

Unified Planning Work Program

Federal Fiscal Year 2014

Boston Region Metropolitan
Planning Organization

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Boston Region Metropolitan Planning Organization Staff

Directed by the Boston Region
Metropolitan Planning Organization,
which is composed of the:

Massachusetts Department of Transportation
Metropolitan Area Planning Council
MBTA Advisory Board
Massachusetts Bay Transportation Authority
Regional Transportation Advisory Council
City of Boston
City of Beverly
City of Everett
City of Newton
City of Somerville
City of Woburn
Town of Arlington
Town of Bedford
Town of Braintree
Town of Framingham
Town of Lexington
Town of Medway
Town of Norwood
Federal Highway Administration (nonvoting)
Federal Transit Administration (nonvoting)

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Executive Summary

This Unified Planning Work Program (UPWP) contains information about surface-transportation planning projects that will be conducted in the Boston metropolitan region during the period of October 1, 2013, through September 30, 2014 (federal fiscal year 2014). The UPWP is an essential transportation-planning tool for the region and often a first step in determining whether or not a project will be implemented. It is integrally related to other planning initiatives conducted by the Boston Region Metropolitan Planning Organization (MPO), as well as by the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport).

The projects in this UPWP will be funded from federal, state, and local sources. This UPWP has been prepared in accordance with the provisions of the “Moving Ahead for Progress in the 21st Century Act” (MAP-21) and with Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) grant application requirements and planning emphasis areas (planning factors and national goals) and guidance. This UPWP contains 79 projects, of which 63 will be carried out by the Central Transportation Planning Staff (CTPS) and the Metropolitan Area Planning Council (MAPC) on behalf of the MPO, MassDOT, the MBTA and Massport. The remaining 16 projects will be carried out by individual transportation agencies, municipalities, and academic institutions, two of which also include MAPC participation.

The majority of the FFY 2014 UPWP projects have been ongoing since FFY 2013 (or earlier). However, there are several new projects. Those to be undertaken on behalf of the MPO are:

- Addressing Safety, Mobility, & Access on Subregional-Priority Roadways – FFY 2014 (page 6-5)
- Environmental Justice and Title VI Analysis Methodology Review (page 7-8)
- Greenhouse Gas Reduction Strategy Cost-Effectiveness Analysis (page 7-11)
- Identifying Areas with Mode-Shift Opportunities (Page 7-13)

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- Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes (Page 6-17)
- Pedestrian Signal Phasing Study (Page 7-29)
- Priority Corridors for LRTP Needs Assessment – FFY 2014 (Page 6-22)
- TIP Project Impact Before-After Evaluations – FFY 2014 (Page 7-32)
- Traffic Signal Retiming Program (Page 6-28)
- Transportation Investments for Economic Development (Page 7-33)

CTPS will also continue to support projects that are being conducted by MassDOT and the MBTA. Examples of these are:

- Green Line Extension: Completion of New Starts Analysis (page 6-13)
- South Coast Commuter Rail FEIR (page 6-26)
- South Station Expansion Project: Support (page 6-27)

The UPWP is intended to serve two purposes. The first is to provide information to government officials, local communities, and the general public about surface-transportation planning projects expected to be undertaken in the Boston region. The second is to provide complete budget information to federal and state officials about the expenditure of federal funds for those projects being carried out by the Boston Region MPO.

The document is structured as follows. Chapter 1 provides general information about the Boston Region MPO, the transportation-planning process, and the sources of funding for UPWP projects. In addition, it explains the MPO's role in programming these funds and the process the MPO followed to select the projects it was responsible for programming in this UPWP. Chapter 1 includes a chart depicting the organizational structure of the MPO and another figure showing the UPWP's relationship to other MPO planning documents, current feasibility studies, and other visioning processes.

Chapter 2 provides a status report on the FFY 2013 UPWP projects that were conducted by CTPS and MAPC. It also includes a list of products for those projects and information on how to obtain copies of reports and certification documents.

Chapter 3 includes an index of the FFY 2014 projects, which are organized by the name of the agency responsible for conducting them.

Chapters 4 through 7 contain project descriptions and detailed budget information for all work being conducted by CTPS and MAPC on behalf of the MPO and for transportation projects being conducted by CTPS on behalf of the individual transportation-planning entities mentioned on page S-1.

Chapter 8 gives budget summaries of the projects included in Chapters 4 through 7 and other information about the federal funding in this UPWP. It is intended to provide federal and state officials with information necessary for funding approval and contract administration.

Appendix A presents brief summaries of project information for other, non-MPO transportation-planning projects that will be conducted in the Boston region. These projects have separate review and approval processes and are outside the purview of the MPO. They are included in the UPWP to provide a more comprehensive picture of what is being planned in the region and to ensure that MPO planning efforts in the region are coordinated with other ongoing work.

Appendix B describes the public participation process used for the development of the Draft UPWP and the public workshops that were held during the Draft UPWP's public review period. It also presents a summary of the written comments about the Draft UPWP that were received during the document's public review period and the MPO's responses to them.

Appendix C contains the documents that were developed by staff to catalog and rate potential UPWP projects. These documents were used by the MPO UPWP Committee and the MPO as a guide in selecting new projects.



The Transportation Planning and Programming Process in the Boston Region MPO Area

This chapter is intended to give the reader an understanding of how the transportation-planning process is conducted in the Boston Region Metropolitan Planning Organization (MPO) area, including the federal requirements that govern the process, the funding sources used to carry it out, and the implementation of the process from conception to completion.

Section 134 of the Federal-Aid Highway Act and Section 5303 of the Federal Transit Act, as amended, require that urbanized areas, to be eligible for federal funds, conduct a continuing, cooperative, and comprehensive transportation-planning process (3C process) resulting in plans and programs consistent with the planning objectives of the metropolitan area.

1.1 THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

The Boston Region MPO area consists of the 101 cities and towns shown on the map that follows the title page of this document. The permanent MPO voting members are the Massachusetts Department of Transportation (MassDOT), the Metropolitan Area Planning Council (MAPC), the Massachusetts Bay Transportation Authority (MBTA), the MBTA Advisory Board, the Massachusetts Port Authority (Massport), the City of Boston, and the Regional Transportation Advisory Council. The current elected MPO voting members and their respective seats are as follows:

- City of Beverly – North Shore Task Force
- City of Everett – At-Large City
- City of Newton – At-Large City
- City of Somerville – Inner Core Committee

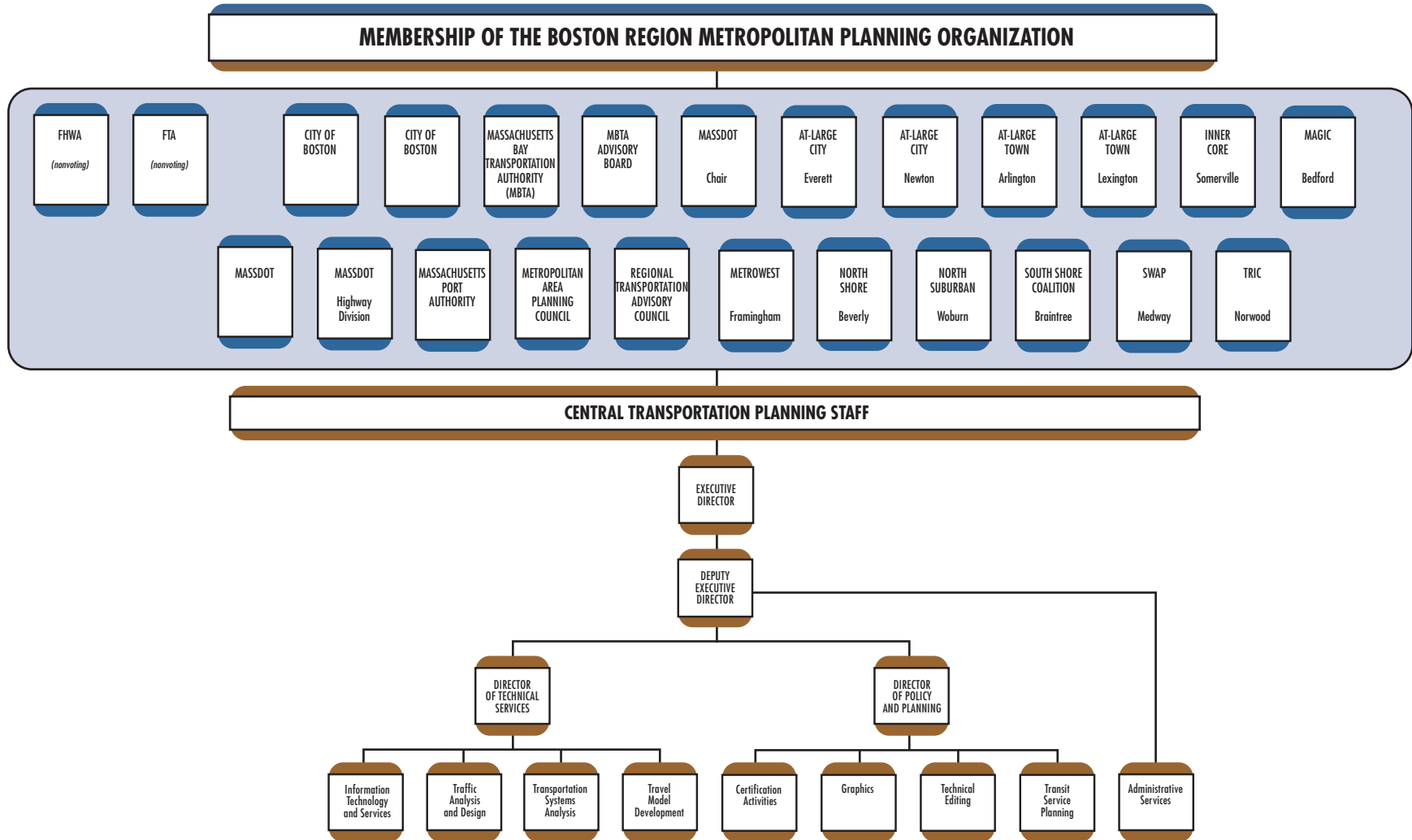
The Transportation Planning and Programming Process

- City of Woburn – North Suburban Planning Council
- Town of Arlington – At-Large Town
- Town of Bedford – Minuteman Advisory Group on Interlocal Coordination
- Town of Braintree – South Shore Coalition
- 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, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) participate in the MPO as advisory (nonvoting) members. Figure 1-1 on the following page shows MPO membership and organization of the Central Transportation Planning Staff (staff to the MPO). Details about MPO voting members are provided below:

- The *Massachusetts Department of Transportation (MassDOT)* was established on November 1, 2009, under Chapter 25 (“An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts”) of the Acts of 2009, which was signed by Governor Deval Patrick in June 2009. Accordingly, MassDOT is a merger of the former Executive Office of Transportation and Public Works (EOT) and its divisions with the former Massachusetts Turnpike Authority, the Massachusetts Highway Department, the Registry of Motor Vehicles, and the Massachusetts Aeronautics Commission. The legislation also established MassDOT’s oversight of the Massachusetts Bay Transportation Authority (MBTA) and of the Commonwealth’s regional transit authorities (RTAs). In addition, it authorized the transfer of ownership of the Tobin Bridge from the Massachusetts Port Authority to MassDOT and the assumption of responsibility by MassDOT for many of the bridges and parkways formerly operated by the Department of Conservation and Recreation (DCR).
- The *MassDOT Highway Division* oversees the roadways, bridges, and tunnels of the former Massachusetts Highway Department and Massachusetts Turnpike Authority and the Tobin Bridge. The Division also oversees many former DCR bridges and parkways.

Figure 1-1: Boston Region Metropolitan Planning Organization – Organization Chart



The Transportation Planning and Programming Process

- The Highway Division is responsible for the design, construction, and maintenance of the Commonwealth's state highways and bridges. The Division is responsible for overseeing traffic safety and engineering activities, including the Highway Operations Control Center, to ensure safe road and travel conditions.
- The *Metropolitan Area Planning Council (MAPC)* is the regional planning agency for the 101 cities and towns in the MAPC/MPO region. It is composed of the chief executive (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 Massachusetts General Laws (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 include responsibilities in the areas of technical assistance to communities, transportation planning, and the development of zoning, land use, demographic, and environmental studies.
- The *Massachusetts Bay Transportation Authority (MBTA)* has the statutory responsibility within its district, under the provisions of Chapter 161A of the MGL, of preparing the engineering and architectural designs for transit development projects, constructing and operating transit development projects, and operating the public transportation system. The MBTA district comprises 175 communities, including all 101 cities and towns of the Boston Region MPO area. A seven-member board of directors was appointed by the Governor to be the governing body of both MassDOT and the MBTA, which is part of MassDOT but retains a separate legal existence. The MBTA provides general transit planning support for projects in this UPWP.
- The *MBTA Advisory Board* was created by the 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 by the chairperson of the board of selectmen. Specific responsibilities of the Advisory Board

include review of and comment on 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 *Massachusetts Port Authority (Massport)* has the statutory responsibility under Chapter 465 of the Acts of 1956, as amended, of planning, constructing, owning, and operating such transportation and related facilities as may be necessary for the development and improvement of commerce in Boston and the surrounding metropolitan area. Massport owns and operates Boston Logan International Airport, Conley Terminal, Cruiseport Boston, Hanscom Field, Worcester Regional Airport, and various maritime/waterfront properties, including parks, in East Boston, South Boston, and Charlestown.
- 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. 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. This procedure was established in the MPO's 2011 Memorandum of Understanding.
- The *Regional Transportation Advisory Council*, the MPO's citizen advisory group, provides the opportunity for transportation-related organizations, agencies, and municipal representatives to become actively involved in the decision-making processes of the MPO in the planning and programming 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.

As noted above, two members participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the Long-Range Transportation Plan (LRTP), the Transportation Improvement Program

(TIP), the UPWP, and other facets of the MPO's planning process to ensure compliance with federal planning and programming requirements:

- The *Federal Highway Administration (FHWA)* and *Federal Transit Administration (FTA)* oversee the highway and transit programs, respectively, of the U.S. Department of Transportation under pertinent legislation and the provisions of Moving Ahead for Progress in the 21st Century Act (MAP-21).

Two other entities assist MPO members in carrying out the responsibilities of the MPO's 3C planning process through policy implementation, technical support, and public participation:

- The *Central Transportation Planning Staff (CTPS)* was created by the MPO to carry out general and 3C transportation-planning activities on behalf of the MPO and to provide agencies with analyses required for the work described in this document and other agency initiatives.

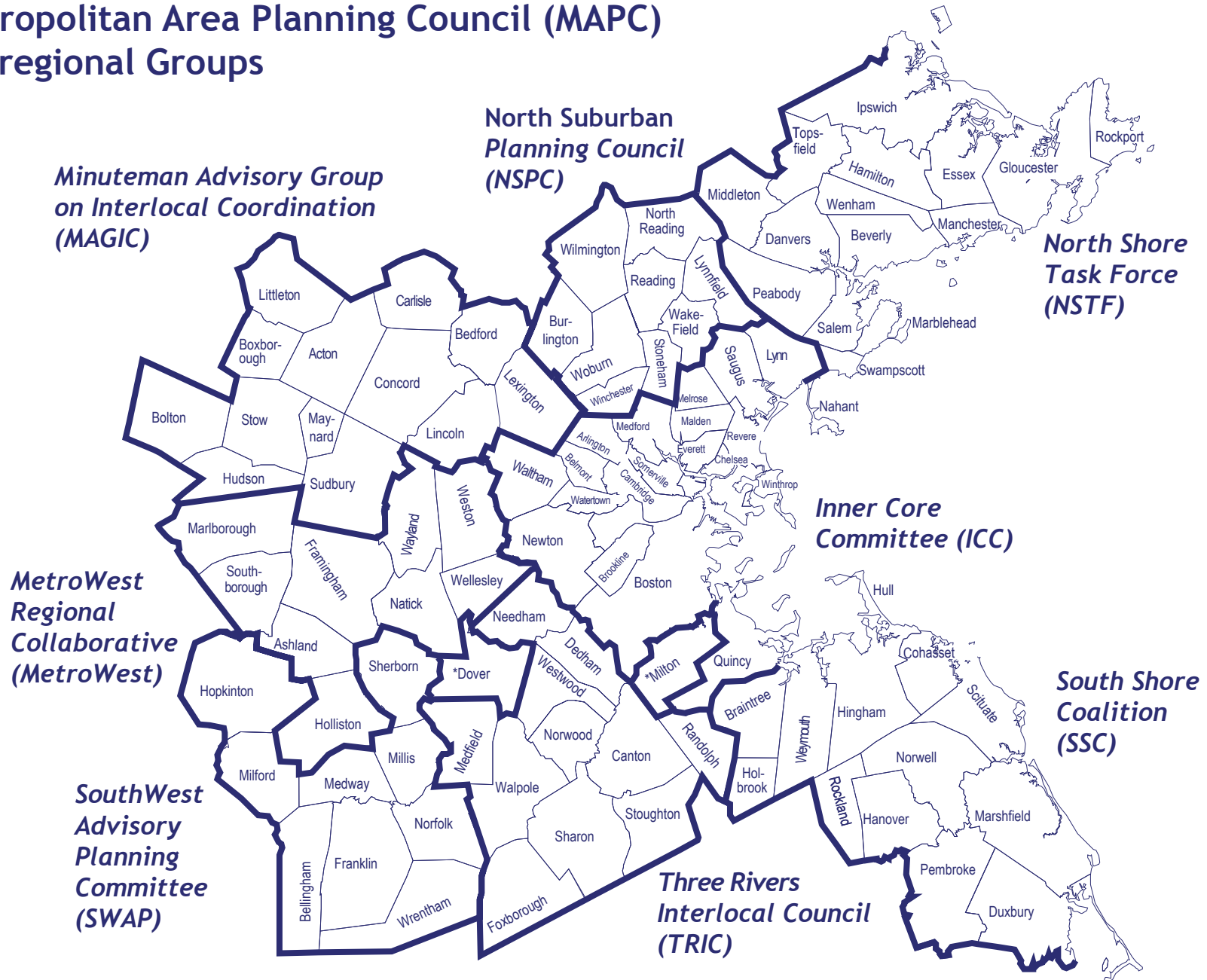
The *MAPC subregional groups* bring together representatives (usually appointed or elected officials or their staff) of the communities within a subregion of the MAPC region to address shared concerns regarding transportation and land use. MAPC has promoted and supported the formation of subregional groups in order to foster better communication and cooperation among communities. They have played an important role in the MPO's participatory process, including the development of TIP and UPWP project priorities. The MAPC subregional groups and their member municipalities are shown in Figure 1-2.

