other Air Quality Support

This ongoing Air Quality Conformity and Support Activities program supports the MPO's expertise in air quality and climate-change matters, as well as the MPO's response to changing requirements for planning, analysis, and reporting. This includes initiatives known today, as well as the ability to participate in issues that might emerge during the year. This program also supports implementation of air quality related transportation programs and projects, and it includes consultation, research, and coordination between the MPO and federal, state, local, and private entities.

FFY 2018 Anticipated Outcomes

Conformity Determinations

These determinations will be performed and presented as noted below. They include a detailed analysis of air-quality impacts (CO and carbon dioxide [CO₂]) of the projects in the FFYs 2019–2023 TIP, any changes to the LRTP, and any work required for implementing GreenDOT (the state's comprehensive environmental responsibility and sustainability policy). MPO staff will also complete analysis of VOCs and NOx emissions.

- A systemwide conformity determination will be prepared if there are changes to regionally significant projects in the LRTP and the TIP.

- A detailed project-level analysis will be conducted for each project to receive Congestion Mitigation and Air Quality Program funding in the TIP and for any projects that will help meet the GreenDOT initiative.

Support to MassDOT (including the Highway Division, the Office of Transportation Planning, the MBTA) and Massport

Activities will include analysis of transportation-control measures (TCMs), park-and-ride facilities, and proposed high-occupancy-vehicle (HOV) projects throughout the Boston Region MPO area, as well as evaluation of emerging and innovative highway and transit clean-air activities.

Support for Climate-Change Initiatives

Activities will include integrating concerns about climate change and opportunities for emissions reduction into the MPO's planning process relative to the regional travel-demand model set, the TIP, project specific work products, the LRTP, the Congestion Management Process, the UPWP, and performance measures. Staff will work with MassDOT to implement its GreenDOT policy and comply with the Department of Environmental Protection (DEP)'s Global Warming Solutions Act Requirements for the Transportation Sector and MassDOT. Staff will also confer with agencies and organizations concerned about climate-change issues to inform actions in the MPO region.

Mobile-Source Element of the SIP

The Massachusetts DEP is required to submit a SIP to the EPA documenting strategies and actions to bring Massachusetts into compliance with air quality standards. CTPS support will include:

- Support for amendments or revisions to the Memorandum of Understanding between the MPO and the DEP
- Support to regional, local, and private entities, and to the agencies involved in monitoring, updating, and revising the mobile-source section of the SIP
- Data collection and analysis to measure regional air quality conditions, support development of MOVES2014 emission factors, validate emissions inventories and budgets, and evaluate the air quality impacts of policies regarding long-term growth, transportation, and land use
- Coordination with the DEP to develop statewide regulations and programs concerning transportation and air quality
- Support to regional, local, and private entities

- Provide data and recommendations to MPO agencies regarding funding and the implementation of transportation programs and projects with air quality benefits

Boston Region MPO Title VI Reporting

Project ID Number	8618
FHWA 3C PL Funds	\$15,611
FTA Section 5303 Funds	\$6,377
FFY 2018 Total Budget	\$21,988

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This program's objective is to develop a report documenting Title VI-related activities undertaken by the MPO during the past year. The report will show the MPO's full compliance with the requirements of both the FTA Title VI Circular C 4702.1B and FHWA Title VI/Nondiscrimination Program.

Approach

Title VI of the federal Civil Rights Act prohibits discrimination based on race, color, and national origin, including individuals with limited English-language proficiency (LEP), in programs and activities that receive federal financial assistance. The FTA and the FHWA require the MPO to develop programs that ensure compliance with Title VI. This is accomplished by reaching out to protected populations and involving them in MPO planning and decision-making, including development of the UPWP), TIP, and LRTP. In addition to the populations given protection under Title VI, FHWA's Title VI/Nondiscrimination Program prohibits discrimination based on a person's sex, age, disability/handicap, and income status.

FFY 2018 Anticipated Outcomes

The MPO will comply with FTA and FHWA Title VI requirements by preparing and submitting reports on the implementation of its nondiscrimination programs, as required. The MPO will provide updates on Title VI-related activities to determine the equity of TIP spending, as required by MassDOT. The MPO also will continue consulting and coordinating with the MassDOT Office of Diversity and Civil Rights (ODCR) to achieve best practices in this area.

Congestion Management Process

Project ID Number	2118
FHWA 3C PL Funds	\$79,325
FTA Section 5303 Funds	\$32,401
FFY 2018 Total Budget	\$111,726

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The MPO's CMP is a federally mandated requirement that seeks to monitor congestion, mobility, and safety needs; it also recommends appropriate strategies for reducing congestion. The CMP is developed in an integrated manner along with the MPO's certification documents (LRTP, TIP, and UPWP) to ensure cohesive strategy evaluation and implementation.

Approach

In the Boston Region MPO area, the CMP follows federal guidelines and recommendations from the MPO's CMP Committee to fulfill the following activities:

- Set goals, objectives, and performance measures
- Identify congested locations
- Determine the causes of congestion
- Develop alternative strategies to mitigate congestion
- Evaluate the strategies' potential for efficacy
- Recommend the strategies that best address the causes and impacts of congestion
- Coordinate with and support development of the LRTP, TIP, and UPWP
- Create needs priorities for planning studies

Depending upon CMP Committee recommendations, monitoring and analysis will continue for highways, arterial roads, park-and-ride lots, freight movements, and bicycle and pedestrian facilities. CMP activities will include using electronic travel-time and speed data to monitor roadways, identify existing conditions, and recommend appropriate improvements in accordance with federal guidelines.

FFY 2018 Anticipated Outcomes

CMP activities will include monitoring, assessing needs, and recommending strategies for multimodal facilities and services, including:

- Using electronic travel-time and speed data to monitor MPO arterials and freeways
- Mapping and tabulating electronic data for analysis and performance evaluation
- Coordinating with the MPO's certification activities (LRTP, TIP, and UPWP)
- Supporting the CMP Committee of the MPO

Freight-Planning Support: FFY 2018

Project ID Number	2218
FHWA 3C PL Funds	\$55,595
FTA Section 5303 Funds	\$-
FFY 2017 Total Budget	\$55,595

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

As part of its FFY 2014 UPWP, the Boston Region MPO established a formal freight-planning program. The goals for MPO freight planning are to:

- Fulfill the Boston Region MPO's freight-planning needs
- Complement state and other official planning efforts
- Study specific freight-related issues
- Fulfill analysis requirements of federal surface transportation legislation
- Address the lack of freight data for the MPO region, including developing enhanced technical capabilities for MPO staff to use in estimating freight demand

Approach

The freight analysis within the framework of this program will be ongoing and conducted on a multiyear basis. In September 2013, MPO staff proposed a Freight Planning Action Plan, which presented possible studies for one or more of the MPO's freight-planning goals.¹

The MPO's FFY 2017 freight planning activities included identifying bridges and tunnels with weight or height restrictions that limit efficient truck movement, collecting freight data to support MPO model development, and a continued focus on the new all-electronic tolling systems. The MPO will look to the Freight Planning Action Plan to determine future activities for the MPO's freight-planning program. In its freight planning activities, MPO staff will incorporate input from

¹ Proposed Freight Planning Action Plan for the Boston Region MPO: Meeting the Goals and Addressing the Issues, memorandum, Boston Region MPO, September 12, 2013.

stakeholders who represent the freight-shipping community in the Boston region to learn about obstacles and transportation needs for freight movement.

FFY 2018 Anticipated Outcomes

Potential issues for study are documented in the FFY 2013 Freight Planning Action Plan. MPO staff will collect data, conduct analysis, and develop recommendations and documentation as appropriate for the study topics.

Transportation Equity/Environmental Justice Support

Project ID Number	8518
FHWA 3C PL Funds	\$88,350
FTA Section 5303 Funds	\$36,086
FFY 2018 Total Budget	\$124,436

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The objective of the Transportation Equity (TE) program is to undertake activities related to the FTA and FHWA Title VI, environmental justice (EJ), and other nondiscrimination requirements. These requirements are rooted in several federal laws and executive orders (EOs), including Title VI of the Civil Rights Act of 1964, Presidential EO 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations,” and the Americans with Disabilities Act of 1990 (ADA), as well as United States Department of Transportation nondiscrimination regulations, and guidance.

Title VI prohibits discrimination based on race, color, and national origin, including persons with LEP, in programs and activities that receive federal financial assistance. EO 12898 directs recipients of federal financial assistance to identify and address any disproportionate burdens placed on low-income and minority populations. The ADA prohibits discrimination against individuals with disabilities by recipients of federal financial assistance. In addition to these programs, FHWA’s Title VI/Nondiscrimination Program prohibits discrimination on the basis of sex and age under other federal authorities, and requires MPOs to understand and consider the transportation needs of these populations.

The TE program encompasses the programmatic, monitoring, and reporting activities that are necessary for the MPO to maintain compliance with the above federal civil rights requirements and guidelines. These activities include public outreach to protected populations, data collection and analysis, and support to other MPO programs regarding populations protected by the above EOs and laws. The TE program also involves monitoring the success of these activities and reporting the results to ensure compliance.