1.2 THE TRANSPORTATION PLANNING PROCESS

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:

- To identify transportation problems and develop possible solutions to them
- To strike a balance between short-range and long-range considerations, so that beneficial incremental actions undertaken now reflect an adequate understanding of probable future consequences and possible future options

**Figure 1-2:
Metropolitan Area Planning Council (MAPC)
Subregional Groups**



*Communities represented by more than one subregional group: Dover is in TRIC and SWAP; Milton is in ICC and TRIC.

- To take into account both regional and local considerations, and both transportation and non-transportation objectives and impacts, in the analysis of project issues
- To assist implementing agencies in putting policy and project decisions into effect in a timely fashion, with adequate consideration of environmental, social, fiscal, and economic impacts and with adequate opportunity for participation by other agencies, local governments, and the public
- To assist implementing agencies in assigning priorities to transportation activities in a manner consistent with the region's needs and resources
- To maintain MPO compliance with the requirements of the Moving Ahead for Progress in the 21st Century Act (MAP-21), the Americans with Disabilities Act (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)

1.3 THE UNIFIED PLANNING WORK PROGRAM

This Unified Planning Work Program (UPWP) contains information about surface-transportation planning projects that will be conducted in the Boston metropolitan region during the period from October 1, 2013, through September 30, 2014 (federal fiscal year 2014). The UPWP is an essential transportation-planning tool for the region and often a first step in determining whether or not a project will be implemented. It is integrally related to other planning initiatives conducted by the Boston Region Metropolitan Planning Organization (MPO), as well as by the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport).

1.3.1 Consistency with Federal Planning Regulations

The Moving Ahead for Progress in the 21st Century Act (MAP-21)

This legislation requires all MPOs to carry out the 3C process (see page 1-1). Activities the MPOs must perform to meet this requirement are:

- Producing the LRTP, the TIP, and the UPWP

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- Conducting an inclusive public participation process
- Maintaining transportation models and data resources to support air quality conformity determinations, as well as long-range and short-range planning work and initiatives

The MAP-21 legislation establishes national goals for federal highway programs. These goals include:

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

MAP-21 also establishes performance-based planning as an integral part of the metropolitan planning process. Performance-based planning and programming refers to practices that apply performance-management principles to transportation system policy and investment decisions. In other words, a system-level, data-driven process is used to make decisions about strategies and investments.¹ MAP-21 requires that each MPO establish performance measures and targets that track

¹ *Performance-Based Planning and Programming*, white paper, Cambridge Systematics, prepared for Federal Highway Administration Office of Planning, Environment and Realty, February 15, 2012.

progress toward attainment of critical outcomes for its region and stipulates that these targets should be coordinated with those of relevant state agencies and public transportation providers to ensure consistency.² Information about the MPO's work with respect to performance measures is detailed in the Long-Range Transportation Plan (page 5-15), the Transportation Improvement Program (page 5-27), and the Congestion Management Process (page 6-8) project descriptions.

Consistency with Other Federal Legislative Requirements

The 1990 Clean Air Act

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 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 the air quality standards in any area.

Transportation control measures (TCMs) identified in the State Implementation Plan (SIP) for the attainment of 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, statewide rideshare regulations, rapid transit and commuter rail extension programs, park-and-ride facilities, residential parking-sticker programs, and the operation of high-occupancy-vehicle lanes. MPO activities related to air quality are detailed in the Air Quality Conformity Determinations (page 5-10) and Air Quality Support Activity (page 5-12) project descriptions.

Non-discrimination Mandates

The Boston Region Metropolitan Planning Organization (MPO) complies with Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act (ADA), and other federal and state non-discrimination statutes and regulations in all programs and activities. The MPO does not discriminate on the basis of race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender,

² "The Development of Performance Measures and Performance-Based Planning," memorandum, Boston Region MPO, March 7, 2013.

sexual orientation, gender identity or expression, or military service. The major federal requirements are discussed below.

Title VI of the 1964 Civil Rights Act

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, 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 Reporting (page 5-14), the MassDOT Title VI Program (page 7-20), and the MBTA 2013-2014 Title VI Program Monitoring (page 7-24) project descriptions.

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 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 the race, color, national origin, and income level of the populations affected by transportation decisions

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- Minimize or mitigate any adverse impact on minority or low-income populations

MPO activities that meet these requirements are discussed in the Transportation Equity/Environmental Justice Support project description on page 5-24.

The Americans with Disabilities Act

Title III of the Americans with Disabilities Act 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. MPO activities that meet these requirements are discussed in Chapter 5.

Executive Order 13330

This executive order, dated February 26, 2004, calls for the establishment of the Interagency Transportation Coordinating Council on Access and Mobility under the aegis of the 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, low-income persons, and older adults. MPO activities related to the above federal requirements are detailed in Chapter 5.

Consistency with Federal Planning Factors and Other Federal Guidance

Federal Planning Factors

MAP-21 maintains the federal planning factors that were included in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). These planning factors are:

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 the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance the 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

These planning factors are reflected in the LRTP visions described on pages 1-19 through 1-21 and were incorporated in the rating of projects for this UPWP. Projects specifically relating to these planning factors are identified in Chapters 4 through 7. A summary of the amount of money being spent for these projects can be found in Chapter 8. Table 1-1 provides a summary of how projects and programs in this UPWP that receive federal formula grant funding to carry out the 3C process address the federal planning factors.

Other Federal Guidance

In addition, this year the FHWA asked MPOs to pay particular attention to the following areas in their UPWPs:

- Addressing the development of performance measures
- Encouraging the assessment of project and program sustainability
- Supporting the efficient movement of goods throughout each region and the Commonwealth
- Engaging Title VI, Environmental Justice (EJ), and Limited English Proficiency (LEP) populations during the transportation planning process
- Providing that at least a third of metropolitan planning funding be spent on activities resulting in tangible products

The MPO has programmed or otherwise incorporated initiatives into the FFY 2014 UPWP in compliance with this federal guidance; these are included in Chapters 5, 6, and 7.

Performance Measures

The process for selecting new projects for the UPWP, which is discussed in detail in Section 1.4.3, “New Study Selection Process,” included an

Table 1-1: UPWP Project and Program Relationship to Federal Planning Factors

* An “X” indicates that a project or program relates to an individual planning factor. Administration and Resource Management projects that receive 3C funding are not listed here; these projects support the ones shown below.

Federal Planning Factor*	3C-funded Certification Requirements												
	3C Planning and MPO Support	Access Advisory Committee Support	Air Quality Conformity Determinations	Air Quality Support Activity	Boston Region MPO Title VI Reporting	Long-Range Transportation Plan	MPO/MAPC Liaison Support Activities	Provision of Materials in Accessible Formats	Regional Model Enhancement	Subregional Support Activities	Transportation Equity/Environmental Justice Support	Transportation Improvement Program	Unified Planning Work Program (CTPS and MAPC)
1 Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	X					X		X		X	X	X	X
2 Increase the safety of the transportation system for all motorized and nonmotorized users.	X					X						X	X
3 Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users.	X					X						X	X
4 Increase accessibility and mobility of people and freight.	X	X			X	X	X	X	X	X	X	X	X
5 Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.	X		X	X	X	X	X	X	X	X	X	X	X
6 Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	X					X			X	X	X	X	X
7 Promote efficient system management and operation.	X					X		X				X	X
8 Emphasize the preservation of the existing transportation system.	X					X						X	X

(cont.)

Table 1-1: UPWP Project and Program Relationship to Federal Planning Factors (cont.)

* An “X” indicates that a project or program relates to an individual planning factor. Administration and Resource Management projects that receive 3C funding are not listed here; these projects support the ones shown below.

Federal Planning Factor*	3C-funded Planning Studies									
	Addressing Safety, Mobility, & Access on Subregional Priority Roadways (Continued from FFY 2013 UPWP)	Addressing Safety, Mobility, & Access on Subregional Priority Roadways – FFY 2014	Bicycle/Pedestrian Support Activities	Congestion Management Process	Corridor/Subarea Planning Studies	Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes	MetroWest RTA Transit Planning Assistance II	Priority Corridors for LRTP Needs Assessment – FFY 2014	Safety and Operations Analyses at Selected Intersections – FFY 2014	Traffic Signal Retiming Program
1 Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	X	X		X		X	X	X		
2 Increase the safety of the transportation system for all motorized and nonmotorized users.	X	X	X	X	X			X	X	
3 Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users.								X	X	
4 Increase accessibility and mobility of people and freight.	X	X	X	X	X	X	X	X	X	X
5 Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.	X	X	X	X	X		X	X		X
6 Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	X	X	X	X			X	X		
7 Promote efficient system management and operation.	X	X		X		X	X	X	X	X
8 Emphasize the preservation of the existing transportation system.	X	X						X		

(cont.)

effort to rate proposed projects against focus areas that highlight the MPO's goals, visions, and policies. These focus areas, which were used to support the development of staff and the MPO's UPWP Committee recommendations for new projects for FFY 2014, included an area titled "Supports Performance-Based Planning." Of the new projects recommended for inclusion in this UPWP, four projects received a "major consideration" rating in this area and another three received a "minor consideration" rating in this area.

There are also several ongoing projects that discuss performance measure-related activities. The Long-Range Transportation Plan description (page 5-15) specifically mentions that "the MPO will develop performance measures and incorporate performance-based planning into LRTP and TIP decision making" and that work products will include "[continuing] to develop performance measures to be used in monitoring the implementation of the LRTP and the TIP." The TIP program description (page 5-27) refers to updates that may be made to the evaluation criteria in response to the development of MPO performance measures.

Sustainability

The focus areas supporting the selection of new projects for FFY 2014 included an area named "Encourage Sustainable Communities and Livability." The focus areas—"Protect Air Quality and Environment," "Increase Transit and Healthy-Transportation Mode Share," and "Link Land Use and Transportation"—support aspects of sustainability. The focus area ratings also reviewed how projects supported the goals and objectives of other state and regional planning activities, such as a GreenDOT and MetroFuture, which include some sustainability concepts. Overall, new projects for FFY 2014 address a range of sustainability principles, including Addressing Safety, Mobility, and Access on Subregional Priority Corridors – FFY 2014 (page 6-5) and Identifying Areas with Mode-Shift Opportunities (page 7-13), in particular.

This UPWP also includes several ongoing projects that address sustainability concepts. For example, Bicycle/Pedestrian Support Activities (page 6-7) and Alternative-Mode Planning and Coordination (page 7-3) support alternatives to motorized transportation modes. Planned activities under MAPC's MetroFuture Engagement (page 6-18) program will include efforts to identify best practices for livable communities and sustainable transportation and to build constituencies at local levels that support these practices.

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The FHWA has recently developed and released the Web-based tool known as the Infrastructure Voluntary Evaluation Sustainability Tool (INVEST). This tool is designed to assess the sustainability of a program or project against best practices relative to sustainability. MPO staff will explore opportunities to apply the INVEST tool and its sustainability criteria in LRTP and TIP updates and in other future transportation studies conducted by MPO staff.

Movement of Goods

The FFY 2014 UPWP includes a Freight Planning Support project, detailed on page 7-10, to support the efficient movement of goods. Freight elements have also been incorporated into *Paths to a Sustainable Region*, the Long-Range Transportation Plan, and freight considerations will be addressed in updates to the plan's needs assessment. Also, the Regional Transportation Advisory Council has an ongoing freight committee supported by the MPO in order to maintain awareness of freight issues and provide input to the MPO on freight-related matters.

Engaging Title VI, Environmental Justice and Limited English Proficiency (LEP) Populations

The MPO's ongoing and continuing projects and programs include elements that address the needs and participation of Title VI, Environmental Justice (EJ), Limited English language Proficiency (LEP), disabled, and elderly populations. The MPO's Transportation Equity/Environmental Justice Support program (page 5-27) is specifically focused on transportation needs of these populations. Other programs, including 3C Planning and MPO Support (page 5-2), Access Advisory Committee Support (page 5-8), and Provision of Materials in Accessible Formats (page 5-19), include activities that support and encourage the participation of these populations in the transportation decision-making process. CTPS also supports Title VI analysis for the MPO, MassDOT, and the MBTA, as described in Chapters 5 and 7. Throughout all of these activities, the MPO works in consultation with MassDOT's Office of Civil Rights.

The focus areas used to rate new discrete projects for the FFY 2014 UPWP included an area called "Consider Transportation Equity and Accessibility." Criteria for this focus area included not only improvements to transportation service and infrastructure serving these populations, but also an element for strengthening the role of these populations in transportation decision making. Of the new projects selected for FFY 2014, Environmental Justice and Title VI Analysis

Methodology Review (page 7-8) particularly addresses the participation and needs of these populations.

Tangible Products of Planning Activities

The MPO meets and exceeds federal guidelines for the expenditure of metropolitan planning funds on tangible products.

1.3.2 Coordination with Other Planning Activities

MPO Long-Range Transportation Plan (LRTP)

The MPO considered the degree to which a proposed UPWP project would further the visions, policies, objectives, and planning emphasis areas of the MPO's long-range transportation plan (LRTP), *Paths to a Sustainable Region*. The LRTP visions include:

1. System Preservation

The regional transportation system will be maintained to a state of good repair and will operate with maximum efficiency. It will be reliable and modern and will provide improved mobility regionwide. Automobile dependency will be reduced, and the transit system will serve more people. Modernization of the existing system will provide access and accessibility throughout for all; additions to the transportation system will also be fully accessible for persons of all abilities.

Efficiencies and operational improvements will come through ongoing system preservation, use of intelligent transportation systems (ITS) and other technologies, management and operations strategies, and a balanced program of strategic investments. Innovative approaches will reduce auto dependency and actively promote other modes of transportation.

Expansion of the system will come through strategic investments.

2. Livability

All residents will have the capability of moving affordably between where they live, work, get services, and play using healthy transportation options that promote a healthy lifestyle. Multimodal transportation will serve business, residential, and mixed-use centers. Transportation investments will focus on existing activity centers, including sites of economic activity and adequate public infrastructure, where density will be encouraged. These centers of community activity will grow in population density and diversity of

The Transportation Planning and Programming Process

uses. This density and mixed-use activity will better support new and increased transit services. Investments in bicycle and pedestrian facilities and in accessibility improvements will support healthy lifestyle choices and increase mobility for everyone, including people with disabilities. Community centers will thrive with the implementation of “complete streets” and context-sensitive design principles; urban design changes in community centers will create more human-scale and aesthetically pleasing community environments. The design of the transportation network will protect cultural, historical, and scenic resources, community cohesiveness, and quality of life.

The transportation network will play its part as a foundation for economic vitality. Energy use will be managed efficiently and alternative energy sources used.

3. Mobility

People in most areas of all corridors in the region will have access to transportation to jobs, education and training, health services, and social and recreational opportunities. This includes persons with disabilities, the elderly, youth, minorities, and persons with low incomes or with limited English proficiency. More communities will have more transportation options, both motorized and nonmotorized. The transportation infrastructure will accommodate freight and commercial activity as well as passenger needs. Freight will be moved efficiently by all freight modes.

The transportation system and services will be reliable. Delays, congestion, and travel time will be reduced. Transit ridership and use of sustainable options will be increased. The system will meet people’s needs; funding decisions will be guided by attention to customer service. Existing transit, bicycle, and pedestrian facilities will be linked in a network.

4. Environment

Human and environmental health will be considered in transportation decision making. With transportation investments targeted to areas of existing development, many greenfields will be preserved, many brownfields will be restored and reused, and water and sewer infrastructure and other utilities will be more cost-effectively maintained. Air quality will be improved as the full range of regulated vehicle emissions (carbon monoxide, nitrogen oxides, volatile organic compounds, and particulates) and carbon dioxide are reduced to required and/or targeted levels. The transportation project design

process will avoid or minimize negative impacts to wetlands, soil, water, and other environmental resources. Context-sensitive design principles will be implemented to protect communities' cultural, historical, and scenic resources, community cohesiveness, quality of life, and aesthetic environments.

5. Transportation Equity

Low-income and minority residents, as well as the elderly, youth, and persons for whom English is a second language (ESL populations), will enjoy, on a level equitable with others, mobility and access to affordable transportation options that connect them with jobs, educational institutions, and services. Environmental burdens from transportation facilities and services (existing and future) will be minimized for these persons; low-income and minority persons will not be inequitably burdened. Expansion projects will address regional needs.

6. Climate Change

The production of greenhouse gas (GHG) emissions by the transportation sector in this region will be reduced to levels that contribute appropriately to the statewide targets set by the Massachusetts Global Warming Solutions Act. The MPO region will have joined with other entities in Massachusetts and the Northeast to slow and perhaps prevent the onset of serious climate change effects. The MPO, in consultation and cooperation with state and federal agencies planning action on GHG reduction, will have adopted GHG reduction goals and taken the steps necessary to meet them. Critical elements of the region's transportation infrastructure that may be vulnerable to the impacts of climate change will have been identified and protected.

7. Safety and Security

All modes of the transportation network, passenger and freight, will provide transportation that is safe, personally and operationally, to the maximum feasible degree. The number and severity of crashes will have been reduced. State-of-the-practice ITS measures and surveillance communication systems will have been deployed on the transit system to minimize vulnerability to security breaches. Transit malfunctions will have been reduced.

Steps will have been taken to protect the viability of transportation infrastructure critical to emergency response and evacuations necessitated by natural hazards and man-made threats.

Work being done to support the LRTP is detailed on page 5-15.

MPO Congestion Management Process (CMP)

The purpose of the CMP is to 1) monitor and analyze the performance of facilities and services; 2) develop strategies for the management of congestion based on the results of monitoring; and 3) move those strategies into the implementation stage by providing decision makers in the region with information and recommendations for the improvement of transportation system performance. The CMP monitors transit, roadway, and park-and-ride facilities in the MPO region for safety, congestion, and mobility and identifies “problem” locations. Projects that help address problems identified in the most recent CMP monitoring were considered for inclusion in this UPWP. Work being done in the FFY 2014 UPWP to support the CMP is detailed on page 6-8.

The MBTA Program for Mass Transportation (PMT)

In 2009, the MBTA adopted its current PMT, which is the MBTA’s long-range capital plan. The PMT was developed with extensive public involvement and was approved by the MBTA Advisory Board. The PMT includes projects currently under study in this UPWP and work included in this UPWP supports the PMT planning process.

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 future, and it was adopted as the future land use scenario for the MPO LRTP, *Paths to a Sustainable Region*. Work being done to support MetroFuture implementation and updates is detailed in the MetroFuture Engagement project description on page 6-18.

youMove Massachusetts and weMove Massachusetts

youMove Massachusetts, a statewide initiative designed as a bottom-up approach to transportation planning, developed 10 core themes derived from a broad-based public participation process that articulated the expressed concerns, needs, and aspirations of Massachusetts residents related to their transportation network. These themes form the basis for the *youMove* Massachusetts Interim Report and were considered in the development of this UPWP.

The *youMove* civic engagement process supports *weMove* Massachusetts (also known as the Massachusetts Multimodal Project), the strategic planning process that constitutes MassDOT's first comprehensive, data-based effort to prioritize transportation investments. The *weMove* Massachusetts process included an outreach effort focused on learning more about the transportation experiences and needs of a focused set of stakeholders, which included Environmental Justice and Title VI populations, while continuing to welcome comments and participation by the public. The results of this process, including themes identified in *weMove* Massachusetts interviews, are documented in the *weMove* Massachusetts Stakeholder Summary Report and were also considered in the development of this UPWP.

GreenDOT and MassDOT's Statewide Mode Shift Goal

GreenDOT, which MassDOT launched in June 2010, is a comprehensive environmental responsibility and sustainability initiative that has three primary objectives: 1) reducing greenhouse gas (GHG) emissions; 2) promoting healthy transportation options of walking, bicycling, and public transit; and 3) supporting smart growth development. GreenDOT applies to MassDOT divisions and contractors, as well as Massachusetts's MPOs and Regional Transportation Authorities (RTAs).

The GreenDOT Implementation Plan serves as the framework for embedding 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. These goals include MassDOT's statewide mode shift goal, which aims to triple the current mode share of bicycling, public transit, and walking each by 2030 and is an important part of MassDOT's strategy to meet the Commonwealth's commitments under the Global Warming Solutions Act. The goals outlined in the GreenDOT Implementation Plan, including the statewide mode shift goal, were considered in the development of this UPWP.

Healthy Transportation Compact

The Healthy Transportation Compact (HTC) is a 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.

The agencies work together to achieve positive health outcomes through the coordination of 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, and the Commissioner of Public Health 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. MPO activities that relate to the Healthy Transportation Compact are discussed in the Livable Community Workshop Program description on page 7-16.

Figure 1-3 shows the relationship of the UPWP to other transportation planning documents, including those described above.

1.4 THE UPWP DEVELOPMENT PROCESS

Each year the MPO considers projects for the annual update of the UPWP through its UPWP Committee, which was established by the MPO. The UPWP documents new projects and projects that are continuing from previous UPWPs, and it provides updates on the MPO's ongoing programs that fulfill the 3C process outlined above.

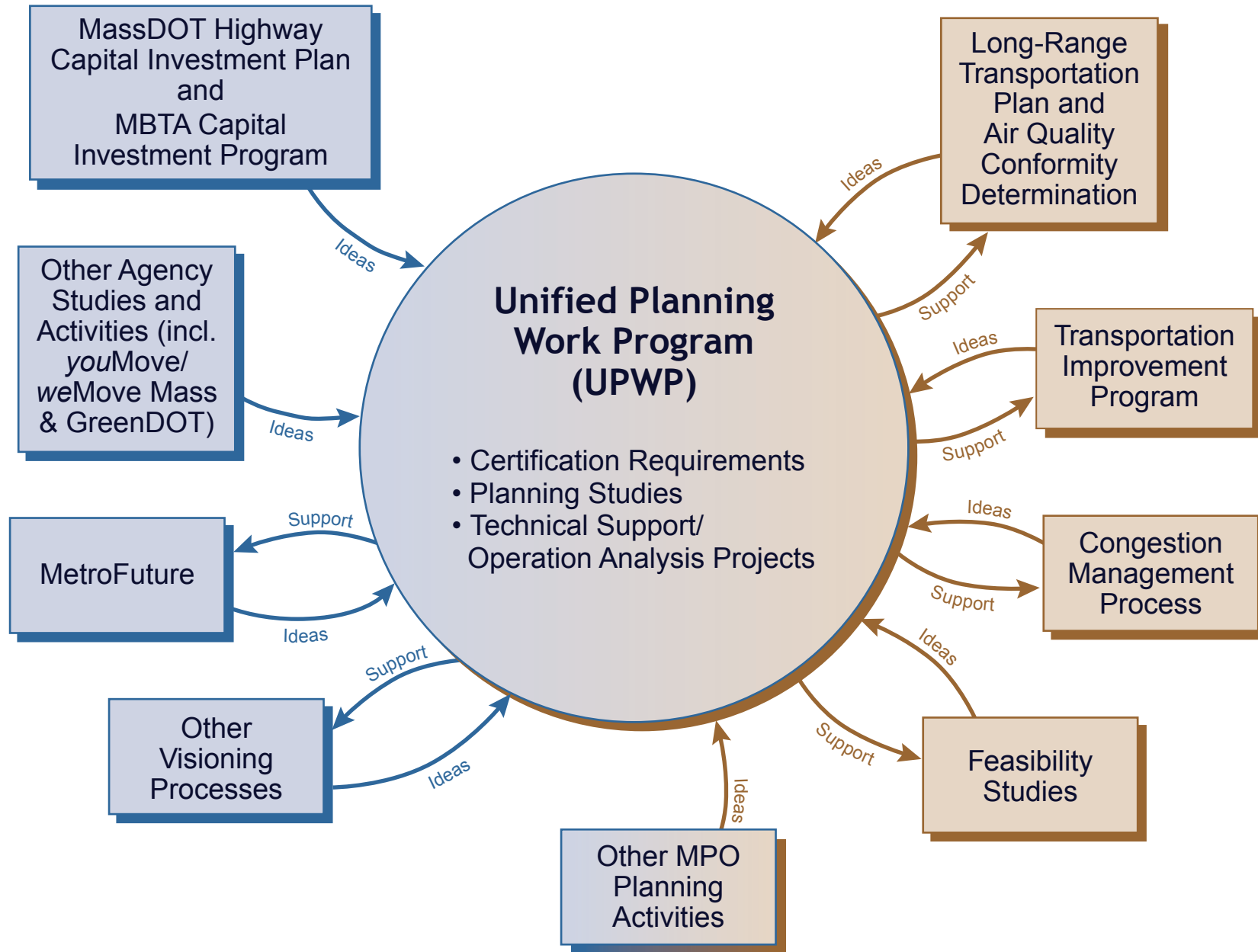
1.4.1 Updates for Ongoing and Continuing Activities

As part of developing the upcoming UPWP, the MPO reviews activities for 1) ongoing projects and programs and 2) discrete (or limited-term) projects and programs that are continuing from previous UPWPs. Collectively, these projects and programs include both 3C-funded activities and projects completed on behalf of transportation agencies that serve the Boston region. As part of this process, the MPO staff identifies continuing activities that will be carried out in FFY 2014 and develops budgets for work to be conducted in FFY 2014.

In addition, MPO staff reviews and revises descriptions of activities to be conducted through the ongoing programs conducted as part of the 3C planning process. If there are changes to the budget of any program as a result of revisions to the planned activities, these are proposed. This annual project 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 projects in the UPWP.

Figure 1-3: Planning Process -

Relationship of UPWP to Other Transportation-Planning Documents



After accounting for 3C-funded continuing and ongoing programs, the remaining funding is available for new projects.

To provide a comprehensive perspective of transportation planning activity occurring in the region, MPO staff members also develop a list of other major transportation planning activities occurring in the Boston region. This list includes projects that may not be funded with MPO funding or supported by MPO staff, but which are being implemented by individual transportation agencies, municipalities, or academic institutions.

Additional information on funding sources for UPWP projects and programs is available in section 1.5: Funding the Projects.

1.4.2 Universe of New UPWP Studies

For the development of new studies for the FFY 2014 UPWP, the MPO drew from the following sources to generate a universe of new study ideas for evaluation by MPO staff and the MPO's UPWP Committee:

1. Existing planning documents: the Congestion Management Process (CMP) reports; the Program for Mass Transportation (PMT), the MBTA's long-range capital plan; *Paths to a Sustainable Region*, the MPO's Long-Range Transportation Plan (LRTP); *youMove Massachusetts* and *weMove Massachusetts* documents; MetroFuture; and recent studies
2. Past guidance received from the Federal Highway Administration and the Federal Transit Administration on addressing planning emphasis areas such as establishing a comprehensive livability program, addressing safety and security issues, and developing performance measures for transportation projects
3. FFY 2013 UPWP comment letters and project proposals
4. Consultations with MassDOT, MAPC, and the MBTA
5. MPO staff-identified needs

MPO staff also requested study suggestions through outreach at MAPC subregional group meetings, at Regional Transportation Advisory Council meetings, and through outreach to the general public at Transportation Improvement Program (TIP)-and UPWP-Building Workshops and at the MPO's "Be Informed, Be Involved" information sessions.

1.4.3 New Study Selection Process

After generating a universe of new study ideas, MPO staff rated each project in 16 focus areas in order to assess what visions, goals, policies, factors, and priorities that study idea would be likely to advance. These focus areas are based on the MPO's visions and policies, national goals and planning factors, federal guidance, and other state and regional priorities, including those outlined in other regional planning documents. These include:

1. Link Land Use and Transportation
2. Work with Limited Financial Resources
3. Use a Management and Operations Approach
4. Protect Air Quality and the Environment
5. Preserve and Maintain the Transportation System
6. Increase Transit and Healthy-Transportation Mode Share
7. Encourage Sustainable Communities and Livability
8. Advance Mobility, Access, and Congestion Reduction
9. Improve System Reliability
10. Increase Transportation Safety and Security
11. Support Economic Vitality
12. Consider Transportation Equity and Accessibility
13. Support MetroFuture Goals
14. Support Goals of PMT, *youMove/weMove* Massachusetts, GreenDOT, and MA Mode Shift
15. Enhance Technical Capacity, Knowledge, and Insights
16. Support Performance-Based Planning

In addition to conducting focus area ratings, MPO staff defined general scopes and estimated costs for study suggestions and considered potential study feasibility issues and consistency with the MPO's policies and priorities. These various factors, along with the availability of funds for new studies, were considered as staff developed a recommended set of new study ideas for review by the UPWP Committee. Study ideas, their estimated costs, their focus area rating results, their relationship to the staff recommendation, and supporting comments are all documented in the FFY 2014 Universe of Proposed New Projects (see Appendix C).

The UPWP Committee met twice to consider and provide guidance on the development process, new study ideas, idea ratings, and the staff recommendation for new projects. During its second meeting, the Committee developed the recommendation for a public review Draft FFY 2014 UPWP. The Committee selected a program of studies that was based on the availability of funding and the factors described above, including planning priorities and state and federal guidelines. The MPO approved the UPWP Committee's recommendations for the public review of Draft FFY 2014 UPWP on May 16, 2013.

1.4.4 Finalizing the UPWP

Descriptive and financial information about ongoing, continuing, and new UPWP projects, along with information about the UPWP development process and other major transportation-planning projects occurring in the region, is incorporated into the public review 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. The public review and comment period lasts 30 days, during which time MPO staff members conduct workshops and make presentations at meetings to discuss and collect feedback on the draft documents. Comments provided through other venues, including the MPO website, are also compiled during this time and presented to the MPO. Information about the public review process for Draft FFY 2014 UPWP is available in Appendix B.

1.5 FUNDING THE PROJECTS

The funding for the projects included in this UPWP (presented in Chapters 4 through 7) 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, as well as the MPO's vote to approve both the UPWP and the subsequent work scopes for the projects included in it. The purview of the MPO is included in each of the funding descriptions.

- *FHWA 3C Planning (PL)/MassDOT Local Match* – These are FHWA planning funds distributed to MassDOT's Office of Transportation Planning (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 2014 3C PL funding allocation for the Boston Region MPO is \$3,566,010

which includes \$713,200 in state matching funds. The MPO votes on both the use of funds and the use of MPO staff for projects in this funding category.

- *FHWA Statewide Planning and Research (SPR)/MassDOT Local Match* – As in the case of 3C PL funds, FHWA provides 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 contains only SPR projects 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 \$498,000 (including \$99,600 in state matching funds) are programmed in this UPWP for projects to be conducted by MPO staff. The MPO's role is to approve the use of MPO staff for projects in this category and to make recommendations on work scopes for implementing them. The MPO's role in these projects is crucial to the 3C process because it provides an opportunity to coordinate projects with other related transportation work efforts that may be planned for the same area.
- *FTA/MassDOT 3C Planning (§5303) and MAPC 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 2014 FTA allocation, including a total local match for FFY 2014, is \$2,137,950. The total amount programmed in this UPWP for projects to be conducted by MPO staff, MassDOT, and MAPC on behalf of the MPO is \$1,825,380. As is the case for FHWA 3C PL funds, the MPO votes on both the use of these funds and the use of MPO staff on projects in this category.
- *MassDOT* – Funds in the amount of \$397,700 for MassDOT projects are included in this UPWP.
- *MBTA* – The MBTA provides \$397,630 in funding for this UPWP for transit projects to be conducted by MPO staff. As is the case of the SPR funds described above, the MPO's role is to approve the use of MPO staff time for these projects and to make recommendations on the work scopes for implementing them.
- *Other* – This UPWP also includes \$15,000 in funding provided by Massport for work being conducted by MPO staff on its behalf.