Approach

Completing FTA and FHWA Reporting Requirements

Although many TE program activities apply to all populations, regardless of the authority under which they are protected, the MPO makes every effort to ensure that monitoring efforts for Title VI and EJ are identified as such and the results reported separately. As requested by the FTA and FHWA, reporting will be accomplished through various quantitative analyses of the impacts of the MPO's programs and activities and documentation of the MPO's efforts to engage protected populations in the MPO's transportation planning and decision-making process. Reporting will also include updates to the MPO's Language Access Plan (LAP), as stated in the plan, which guides the MPO's efforts to ensure that activities are accessible to LEP persons. MPO staff will complete annual and triennial reports as requested by FHWA and the FTA through MassDOT, and respond to requests made by MassDOT regarding changes in the MPO's Title VI, EJ, and nondiscrimination reporting activities.

Supporting Participation in the MPO's Transportation Planning Process and the Public Participation Program

Gathering input and generating participation in the MPO's transportation planning process will be accomplished in several ways. The MPO will continue to develop relationships and conduct public engagement with community organizations that serve protected populations. Many of these organizations will also contribute to the MPO's evolving database of community organizations and contacts. Staff will use information acquired from these public outreach efforts, as well as from data collection and analysis, such as Census data, to identify transportation gaps and needs of protected populations. This information will inform the MPO's transportation planning efforts, namely the UPWP, TIP, and LRTP.

Staff will also continue to develop methods for ensuring that all communications from the MPO with the public are accessible to those with a disability as well as to LEP persons. In accordance with the MPO's LAP, vital documents (both digital and print formats) will be translated into languages other than English. Staff will also continue to ensure that all MPO documents and resources are accessible to people with disabilities as described in the *CTPS Nondiscrimination Handbook*.

Providing Technical Support to the LRTP, TIP, and MPO-guided Studies

Staff will support development of the MPO's certification documents through project evaluation, contributing to the Performance Dashboard, assisting in development of equity performance measures, and refining the equity analyses. Staff will support the LRTP Needs Assessment on an ongoing basis. Staff will also support analysis of the distribution of UPWP-funded studies.

Managing the MPO Staff's Transportation Equity Analysis Committee (TEAC)

This committee provides an opportunity for staff to discuss analytical practices undertaken for the MPO and client agencies, make decisions regarding updating and implementing these practices, and promotes integration of EJ and Title VI principles throughout the MPO's activities. The overarching goals are to ensure that these principles are fully integrated into the MPO's activities and that analytical processes are applied consistently. While the TIP and LRTP equity analyses are currently the primary concern of TEAC, other topics that deal with analytical components of the MPO's transportation equity program are also of interest. Topics under consideration are expected to evolve as the need arises within the MPO.

Refine Equity-Related Analytical and Modeling Techniques

Federal requirements instruct the MPO to undertake analyses that evaluate the impact of the MPO's activities on populations protected by the civil rights regulations stated above. In order to improve the effectiveness of these analyses, which include equity analyses, staff will undertake to efforts to refine current methods and develop novel methodological approaches. Staff will address analyses that are done both with the regional travel demand model and those that are done off model.

Supporting and Coordinating with Other Agencies

Staff will continue to support FTA programs that target minority and low-income populations, elderly individuals, and people with disabilities in the region. For example, MPO staff will continue to help MassDOT publicize its Community Transit Grant Program solicitation, and will evaluate that program's grant applications.

MPO staff will continue to coordinate with MassDOT's Office of Diversity and Civil Rights to ensure consistency of MPO Title VI-related processes, procedures, and activities.

FFY 2018 Anticipated Outcomes

- Prepare and submit a report documenting the MPO's FTA Title VI and FHWA Title VI/Nondiscrimination programs, as required, to MassDOT
- Continue outreach to Title VI and EJ communities, including minority, low-income, and LEP communities, and further integrate this process with the MPO's Public Participation Program and its transportation planning process

- Expand and update the database of community organizations and contacts for public-engagement activities
- Gather and analyze data from the United States Census Bureau, and explore other potential sources of data, that support this program and inform the MPO's planning and programming decision-making
- Evaluate, refine, and complete equity analyses as needed for the MPO's TIP, LRTP, and UPWP
- Monitor developments at the US Department of Transportation regarding civil rights, Title VI, and EJ; participate in workshops, conferences, and seminars, as appropriate; and use this knowledge to inform MPO activities
- Support the Community Transit Grant Program solicitation for projects, and help evaluate applicant proposals
- Continue to train staff in Title VI, EJ, ADA, and other nondiscrimination policies as they relate to the MPO's activities
- Explore development of new analytical tools to assist MPO staff with planning and programming decision-making

CHAPTER 6

Boston Region MPO Planning Studies and Technical Analysis

6.1 INTRODUCTION

As described in Chapter 1, each federal fiscal year (FFY), the Boston Region Metropolitan Planning Organization (MPO) receives federal transportation planning funds from Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Combined with the local Massachusetts Department of Transportation (MassDOT) matching amount, these funds form the budget that allows the MPO staff to accomplish the certification requirement activities described in Chapter 5, the planning studies and technical analyses described in this chapter, and the administrative tasks and data management described in Chapter 8.

The work described in this chapter consists of the following:

- New transportation planning studies chosen for funding in this FFY through the committee and public outreach processes described in Chapter 1 (see Section 6.2, Planning Studies)
- Ongoing MPO work programs that provide technical assistance and transportation planning support to municipalities throughout the region (see Section 6.3, Technical Analyses)

Additionally, the MPO member agency, the Metropolitan Area Planning Council (MAPC), conducts planning studies and technical assistance throughout the region under four ongoing work programs each FFY (see Section 6.4, MAPC Planning Studies and Technical Analyses).

Table 6-1 summarizes the salary and overhead costs, status (percent complete by the end of FFY 2017), and completed and planned work products for planning studies started in a previous FFY and continued into FFY 2018. Table 6-2 summarizes the salary and overhead costs in FFY 2017 and FFY 2018, as well as the completed and planned work products for ongoing MPO technical assistance and transportation planning support work.

The project descriptions throughout this chapter describe new transportation planning studies chosen for funding in FFY 2018. They provide detailed updates for the FFY 2018 funding and work products for the MPO's and MAPC's ongoing programs.

[Table 6-1: Discrete Boston Region MPO Planning Studies and Technical Analyses Continued into FFY 2018]

[Table 6-2: FFY 2017/FFY 2018 Ongoing Boston Region MPO Technical Analyses]

6.2 PLANNING STUDIES

The project descriptions in this section describe the new studies chosen by the MPO for funding in FFY 2018. As described in Chapter 1, each year as ideas for new studies are formed, MPO staff classifies them into the following categories: active transportation; land use, environment, and economy; multi-modal mobility; transit; safety and security; and other technical work. Each of the project descriptions on the following pages is preceded by a funding table that shows the project identification number, category, funding sources, and total budget.

Bicycle Level-of-Service Metric

Project ID Number	
Category	Land Use, Environment, and Economy
FHWA 3C PL Funds	\$39,050
FTA Section 5303 Funds	\$15,950
FFY 2018 Total Budget	\$55,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

Currently, there are several new metrics available for measuring the extent to which infrastructure supports bicycle travel and comfort, known as “bicycle level of service.” It has yet to be seen, however, if these metrics are applicable to the Boston region. In this project, MPO staff will formulate a plan for developing and implementing a bicycle level-of-service index. This index could consist of information collected from intersection surveys and bicycle counts, among other possible sources. This information could help transportation planners and government officials make decisions about bicycle programs, including prioritizing projects and allocating funding.

Approach

MPO staff would analyze the potential structure and needs of a bicycle level-of-service index for the region and would produce a white paper elaborating on the results. The steps for formulating a plan include:

1. Researching criteria that already exist and criteria that other entities have applied to specific projects
2. Interviewing local and state entities to determine what data are already available or could be readily obtained
3. Developing a plan to aggregate any data that can be obtained, and refining data collection processes that would be beneficial
4. Determining what criteria are best for evaluating bicycle facilities in the Boston Region MPO area

FFY 2018 Anticipated Outcomes

The anticipated result of this project would be a recommended bicycle level-of-service index that the MPO could implement as part of its planning and monitoring processes in the future. In the long term, MPO staff may seek to create an interactive tool based on this index that could analyze bicycle facilities in the region. This tool would be located in the applications section of the Boston Region MPO's website.

Transportation Mitigation of Major Developments: Review of Strategies

Project ID Number	TBD
Category	Land Use, Environment, and Economy
FHWA 3C PL Funds	\$35,500
FTA Section 5303 Funds	\$14,500
FFY 2018 Total Budget	\$50,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This project will build on the research from the MPO's previous Core Capacity Constraints study. That effort included compiling processes used by the nine studied communities to review proposed developments and mitigate their transportation impacts; this also included documenting specific examples of these communities' experiences with transit mitigation strategies. This project would expand the study area to include the rest of the Boston Region MPO and investigate the other 92 MPO municipalities' experience with transportation mitigation strategies, focusing on what worked and what didn't from recently completed projects.

Approach

MPO staff proposes to identify recent and planned major developments in the MPO municipalities. Staff will meet with representatives from the communities of these selected developments and learn how each community negotiated mitigation measures and funding with each developer, and citing the resultant outcomes of the mitigation.

FFY 2018 Anticipated Outcomes

This project would expand the reach of the Core Capacity Constraints study to include the 92 MPO municipalities not studied in that effort. A report will document the experience and presence of development-related transportation mitigation practices.

Safety and Operations Analysis at Selected Intersections

Project ID Number	M-1
Category	Safety and Mobility
FHWA 3C PL Funds	\$49,700
FTA Section 5303 Funds	\$20,300
FFY 2018 Total Budget	\$70,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This project will examine mobility and safety issues at major intersections on the region's arterial highways. According to the MPO's crash database, many crashes occur at these locations, which also are congested during peak traffic periods. While the resulting congestion may occur only at the intersections, it usually spills over to a few, adjacent intersections along an arterial. These intersections may also accommodate multiple transportation modes including buses, trucks, bicyclists, and pedestrians.

Approach

MPO staff will examine intersection locations based on a review of the MPO's crash database and the MPO Congestion Management Process's travel-time and delay information. MPO staff will recommend safety and operations improvements to enhance the intersections' operations for all transportation modes, including transit, bicycling, and walking, and to enhance the safety of drivers, bicyclists, pedestrians.

Municipalities are receptive to these studies, as they provide an opportunity to review the locations' needs, starting at the conceptual level, before municipalities commit funds for project design. If a project qualifies for federal funds, the study's documentation is also useful to MassDOT.

FFY 2018 Anticipated Outcomes

Selection of intersection locations for study, data collection, technical analysis, development of recommendations for improvements, and creation of presentations and memoranda.

Potential Impacts of Connected and Autonomous Vehicles

Project ID Number	
Category	Multimodal Mobility
FHWA 3C PL Funds	\$35,500
FTA Section 5303 Funds	\$14,500
FFY 2018 Total Budget	\$50,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This project will build on the FY 2017 Planning for Connected and Autonomous Vehicles (CAV) project, which was an important first step to understanding the transportation planning consequences of CAV technologies, as well as the preparation needed by the MPO for their impacts. The rapid pace of changes associated with CAV technology and its accompanying regulatory issues necessitate continual study and attention; hence research is an ongoing effort. Many of the questions posed in the 2017 study remain to be answered, and many new ones will be raised as the Boston Region MPO begins to understand and plan for CAV technologies.

Approach

Based on recommendations and research from the 2017 study, MPO staff proposes to further examine CAV planning tools, such as travel demand modeling, as well as CAV issues related to MPO processes, such as LRTP planning and overall decision-making and evaluation. Staff will continue the ongoing coordination with key stakeholders identified in the previous study. Staff will also organize a workshop in which findings from CAV research will be shared with MPO member communities.

FFY 2018 Anticipated Outcomes

This project would further investigate the research and recommendations from the FY 2017 study. A workshop will be conducted for MPO member communities at which CAV research will be presented. This workshop will also serve as an

opportunity for staff to collect feedback from these stakeholders and understand their concerns regarding CAV issues.

Travel Alternatives to Regional Traffic Bottlenecks

Project ID Number	13278
Category	Capacity Management/Mobility
FHWA 3C PL Funds	\$49,700
FTA Section 5303 Funds	\$20,300
FFY 2018 Total Budget	\$70,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This project will use vehicle probe data to develop an understanding of how regional traffic moves through cities and towns, and explore possible alternatives along key roadways where congestion recurs. This understanding of how regional traffic moves could help communities prioritize needs and potentially shift users to sustainable modes.

This study could also study traffic patterns that do not occur during peak periods or are non-recurring. This could include examining traffic patterns associated with:

- Sporting Events
- Concerts
- Festivals
- Construction
- Inclement Weather
- Holidays

Approach

MPO staff will examine Inrix or like data to determine locations and times of recurring and non-recurring congestion and develop an understanding of how traffic flows in the region after determining these locations, staff would calculate performance measures that can gauge the duration, extent and reliability of congestion at a location.

FFY 2018 Anticipated Outcomes

A study or handbook to provide communities with a way to reduce congestion caused by regional traffic, prioritize their transportation needs, and potentially to shift users to sustainable modes.

Addressing Safety, Mobility, and Access on Subregional Priority Roadways

Project ID Number	13274
Category	Multimodal Mobility
FHWA 3C PL Funds	\$85,200
FTA Section 5303 Funds	\$34,800
FFY 2018 Total Budget	\$120,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

During MPO outreach, Metropolitan Area Planning Council (MAPC) subregional groups identify transportation problems and issues that concern them, often those relating to bottlenecks or lack of safe access to transportation facilities in their areas. These issues can affect livability, quality of life, crash incidence, and air quality along an arterial roadway and its side streets. If problems are not addressed, mobility, access, safety, economic development, and air quality are compromised.

Approach

To address feedback from the MAPC subregional groups, MPO staff will identify priority arterial roadway segments in the MPO region, emphasizing issues identified by the relevant subregional groups, and will develop recommendations. Staff will concentrate on transit service, nonmotorized modes of transportation, and truck activity along these arterial segments. Staff will consider numerous strategies to improve arterials, including examining and evaluating any or all of the following factors:

- Traffic signals (equipment, retiming, redesign, and coordination)
- Bus stop locations
- Processing buses through traffic lights
- Location and management of pedestrian crossings and signals, including

- Americans with Disabilities Act of 1990 (ADA) requirements
- Travel-lane utilization by motorized and bicycle traffic
- Speed-limit assessment
- Access management

These improvements will provide a guide to designing and implementing a Complete Streets corridor, which could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

The Boston Region MPO has conducted Addressing Safety, Mobility, and Access on Subregional Priority Roadways studies as part of the FFY 2013, 2014, 2015, 2016, and 2017 Unified Planning Work Programs (UPWPs).

FFY 2018 Anticipated Outcomes

Anticipated outcomes include data collection, technical analysis, development of recommendations, and documentation for selected corridors.

Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment

Project ID Number	
Category	Multimodal Mobility
FHWA 3C PL Funds	\$85,200
FTA Section 5303 Funds	\$34,800
FFY 2018 Total Budget	\$120,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The purpose of these studies is to develop conceptual design plans that address regional multimodal transportation needs along priority corridors identified in the Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*. These studies include recommendations that address multimodal transportation needs that are expected to arise from potential future developments in the study area.

Approach

The LRTP identified needs for all modes of transportation in the MPO region. These needs guide decision-making about which projects to include in current and future Transportation Improvement Programs (TIPs). Projects that address the region's current mobility needs are those that focus on maintaining and modernizing roadways with high levels of congestion² and safety problems, expanding the quantity and quality of walking and bicycling, and making transit service more efficient and modern. During the past several years, the MPO has conducted these planning studies, and municipalities have been receptive to them.

² Congestion is used as one of the selection criteria for potential study locations. Congested conditions are defined as a travel time index of at least 1.3 (this means that a trip takes 30 percent longer than it would under ideal conditions).

MPO staff would select locations for study with consideration of municipal, subregional, and other public feedback, then would collect data, conduct technical analyses, and develop recommendations for improvements. The recommendations would be forwarded to implementing agencies, which may choose to fund improvements through various federal, state, and local sources, either separately or in combination.

FFY 2018 Anticipated Outcomes

Through these studies, MPO staff would recommend conceptual improvements for one or more corridors, or several small sections within a corridor, that are identified by the Congestion Management Process and the LRTP as being part of the Needs Assessment process.

The studies would provide cities and towns with the opportunity to review the requirements of a specific arterial segment, starting at the conceptual level, before committing design and engineering funds to a project. If the project qualifies for federal funds for construction of the recommended upgrades, the study's documentation also might be useful to the Massachusetts Department of Transportation (MassDOT) and the municipalities.

Low-Cost Improvements to MBTA Service

Project ID Number	
Category	Transit
FHWA 3C PL Funds	\$35,500
FTA Section 5303 Funds	\$14,500
FFY 2018 Total Budget	\$50,000

Purpose

Identify low-cost solutions to specific problems/locations in the transit network.

Approach

Transit agencies experience operational problems that include poor queueing (which negatively affect boarding speeds and dwell times), inefficient loading within vehicles (which affect capacity of trains), and ineffective wayfinding. This study would explore some of these problems and propose possible low-cost solutions to help solve them. Staff will coordinate with the MBTA and MIT, which is conducting a similar effort, to ensure that there is no overlap in our work. We would identify between three-to-five locations where this “friction” occurs, identify low-cost solutions that could be implemented, and suggest processes for implementing the solutions. This study would primarily focus on the MBTA rapid transit system, but could also include the MBTA commuter rail as well as locations within regional transit agency service areas that are in need of improvement.

Anticipated Outcome: The first part of the study would involve a literature review to determine the range of low-cost solutions that exist and which ones would be most appropriate and efficacious to address identified service issues at the chosen locations. The resulting report would also and could recommend an approach to study the after-condition at each location to determine how well the interventions are working.

FFY 2018 Anticipated Outcome:

Identification of low-cost solutions to selected operational transit problems.

First- and Last-Mile Shuttle-Partnership Models

Project ID Number	
Category	Transit
FHWA 3C PL Funds	\$24,850
FTA Section 5303 Funds	\$10,150
FFY 2018 Total Budget	\$35,000

Purpose

The goal of this study is to identify the most promising financially sustainable partnership models for first- and last-mile transit services for the purpose of including these services in the Boston Region MPO's TIP.