The MPO's role is to vote on the use of MPO staff time for these projects and to make recommendations on the work scopes for implementing them.

1.6 MONITORING THE PROJECTS

The following procedures for monitoring the projects in this UPWP were approved by the MPO:

- *Project work scopes* supported by federal 3C planning funds must be approved by the MPO prior to the start of any CTPS activity.
- *Monthly progress reports* on all active projects must be submitted to the respective funding agency by CTPS and/or MAPC. The reports must include the following information for each project:
 - Brief narrative describing the work accomplished by task
 - Key personnel attendance at meeting(s) held each week
 - Objectives/planned activities for the next month
 - Percent of work completed by task
 - Some measure of actual resources (hours, funds, etc.) charged to the contract over the past month
 - Comparison of actual cumulative resources expended compared to the contract budget
- *A quarterly report* is presented by CTPS comparing the UPWP project budgets with the actual project spending.
- *MPO approval* for release of a project's work products is based on whether the objectives stated in the work scope were met and whether the stated deliverables were produced.

1.7 AMENDMENTS AND ADMINISTRATIVE MODIFICATIONS TO THE UPWP

Amendments and administrative modifications may be made to the UPWP, when necessary, throughout the year. 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. 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 legal notice or a public review period, although these may be provided at the MPO's discretion.



Status of the Federal Fiscal Year 2013 UPWP Projects Conducted By Boston Region MPO Staff

2.1 INTRODUCTION TO FFY 2013 PROJECTS

During federal fiscal year (FFY) 2013, numerous projects were conducted by the Central Transportation Planning Staff (CTPS) of the Boston Region Metropolitan Planning Organization (MPO) and by the Metropolitan Area Planning Council (MAPC) on behalf of the MPO. For the purpose of reporting here on the status of these projects, they have been divided into three categories:

- *Completed* – These projects are either already completed or expected to be complete by October 1, 2013, when this document goes into effect.
- *Ongoing* – These projects support and continue the transportation planning process from year to year.
- *Continuing Discrete* – These projects are also continuing from FFY 2013 into FFY 2014. However, they are planning studies that have a specific, limited duration, unlike ongoing programs, which are refreshed each federal fiscal year. The projected percentage completed as of October 1, 2013, for each of these projects is included in the project descriptions presented in Chapters 6 and 7.

2.2 FFY 2013 PROJECT AND BUDGET TABLES AND WORK PRODUCTS

This chapter includes four tables that describe the status of FFY 2013 projects. Tables 2-1 through 2-3 group the projects according to the “completed,” “continuing discrete,” and “ongoing” categories described above and provide FFY 2013 budget information. Table 2-4 lists projects that were expected to be completed in FFY 2012 but which

Federal Fiscal Year 2013 UPWP Status Report

actually were completed in FFY 2013. FFY 2012 budgets are provided in this table.

Following these four tables is a listing of MPO work products resulting from FFY 2013 UPWP projects, along with work products from previous fiscal years, where applicable. Information is provided on how to obtain copies of reports approved by the MPO.

Table 2-1: Completed Federal Fiscal Year (FFY) 2013 UPWP Projects with FFY 2013 UPWP Budgets

UPWP Project	FFY 2013 UPWP Project ID	Total FFY 2013 UPWP Budget	FFY 2013 PL Funding	FFY 2013 MPO \$5303 Funding	FFY 2013 SPR Funding	FFY 2013 MassDOT Funding	FFY 2013 MassDOT \$5303 Funding	FFY 2013 MBTA Funding	FFY 2013 Other Funding
2012–13 I-93 North and Southeast Xway HOV Lane Monitoring ¹	23228	\$64,000			\$64,000				
Bicycle Network Evaluation	11247	\$12,200	\$8,540	\$3,660					
Callahan Tunnel Construction Impact Study	22206	\$10,400				\$10,400			
Green Line Extension Study FEIR	22333	\$10,000				\$10,000			
MassDOT Transit Planning Assistance (Contract)	11380	\$251,120					\$251,120		
MBTA 2012 National Transit Database: Directly Operated	14326	\$3,700						\$3,700	
MBTA 2012 National Transit Database: Purchased Bus	14325	\$2,600						\$2,600	
MBTA Neighborhood Maps	14328	\$11,130						\$11,130	
Priority Corridors for LRTP Needs Assessment	13257	\$105,000	\$73,500	\$31,500					
Regional HOV-Lane Systems Planning Study, Phase II	13256	\$60,000	\$36,000	\$24,000					
Roadway Network Inventory for Emergency Needs: A Pilot Study	11144	\$25,000	\$13,610	\$11,390					
SWAP Regional Public Transit Feasibility Study	42313	\$40,000		\$40,000					
Safety and Operations Analyses at Selected Intersections – FFY 2013	13246	\$67,700	\$47,390	\$20,310					
Subtotal for Completed FFY 2013 UPWP Projects		\$662,850	\$179,040	\$130,860	\$64,000	\$20,400	\$251,120	\$17,430	\$0

Note: The label "Contract" has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

¹Activities associated with 2013–14 I-93 North and Southeast Xway HOV Lane Monitoring are described under the MassDOT Statewide Planning Research and Program Support project description (Page 7-19).

FEIR Final Environmental Impact Report. HOV High-Occupancy Vehicle. SWAP SouthWest Advisory Planning Committee.

Table 2-2: Continuing Discrete Federal Fiscal Year (FFY) 2013 UPWP Projects with FFY 2013 UPWP Budgets

UPWP Project	FFY 2013 UPWP Project ID	Total FFY 2013 UPWP Budget	FFY 2013 PL Funding	FFY 2013 MPO §5303 Funding	FFY 2013 SPR Funding	FFY 2013 MassDOT Funding	FFY 2013 MassDOT §5303 Funding	FFY 2013 MBTA Funding	FFY 2013 Other Funding
Accelerated Bridge Program Support (Contract)	13258	\$40,000				\$40,000			
Addressing Safety, Mobility, and Access on Subregional Priority Roadways	13259	\$75,000	\$45,000	\$30,000					
Boston Region MPO Freight Program – MPO Freight Study, Phase II ¹	11145	\$36,400	\$36,400						
Green Line Extension Delay: SIP Mitigation	11377	\$17,000				\$17,000			
Household Survey-Based Travel Profiles and Trends	11146	\$66,700	\$33,350	\$33,350					
I-93/I-95 Interchange, Woburn [listed as Modeling Support: I-93/I-95 Interchange Improvements North of Boston for FFY 2014]	73216	\$52,400				\$52,400			
MassDOT Road Inventory Supplemental Grant [listed as MassDOT Road Inventory Supplemental Grant for FFY 2014]	60616	\$120,000				\$120,000			
MassDOT Statewide Planning & Research Program Support (Contract)	11124	\$332,000			\$332,000				
MassDOT Title VI Program	13151	\$47,000				\$47,000			
Massport Assistance SFY 2012–SFY 2014 [listed as Massport Technical Assistance for SFY 2012–SFY 2014] (Contract)	22124	\$50,000							\$50,000
MBTA 2013 National Transit Database: Directly Operated	14333	\$92,400						\$92,400	
MBTA 2013 National Transit Database: Purchased Bus	14332	\$22,340						\$22,340	
MBTA Bus Service Data Collection Program VIII	11384	\$226,950						\$226,950	
MBTA Rider Oversight Committee Support	14303	\$8,000						\$8,000	

cont.

Table 2-2: Continuing Discrete Federal Fiscal Year (FFY) 2013 UPWP Projects with FFY 2013 UPWP Budgets (cont.)

UPWP Project	FFY 2013 UPWP Project ID	Total FFY 2013 UPWP Budget	FFY 2013 PL Funding	FFY 2013 MPO §5303 Funding	FFY 2013 SPR Funding	FFY 2013 MassDOT Funding	FFY 2013 MassDOT §5303 Funding	FFY 2013 MBTA Funding	FFY 2013 Other Funding
MBTA Title VI Program Monitoring: 2013 [listed as MBTA 2013–2014 Title VI Program Monitoring for FFY 2014]	11385	\$49,000						\$49,000	
MetroWest RTA Transit Planning Assistance II	53312	\$30,000		\$30,000					
Route 79 Interchange, Fall River [listed as Route 79 Transportation Study: Evaluation of Alternatives for FFY 2014]	43213	\$33,700				\$33,700			
South Coast Commuter Rail FEIR	43212	\$10,000				\$10,000			
South Station Expansion Support [listed as South Station Expansion Project: Support for FFY 2014]	12311	\$125,000				\$125,000			
Subtotal for Continuing Discrete FFY 2013 UPWP Projects		\$1,433,890	\$114,750	\$93,350	\$332,000	\$445,100	\$0	\$398,690	\$50,000

Notes: The label "Contract" has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

¹Freight planning and analysis conducted during FFY 2013 has been conducted under the "MPO Freight Study, Phase II (ID 11142)." Freight planning and analysis for FFY 14 will be conducted under the program "Freight Planning Support."

Table 2-3: Ongoing Federal Fiscal Year (FFY) 2013 UPWP Projects with FFY 2013 UPWP Budgets

UPWP Project	FFY 2013 UPWP Project ID	Total FFY 2013 UPWP Budget	FFY 2013 PL Funding	FFY 2013 MPO §5303 Funding	FFY 2013 SPR Funding	FFY 2013 MassDOT Funding	FFY 2013 MassDOT §5303 Funding	FFY 2013 MBTA Funding	FFY 2013 Other Funding
3C Planning and MPO Support ¹	90011-90090	\$725,800	\$508,060	\$217,740					
Air Quality Conformity Determinations	10112	\$12,000	\$8,400	\$3,600					
Air Quality Support Activity ¹	90061	\$40,700	\$28,490	\$12,210					
Alternative-Mode Planning and Coordination	MAPC7	\$170,000	\$113,970	\$56,030					
Bicycle/Pedestrian Support Activities ¹	13208	\$39,000	\$27,300	\$11,700					
Boston Region MPO Livability Program [listed as Livable Community Workshop Program for FFY 2014] ^{1,2}	13801, MAPC8	\$60,600	\$39,900	\$20,700					
Boston Region MPO Title VI Reporting	11355	\$13,000	\$9,100	\$3,900					
Community Transportation Technical Assistance Program ²	13150, MAPC9	\$60,000	\$38,000	\$22,000					
Computer Resource Management ¹	60415-60492	\$365,000	\$255,500	\$109,500					
Congestion Management Process ¹	11138	\$199,500	\$139,650	\$59,850					
Corridor/Subarea Planning Studies & Land Use Reviews [listed as Corridor/Subarea Planning Studies for FFY 2014]	MAPC4	\$180,480	\$107,610	\$72,870					
Data Resources Management ¹	60110-60600	\$350,000	\$245,000	\$105,000					
Direct Support	90000	\$79,200	\$37,500	\$22,500	\$14,000		\$5,000	\$200	
Disability Access Support [listed as Access Advisory Committee Support for FFY 2014] ^{1,3}	90024 & 90028	\$117,300	\$82,110	\$35,190					
Land Use, Demographics, and Climate Change in Transportation Modeling [listed as Land Use, Demographics, and Mode Shift in Transportation for FFY 2014]	MAPC10	\$50,000	\$35,000	\$15,000					
Land Use Development Project Reviews	MAPC5	\$80,000	\$52,800	\$27,200					
Long-Range Transportation Plan ¹	10101	\$180,000	\$126,000	\$54,000					
MPO/MAPC Liaison and Support Activities	MAPC1	\$157,010	\$109,010	\$48,000					

(cont.)

Table 2-3: Ongoing Federal Fiscal Year (FFY) 2013 UPWP Projects with FFY 2013 UPWP Budgets (cont.)

UPWP Project	FFY 2013 UPWP Project ID	Total FFY 2013 UPWP Budget	FFY 2013 PL Funding	FFY 2013 MPO §5303 Funding	FFY 2013 SPR Funding	FFY 2013 MassDOT Funding	FFY 2013 MassDOT §5303 Funding	FFY 2013 MBTA Funding	FFY 2013 Other Funding
Regional Model Enhancement	11244	\$790,000	\$553,000	\$237,000					
Regional Transit Service Planning Technical Support	14327	\$18,000		\$18,000					
Regional Vision Implementation: Metrofuture [listed as MetroFuture Engagement for FFY 2014]	MAPC6	\$95,000	\$62,200	\$32,800					
Subregional Support Activities	MAPC2	\$157,010	\$109,010	\$48,000					
Transportation Equity/Environmental Justice Support	11132	\$88,000	\$61,600	\$26,400					
Transportation Improvement Program	10103	\$160,000	\$112,000	\$48,000					
Travel Data Forecasts	90080	\$5,000	\$3,500	\$1,500					
Travel Operations Analyses	90040	\$8,000	\$5,600	\$2,400					
Unified Planning Work Program [CTPS] ¹	10104	\$94,000	\$65,800	\$28,200					
Unified Planning Work Program [MAPC]	MAPC3	\$10,000	\$7,000	\$3,000					
Subtotal for Ongoing FFY 2013 UPWP Projects		\$3,837,590	\$2,620,300	\$1,198,090	\$14,000	\$0	\$5,000	\$200	\$0
FFY 2013 UPWP Total		\$6,401,340	\$3,236,900	\$1,566,500	\$410,000	\$465,500	\$256,120	\$416,320	\$50,000

¹An administrative modification by the MPO's UPWP Committee on 4/18/2013 increased the 3C Planning and MPO Support budget by \$47,000; the Air Quality Support Activity budget by \$4,700; the Computer Resource Management budget by \$35,000; the Disability Access Support budget by \$30,300; and the Unified Planning Work Program [CTPS] budget by \$14,000. This administrative modification also reduced the Bicycle/Pedestrian Support Activities budget by \$1,000; the Boston Region MPO Livability Program budget by \$15,000; the Congestion Management Process budget by \$10,000; the Data Resources Management budget by \$85,000; and the Long-Range Transportation Plan budget by \$20,000.

²The Livable Communities Workshop Program and the Community Transportation Technical Assistance Program budgets reflect both CTPS and MAPC-managed funding.

³The "Provision of Materials in Accessible Formats" portion of the Disability Access Support Project is listed as an independent project in the FFY 2014 UPWP.

Table 2-4: Federal Fiscal Year (FFY) 2012 UPWP Projects Completed in FFY 2013 with FFY 2012 UPWP Budgets

UPWP Project	FFY 2012 UPWP Project ID	Total FFY 2012 UPWP Budget	FFY 2012 PL Funding	FFY 2012 MPO §5303 Funding	FFY 2012 SPR Funding	FFY 2012 MassDOT Funding	FFY 2012 MassDOT §5303 Funding	FFY 2012 MBTA Funding	FFY 2012 Other Funding
2011–12 I-93 North and Southeast Xway HOV Lane Monitoring	23227	\$65,000			\$65,000				
Analysis of JARC and New Freedom Projects	13152	\$20,000		\$20,000					
Impact of Walking Radius/Transit Frequency and Reliability	11374	\$20,000		\$20,000					
Intercity Bus Study [now named Massachusetts Regional Bus Study]	11375	\$65,000				\$65,000			
MBTA [2012] Title VI Program Monitoring	11381	\$50,000				\$50,000			
MBTA Bus Service Data Collection VII	11369	\$114,000						\$114,000	
MBTA Systemwide Passenger Survey: Comparison of Results	11379	\$30,000		\$30,000					
Priority Corridors for LRTP Needs Assessment [FFY 2012]	12201	\$120,600	\$120,600						
Regional HOV-Lane System Planning Study	13250	\$30,000	\$20,400	\$9,600					
Roundabout Installation Screening Tool	13252	\$700	\$700						
Safe Access to Transit for Pedestrians and Bicyclists	13153	\$36,500	\$8,300	\$28,200					
TIP Project Impacts Before-After Evaluation [FFY 2012]	12202	\$30,000	\$28,500	\$1,500					
Total for FFY 2012 UPWP Projects Completed in FFY 2013		\$581,800	\$178,500	\$109,300	\$65,000	\$115,000	\$0	\$114,000	\$0

HOV High-Occupancy Vehicle. JARC: Job Access and Reverse Commute. TIP Transportation Improvement Program.

2.3 WORK PRODUCTS OF THE FFY 2013 UPWP

Listed below are reports, memoranda, and other MPO work products and activities associated with the projects in the federal fiscal year (FFY) 2013 UPWP. These projects are either complete or expected to be complete by the end of FFY 2013. All certification documents and many other work products are or will be available for downloading from the MPO website, www.bostonmpo.org. Work products not found on the MPO website may be requested by contacting CTPS at 617-973-7100 (voice), 617-973-7089 (TTY), or bostonmpo@ctps.org (email).