Approach

In the current LRTP, the Boston Region MPO envisions first- and last-mile shuttles as a potential solution to some of the region's mobility needs. Future Transportation Improvement Programs will include a first- and last-mile shuttle component of the community transportation, parking, clean air and mobility priority area. In the past few years, the MPO has studied potential locations, routings, and scheduling of first- and last-mile shuttles as part of the Regional Transit Service Planning Assistance program. In previous years, the MPO also ran grant programs, partnering with municipalities and transportation management associations (TMAs), to initiate these types of first- and last-mile transit services. However, there were only a few applicants to those previous grant programs.

There has been little research at the MPO into financially sustainable partnership models for first- and last-mile transit shuttles. This study would investigate these potential partnership models and identify the most promising models to include in the Boston Region MPO's TIP.

FFY 2018 Anticipated Outcome:

Identification of promising partnership models for assessing first- and last-mile transit shuttle services for inclusion in the Boston Region MPO's TIP.

Review of and Guide for Implementing Transit Signal Priority in the MPO Region

Project ID Number	
Category	Transit
FHWA 3C PL Funds	\$46,150
FTA Section 5303 Funds	\$18,850
FFY 2018 Total Budget	\$65,000

Purpose

The goal of this study is to develop a guide for evaluating potential transit priority treatments in the MPO region in order to respond better to requests from municipalities and transit operators seeking analysis and planning assistance for transit priority treatments.

Approach

Municipalities and transit operators in the Boston Region MPO area have started to investigate transit signal priority (TSP) as a method of providing better travel times to public transit riders at individual intersections or along a route or corridor with multiple signalized intersections. There are many types of transit priority signal systems and technologies. In advance of any implementation of a transit signal priority system or technology, municipalities and other agencies that own traffic signal systems would need to coordinate with each other and public transit operators to choose a specific transit signal priority system or set of transit signal priority technologies.

The Central Transportation Planning Staff (CTPS) to the Boston Region MPO proposes to review transit signal priority technologies to understand the capabilities and limitations of current transit signal priority systems, their potential for integration with local traffic signal systems in the MPO region, and their potential for integration with local transit operator vehicle fleets. This study will also investigate the institutional issues for implementing transit signal priority in the region and develop guidance concerning interagency coordination between transit agencies and local transportation, traffic, and/or public works departments

during the planning, implementation, operation, and evaluation phases of a TSP system.

Based on the findings of this review, CTPS will develop a guide for evaluating potential transit priority treatments in the MPO region in order to respond better to requests from municipalities or transit operators seeking analysis and planning assistance for transit priority treatments.

FFY 2018 Anticipated Outcome:

A guide for evaluating and implementing transit signal priority in the MPO region.

MPO Staff-Generated Research Topics

Project ID Number	20901
Category	Other Technical Support
FHWA 3C PL Funds	\$14,200
FTA Section 5303 Funds	\$5,800
FFY 2018 Total Budget	\$20,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This program would support work by MPO staff members on topics that relate to the Boston Region MPO's metropolitan transportation-planning process, that staff members have expressed interest in, and that are not covered by an ongoing UPWP or discrete project.

This program was funded for the first time in FFY 2016, when the work undertaken consisted of investigating the possibility of using driver license acquisition rates obtained through Registry of Motor Vehicles (RMV) data as a possible measure of transit dependence. The thought is that current measures of transit dependence, such as vehicles per household, may not be an accurate measure given the availability of car-sharing services such as Zipcar. This research aims to develop a new measure of transit dependence that could be more accurate and meaningful.

Approach

Interested MPO staff members would complete an application for MPO funding to do independent research on a topic of professional interest and potential use in the metropolitan transportation-planning process. The application would be reviewed by MPO managers and directors.

FFY 2018 Anticipated Outcomes

This research program would produce valuable information for the MPO's consideration and would support staff members' professional development. It would yield highly creative solutions for transportation-planning problems.

6.3 TECHNICAL ANALYSES

The project descriptions in this section consist of ongoing MPO programs that provide technical planning assistance and analysis to cities and towns throughout the region. The major areas of technical analyses include bicycle and pedestrian support, transit service planning, and community-level transportation planning and technical assistance.

Bicycle/Pedestrian Support Activities

Project ID Number	2517
FHWA 3C PL Funds	
FTA Section 5303 Funds	
FFY 2018 Total Budget	

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

MPO staff supports the MPO's and the region's needs for bicycle and pedestrian planning through the ongoing data collection, analysis, and technical assistance in this program.

Approach

In addition to the items listed below, during the federal fiscal year, other bicycle and pedestrian planning studies often are identified collaboratively by MPO members, communities, bicycle and pedestrian advisory groups, and CTPS. Through such studies, MPO staff provides support to communities in creating bicycle and pedestrian improvement projects that can be advanced through the MassDOT Project Development process.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include technical assistance, data collection, analysis, review of materials, and attendance at state, regional, and local forums and committee meetings. Tasks not related directly to separate studies or activities may include the following:

- A review of potential bicycle and pedestrian improvements to ready project recommendations for compliance with the Healthy Transportation Directive
- Coordinate with state agencies, MAPC, other MPOs, the Safe Routes to School Program at MassRIDES, WalkBoston, MassBike, Livable Streets, municipalities, and other groups regarding bicycle and pedestrian planning for the region; possibly to include issues pertaining to bicycle/pedestrian law enforcement and education
- Collect data on bicycle and pedestrian volumes at selected on-road and off- road facilities
- Examine bicycle and pedestrian crash data at the intersection, corridor, and regional level to support development of strategies to address bicycle and pedestrian safety problems
- Provide ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with a particular focus on promoting safety
- Conduct technical analyses to quantify the impacts of proposed bicycle facilities, including air quality improvements, reductions in vehicle-miles traveled, and parking needs
- Conduct analyses to identify critical sidewalk gaps in the region, and possibly provide guidance to communities in accessing available Transportation Alternatives Program (TAP) funding to close gaps on federal-aided roadways
- Examine potential routes, both on-road and off-road, to increase the connectivity of the existing transportation system, including trails, on-road facilities, and public transit, emphasizing connections on the Bay State Greenway, where applicable
- Consider development of future possible strategic bicycle and pedestrian safety plans

Regional Transit Service Planning Technical Support

Project ID Number	4117
FHWA 3C PL Funds	
FTA Section 5303 Funds	
FFY 2018 Total Budget	

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

Through this ongoing program, the MPO provides technical support to regional transit authorities (RTAs). This work is focused on helping subregions expand transit service and reduce single-occupant-vehicle (SOV) travel in the region.

Approach

The MPO's policy is to support transit services and reduce SOV travel in the region. As such, MPO staff provides technical support to RTAs to promote best practices and address issues of ridership, cost-effectiveness, route planning, first- and last-mile strategies, and other service characteristics. The MPO also extends support to TMAs, MAPC subregions, and municipalities seeking to improve the transit services that they operate or fund.

FFY 2018 Anticipated Outcomes

MPO staff will provide technical assistance to RTAs, TMAs, MAPC subregions, and municipalities as described above.

Community Transportation Technical Assistance Program

Project ID Number	2417 MAPC8
FHWA 3C PL Funds	
FTA Section 5303 Funds	
FFY 2018 Total Budget	

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

Through this ongoing program, MPO staff and MAPC provide technical advice to municipalities throughout the region about identified transportation issues of concern.

Approach

Community officials often identify transportation issues of concern about which they would like to have technical advice. In this program, a team of CTPS and MAPC engineers and planners will meet with community officials to learn more about specific problems and provide advice on next steps concerning issues that the community may have identified, such as those related to parking, traffic calming, walking, bicycling, and bus stops. In many cases, there will be a site visit to better understand the potential problem, review existing data, and make suggestions for additional data that may be needed. General types of solutions, along with appropriate follow up and contact information, could be recommended. Descriptions of the various planning processes at MassDOT, the MBTA, the MPO, and MAPC, as well as guidance on how communities can get involved, could also be provided. Technical assistance activities could produce conceptual designs for some project locations. This program is a mechanism for providing quick-response advice to communities for resolving the issues they have identified.

This work will advance the MPO's goals for system preservation, modernization, and efficiency; mobility; and land use and economic development. It will be consistent with the MPO's Congestion Management Process and other staff-identified needs. It also will include a safety component in which staff will respond

to community requests to conduct analyses at crash locations and recommend possible mitigation strategies.

FFY 2018 Anticipated Outcomes

In early FFY 2018 staff will solicit town technical assistance requests. The number of technical assistance cases will depend on the funding amount; and MAPC and CTPS will coordinate and collaborate on a case-by-case basis. Depending on the complexity of the specific technical assistance requests from municipalities, typically three-to-four projects are undertaken by CTPS and MAPC each FFY. MAPC and CTPS will field and prioritize each service request, and expect to spend three-to-four weeks working on the community technical assistance requests that are selected for funding. Professional teams will be dispatched to client municipalities, and memoranda will document the work, recommendations, and outcomes of these consultations.

6.4 MAPC PLANNING STUDIES AND TECHNICAL ANALYSES

MAPC conducts transportation planning studies through four ongoing programs, including Corridor/Subarea Planning Studies, Alternative Mode Planning and Coordination, MetroFuture Implementation, and Land Use Development Project Reviews. Each FFY, some work that was started in previous FFYs is continued through these ongoing programs, and new work also is planned and undertaken.