This list also contains products that were expected to be complete in FFY 2012 or earlier, but were completed or are expected to be complete in FFY 2013. These products are highlighted with an asterisk (*).

2.3.1 CTPS Work Products

Certification Documents

- Federal Fiscal Years 2013–16 Transportation Improvement Program Amendments and Administrative Modifications
- Federal Fiscal Year 2014 Unified Planning Work Program (UPWP)
- Federal Fiscal Years 2014–17 Transportation Improvement Program and Determination of Air Quality Conformity
- Update to the Public Participation Program of the Boston Region Metropolitan Planning Organization

CTPS Reports

- Carbon Dioxide, Climate Change, and the Boston Region MPO: 2012 Update
- CTPS Travel Demand Model Set Documentation
- Impacts of Walking Radius on Transit Frequency and Reliability*
- Inner-Suburban Mobility Study*
- MBTA Core Services Evaluation Report*
- MPO Freight Study, Phase II

- Priority Corridors for Long-Range Transportation Plan Needs Assessment: Route 30, Framingham
- Priority Corridors for Long-Range Transportation Plan Needs Assessment: Route 2, Concord
- Regional HOV-Lane System Planning Study, Phase II
- Massachusetts Regional Bus Study (previously listed as Intercity Bus Study)
- Route 203 (Gallivan Boulevard and Morton Street): Safety, Mobility, and Access Management

CTPS Technical Memoranda

- 2013 Environmental Justice Outreach in the Transportation Equity Program
- 2012-2013 I-93 North and Southeast Expressway HOV Lane Monitoring – Memoranda for Fall 2012, Winter 2013, Spring 2013, and Summer 2013
- Addressing Safety, Mobility, and Access on Subregional Priority Corridors: Routes 127A/127, Gloucester and Rockport
- Addressing Safety, Mobility, and Access on Subregional Priority Corridors: Route 3A, Cohasset and Scituate
- Bicycle Network Evaluation
- Callahan Tunnel Construction Impact Study
- Community Transportation Technical Assistance Memoranda
- Early Morning Transit Service – Examined demand for and made recommendations regarding additional early-morning MBTA service*
- Estimation of Trip Production and Attraction Models Based on 2010–11 Statewide Household Survey Data
- Estimation of Internal-Internal and Internal-External Trip Distribution Models Based on 2010–11 Statewide Household Survey Data
- Estimation of Mode Choice Models Based on 2010–11 Statewide Household Survey Data
- FFY 2013 Safety and Operations Analysis at Selected Intersections

Boston Region MPO FFY 2014 Unified Planning Work Program

- Job Access and Reverse Commute and New Freedom Federal Grant Program Projects in the Boston Region Metropolitan Planning Organization Area: An Evaluation
- MBTA 2012 Title VI Program Monitoring – Documentation of level-of-service performance for selected services and amenities*
- MBTA 2012 National Transit Database: Directly Operated – Ridership and Passenger-Mile Estimates for Fiscal Year 2012
- MBTA 2012 National Transit Database: Purchased Service – Ridership and Passenger-Mile Estimates for Fiscal Year 2012
- MBTA Systemwide Passenger Survey: Comparison of Results – Compared results of the 2008–09 surveys with the corresponding results from previous surveys on all MBTA modes*
- MetroWest RTA Transit Planning Assistance – Technical assistance to the MetroWest RTA
- Proposed New Criteria for MPO Evaluation of Job Access Reverse Commute and New Freedom Grant Proposals
- Review of the TIP Project Evaluation Criteria, December 20, 2012, updated January 10, 2013
- Route 114 in Danvers, Interstate 95 to the Peabody City Line Safety, Operations, and Access Management Study*
- Roundabout Installation Screening Tool*
- Safe Access to Transit Memoranda
- Screening Regional Express Highways for Possible Preferential Lane Implementation*
- SouthWest Advisory Planning Committee (SWAP) Regional Public Transit Feasibility Study – Identified areas with potential for transit and made recommendations regarding service and service connections that could be implemented in the SWAP Subregion*
- The Development of Performance Measures and Performance-Based Planning
- Title VI and Environmental Justice Demographic Profiles of the Region
- TIP Project Impacts Before-After Evaluation – FFY 2012*

Other CTPS Work Products and Activities

- 2012 Title VI Annual Update to the Massachusetts Department of Transportation.
- Access Advisory Committee to the MBTA (AACT) Support – Materials, coordination, and administrative support for the Access Advisory Committee to the MBTA. Support includes meeting agendas, notices, minutes, correspondence, mailing lists, databases, meeting scheduling and planning, and services for the AACT Executive Board. Accessibility checklist for MPO meetings and distribution to other entities to facilitate compliance with ADA requirements. Updated AACT Brochure.
- Accessible formatting of the *Paths to a Sustainable Region* transportation plan, the Transportation Improvement Program and amendments, the Unified Planning Work Program, and meeting agendas, minutes and materials for the MPO, the Regional Transportation Advisory Council, the Access Advisory Committee to the MBTA (AACT), and other materials on request.
- Accessibility Initiatives – Development and implementation of procedures to ensure that the needs of people with disabilities are accommodated so that they can participate in the MPO’s transportation planning and decision-making processes. Work includes documenting internal accessibility policies and procedures; developing document-production standards and templates that allow materials to be easily translated into paper or electronic formats that are accessible to people with limited vision; redesigning the MPO website to simplify its appearance, incorporate accessibility features, and make it easier for people of all abilities to navigate; creating a meeting checklist to ensure that all meeting locations are free of physical barriers for people with limited mobility; and training staff to raise awareness of why accessibility is important and how it can be achieved.
- Air Quality Support Activity – Management of the MPO’s Climate Change forum. Coordination and inputs related to the implementation of GreenDOT and the Global Warming Solutions Act. Development of Motor Vehicle Emission Simulator (MOVES) emission factors. Preliminary work pursuing the pilot program Travel Efficiency Assessment Method (TEAMS) in conjunction with MassDOT.

Boston Region MPO FFY 2014 Unified Planning Work Program

- All-Hazards Planning – Participation at regional meetings at which planning for emergency preparedness and response was conducted.
- Clean Air and Mobility Program – Project tracking and reporting for TIP programming.
- Computer Resources Management – Maintenance and enhancements of CTPS’s desktop and server computer systems, computer network, and peripheral devices such as printers, plotters, and mass-storage devices.
- Community Transportation Technical Assistance Program – Site visits to municipalities, consultations, recommendations for improvements, and reporting.
- Congestion Mitigation and Air Quality Program analyses.
- Congestion Management Process – Bicycle parking data collection and documentation, documentation of park-and-ride lots, research into electronic travel time data, and establishing an intersection improvements program.
- Data Resources Management – Maintenance and enhancement of CTPS’s database of standard reference geographic information system (GIS) layers and GIS layers required to carry out particular projects. Database updates with new versions of standard reference GIS layers as released by MassGIS, the MassDOT Office of Transportation Planning, and other agencies.
- Development of Performance Measures and Performance-Based Planning Process – Development of staff recommendation for performance measures and performance-based planning process; coordination with MPO Performance Measures Committee.
- Emergency Evacuation and Hazard Mitigation Mapping – Maps depicting the Boston region transportation network with projects programmed in, or proposed for, the FFY 2013 element of the TIP and programmed in the Long-Range Transportation Plan, maps showing the proximity of transportation projects (and in secure layers, emergency traffic-control points) to natural hazard zones, and a matrix providing information indicating if proposed TIP projects are in such zones or if they provide emergency management benefits. Updated mapping of these areas and related transportation and other critical infrastructure, such as potential dam inundation areas, MBTA bridges and signals. A Web tool to make the mapping available online, with some secure

information accessible only to those with special security clearance and some information open to the public. Update to the web tool to display information about traffic signals along emergency evacuation routes in Boston and the immediately surrounding communities. Data collection and mapping of condition of critical infrastructure on evacuation routes.

- Expansion of existing origin-destination model developed by CTPS to create transit trip tables using automated fare collection (AFC) data.
- Ferry Compact Technical Assistance – Technical assistance to the newly established Massachusetts Ferry Transportation Compact.
- GIS maps, computer map files, databases, and data analyses.
- Green Line Extension Delay: SIP Mitigation – Database of solicited interim mitigation measure ideas, including a preliminary evaluation of key metrics and accompanying memorandum.
- Green Line Extension Project: Support to MassDOT and the MBTA on the Green Line Extension FTA New Starts application. Memoranda documenting the model methodology and base year model calibration.
- Ground transportation analysis in support of Massport – Memoranda documenting the Logan passenger forecasts, for the Remote Parking study.
- Household-Survey Based Profiles and Trends – Maps and tables showing trends between the 2011 and earlier household-survey. A profile of characteristics of 2011 survey participants.
- I-93/I-95 Interchange Improvements (Woburn) Modeling Support – Memorandum documenting the license plate survey.
- Job Access and Reverse Commute Program and New Freedom Program solicitation notices, evaluations, and recommendations. Support for MassDOT Division of Rail and Transit program solicitation and application process.
- Livable Community Workshop program – Updated Web-based data and maps for the MPO's livability index. Livable Community Workshops and Walkable Community Workshops in MPO municipalities including research, site visits, and preparation of materials and memoranda to support and document workshop discussions.

Boston Region MPO FFY 2014 Unified Planning Work Program

- Massachusetts Turnpike Boston Ramps Study Technical Support – Review of existing data and analysis, updates to existing conditions analysis, and analysis of future-year project alternatives.
- MassDOT Accelerated Bridge Program Project Support – Data analysis and preparation of spreadsheets and memos.
- MassDOT Diversity Posters – Designed and produced a series of seven Diversity posters including the following topics: Asian Pacific Islanders; Gay, Lesbian, Bisexual, and Transgender; Disability Awareness; Hispanic Heritage; Native American; Black History; and Women’s History.
- MassDOT Road Inventory File – Assistance to MassDOT, including updates to MassDOT Road Inventory line work and attributes and other inventory enhancements.
- MassDOT Road Inventory Supplemental Grant – Updated street names and aliases for 100 towns and updated and standardized ramp names statewide.
- MassDOT SIP Process Support – Identification of emissions targets for proposed projects in their opening year, quantifying emissions from offset projects, and identifying benefits of proposed offsets.
- MassDOT State Transportation Map – Created an updated Massachusetts Official Transportation Map and an online version of the main three languages: Spanish, Portuguese and Chinese.
- MBTA Automated Fare Collection System – Development of a system for regularly downloading, analyzing, and summarizing data from the MBTA’s automated fare collection (AFC) system.
- MBTA bus trip pointchecks and passenger counts on selected routes.
- MBTA Cost-Allocation Model – Update to MBTA’s cost-allocation model for use in determining the net cost per passenger of various MBTA services to aid the service planning process.
- MBTA Fiscal Year 2013 National Transit Database: Directly Operated – Sampling of passenger boardings and alightings on randomly selected bus trips; survey of a sampling of rail rapid transit passengers’ trips.

- MBTA Fiscal Year 2013 National Transit Database: Purchased Bus – Sampling of passenger boardings and alightings on randomly selected bus trips.
- MBTA Neighborhood Maps and Bus Shelter Maps – Created neighborhood maps for select MBTA stations and bus shelters.
- MBTA Rider Oversight Committee – Technical assistance to the MBTA Rider Oversight Committee and attendance at committee and subcommittee meetings.
- MBTA Ridership Data – Update of existing CTPS database that houses MBTA ridership data to incorporate data from automatic passenger counters (APC).
- MBTA Silver Line passenger counts to monitor implementation of free fares at Logan Airport.
- MPO Committees Support (including the Congestion Management Committee, the UPWP Committee, the Administration and Finance Committee and the ad hoc Committee on the Regional Transportation Advisory Council Review and the Performance Measure Committee). Clean Air and Mobility Program coordination; preparation of the FFY 2014 MPO Certification Activities Schedule; meeting planning; communications and coordination with members and interested parties; preparation of meeting agendas, minutes, other meeting materials and informational materials, and various memoranda and presentations; staff support; and database maintenance.
- MPO Public Participation Program – Outreach materials supporting the development of certification documents and other MPO programs. Publication and posting of MPO notices and informational materials. Soliciting and responding to public comments on documents under review and gathering and responding (year-round) to other comments, questions, and requests for information from members of the public. Preparation of press releases and legal and public notices.
- MPO Website Development and Enhancements – Revamped and updated website to make it accessible to blind and low-vision users. Updated interactive TIP database. Updated online surveys for the Transportation Equity Program and for submitting public comments on draft certification documents on the website.
- Needs Assessment Updates – Data gathering and incorporation into the Needs Assessment databases, tables, and maps.

Boston Region MPO FFY 2014 Unified Planning Work Program

- Ongoing technical support to the MassDOT Office of Civil Rights to assist in compliance with FHWA and FTA Title VI requirements and response to reporting deficiencies.
- Planning Topics – Notes documenting research and pertinent information for MPO consideration on topics such as health impacts and economic analyses.
- Regional Transit Service Planning Technical Support – Technical assistance to regional transportation authorities to promote best practices and to transportation management areas (TMAs) and municipalities to improve transit services.
- Regional Transportation Advisory Council Support (including the Freight Committee, Membership Committee, and ad hoc committees) – Support includes meeting planning; scheduling of speakers; coordination with the MPO, including response to the MPO's recommendation regarding the Advisory Council election process; preparation of meeting agendas, minutes, materials, and various memoranda; outreach for new members; coordination of process for the review and revision of the bylaws; staff support; and database maintenance.
- Responses to requests for transit data.
- Roadway Network Inventory for Emergency Needs pilot study – GIS layer and database of traffic signals and documentation.
- Route 79 Transportation Study: Evaluation of Alternatives – Data analysis and preparation of spreadsheets and memoranda.
- South Coast Commuter Rail Final Environmental Impact Report (FEIR) – Memoranda documenting the ridership forecasts, mode shift, station activities, and air quality impacts for the FEIR study and Rapid Bus alternative for the draft environmental impact report (DEIR) study, respectively.
- South Station Expansion – Memoranda documenting CTPS's data-collection work and transfer activities at South Station, Dorchester Avenue sensitivity analysis, and market analysis.
- TIP project information forms, evaluation criteria and matrices, instructional handbook, TIP interactive database, and other Web-based data.
- Transportation Equity Program – Transportation needs assessment outreach (meetings and forum) to organizations and agencies familiar with the needs of environmental justice areas

and memoranda to document results. Some work conducted in collaboration with MAPC. Initial outreach to update the Coordinated Human Services Transportation Plan, including preparation of maps showing existing transportation infrastructure and services and preparation of an updated Plan.

- *TRANSREPORT*, the MPO's bimonthly newsletter.
- Travel data forecasting.
- Updates to MPO bicycle and pedestrian traffic count interactive database.
- UPWP – Outreach materials, evaluation criteria and process, and staff recommendation for the FFY 2014 UPWP and FFY 2013 UPWP quarterly reports.
- Work scopes for MPO evaluation and approval and transmission to the Federal Highway Administration.

2.3.2 MAPC Work Products

MAPC Reports

- Downtown Forxborough Parking Analysis and Workshop
- Needham/Newton Rail Right-of-Way Transit Concept
- Priority Development Areas and Priority Preservation Areas in North Suburban and South Shore Sub-regions
- Route 9 Corridor Study and Smart Growth Plan
- Sullivan Square Land Use Vision
- Transit Oriented Development Opportunities & Impediments: Wollaston Station, Beverley Depot, and Melrose Cedar Park

MAPC Technical Memoranda

- Comment letters analyzing major development projects across the region, including:
 - Suffolk Downs Casino and Hotel
 - Boston Convention and Exhibition Center Expansion
 - Harvard University Barry's Corner
 - New Balance Expansion in Allston
 - Quincy Center Redevelopment
 - Millennium Tower Downtown Crossing

- Local Bicycle and Pedestrian Plans in Dedham, Westwood, Quincy, Malden, Everett, Chelsea, Revere, Lynn, Saugus, Marlborough, Hudson, and Stow
- MAPC Demographic Projections
- Technical Assistance Memo for Lynn Route 1A Pedestrian Access
- Technical Assistance Memo for Wilmington Cross Street Pedestrian Improvements
- TIP criteria evaluations for impact on land use and economic development

Other MAPC Work Products and Activities

- 128 Business Council Smart Bus technology procurement of services – This project is ongoing. MAPC is overseeing Clean Air and Mobility Program funding to the 128 Business Council to develop a technology-driven, demand-responsive variable bus route system. MAPC will be procuring a vendor to provide a turn-key electronic dispatching system.
- Community Transportation Technical Assistance Program – Site visits to municipalities, consultations, and recommendations for improvements.
- Creation of a database of development projects in the Boston MPO region (dd.mapc.org).
- GIS technical assistance and support for transportation planning in the region.
- Hubway Bicycle Sharing coordination among Boston, Cambridge, Somerville, and Brookline; system implementation.
- Interagency coordination, work scopes, participation in advisory and corridor committees, public participation, 2012 MPO elections, and attendance at relevant meetings.
- Livable Communities Workshops – Engagement with municipalities and recommendations for transportation and land use improvements to be more in line with livability principles.
- MetroFuture engagement at the local level, updates to the Regional Indicators reports, and Smart Growth Profiles.
- Preparation of monthly meeting agendas, coordination with transportation agencies, traffic study reviews, presentations to the

MPO, support for subregion and corridor advisory committee meetings.

- Provision of information to the MAPC Executive Committee, MAPC officers, and MAPC subregional groups on MPO transportation activities and issues.
- Regional Trail Network Map and Greenway Planning – This project is ongoing; however, MAPC has created an inventory of off-road and on-road trails in the region and an interactive online map that will help identify priority “gaps” and provide information to evaluate specific segments (trailmap.mapc.org/).
- Report analyzing the vehicle miles traveled data from the Registry of Motor Vehicles of each automobile garaged in Massachusetts.
- Subregional forums sponsored by the subregions that focused on transportation finance policies and economic development.
- Support and technical assistance in developing and implementing the MPO’s Clean Air and Mobility Program.
- Support for the UPWP Committee. Support for the regional Congestion Mitigation and Air Quality Committee.
- Support for the UPWP Committee.



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This index of projects is intended both to facilitate finding specific projects in this document and to provide a summary of the various parts of this UPWP for which each agency is responsible.

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MBTA

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Administration and Resource Management Projects

Chapters 4 through 7 of the UPWP present project descriptions and budget information for transportation-planning work that will be carried out between October 1, 2013, and September 30, 2014. The activities described in these chapters will be conducted by the Central Transportation Planning Staff (CTPS) of the Boston Region Metropolitan Planning Organization (MPO) and by the Metropolitan Area Planning Council (MAPC) acting on behalf of the MPO.

The projects in the UPWP are funded by a variety of federal and state sources. Each project description identifies the project's funding source or sources. With respect to funding, there are two types of projects:

- 1) Projects funded with federal 3C planning funds, to be carried out by CTPS and MAPC. The MPO programs these funds and approves the use of staff time.
- 2) Projects funded from other sources (federal, state, and local), to be carried out by CTPS for an individual transportation agency. The MPO approves the use of staff time for these projects and provides guidance to the implementing entities on their coordination with other planning efforts.

In reviewing the project listings, it is important to remember that the 3C transportation-planning process is a coordinated effort that is often carried out simultaneously by several agencies. For example, when the MBTA hires a consultant to prepare an environmental impact report for a transit project, CTPS may provide the travel-demand and air-quality modeling for the consultant and MAPC may perform land-use analysis. Thus, if the same project is mentioned in more than one place in this UPWP, it is because of this kind of interagency coordination. To help clarify the distinctions between the various work activities, cross-referencing is provided, where appropriate, to show the interrelationship between projects.

Boston Region MPO FFY 2014 Unified Planning Work Program

The administration and resource management projects, presented in this chapter, are:

Project ID #	Project Name	Page
60405-60492	Computer Resource Management	4-3
60120-60600	Data Resources Management	4-5
90000	Direct Support	4-7

**STAFF:** Central Transportation Planning Staff**CLIENT:** Boston Region MPO**ID #:** 60405–60492**BUDGET:**Not applicable to ongoing projects**STATUS:** Ongoing

In order to carry out its functions, CTPS maintains state-of-the-practice computer resources through the following tasks:

60405 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 their work. Increased emphasis will be given to the security and integrity of all hardware, software, and data resources. Plan, monitor, and maintain CTPS’s computer room space and facilities.

60430 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.

60465 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.

60470 Liaison with Other Agencies: Work with other public agencies, including MAPC and the Commonwealth’s Office of Geographic Information (MassGIS), to encourage sharing of computer and data resources and techniques.

60475 Computing Resource Purchasing and Maintenance: Purchase and maintain CTPS’s computing resources. These include in-house resources 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. It also includes out-of-house resources, such as software purchased as a service, cloud-based storage, and other cloud-based computing resources.

60492 Computer Resource Planning: Updating the CTPS Five-Year Plan for Computer Resource Development, in conjunction with the development of the next CTPS budget.

FFY 2014 Activities and Expected Work Products: Work on these tasks will continue as described above.

COMPUTER RESOURCE MANAGEMENT [CONT.]



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 60405-60492

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.22.03

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$358,600	\$358,600			\$251,320	\$107,280					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 60120–60600

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

CTPS provides travel data and analyses at the regional, corridor, and site-specific levels. The variety of tasks encompassed by this work may be grouped within the following categories:

60120 Travel Data: Data on travel patterns within the region will be processed and analyzed. This includes, but is not limited to, traffic counts, ridership counts, vehicle registration data, and crash data. CTPS’s database of these data will be maintained and kept up to date.

60130 Socio-economic Data: CTPS’s database of data from the U.S. Census Bureau’s decennial census and American Community Survey, and products derived from these data, will be maintained and kept up to date.

60140 Miscellaneous Data: Data from CTPS surveys, field data collection activities, and other miscellaneous sources will be processed and analyzed.

60201 Response to Data Requests: Data will be processed or analyzed upon request to meet the needs of local, state, and federal government agencies and private institutions and firms.

60180 GIS Reference Data: CTPS’s database of standard reference geographic information system (GIS) data from sources including MassDOT, the Commonwealth’s Office of Geographic Information (MassGIS), the U.S. Geological Survey (USGS), the Federal Emergency Management Agency (FEMA), and municipal GIS departments will be maintained and kept up to date.

60600 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 data 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 2014 Activities and Expected Work Products: Databases of standard reference GIS data, socio-economic data, RMV data, and travel data; GIS processing tools; tabular and spatial data analyses; Web service and Web applications; responses to data requests.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 60120–60600

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.22.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$290,800	\$290,800			\$202,540	\$88,260					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO/MassDOT/MBTA

ID #: 90000

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

CTPS provides integral direct support to all CTPS projects and functions in the following areas:

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

Consultants: Consultants are periodically hired 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 U.S. Department of Transportation and other organizations sponsor courses and seminars that enhance the ability of staff 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 are also charged as direct-support expenditures. Additional project work, such as HOV-lane monitoring, is funded through this budget to cover rental vehicles and fuel costs.

Other: There are various expenditures that can arise over the term of this UPWP, such as postage and data processing services. These expenditures can become necessary when producing a project report or conducting a project-specific survey. The costs associated with postage for return mail and services for preparing and processing data for specific projects are direct-support expenditures. Other nonrecurring costs, such as software for specific project work, may also be funded through this line item.

FFY 2014 Activities and Expected Work Products: This includes 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.

DIRECT SUPPORT [CONT.]



STAFF: Central Transportation

CLIENT: Boston Region MPO

ID #: 90000

BUDGET: Not applicable to ongoing

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.27.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$128,810	\$128,810			\$57,540	\$22,500	\$43,000		\$5,000	\$770	



Certification Requirements

The projects in this chapter are categorized as certification requirements because they include work that the Boston Region MPO must do to maintain its certification by the Federal Highway Administration and the Federal Transit Administration. The projects also include activities that are necessary for compliance with federal and state laws, such as the federal Clean Air Act and the Americans with Disabilities Act. The projects in this category are:

Project ID #	Project Name	Page
90011-90090	3C Planning and MPO Support	5-2
90024	Access Advisory Committee Support	5-8
10112	Air Quality Conformity Determinations	5-10
90061	Air Quality Support Activity	5-12
11355	Boston Region MPO Title VI Reporting	5-14
10101	Long-Range Transportation Plan	5-15
MAPC1	MPO/MAPC Liaison and Support Activities	5-17
90028	Provision of Materials in Accessible Formats	5-19
11244	Regional Model Enhancement	5-20
MAPC2	Subregional Support Activities	5-23
11132	Transportation Equity/Environmental Justice Support	5-24
10103	Transportation Improvement Program	5-27
10104	Unified Planning Work Program [CTPS]	5-31
MAPC4	Unified Planning Work Program [MAPC]	5-33

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 90011-90090****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

The following projects are called 3C activities because they support the federally mandated continuing, cooperative, and comprehensive transportation-planning process. This process results in the preparation of numerous products and materials and enables MPO operations and decision making.

SUPPORT TO THE MPO

90011 Support to the MPO and Its Committees: (\$273,600) Support includes conducting metropolitan planning and implementing planning activities for the MPO. This involves researching, analyzing, and reporting information on 3C planning topics, including those identified in federal reauthorization legislation, and issues related to federal policies, regulations, and guidance, such as responding to possible federal recommendations or requirements for certification documents or MPO recertification. This year, staff will have an important focal point of activity—implementing MAP-21. Support to the MPO and its committees also includes implementing MPO policies on planning and programming, preparing information for MPO decision making, and supporting the work of the MPO and its committees. This includes providing process support for the MPO and its meetings, such as developing agendas for meetings, preparing informational materials, compiling meeting packages, site selection and logistics planning and setting up for meetings, attending meetings, recording and transcribing minutes of meetings, and completing meeting follow-up activities such as maintaining the information flow for the MPO and the public and processing approved work scopes.

Technical and process support is also provided to the MPO's Clean Air and Mobility Program and its Congestion Management Committee.

In addition, this work includes consultation with other entities and agencies involved with or interested in 3C planning activities; liaison activities between Massachusetts MPOs (with ongoing coordination with those in the Boston Region Urbanized Area); and communication with MAPC subregional groups.

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 90011-90090****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

Other activities include the day-to-day oversight of 3C-program-related activities, reporting on the progress of projects listed in the UPWP, and responding to requests for information.

90014 Planning Topics: (\$7,400) CTPS provides support related to planning topics such as the 3C planning factors, the MAP-21 National Goals, and other topics highlighted in federal planning guidance, including sustainability, health, freight, economic effects, all-hazards planning, and environmental issues. CTPS staff members maintain expertise in these topics so that the MPO will have the capability and flexibility to respond to unforeseen needs in these areas.

Information on these topics is gathered, analyzed, and presented to the MPO in memoranda and white papers for consideration in the development of the Transportation Improvement Program (TIP) and the Long-Range Transportation Plan (LRTP). This project also includes work that is needed to respond to possible new and unforeseen federal guidance and requirements following a certification review.

90019 Subregional Outreach: (\$12,700) CTPS staff members attend meetings of the MAPC subregional groups to keep them abreast of MPO activities and to coordinate subregional issues and concerns in the development of MPO documents.

90021 Regional Transportation Advisory Council Support: (\$68,000) The Regional Transportation Advisory Council is the MPO's citizen advisory committee. CTPS provides planning and operations support to this body and its committees. This includes planning programs and meetings, scheduling speakers, and preparing and distributing agendas, meeting notices, informational packets, and minutes; assisting in conducting meetings; attending and making presentations at meetings; organizing and conducting field trips; coordinating other activities; soliciting new members; and maintaining mailing lists. CTPS 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.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90011-90090

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

90025 TRANSREPORT: (\$36,000) The newsletter of the MPO, *TRANSREPORT*, is an important part of the MPO's public involvement program. CTPS is responsible for soliciting, researching, and writing articles and for managing all aspects of production: writing and editing, layout, graphics, proofreading, and, for a few recipients, copying and mailing. CTPS coordinates the participation of MPO agencies and other interested organizations in the development of articles and is responsible for the newsletter's distribution in accessible format on the MPO website, electronic-transfer formats for email subscribers, and hard-copy format for a small number of special recipients. Once posted on the website, the newsletter can be translated into the region's most-used languages (other than English) using the website's Google Translate tool.

90026 Public Participation Process: (\$73,800) CTPS implements the MPO's Public Participation Program and coordinates and conducts MPO public outreach activities. These activities are opportunities to:

(1) Provide information to

- State, regional, and local officials
- Agencies
- Transportation, environmental, and social-service advocacy groups
- Freight operators
- Transit service providers
- Other interested parties, and
- Members of the general public

(2) Collect input from those parties for use by the MPO in its planning and in the development of the certification documents. Communication is ongoing and conducted through a variety of means.

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 90011-90090****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

Public meetings are important in this process, and several types of meetings are planned and conducted throughout each year. The MPO holds “Be Informed, Be Involved” sessions three to four times a year, and conducts TIP- and UPWP-Building Workshops, other workshops, and special-issue forums. CTPS and the Metropolitan Area Planning Council collaborate on public involvement activities whenever possible.

The MPO hosts on its website a public information email address to provide members of the public an avenue to request information and provide input. CTPS monitors the input from this address and coordinates both responses and referral of comments received.

The program also involves consultations as specified in federal guidance; improving informational materials; reviewing and modifying procedures, as appropriate, to increase the program’s effectiveness; arranging, upon request, for the provision of American Sign Language (ASL) and other language interpretation services at meetings; preparing and distributing printed materials in Spanish and other languages; posting notices on the MPO’s listserv; and providing public participation support to MPO member entities. It also includes maintaining and updating the contact database and listservs.

90027 Boston Region MPO Website, www.bostonmpo.org: (\$38,300) CTPS develops and maintains a website that provides information regarding the MPO’s activities, reports and studies produced by the MPO and CTPS, a data catalogue, and several interactive mapping applications. The website serves a critical role in the MPO’s public participation program by providing information and eliciting public comment. All MPO and Advisory Council meetings and committee meetings and their related meeting materials are posted on the website. CTPS continues to improve the design of the site, the information provided, and the accessibility of this means of communication to those who are visually impaired.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90011-90090

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

OTHER 3C PLANNING SUPPORT ACTIVITIES

90012 Professional Development: (\$16,000) The MPO staff maintains its technical expertise in part by participation in courses, programs, and workshops offered by the Federal Highway Administration, Federal Transit Administration, Transportation Research Board, Association of Metropolitan Planning Organizations, Institute of Transportation Engineers, and other public and private organizations. Previous professional development endeavors have included topics such as 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.

90090 General Graphics: (\$108,400) Graphics support will be provided to CTPS staff and MPO agencies in the design and production of maps, charts, illustrations, report covers, brochures, slides, and photographs; the application of other visualization techniques; and the creation of other products that improve communication.

FFY 2014 Activities and Expected Work Products: Staff will prepare materials as needed, continue to support the MPO and its committees and the Regional Transportation Advisory Council, conduct communications with the public, conduct planning to support compliance with federal requirements and guidance, and remain prepared for unforeseen issues as they arise.

The above activities support all other projects in this UPWP in compliance with the 3C planning process. They foster the implementation of MPO policies, federal planning factors and guidance, the MAP-21 National Goals, and all applicable orders and requirements, including Executive Order 13166 (governing outreach to persons with limited English-language proficiency).

This project is supported by the Provision of Materials in Accessible Formats project.

3C PLANNING AND MPO SUPPORT [CONT.]



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90011-90090

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.21.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$634,200	\$634,200			\$442,830	\$191,370					

**STAFF:** Central Transportation Planning Staff**CLIENT:** Boston Region MPO**ID #:** 90024**BUDGET:** Not applicable to ongoing projects**STATUS:** Ongoing

CTPS supports the MBTA in meeting ADA requirements by providing ongoing support to the Access Advisory Committee to the MBTA (AACT), a user group representing people with disabilities. AACT advises the MBTA on all accessibility matters relating to the use of the MBTA's systemwide fixed-route services and THE RIDE paratransit service by people with disabilities and ensures that users' ideas concerning accessible transportation are heard. Staff provides a variety of support services detailed below.

FFY 2014 Activities and Expected Work Products:

- Staff support for regularly scheduled AACT Membership and AACT Executive Board and other related meetings at which attendees advise and comment on projects being planned or implemented systemwide for commuter rail, rapid transit, surface transit, and paratransit
- Distribution of monthly reports on systemwide accessibility, the MBTA RIDE service statistics, and other materials pertinent to AACT meeting agenda items
- Support for the Chair such as attendance at special consultations and other meetings
- Support for the activities of the AACT Executive Board of Directors
- Awareness of the Memorandum of Understanding, AACT bylaws, and disability issues in general
- AACT elections as needed and other committee activities
- Preparation and distribution of AACT meeting agendas and minutes, meeting announcements, correspondence, meeting calendars to post in THE RIDE vans, and updated AACT informational materials
- Production and distribution of an orientation packet for new AACT members



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90024

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Continued maintenance of AACT databases for mailings, meeting attendance, and membership standing and maintenance of AACT archives, supplies, and accessible-formatting equipment
- Coordination of briefings on MPO activities
- Production of meeting materials in accessible formats to AACT members upon request

This project supports MPO public outreach and planning activities presented in this chapter. It is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and transportation equity activities described in this chapter.