Corridor/Subarea Planning Studies

Project ID Number	MAPC4
FHWA 3C PL Funds	\$112,180
FTA Section 5303 Funds	\$55,300
FFY 2018 Total Budget	\$167,480

Note: FTA match is provided by MAPC and FHWA funds include the MassDOT local match.

Purpose

This UPWP task includes funding to support MAPC's work on several corridor and subarea studies in the region. Some of these projects will be funded jointly through the UPWP and the District Local Technical Assistance Program.

Approach

This area of work is accomplished through the following subtasks.

Opportunities for and Impediments to Creating Transit-Oriented Development (\$30,000):

MAPC will continue planning work that can support transit-oriented development (TOD). MAPC will use demographic data to identify one existing transit station (subway or commuter rail) or high-volume bus corridor that has the potential to support TOD. MAPC will analyze these sites and identify their development potential, along with impediments to development. Factors that may affect the potential for TOD include existing zoning, inadequate pedestrian connections, outdated parking requirements, existing levels of travel demand management (TDM) implementation, and infrastructure elements. MAPC will offer recommendations about how to improve the site's potential for TOD. Where

applicable, MAPC will conduct a market analysis to determine whether the market can support additional development at the chosen station area or corridor. Where appropriate, MAPC will work with the MBTA, CTPS, MassDOT, the Executive Office of Housing and Economic Development (EOHED), the Division of Capital Asset Management and Maintenance (DCAMM), landowners, and the municipalities in which the stations or corridors are located.

FFY 2018 Anticipated Outcomes Related to TOD

Anticipated outcomes include analysis to identify transit stations or bus corridors with the potential to support TOD, market analysis, mapping and visualization products, demographic and vehicle-miles-traveled data for chosen station areas or corridors, community engagement, recommendations to overcome impediments to TOD, and technical support to municipalities.

Local Parking Management Plans in Selected Communities (\$50,000):

MAPC will work with selected municipalities to develop local parking management plans to provide better parking availability to stimulate local economic prosperity, reduce congestion caused by circling vehicles, and help municipalities plan for greater land use density by decreasing parking ratios. The goal of this work program is to address the problems that municipalities face from not managing their parking supply in commercial and mixed-used areas. This work would benefit local air quality and congestion by managing parking supply and demand and creating places where people can park once and then walk to multiple destinations. In locations where parking requirements can be reduced, the number of households with one or more vehicles could decline, which could result in higher percentages of walking, biking, and transit ridership.

FFY 2018 Anticipated Outcomes Related to Local Parking Management Plans

Activities and expected work products include parking utilization data collection, analysis of data, and recommendations to municipalities in the form of a report with pricing and parking management solutions.

Corridor/Sub-Area Level Transportation and Land Use Planning (\$57,480):

MAPC will work in one selected roadway corridor to coordinate multimodal transportation planning conducted by MassDOT, the Department of Conservation and Recreation (DCR), and/or municipalities with local land use planning to achieve livability and smart growth goals.

Water Transportation Planning (\$30,000):

MAPC will work with municipalities along Boston Harbor and the Mystic River to coordinate water transportation planning, related land use planning, and facilitate coordination with MassDOT, MBTA and Massport.

FFY 2018 Anticipated Outcomes Related to Water Transportation Planning
Activities and expected work products include coordination among stakeholders, recommended services that are sustainable and cost-effective.

Alternative-Mode Planning and Coordination

Project ID Number	MAPC7
FHWA 3C PL Funds	\$126,925
FTA Section 5303 Funds	\$66,577
FFY 2018 Total Budget	\$193,502

Note: FTA match is provided by MAPC and FHWA funds include the MassDOT local match.

Purpose

MAPC provides alternative-mode transportation-planning support to the Boston Region MPO and municipalities that focuses on non-single-occupant vehicle modes. This work benefits bicycle and pedestrian transportation, encourages transit in areas that currently are underserved by existing RTAs, improves the region's understanding of Transportation Network Companies (TNCs), advances electric vehicles, and identifies and supports transportation demand management strategies.

Approach

Autonomous Vehicles, Connected Cars, and TNCs (\$33,502)

MAPC will further the regional and municipal understanding of the potential future impacts of TNCs and autonomous vehicle/connected vehicle (AV/CV) technologies. MAPC staff will work with CTPS to identify how expanded TNC use and movement toward AV/CV technologies may influence future travel behaviors and how these findings can best be incorporated into travel demand and land use modeling as well as long-range transportation and land use plans. Staff will also continue to stay informed of how federal agencies and other states and municipalities are regulating TNCs and preparing for AV/CV technologies.

Suburban Mobility and Technology (\$35,000)

MAPC will work with selected municipalities to advance solutions that apply technology, dynamic ride dispatching, ride-sharing technologies, and public-private partnership funding models to first-mile last-mile connections and other gaps in the transit system.

Bike Share Program Implementation (\$25,000)

MAPC will continue to work with the cities of Boston, Cambridge, and Somerville, and the town of Brookline to implement the regional Hubway Bike Share system, expanding the system within these municipalities and to neighboring cities and towns, including Arlington, Watertown, Newton, Everett, and Chelsea. Seed funding for the program came from the MPO's Clean Air and Mobility Program, a separate FTA Bus Livability award, and local support from the municipalities. In order to implement the system more fully, MAPC will continue to support the municipalities in their planning.

Local Bicycle and Pedestrian Plans and Technical Assistance in Selected Communities (\$30,000)

MAPC will continue to work with selected municipalities to develop local bicycle and pedestrian prioritization plans. MAPC will provide technical support to identify implementable steps that the municipalities, MassDOT, the Massachusetts Department of Conservation and Recreation, and other entities could take to advance bicycle and pedestrian infrastructure in specific locations. MAPC will also provide small-scale technical assistance to municipalities that are seeking support. This work continues the implementation efforts of the MPO's 2007 Regional Bicycle Plan and the 2010 Regional Pedestrian Plan.

Regional Greenway Planning and Mapping (\$70,000)

MAPC will continue to work with MassDOT, CTPS, municipalities, and trail organizations to better develop and implement portions of a regional bicycle and pedestrian network of off-road and on-road connections (a greenway) that form a contiguous system around greater Boston. In 2015, MAPC—working with the above-cited partners—developed the branding of this system, called the LandLine. Trail development is increasingly frequent in most communities in the Boston region. The trails consist of shared-use paths along former railroad rights-of-way, hiking trails through conservation land, and historic corridors that connect points of interest. The binding theme of the proposed and completed corridors is creating attractive places to walk, bike, or otherwise travel through low-traffic or no-traffic green areas. These greenways often are local in nature; however, if all of these separate projects could be connected to form a regional system, a world-class regional network could be created.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include data collection, research and analysis to support completed bicycle and pedestrian plans in selected municipalities, technical support for bicycle and pedestrian improvements, support for regional trail and greenway development, implementation of the regional bike share program, research and recommendations to support first-mile last-mile connections, and

research to understand potential transportation and land use impacts of AV/CV technologies in long-range planning efforts.

MetroFuture Implementation

Project ID Number	MAPC6
FHWA 3C PL Funds	\$59,400
FTA Section 5303 Funds	\$30,600
FFY 2018 Total Budget	\$90,000

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This UPWP study area will continue to support implementation, evaluation, and update of MetroFuture, the Boston Region's 30-year comprehensive plan (through the year 2030) for sustainable growth and development, by increasing community engagement in MAPC's local planning work. Specifically, this task includes an emphasis on engaging diverse groups of stakeholders. It also will identify transportation and land use best practices by evaluating the different approaches and strategies used in MAPC's work, and through case studies of positive models from around the region.

Approach

Building Constituencies for Local Decisions that Enable Livable Communities and Sustainable Transportation

MAPC will continue to work with municipal officials and residents at the local level to seek changes in land use that will support livable communities and sustainable transportation. This will include engaging the public in planning and dialogue that enhances equitable transit-oriented development (eTOD) planning; supports engagement in MPO planning processes; and influences other decision-making to improve development outcomes, transportation opportunities, and reduction of greenhouse gas emissions. As part of the MetroFuture update, MAPC will supplement the civic engagement tasks in developing the land use scenarios for the LRTP. Task outputs are expected to include engagement of at least 500 people in at least ten different events or activities.

Honing MAPC's Practice of Planning for Livable Communities and Sustainable Transportation

MAPC will evaluate the approaches, strategies, and implementation status of its transportation and land use planning work, with particular emphasis on equity.

This may include focusing on strategies to steer investments and development to low-income neighborhoods, working to mitigate and minimize displacement pressures, and expanding senior mobility.

Research and Policy Development that Support Livable Communities and Sustainable Transportation

Best practices and state policy that support sustainable land use planning, which include local and state practices from across the country, provide both ideas and “proof of concept.” MAPC will identify such best practices and employ appropriate means to promote their use in the region. Activities may include researching transportation strategies for senior mobility that are successfully employed in other parts of the country to assess their applicability in Massachusetts. MAPC may also research strategies to improve transportation equity and access for low-income and minority residents.

Updating MetroFuture

This year, MAPC will begin updating MetroFuture. Changing demographics and location preferences, planned investments in public transportation and Complete Streets, and emerging transportation technologies will have a profound impact on our region in the decades ahead. MAPC will finish evaluating the existing plan, while designing a process for the update that takes into account the changing nature of mobility in Metro Boston. The plan update will begin in spring 2018.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include enhanced and expanded engagement in land use and transportation planning processes, including the LRTP and MetroFuture.

Land Use Development Project Reviews

Project ID Number	MAPC5
FHWA 3C PL Funds	\$59,400
FTA Section 5303 Funds	\$29,420
FFY 2018 Total Budget	\$88,820

Note: FTA match provided by MAPC and FHWA funds include the MassDOT local match.

Purpose

This UPWP task supports MAPC's review of potential development projects in the region. In particular, projects will be reviewed for consistency with MetroFuture (the Boston Region's 30-year comprehensive plan for sustainable development), impacts on the transportation network and projects identified in the TIP and LRTP, and for consistency with the MPO's livability goals and the Commonwealth's sustainable-development principles.

Approach

MAPC tracks all projects reviewed in the region under the Massachusetts Environmental Policy Act (MEPA), and provides a regional-planning analysis to the Secretary of Energy and Environmental Affairs for all developments considered to have significant impact. Special attention is given to local zoning ordinances and regulations that serve to reduce auto travel by encouraging carpooling, transit, and other travel demand management techniques. MAPC also will recommend appropriate mitigation measures. MAPC coordinates these reviews with MassDOT, and works with MassDOT to identify updated requirements to be included in the transportation impact assessments that must be conducted by developers.

MAPC also reviews notices of offered railroad property from MassDOT, consults with municipalities as necessary, and provides appropriate input. Often, these notices involve rail trails, but they also may involve other types of proposed developments.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include analysis and reports of MEPA reviews, development of mitigation recommendations, coordination with municipalities and transportation agencies, maintenance and updates of MAPC's development database, and input into the project evaluations for the TIP and LRTP. In addition, MAPC will continue to review and respond to notices of offered railroad property.

CHAPTER 8

Administration, Resource Management, and Support Activities

8.1 INTRODUCTION

In addition to the certification requirements described in Chapter 5, Metropolitan Planning Organization (MPO) staff conducts various ongoing administrative, data resource and other support activities on an annual basis in order to maintain the critical functions of the MPO.

The activities described in this chapter are all funded with federal 3C planning funds and fall into the following categories:

- Activities that support the ongoing function of the MPO: Includes ongoing work to provide materials in accessible formats, and computer resource management, among other activities.
- Activities that assist the MPO and its subcommittees: Includes ongoing work to support the Access Advisory Committee, and MPO agenda setting, as well as coordination and participation in statewide and regional planning committees.
- Activities that offer data resources support to municipalities in the region: Includes work conducted through ongoing roadway safety audit, traffic data support, and transit data support tasks.

Each activity in this chapter includes a description of the purpose of the work, how the work is accomplished, and a summary of the anticipated federal fiscal year (FFY) 2018 work products. The budget tables at the beginning of each project description describe the salary and overhead costs associated with these projects. Any direct costs associated with the projects are included in the Direct Support budget table in this chapter.

Table 8-1 summarizes the funding assigned to each of the activities in this chapter that were also assigned in FFY 2017, a summary of the work products and/or progress made in FFY 2017, the funding proposed for each of these activities in the FFY 2018, and the anticipated work products and/or progress in FFY 2018.

Although many of the activities in this chapter generally comprise the same type of tasks from year to year, often there are variations in budgets that reflect greater or lesser emphasis in certain efforts. For example, MPO staff may

undertake new or additional data collection and/or analysis under specific line items; the tasks undertaken as part of one line item in one year may be folded into an ongoing activity in a subsequent year; or, there simply may be fluctuations in staffing levels. Where appropriate, these differences are explained in the table.

[Table 8-1: FFY 2017/FFY 2018 Ongoing Administration, Resource Management, and Support Activities]

8.2 CTPS ACTIVITIES

This section provides details on the administration, resource management, and support activities undertaken by CTPS every FFY.

Computer Resource Management

Project ID Number	See Individual Tasks Below
FHWA 3C PL Funds	\$292,357
FTA Section 5303 Funds	\$119,413
FFY 2018 Total Budget	\$411,770

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

In order to fulfill the Boston Region Metropolitan Planning Organization (MPO) functions, the Central Transportation Planning Staff (CTPS) to the MPO maintains state-of-the-practice computer resources.

Approach

The following subtasks are undertaken as part of computer resource management:

6217 System Administration and Computer Room Management

Manage and maintain hardware and software for all CTPS computer systems to ensure that staff has maximum access to the computing resources required for its work, including an intranet site. Increased emphasis will be given to the security and integrity of all hardware, software, and data resources. Plan, monitor, and maintain CTPS's server room and computing facilities.

6317 Boston Region MPO Website

Develop and maintain a website that provides information regarding the MPO's activities and reports, studies produced by MPO staff, a data catalogue, and several interactive mapping applications. Continue to improve the site's design, content, and accessibility of this communications tool to those who are visually impaired. The website plays a critical role in the MPO's public participation program by providing information and eliciting public comment. All announcements for MPO and Regional Transportation Advisory Council (the

Advisory Council) meetings and committee meetings, as well as their related materials, are posted on the website.

6417 Software Development

Develop computer software to support CTPS's analytical, administrative, and documentation requirements. Maintain and enhance software developed by CTPS and/or others when program maintenance is no longer available from the original vendor.

6317 Staff Assistance and Training

Assist staff in using computer resources; organize and distribute vendor-supplied documentation, and, where appropriate, provide written and online user guides for particular resources.

6617 Liaison with Other Agencies

Work with other public agencies, including the Metropolitan Area Planning Council (MAPC) and the Commonwealth's Office of Geographic Information (MassGIS), to encourage sharing of computer and data resources and techniques.

6717 Computing Resource Purchasing and Maintenance

Purchase and maintain CTPS's computing resources. These include in-house assets such as servers, desktop and laptop computers, tablet and handheld computers, mass-storage devices, networking and communications hardware, printers and plotters, system and application software, and consumable supplies. These also include out-of-house resources, such as software purchased as a service, cloud-based storage, and other cloud-based computing resources.

6817 Computer Resource Planning

Update the CTPS Five-Year Plan for Computer Resource Development in conjunction with developing the next CTPS budget.

FFY 2018 Anticipated Outcomes

Work on these tasks will continue as described above.

Data Resources Management

Project ID Number	See Individual Tasks Below
FHWA 3C PL Funds	\$147,116
FTA Section 5303 Funds	\$60,090
FFY 2018 Total Budget	\$207,206

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

CTPS provides travel data and analyses at regional, corridor, and site-specific levels to support transportation planning and decision-making in the Boston Region MPO area.

Approach

The categories below comprise the variety of tasks encompassed by this work:

5217 Socioeconomic Data

CTPS will maintain and keep current its database of statistics from the US Census Bureau's decennial Census and American Community Survey, and products derived from these sources.

5317, 5417 Response to Data Requests

CTPS will process or analyze data upon request to meet the needs of local, state, and federal agencies, as well as private institutions and firms. The 5317 project number is used for data requests handled by CTPS's Information Technology and Systems (IT&S) group; the 5417 number is used for data requests handled by all other groups.

5517 Geographic Information System/Database Management System (GIS/DBMS)

CTPS will continue to develop and enhance its GIS database. CTPS will coordinate data development and distribution with MassDOT and MassGIS in order to prevent duplication of effort, ensure quality, and reduce costs. CTPS's GIS database will be made available to staff through ArcSDE, ArcMap layer files, web services, and web applications.

FFY 2018 Anticipated Outcomes

Databases of standard reference GIS data, socioeconomic data, Registry of Motor Vehicles (RMV) data, and travel data; GIS processing tools; tabular and spatial data analyses; web service and web applications; responses to data requests.

Direct Support

Project ID Number	Varies
FHWA 3C PL Funds	\$60,000
FTA Section 5303 Funds	\$23,000
SPR Funds	\$12,500
MassDOT Section 5303 Funds	\$5,500
MassDOT Other Funds	n/a
MBTA Funds	\$850
Massport Funds	\$500
FFY 2018 Total Budget	\$102,350

Note: FTA and FHWA funds include the MassDOT local match.
SPR = State Planning and Research Contract with MassDOT.

Purpose

Through this activity, CTPS provides integral direct support for all CTPS projects and functions.

Approach

Computer Equipment

CTPS computer needs are programmed in the CTPS Five-Year Plan for Computer Resource Development, as amended.

Consultants

Consultants are hired periodically to perform specialized, time-specific tasks as project work demands.

Printing

Project-specific printing costs, such as those for surveys, maps, reports, presentation boards, and other informational materials, are included in this budget.

Travel

Periodically, the US Department of Transportation and other organizations sponsor courses and seminars that enhance staff's ability to do project work; the costs of registration, travel, and lodging associated with attending such programs are direct-support expenditures. Mileage, tolls, and parking expenses associated with project work also are charged as direct-support expenditures. Additional project work, such as high-occupancy-vehicle (HOV) lane monitoring, is funded through this budget to cover rental vehicles and fuel costs.

Other

Various other expenditures may become necessary during the term of this Unified Planning Work Program (UPWP). Costs associated with postage for return mail, services for preparing and processing data for specific projects, and translations of MPO materials into other languages are direct-support expenditures. Other nonrecurring costs, such as software for specific project work, video-camera equipment for license-plate surveys, or traffic-counting equipment, also may be funded through this line item.