FHWA/FTA Grant Application Task and Element: 44.21.04
FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$85,700	\$85,700			\$58,280	\$27,420					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10112

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Analysis and documentation to demonstrate the conformity of plans, programs, and projects with the 1990 Clean Air Act (CAA) are provided annually. The Boston region has been re-classified as an attainment area for the 2008 ozone standard. The city of Boston, the surrounding cities and towns, and the city of Waltham are classified as maintenance areas for carbon monoxide (CO). Since the Boston area is classified as maintenance, the region must show that, overall, its federally funded transportation programs maintain air quality in a manner consistent with the Massachusetts State Implementation Plan (SIP). Air quality information for ozone will be submitted to MassDOT for use in determining conformity for applicable nonattainment areas in Eastern Massachusetts.

FFY 2014 Activities and Expected Work Products: Conformity determinations, including a detailed analysis of air quality impacts (volatile organic compounds [VOCs], nitrogen oxides [NOx], carbon monoxide [CO], and carbon dioxide [CO₂]) of the projects in the FFYs 2014–17 Transportation Improvement Program (TIP), any changes to the Long-Range Transportation Plan (LRTP), and any work required for the implementation of GreenDOT will be performed and presented as follows:

- **System-Level:** If there are changes to regionally significant projects in the LRTP and the TIP, a systemwide conformity determination will be prepared. Any new conformity determination will use the new 2010 base year, as well as “build” networks for 2016, 2020, 2025, and 2035, for VOCs, NOx, and CO₂; for CO it will show build networks for 2016, 2025, and 2035, only in the maintenance areas.
- **Project-Level:** A detailed analysis of the potential VOC, CO, CO₂, and NOx impacts of each project to receive Congestion Mitigation/Air Quality Program funding in the TIP and those that will help in meeting the GreenDOT initiative will be conducted in accordance with U.S. Department of Transportation and U.S. Environmental Protection Agency (EPA) guidelines. The specifics of the analysis will be determined through consultation between the state’s transportation and environmental agencies.

This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and transportation equity and public outreach activities described in this chapter.

AIR QUALITY CONFORMITY DETERMINATIONS [CONT.]



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10112

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.21.03

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$13,000	\$13,000			\$8,840	\$4,160					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90061

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

This project complements the Air Quality Conformity Determinations of the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP) described previously. It also provides for research and analysis regarding climate change and its impacts within the MPO region. It allows for additional support in implementing air-quality-related transportation programs and projects and includes consultation, research, and coordination between CTPS and federal, state, local, and private agencies.

FFY 2014 Activities and Expected Work Products:

Support to MassDOT (including the Highway Division, the Office of Transportation Planning, and 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, and evaluation of emerging and innovative highway and transit clean-air activities.

Support for Climate Change Initiatives: Activities will include integrating climate-change concerns and emission-reduction opportunities into the MPO's planning process in relation 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 also work with MassDOT to implement their GreenDOT policy. Staff will also confer with agencies and organizations that are concerned about climate-change issues and obtain knowledge and ideas for policies, programs, and improvements in the MPO region.

Mobile-Source Element of the State Implementation Plan (SIP): The Massachusetts Department of Environmental Protection (DEP) is required to submit a SIP to the U.S. Environmental Protection Agency (EPA) documenting strategies and actions designed to bring Massachusetts into compliance with air quality standards, as needed. CTPS support will include:

- Support for amendments or revisions to the Memorandum of Understanding between the MPO and the DEP



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90061

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Continued staff support to the agencies involved in monitoring, updating, and revising the mobile-source section of the SIP
 - Analysis of existing regional air quality conditions, assistance to MassDOT in data collection, development of emission factors, and validation of DEP’s air quality inventories and emission budgets. In addition, CTPS will evaluate policies on long-term growth, transportation, and land use, and other public policies that may affect air quality
 - Continued coordination with DEP in developing statewide regulations and programs for ridesharing, and other regulations and programs that pertain to transportation and air quality
 - Support to regional, local, and private agencies
 - Continued participation in the Transportation Task Force of the SIP Steering Committee
 - Provision of data and recommendations to MPO agencies regarding funding and implementation of transportation programs and projects that have air quality benefits
- This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and transportation equity and public outreach activities described in this chapter.*

FHWA/FTA Grant Application Task and Element: 44.21.03

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$43,300	\$43,300			\$31,040	\$12,260					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11355

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Title VI of the federal Civil Rights Act requires that persons must not be excluded, denied benefits, or discriminated against on the basis of race, color, national origin, age, sex, disability, or religion. Federal regulations governing its implementation require the MPO to report on how it is followed—and how minority populations are involved—in MPO planning and decision making, including development of the UPWP, the Transportation Improvement Program (TIP), and the Long-Range Transportation Plan (LRTP).

FFY 2014 Activities and Expected Work Products:

- The MPO will comply with Title VI regulations through the preparation and submittal of reports as required
- Triennial Title VI Report

This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, public outreach activities, and work promoting transportation equity and environmental justice as presented in this chapter. See Chapter 7 for additional support provided by CTPS to MassDOT and the MBTA for their Title VI compliance.

FHWA/FTA Grant Application Task and Element: 44.21.04

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$14,000	\$14,000			\$9,520	\$4,480					

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 10101****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

The MPO adopted its Long-Range Transportation Plan (LRTP), *Paths to a Sustainable Region*, in September 2011. A Needs Assessment was developed as part of this LRTP and is considered a living document. Work in this fiscal year will include updating and further analyzing information in the Needs Assessment. This information can be used by the MPO and staff in studies, reports, and deliberations in the future. Staff will also begin preparing for the next LRTP development to be adopted by 2015. Socio-economic projections for future LRTP analysis years (2020, 2030, and 2040) will be developed and incorporated into the travel demand model. Different land-use and transportation scenarios can then be analyzed before the MPO ultimately adopts a preferred land use for the region. The adopted land-use scenario will then be used to determine the recommended set of projects that will be funded in the next LRTP.

In addition, the MPO will develop performance measures and incorporate performance-based planning into LRTP and Transportation Improvement Program (TIP) decision making.

FFY 2014 Activities and Expected Work Products:

- Provide further detail on and analyze Information in the current Needs Assessment to provide the most up-to-date information for the MPO and the public. This will include incorporating the MPO regional travel demand model set's new base year of 2010, which was developed using new census data and updated data sets, and a 2040 no-build scenario.
- Work with MAPC to develop socio-economic projections for future analysis years for the LRTP.
- Produce summaries of *Paths to a Sustainable Region* as outreach to the public as needed and for use in developing the new LRTP.
- Address any comments or changes required from comments from the Federal Highway Administration and Federal Transit Administration or changes to the State Implementation Plan (SIP).



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10101

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Continue to develop performance measures to be used in monitoring the implementation of the LRTP and TIP.

This project is supported by 3C planning support activities, air quality conformity and support activities, the Provision of Materials in Accessible Formats project, and transportation equity and public outreach activities described in this chapter. Also see Chapter 7 for MAPC activities related to the development of the LRTP.

**FHWA/FTA Grant Application Task and Element: 44.23.01
FFY 2014 Budget**

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$300,000	\$300,000			\$204,000	\$96,000					



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC1

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

This project includes working with MPO members and staff to establish work priorities and meeting agendas. It also includes reporting to the MAPC Executive Committee, the MAPC Officers' Transportation Advisory 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.

Statewide and Regional Planning Committees: MAPC actively participates in statewide and regional planning committees and task forces to represent the interests of the region, with a particular focus on the critical links between land use and transportation. These committees include the statewide Congestion Mitigation and Air Quality (CMAQ) Consultation Committee; the Massachusetts Association of Regional Planning Agencies (MARPA); Metro Boston Regional ITS Planning; and various MassDOT, MBTA, or municipally-led planning initiatives. MAPC will also be actively involved in regional and statewide plans and programs with regard to the state's mode-shift goal, GreenDOT implementation, and other climate-change and greenhouse-gas issues as they relate to transportation. Advisory committees may change from year to year as studies are begun or completed, but participation in a variety of advisory committees is an ongoing task.

Support of the Public Participation Process for Metropolitan Planning Documents: MAPC provides education and outreach on a wide variety of transportation and land use-related topics in the region, with emphasis on outreach through the subregions to municipal officials. MAPC will also support CTPS in outreach to environmental justice, disabled, and senior populations.

MPO Elections: Working with the MBTA Advisory Board, MAPC will coordinate and implement the annual election process for the municipal representatives on the MPO.

Clean Air and Mobility Program: MAPC will work with CTPS to provide technical support for the Clean Air and Mobility projects identified in federal fiscal years 2013, 2016, and 2017 in the Transportation Improvement Program (TIP).



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC1

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Transportation Improvement Program Evaluation and Criteria: MAPC will coordinate with CTPS on the land use and economic development aspects of the TIP evaluations, as well as coordinating with the implementation of the comprehensive regional growth plan, MetroFuture.

FFY 2014 Activities and Expected Work Products: Interagency coordination, work scopes and agendas, participation in advisory and corridor committees, public participation and outreach, reports to the MAPC Officers’ Transportation Advisory Committee and to the Executive Committee, MPO elections, Clean Air and Mobility Program implementation, TIP criteria evaluations, and attendance at relevant meetings.

This project supports Transportation Improvement Program activities presented in this chapter.

FHWA/FTA Grant Application Task and Element: 44.21.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$157,000		\$157,000		\$109,000	\$48,000					

PROVISION OF MATERIALS IN ACCESSIBLE FORMATS



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90028

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

The MPO conducts its transportation-planning activities and public outreach process in accordance with the Americans with Disabilities Act, 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 2014 Activities and Expected Work Products:

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

This project supports the development of MPO products for projects throughout this UPWP.

FHWA/FTA Grant Application Task and Element: 44.21.04

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$70,000	\$70,000			\$54,000	\$16,000					

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 11244****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

CTPS builds and maintains a state-of-the-practice regional travel-demand model set to aid in analyzing the interrelationships between transportation infrastructure and land use. Metrics produced by the model are designed to aid in both policy planning and technical analysis, as well as to aid in Federal reporting requirements associated with the Boston Region MPO. The model set is also used by MPO member transportation agencies because the model set is extremely robust and cannot be duplicated and because it incorporates data from all the region's transportation agencies, transportation service providers, the U. S. Census Bureau, the Metropolitan Area Planning Council, and the cities and towns that constitute the Boston Region MPO.

The model set is principally a simulation of travel behavior that emulates the millions of travel behavior decisions which ultimately produce over 12 million daily person-trips across the 164 municipalities in the CTPS modeled area.

Activities associated with the current Boston Region MPO model work program are to:

- Monitor and understand changes in federal requirements as they affect this area, and the current model set
- Research ways in which the state-of-the-practice is changing and develop modifications to the model set to meet those standards
- Update the model software to keep pace with changes in simulation technology
- Continue to update model inputs as new data becomes available
- Continue to estimate/develop new model capability and then calibrate, and validate the model set as needed
- Develop adequate model documentation
- Provide technical support and training to those who are using the model
- Improve the model's ability to compute highway and arterial congestion and the impacts of congestion on mode and route selection



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11244

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Making Use of Massachusetts Travel Survey (aka, Statewide Household Travel Survey): CTPS has shared oversight responsibilities for the Statewide Household Travel Survey, which was completed in 2012. The survey was conducted to provide an accurate representation of household-based travel and the relationships between demographic characteristics and travel behavior. Processing this survey to refresh the model has begun. The specific model refresh areas include: trip generation, trip distribution, and mode choice. The basic structure of the model has not changed as a result of this refresh work.

FFY 2014 Activities and Expected Work Products: Incorporate new or advanced techniques into the current regional travel-forecasting model set in TransCAD and maintain a well-calibrated 2010 base-year regional model set and a future year model set. This effort supports projects in this UPWP that rely on the regional model set for travel forecasting and analysis, particularly the analysis in support of the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP).

Additional model enhancement activities may include:

- Refining the mode-choice model to enhance the model's sensitivity to premium transit modes
- Disaggregating household data into auto-less households and households with autos to increase the model's sensitivity to transit-captive riders
- Examining the use of tour-based modeling capability to enhance the model's capability to trip-distribution issues
- Examining the use of a parking choice model in the Boston central business district (CBD) to improve the model's ability to simulate where people park compared to their final destination
- Examining the integrated use of a land-use allocation model, which will allow for the analysis of the linkage between changes in transportation accessibility and land development



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11244

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Improving the model’s ability to compute highway and arterial congestion and the impacts of congestion on mode and route selection
- Examining the use of advanced modeling practice such as trip- and/or activity-based models

These efforts support projects in this UPWP that rely on the regional model set for travel forecasting and analysis, particularly the air quality conformity determinations for the LRTP and the TIP presented in this chapter. Also see Chapter 7 for MAPC activities related to the development of the land use allocation model, as described above.

**FHWA/FTA Grant Application Task and Element: 44.22.03
FFY 2014 Budget**

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$790,000	\$790,000			\$553,550	\$236,450					

SUBREGIONAL SUPPORT ACTIVITIES



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC2

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

The Metropolitan Area Planning Council (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.

Subregions are encouraged to recommend subregional projects and priorities for the Transportation Improvement Program (TIP), the Long-Range Transportation Plan (LRTP), and the UPWP. 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 area. MAPC staff ensures timely discussions of transportation-related issues by placing the topics on the monthly agendas, by leading and participating in the discussions, and by distributing appropriate documents and notices relating to region-wide and statewide transportation meetings.

FFY 2014 Activities and Expected Work Products: 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, and assistance in setting subregional transportation priorities. This project supports community involvement in the development of transportation-planning documents.

FHWA/FTA Grant Application Task and Element: 44.21.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$157,000		\$157,000		\$109,000	\$48,000					

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 11147****BUDGET: Not applicable to ongoing projects****STATUS: Ongoing**

The purpose of this program is to foster awareness and consideration of transportation-equity/environmental-justice transportation needs in MPO planning and programming, particularly in relation to the Long Range Transportation Plan (LRTP), the Unified Planning Work Program (UPWP), the Transportation Improvement Program (TIP), the Congestion Management Process (CMP), air quality conformity determinations, environmental impact studies, and project-specific work products of the MPO. It also has the goal of stimulating the participation of low-income, minority, elderly, and limited English language proficiency (LEP) populations in the MPO process. Gathering this input and generating participation will be accomplished through several means.

The first means is through continued outreach to minority and low-income populations, elders, and LEP populations. Staff will continue its program of holding regional forums and scheduling meetings and interviews in the MPO communities of concern. This year, staff will ask to attend regularly scheduled meetings held by umbrella social service groups working in and representing MPO communities of concern. Attending these meetings will give staff an opportunity to meet and begin a working relationship with community advocates. MPO staff will also strive to better understand the needs of the communities by seeking small-group discussions following larger meetings. An objective of these discussions will be to understand which transportation needs are the highest priorities of a given community. In addition, staff will continue to interview community organizations to identify transportation needs, solicit ideas for improvements, and expand the universe of possible entities to be contacted. In addition, information gathered through other recent initiatives will be analyzed and presented. Staff will collaborate with MAPC in the outreach to communities of concern and in the planning for MPO public participation activities.

Work will also include continuing analysis and assessment of the transportation needs of low-income, minority, LEP, and elderly populations. Staff supports the development of the TIP and LRTP in their applications of the adopted environmental justice definitions for the LRTP and TIP, in project evaluations, and in conducting LRTP analysis of benefits and burdens.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11147

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Staff will continue to support Federal Transit Administration programs that target low-income populations, elderly individuals, and people with disabilities in the region. Currently, this means evaluating and making recommendations of funding for the former Job Access and Reverse Commute program and for the former New Freedom Program.

In addition, CTPS staff will complete the update of the Coordinated Public Transit Human Services Transportation Plan (CHSTP) begun in FFY 2013. For the CHSTP, work will include mapping important locations in communities of concern and identifying transportation options in those areas. Staff will identify and map major destinations (for example, hospitals, government agencies, schools, social service agencies, and grocery stores) within selected environmental justice areas of concern in the MPO region, and other important destinations identified in the CHSTP outreach activities to MPO communities of concern. Mapping will include an overlay of existing public and active (walking and biking) transportation options in those areas. This work will be useful in documenting transportation gaps and needs.

As budget permits, staff will conduct special studies and analyses during the year. Their results will be reported to the MPO in technical memoranda. An example is the recently completed Job Access and Reverse Commute (JARC) and New Freedom Federal Grant Program projects in the Boston Region MPO Area: An Evaluation. This year staff plans to conduct the following special study: Household Survey-Based Comparisons between Income and Racial Groups. The study would analyze the 2011 Massachusetts Household Travel Survey data (including variables such as trip length, number of trips, types of trips, and modes used) for low-income and minority households and compare them with data from non-minority and higher-income households to identify any differences. This information will be useful in identifying transportation needs and supporting transportation project programming decisions.