FFY 2018 Anticipated Outcomes

Direct costs include computer and general office equipment, professional consulting services, in-state project-related travel, out-of-state travel associated with staff attendance at professional and training conferences, and other costs deemed appropriate.

Access Advisory Committee Support

Project ID Number	9418
FHWA 3C PL Funds	\$-
FTA Section 5303 Funds	\$97,837
FFY 2018 Total Budget	\$97,837

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

MPO staff supports the Massachusetts Bay Transportation Authority (MBTA) in meeting Americans with Disabilities Act of 1990 (ADA) requirements by providing ongoing support to the Access Advisory Committee to the MBTA (AACT), a user group that represents people with disabilities. AACT advises the MBTA on all accessibility matters relating to use of the MBTA's systemwide fixed-route services and THE RIDE, the MBTA's paratransit service for people with disabilities. It also ensures that users' ideas concerning accessible transportation are heard.

Approach

AACT is a member of the MPO's Regional Transportation Advisory Council, and MPO staff solicits input from AACT regarding the transportation-planning process. Staff provides a variety of support services (detailed below).

FFY 2018 Anticipated Outcomes

- Support regularly scheduled AACT membership, AACT executive board, and other related meetings at which attendees advise and comment on projects being planned or implemented throughout the system for fixed-route services, commuter rail, rapid transit, surface transit, and paratransit service
- Distribute monthly reports on systemwide accessibility, THE RIDE's service statistics, and other materials pertinent to AACT meeting agenda items
- Support the AACT chairperson by attending special consultations and other meetings
- Support activities of the AACT executive board of directors

- Maintain awareness of and provide guidance for the AACT Memorandum of Understanding, AACT bylaws, and disability issues in general
- Coordinate AACT elections and other committee activities, as needed
- Prepare and distribute AACT meeting agendas and minutes, meeting announcements, correspondence, meeting calendars to post in THE RIDE vans, and updated AACT informational materials
- Produce and distribute orientation packets for new AACT members
- Track follow up of members' requests for information
- Maintain AACT databases for mailings, attendance log, membership standing, AACT archives, supplies, and accessible-formatting equipment
- Coordinate briefings on MPO activities
- Produce meeting materials in accessible formats for AACT members and members of the public upon request
- Coordinate forums on transit accessibility
- Update the AACT brochure

Provision of Materials in Accessible Formats

Project ID Number	3118
FHWA 3C PL Funds	\$72,458
FTA Section 5303 Funds	\$29,595
FFY 2018 Total Budget	\$102,053

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The purpose of this program is to comply with ADA, Section 508 of the Rehabilitation Act as amended in 1998, and other policies and regulations governing accessibility standards. When the MPO ensures compliance with these policies and regulations, public outreach and engagement is enhanced because more stakeholders in the region can access our informational materials and reports.

Approach

As mentioned above, the MPO conducts its transportation-planning activities and public outreach process in accordance with the ADA, Section 508 of the Rehabilitation Act as amended in 1998, and other policies and regulations governing accessibility standards. In support of these standards, the MPO produces written and electronic materials in accessible formats. In addition to producing these materials, the MPO will continue to maintain a library of templates that incorporate accessibility guidelines and standards.

FFY 2018 Anticipated Outcomes

- Production of materials in accessible formats for public meetings and website postings, as requested
- Ongoing maintenance of accessible document templates
- Development of accessibility guidelines and standards for MPO products

Regional Model Enhancement

Project ID Number	218
FHWA 3C PL Funds	\$548,872
FTA Section 5303 Funds	\$224,187
FFY 2018 Total Budget	\$773,059

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

Through this work program, CTPS builds and maintains a state-of-the-practice regional travel-demand model to help assess the area's transportation needs and evaluate alternatives to improve the transportation system. In effect, the model is a simulation of travel behavior that emulates the millions of travel decisions that produce more than 16 million daily person-trips across the 164 municipalities in the modeled area. Metrics produced by the model are designed to aid in both policy planning and technical analysis, as well as in meeting federal reporting requirements. The model is also used by MPO member transportation agencies because it is an extremely robust tool that incorporates data from all the region's transportation agencies (public transportation) and transportation service providers (private transportation) that are within the Boston Region MPO area.

Approach

During FFY 2017, CTPS continued to maintain the regional model and enhanced it. Maintenance included updating the transit route system from the base year 2012 to 2016. Maintenance also included updates to the highway network to reflect projects completed between 2012 and 2016, including conversion of the toll collection system. In calendar year 2016, MassDOT converted to open road tolling, consequently eliminating all ticket and barrier systems. The tolling system within the model needed to be entirely re-specified and re-programmed. Also, during the past year, the model software vendor (Caliper) updated the software version (TransCAD 6 to TransCAD 7). This meant that revisions were needed to the customized model program (GISDK), which runs the model. These revisions also included developing a scenario manager, which TransCAD 6 could not support, but that TransCAD 7 does support. These revisions improved the model's performance and accuracy.

For enhancements, many customized reports were added to the updates, which improved the model's reporting. Many of these reports focused on transit, with enhanced reporting of transfers within a mode as well as transfers between modes. Another area of substantial enhancement was in air quality analysis. Considerable resources were used to update the interfaces in the model in accordance with Environmental Protection Agency (EPA) mobile emission programs. Another area of enhancement focused on the calculations associated with accessibility to transit, which is a key input to the mode choice program.

After making these maintenance and enhancement changes, the model needed to be re-calibrated. This was done using 2016 ridership information as well as hundreds of new traffic counts.

Other ongoing model activities in FFY 2017 included a continued relationship with the Massachusetts Institute of Technology (MIT), which is building an activity based model (ABM) for the 164-community region. To support this effort, staff shared a considerable amount of model data with MIT. Also, staff collaborated with MAPC to continue refining the CubeLand model continued. During FFY 2017, new data sources from Google and INRIX were used to help with the model calibration process.

Finally, under a separate contract with MassDOT, the statewide model was updated from the 1990 base files to 2016. This statewide model is used to inform the regional model about travel passing through the 164-community regional model, as well as to inform it with travel that begins or ends within the 164-community region, but ends outside of the 164-community region.

FFY 2018 Anticipated Outcomes

MPO staff plans to pursue the following activities associated with the Boston Region MPO's travel demand model:

- Continue to use the 2011 Massachusetts Travel Survey (2011 MTS), the most recent MBTA user surveys, the most recent traffic counts, and the latest MBTA counts to maintain, update, and calibrate the model set.
- Refine the scenario-management program and continue to make the model interface more flexible and powerful.
- Continue to refine linkage between the statewide and CTPS model sets to improve CTPS model with a better way to estimate external-external travel through the region. This linkage will also allow for improvements in forecasting external transit usage (basically, commuter rail trips that begin outside of the MPO's 101 communities, but end within the 101 communities, or more specifically, downtown Boston).

- Use statewide model linkage to enhance the CTPS model by improving the ability to predict and analyze traffic flow with bordering planning agencies, including the Central Massachusetts Regional Planning Commission and the Southeast Regional Planning and Economic Development District.
- Continue to support (by supplying data) the MIT effort to build an ABM for the 164-community region.
- Work toward development of a parking choice model for the Boston core. In the previous fiscal year, a parking inventory was completed for the core. This inventory can be used as the basis for the parking choice model.
- Continue to refine model documentation.
- Continue to provide technical support and training to users of the model.
- Continue to improve linkage between the regional model set and the EPA's Motor Vehicle Emissions Simulator (MOVES) software, which calculates mobile emissions.
- Work toward the development of a dynamic traffic assignment (DTA) model for use in the MPO model set. Current practice suggests that DTA helps planners understand traffic flows at a finer temporal and spatial resolution than other assignment methods.

The activities listed above support projects in this UPWP that rely on the regional model for travel forecasting and analysis, particularly analysis that supports the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP).

Additional regional model enhancement activities may include the following:

- Continue to improve the linkage between the regional travel demand model set and CubeLand, and examine potential for using CubeLand for project-level land use forecasting. MPO staff will coordinate with MAPC and consult with peers and colleagues—including those in other regions—to learn more about best practices and lessons learned based on their experiences with alternative modeling approaches.
- Continue to improve ways to use Google and INRIX travel data in the development and calibration of the regional model.
- Work on ways to improve representation of Transportation Network Companies (TNCs) such as UBER and LYFT in the regional model.
- Massport has recently completed a calendar year 2016 ground access survey. Consequently, the Logan ground access model (funded by Massport) will be re-estimated. The results of this model need to be incorporated into the regional model

- The truck model is in need of an update. During the current work program, methods for updating the model will be examined. The update likely would be a two-step process. Step one will be to use the matrix estimation process and a set of new vehicle classification counts to update the truck trip tables. Step two will be a more comprehensive examination of the truck trip generation and distribution process.
- Continue to work on the park-and-ride station choice model.

Transit Data Support: FFY 2018

Project ID Number	4218
FHWA 3C PL Funds	\$-
FTA Section 5303 Funds	\$15,843
FFY 2018 Total Budget	\$15,843

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The purpose of this program is to provide transit data and small-scale analyses of available data to interested parties, upon request.

Approach

By performing various planning studies for the MBTA and other entities, CTPS has accumulated a large amount of transit ridership, revenue, and service data. This program allows CTPS to provide this data to interested parties throughout the federal fiscal year.

FFY 2018 Anticipated Outcomes

CTPS will respond to requests for data and small-scale studies from agencies, municipalities, members of the public, academic institutions, and other interested parties.

Traffic Data Support: FFY 2018

Project ID Number	2718
FHWA 3C PL Funds	\$10,977
FTA Section 5303 Funds	\$4,483
FFY 2018 Total Budget	\$15,460

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

The purpose of this program is to perform various quick-response data-gathering or data-analysis tasks for public and private institutions throughout the federal fiscal year.

Approach

For the vast majority of requests for transportation planning and traffic engineering analysis, the amount of effort is significant; therefore, a specific scope of work is developed for these projects. Occasionally, public and private institutions and their consultants ask CTPS to perform various quick-response analyses or data. Accounting for these requests, which are expected to require less than two person-days each, is done under this general project description.

FFY 2018 Anticipated Outcomes

Work products will depend on the tasks requested by the MPO agencies, the general public, consultants, or other parties.

Roadway Safety Audits

Project ID Number	2318
FHWA 3C PL Funds	\$15,731
FTA Section 5303 Funds	
FFY 2018 Total Budget	\$15,731

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This program supports CTPS participation in Roadway Safety Audits (RSAs).

Approach

An RSA, as defined by FHWA, is a formal safety performance examination of an existing or future road or intersection by an independent audit team. MassDOT guidelines require an RSA to be conducted where Highway Safety Improvement Program (HSIP)-eligible crash clusters are present. The RSA examines the location to develop both short- and long-term recommendations to improve safety for vehicles, pedestrians, and bicyclists. These recommendations help communities identify safety improvements that can be implemented in the short term, and determine if more substantial improvements also are needed as part of a larger, long-term improvement process.

Audit teams include MassDOT headquarters and district office staff, MassDOT consultants, and CTPS personnel, as requested. In the RSA process, the audit team: 1) reviews available crash data; 2) meets and communicates with local officials, planners, engineers, and other stakeholders; 3) visits the site to observe traffic operations and identify safety issues; and 4) develops and documents recommendations.

FFY 2018 Anticipated Outcomes

The anticipated outcome is participation in audit teams as requested by MassDOT.

8.3 MAPC ACTIVITIES

This section provides details on the administration, resource management, and support activities undertaken by MAPC every FFY.

MPO/MAPC Liaison and Support Activities

Project ID Number	MAPC1
FHWA 3C PL Funds	\$112,000
FTA Section 5303 Funds	\$48,000
FFY 2018 Total Budget	\$160,000

Note: FTA funds include a local match from MAPC and FHWA funds include the MassDOT local match.

Purpose

This project includes working with MPO members and staff to establish work priorities, and meeting agendas. It also includes implement the 3C process and engagement in regional transportation planning lead by MassDOT, the MBTA, or municipalities in the region. Additionally, it includes reporting to the MAPC executive committee, MAPC council members, MAPC subregions, and MAPC staff on MPO activities to ensure strong coordination of land use and transportation planning across the region.

Approach

Statewide and Regional Planning Committees (\$70,000)

MAPC actively participates in and attends statewide and regional planning committees, task forces, and boards to represent the interests of the region, with a particular focus on the critical links between land use and transportation. These committees include the Massachusetts Association of Regional Planning Agencies (MARPA), Regional Coordination Councils, and MassDOT and MBTA board meetings, as well as various MassDOT, MBTA, or municipally led transportation planning groups. MAPC will also be actively involved in regional transportation plans and programs related to land use and transportation. Advisory committees may change from year to year as studies are started or completed, but participating in various advisory committees is an ongoing task.

Support of the Public Participation Process for Metropolitan Planning Documents (\$20,000)

MAPC provides education and outreach for a wide variety of transportation-related and land-use-related topics in the region, with emphasis on outreach through the subregions to municipal officials. MAPC also supports CTPS in its outreach to environmental justice and senior populations and to people with disabilities.

MPO Elections (\$5,000)

Working with the MBTA Advisory Board, MAPC will coordinate and implement annual elections for municipal representatives in the MPO.

Performance Based Planning and Programming (PBPP) (\$10,000)

MAPC will support CTPS in developing the PBPP targets and identifying data to measure progress toward meeting targets and objectives.

Long Range Transportation Plan (LRTP) (\$15,000)

MAPC will support CTPS to develop the next LRTP, with focus on scenario planning and public engagement.

Transportation Improvement Program (TIP) Evaluation and Criteria (\$5,000)

MAPC will advise CTPS about the land use and economic-development aspects of the TIP evaluations. MAPC will provide updated TIP criteria and help to implement the comprehensive regional growth plan, MetroFuture. MAPC will research TIP projects and work with municipalities to advance TIP projects.

MPO Agenda Setting and Coordination (\$35,000)

MAPC will work with CTPS and MassDOT to develop MPO meeting agendas and presentations, and participate in MPO processes.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include interagency coordination; work scopes and agendas; participation in advisory and corridor committees; public participation and outreach; reports to the MAPC executive committee, MAPC Council members, MAPC subregions, and MAPC staff; MPO elections; PBPP targets and data; LRTP scenarios; TIP criteria update and project evaluations; and attendance at relevant meetings.

Unified Planning Work Program Support (MAPC)

Project ID Number	MAPC3
FHWA 3C PL Funds	\$7,000
FTA Section 5303 Funds	\$3,000
FFY 2018 Total Budget	\$10,000

Notes: 1) FTA and FHWA funds include the MassDOT local match. 2) FTA match provided by MAPC and FHWA funds include the MassDOT local match.

Purpose

This UPWP task supports MAPC's management and oversight of UPWP-funded planning studies, projects, and programs, including preparing updates and budget information in monthly reports to MassDOT.

Approach

MAPC assists with the annual development of the UPWP and supports, in coordination with MassDOT and CTPS, development of UPWP project ideas and specific work scopes. Through community liaison and subregional support activities, MAPC staff also helps communities identify and develop studies to be included in the UPWP.

FFY 2018 Anticipated Outcomes

MAPC staff will prepare UPWP project listings and monthly reports on UPWP activities. MAPC will assist with annual development of the UPWP and support development of specific project proposals and work scopes. Staff will also provide assistance to communities in identifying and developing studies to be included in the UPWP through community liaison and subregional support activities.

Land Use Data and Forecasts for Transportation Modeling (MAPC)

Project ID Number	MAPC10
FHWA 3C PL Funds	\$61,051
FTA Section 5303 Funds	\$26,400
FFY 2018 Total Budget	\$87,451

Note: FTA and FHWA funds include the MassDOT local match.

Purpose

This program allows MAPC to support the MPO's planning and decision-making by providing CTPS with detailed population, household, employment, and land use data (current conditions and projections) for transportation modeling and project evaluation.

Approach

Regional Population, Household, and Employment Projections: MAPC will collaborate with MassDOT, interested state agencies, RPAs, and other stakeholders to help produce regional socioeconomic projections based on updated information about migration patterns, household formation, economic activity, and development patterns.

Land-Use Allocation Model Development: MAPC will make targeted improvements to the land use allocation model and will use the model to create land use scenarios to be evaluated during development of the LRTP.

Development Database: MAPC will continue to monitor development projects that are being planned across the region and will maintain an up-to-date development database in a new online portal at www.massbuilds.com. MAPC will support CTPS in applying this data for project evaluation or updates to the travel demand model.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include updated population and household projections, an improved land use allocation model, multiple land use alternatives for use in the

L RTP, new data and analysis, documentation, and mapping products to support advanced transportation modeling.

Subregional Support Activities (MAPC)

Project ID Number	MAPC2
FHWA 3C PL Funds	\$139,000
FTA Section 5303 Funds	\$48,000
FFY 2018 Total Budget	\$187,000

Note: FTA match provided by MAPC and FHWA funds include the MassDOT local match.

Purpose

The MAPC region consists of 101 cities and towns. The region is subdivided into eight geographic areas that are represented by subregional councils comprising municipal officials, business leaders, community based organizations, and other local participants. MAPC staff planners are assigned as coordinators to each of the subregional groups to assist members in developing an understanding of subregional and regional transportation and land use issues.

Approach

Subregions jointly identify and review the transportation priorities in their areas and recommend subregional projects and priorities for the TIP, LRTP, UPWP, and MBTA's Focus 40 long-range planning.

Subregional coordinators and MAPC transportation staff report back to the MPO through formal and informal communications. MAPC subregional groups will continue to participate in local corridor advisory committees whenever these committees are appropriate vehicles for working on projects in their areas. The subregions will continue to advance Priority Development Area and Priority Preservation Area planning and mapping activities, planning for first-mile last-mile connections to transit, and engagement in the MPOs Performance Based Planning and Programming initiative and development of the next LRTP.

MAPC staff ensures timely discussions of transportation-related issues by placing the topics on meeting agendas, leading and participating in the discussions, and distributing appropriate documents and notices relating to region- and statewide transportation meetings.

FFY 2018 Anticipated Outcomes

Anticipated outcomes include preparation of monthly meeting agendas for transportation topics at subregional meetings, coordination with transportation agencies, reviews of transportation studies in subregions, support for subregional and corridor advisory committee meetings, public comment and input on MPO process and certification documents, and assistance in setting subregional transportation priorities. This project supports community involvement in the development of transportation-planning documents.