FFY 2014 Activities and Expected Work Products:

- Continue MPO outreach to minority, low-income, and LEP communities by various means, including forums, meetings and small group interviews



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11147

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Monitor developments at the U.S. Department of Transportation regarding Civil Rights, Title VI, and Environmental Justice, and participate in workshop conferences, and seminars, as appropriate
- Provide summaries of interviews and other updates to the MPO
- Continue the solicitation and evaluation of projects for funding under the JARC and New Freedom programs as long as funds are available
- Complete the update of the CHSTP
- Analyze the Massachusetts Household Travel Survey data
- Conduct environmental justice analyses as needed
- Produce maps and technical memoranda

This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and public outreach activities described in this chapter.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11147

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

- Monitor developments at the U.S. Department of Transportation regarding Civil Rights, Title VI, and Environmental Justice, and participate in workshop conferences, and seminars, as appropriate
- Provide summaries of interviews and other updates to the MPO
- Continue the solicitation and evaluation of projects for funding under the JARC and New Freedom programs as long as funds are available
- Complete the update of the CHSTP
- Analyze the Household Survey data
- Conduct environmental justice analyses as needed
- Produce maps and technical memoranda

This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and public outreach activities described in this chapter.

FHWA/FTA Grant Application Task and Element: 44.21.04
FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$96,000	\$96,000			\$67,330	\$28,670					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10103

BUDGET:Not applicable to ongoing projects

STATUS: Ongoing

The Boston Region MPO’s Transportation Improvement Program (TIP) is a document that 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 have committed to producing annual updates.

Development: The annual TIP development cycle begins with gathering a list of existing and new projects requested by cities and towns to be considered for the upcoming TIP. Municipal TIP contacts and MPO staff coordinate to update information on projects through the MPO’s TIP Interactive Database. This process of gathering data establishes information on a project’s background, infrastructure condition and needs, development status, and effectiveness at advancing MPO policies. To help ensure that municipalities and other project proponents are informed and up-to-date on TIP development, CTPS conducts TIP-and UPWP-Building workshops each year near the beginning of the process. In addition, CTPS conducts targeted outreach to the MAPC subregions and ongoing outreach through various public-involvement channels to provide opportunities for input into the draft TIP development process.

Project Evaluation: CTPS reviews and evaluates all projects in the universe for which there is adequate information against the TIP criteria. The project evaluation process for the TIP continues to evolve, and MPO participation in the MassDOT Highway Division’s project development process continues to develop, as called for in the Highway Division’s Project Development and Design Guide. Changes to the project evaluation criteria were implemented during the development of the FFYs 2012–15 TIP to better reflect the visions and policies adopted by the MPO on April 22, 2010. Additional revisions were recently incorporated into the project evaluation criteria during the development of the FFYs 2014–17 TIP. Further adjustments will be made as needed, particularly incorporating changes in the criteria resulting from the MPO’s performance measurements.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10103

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Based on the evaluation results, the staff reviews proposed projects and prepares a first-tier list of projects that can be made ready in the scope of the TIP. The staff also prepares a staff recommendation of transportation investments for the next four years. In developing the staff recommendation for the draft TIP, MPO staff strongly considers the first-tier list of projects. MPO staff also factors in projects that are listed in the Long-Range Transportation Plan (LRTP) as a necessary part of its implementation, considers geographic equity to help ensure that the list of projects addresses needs throughout the region, and accounts for cost to comply with fiscal constraint.

The MPO reviews and discusses the first-tier list of projects and staff recommendation and releases a draft TIP for public comment. After considering public comments, the MPO adopts the TIP.

Information Flow: CTPS will continue to collect and disseminate project status information, cost updates, public comments, and information on process-related issues to the MPO. CTPS provides “relevant, timely, and comprehensive” information, including project planning, design, and advertisement status updates, to the MPO. Additionally, the staff continues to provide a consistent information flow to the MPO municipalities through mail, email, the MPO website, and telephone communication via the municipally appointed TIP contacts.

Development and Certification: CTPS performs all tasks necessary for TIP development and certification, including:

- Preparing and producing all TIP-related informational materials and analysis, as well as draft and final documents.
- Coordinating public participation in TIP development and review of all drafts and preparing responses to comments.
- Scheduling and staffing meetings of the MPO and its ad hoc TIP Criteria Committee; the Regional Transportation Advisory Council; and MPO workshops, “Be Informed, Be Involved” sessions, and TIP-and UPWP-Building Workshops.
- Conducting outreach to the MAPC subregions.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10103

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Amendments and Administrative Modifications: CTPS drafts amendments and/or administrative modifications and manages all procedural steps necessary to properly adopt and certify them.

Public Participation Process: Staff is responsible for the dissemination of TIP materials for public review; the release of the circulation draft, as well as all amendments, are announced in the MPO's newsletter, *TRANSREPORT*, and in press releases and legal notices to print media and by notifying the MPO's listserv subscribers. The draft document is made available on the MPO website and on CD on request. Notice of the availability of the document is emailed to municipal officials, legislators, libraries, the Regional Transportation Advisory Council, and MAPC representatives in the 101 MPO municipalities. Notices of public meetings and outreach concerning the TIP are posted on the MPO website and emailed to regional contacts and interested parties and specified for MPO consultations. Public meetings are held at locations around the region during the public review period. Articles are also prepared for *TRANSREPORT*.

GIS Support: GIS support will include the creation of TIP map coverages, data collection for project evaluation, and production of maps.

FFY 2014 Activities and Expected Work Products: The FFYs 2015–18 TIP, and amendments and administrative modifications to the FFYs 2014–17 TIP, will be prepared as described above. The interactive TIP database for tracking projects will be maintained, and a funding database will be developed to provide more complete funding source information by project.

This project is supported by 3C planning support activities, air quality conformity and support activities, the Provision of Materials in Accessible Formats project, and transportation equity and public outreach activities described in this chapter.

MAPC work efforts related to the TIP are also presented in this chapter under MPO/MAPC Liaison and Support Activities.

TRANSPORTATION IMPROVEMENT PROGRAM [CONT.]



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10103

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.25.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$170,000	\$170,000			\$118,020	\$51,980					

**STAFF:** Central Transportation Planning Staff**CLIENT:** Boston Region MPO**ID #:** 10104**BUDGET:** Not applicable to ongoing projects**STATUS:** Ongoing

The Boston Region MPO produces an annual Unified Planning Work Program (UPWP). This document outlines the transportation-planning activity, for all surface transportation modes, that is expected to be undertaken in the region during a given federal fiscal year. It also includes detailed budget information on the expenditure of federal planning funds.

CTPS prepares materials for and coordinates all phases of this work, including soliciting, evaluating, and selecting study ideas; preparing budgets; writing project descriptions; conducting background research; coordinating document development with the MPO's UPWP Committee; responding to federal guidance; and preparing draft and final documents. CTPS staff members are responsible for coordination of public participation in the UPWP process, distribution of the draft UPWP, and administrative modifications and amendments. CTPS also prepares quarterly reports on the implementation of the UPWP.

FFY 2014 Activities and Expected Work Products:

- Amendments and administrative modifications to the FFY 2014 UPWP
- Development of, and public outreach for, the FFY 2015 UPWP, as described above
- Attendance at relevant meetings
- Quarterly implementation reports
- Other information materials as needed

This project is supported by 3C planning support activities, the Provision of Materials in Accessible Formats project, and transportation equity and public outreach activities described in this chapter. MAPC work efforts related to the UPWP are also presented in this chapter.

UNIFIED PLANNING WORK PROGRAM [CTPS]



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 10104

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.21.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$91,800	\$91,800			\$63,380	\$28,420					



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC3

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

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

MAPC also provides assistance on the annual development of the UPWP and support for the development of specific 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.

FFY 2014 Activities and Expected Work Products: MAPC staff will prepare UPWP project listings and monthly reports on UPWP activities. MAPC will provide assistance with the annual development of the UPWP and support for the development of specific 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.

This project supports UPWP activities presented in this chapter.

FHWA/FTA Grant Application Task and Element: 44.21.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$10,000		\$10,000		\$7,000	\$3,000					



Planning Studies

The projects in this chapter are planning studies that will be conducted during federal fiscal year 2014. They are technical in nature and may include support for larger projects that are described in Appendix A: Other Boston Region Transportation-Planning Projects.

Project ID #	Project Name	Page
13258	Accelerated Bridge Program Support	6-3
13259	Addressing Safety, Mobility and Access on Subregional Priority Roadways	6-4
13265	Addressing Safety, Mobility and Access on Subregional Priority Roadways – FFY 2014	6-5
13208	Bicycle/Pedestrian Support Activities	6-7
11123	Congestion Management Process	6-8
MAPC4	Corridor/Subarea Planning Studies	6-10
22336	Green Line Extension: Completion of New Starts Analysis	6-13
11377	Green Line Extension Delay: SIP Mitigation	6-14
MAPC5	Land Use Development Project Reviews	6-15
22124	Massport Assistance SFY 2012–SFY 2014	6-16
11390	Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes	6-17
MAPC6	MetroFuture Engagement	6-18

Boston Region MPO FFY 2014 Unified Planning Work Program

Project ID #	Project Name	Page
53312	MetroWest RTA Transit Planning Assistance II	6-20
73216	Modeling Support: I-93/I-95 Interchange Improvements North of Boston	6-21
13262	Priority Corridors for LRTP Needs Assessment – FFY 2014	6-22
43213	Route 79 Transportation Study: Evaluation of Alternatives	6-24
13261	Safety and Operations at Selected Intersections – FFY 2014	6-25
43212	South Coast Commuter Rail FEIR	6-26
12311, 12320-12323	South Station Expansion Project: Support	6-27
13263	Traffic Signal Retiming Program	6-28

ACCELERATED BRIDGE PROGRAM SUPPORT



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 13258

BUDGET: \$190,000

STATUS: Contract¹

The MassDOT project managers overseeing the Accelerated Bridge Program have asked CTPS to assist them in advancing the construction and repair of the bridges in the program by providing transportation-planning and travel-forecasting support for bridge projects as needed.

FFY 2014 Activities and Expected Work Products: This project will continue as described above, with the understanding that additional work may be requested by MassDOT.

¹ The term “contract” has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$10,000	\$10,000						\$10,000			



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13265

BUDGET: \$80,000

STATUS: 0%

During MPO outreach, MAPC subregional groups identify transportation problems and issues that concern them. Often these issues are related to bottlenecks or lack of safe access to transportation facilities in their area. These issues can affect livability, quality of life, crash incidence, and air quality along an arterial and its side streets. If problems are not addressed, mobility, access, safety, economic development, and air quality are compromised.

To address comments from the MAPC subregional groups, MPO staff will identify priority arterial bottleneck locations (or series of locations) in the MPO region, with an emphasis on the issues identified by the relevant subregional groups, and will develop recommendations for low-cost improvements. Special attention will be paid to the need for and feasibility of bus service 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 ADA requirements; travel lane utilization by motorized and bicycle traffic; speed limit assessment; and access management. These corridor improvements could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

This project constitutes an additional phase of Addressing Safety, Mobility, and Access on Subregional Priority Arterial Roadways, which was included in the FFY 2013 UPWP.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13265

BUDGET: \$80,000

STATUS: 0%

FHWA/FTA Grant Application Task and Element: 44.24.01
FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$80,000	\$80,000			\$68,000	\$12,000					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13259

BUDGET: \$120,000

STATUS: 63%

During MPO outreach, MAPC subregional groups identify transportation problems and issues that concern them. Often these issues are related to bottlenecks or lack of safe access to transportation facilities in their area. These issues can affect livability, quality of life, crash incidence, and air quality along an arterial and its side streets. If problems are not addressed, mobility, access, safety, economic development, and air quality are compromised.

To address comments from the MAPC subregional groups, MPO staff will identify priority arterial bottleneck locations (or series of locations) in the MPO region, with an emphasis on the issues identified by the relevant subregional groups, and will develop recommendations for low-cost improvements. Special attention will be paid to the need for and feasibility of bus service along these arterial segments. Staff will consider numerous strategies to improve arterials, including examining and evaluating: traffic signals (equipment, retiming, redesign, and coordination); bus stop locations; processing buses through traffic lights; location and management of pedestrian crossings and signals, including ADA requirements; travel lane utilization by motorized and bicycle traffic; speed limit assessment; and access management. These corridor improvements could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

FFY 2014 Activities and Expected Work Products: Complete technical analysis and documentation for selected corridors. Recommendations for improvement will be transmitted to responsible entities for implementation.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$45,000	\$45,000			\$30,600	\$14,400					

BICYCLE/PEDESTRIAN SUPPORT ACTIVITIES



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13208

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

CTPS supports the MPO’s and the region’s needs for bicycle and pedestrian planning through ongoing data collection, analysis, and technical assistance. In addition to the items below, during the UPWP year, other bicycle and pedestrian planning studies are often identified collaboratively by MPO members, communities, bicycle and pedestrian advisory groups, and CTPS.

FFY 2014 Activities and Expected Work Products: 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 include the following:

- 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
- Conduct and collect 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
- Provide ongoing technical support on current tools and practices to communities on bicycle and pedestrian issues
- Conduct technical analyses to quantify the impacts of proposed bicycle facilities, including air quality improvements, reductions in vehicle miles traveled, and parking needs
- Examine potential routes, both on- and off-road, to increase the connectivity of the existing transportation system, including trails, on-road facilities, and public transit

FHWA/FTA Grant Application Task and Element: 44.22.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$46,200	\$46,200			\$33,020	\$13,180					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11123

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

The Congestion Management Process (CMP) in the Boston Region MPO area typically follows federal guidelines and recommendations from the MPO's CMP Committee to set goals, objectives, and performance measures; identify congested locations; determine the causes of congestion; develop sets of alternative strategies to mitigate congestion; evaluate the potential of the different strategies; recommend the strategies that best address the causes and impacts of congestion; coordinate with and support the development of the Transportation Improvement Program (TIP), the Long-Range Transportation Plan (LRTP), and the UPWP; and develop needs priorities for planning studies. Depending on CMP Committee recommendations, monitoring and analysis will continue for highways, arterial roads, transit services, park-and-ride lots, and bicycle and pedestrian facilities. A new work program outlining the tasks for the next CMP cycle will also include the use of electronic monitoring data for roadway travel-time and speed monitoring, identification of existing conditions, and a recommendation on appropriate improvements in accordance with federal guidance.

The CMP is a federally mandated requirement, seeking to monitor congestion, mobility, and safety needs and recommend appropriate strategies. The CMP is developed in an integrated manner with the development of the certification documents: the LRTP, the TIP, and the UPWP, to ensure coherent strategy evaluation and implementation.

FFY 2014 Activities and Expected Work Products: A new work program will be written that will include monitoring, needs assessment, and strategy recommendations for multimodal facilities and services, including:

- Use of electronic travel-time and speed data for MPO arterials and freeways
- Mapping/tabulations of electronic data for analysis and performance evaluation
- Coordinating with the MPO's certification activities, UPWP, TIP, and LRTP
- Supporting the CMP Committee of the MPO



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11123

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

This project informs decisions related to the LRTP and the TIP and identifies areas requiring additional study through the UPWP.

**FHWA/FTA Grant Application Task and Element: 44.22.02
FFY 2014 Budget**

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$212,400	\$212,400			\$144,430	\$67,970					



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC 4

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

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, the District Local Technical Assistance program, and the Sustainable Communities Initiative.

Rutherford Avenue Land Use Visioning: (\$25,000) Following up on the Sullivan Square land use planning project, MAPC will continue to work closely with the City of Boston to conduct land use planning around Austin Street in Charlestown. MAPC will also support the City in any additional planning to finalize the Sullivan Square land use planning at the northern end of Rutherford Avenue. The transportation elements of this project are programmed in the Long-Range Transportation Plan in the 2016–2020 time period.

FFY 2014 Activities and Expected Work Products: Community outreach and engagement, land use vision, maps and visualization products, design guidelines, coordination with the Boston Redevelopment Authority (BRA) and MBTA on land disposition process.

Subregional Priority Development and Priority Preservation Studies: (\$25,000) MAPC will continue to work with municipalities to identify areas for priority development and areas for priority preservation along with the corresponding transportation connections needed to support these sites. New commercial and residential growth must occur in a manner that is respectful of open space resources, impacts on the environment, transportation networks, and water resources in the region. MAPC will work with municipalities in the Inner Core and Three Rivers Interlocal Council to identify a set of regional priorities and opportunities to coordinate their planning. MAPC, in coordination with the Executive Office of Housing and Economic Development, has conducted similar planning efforts across the region, including municipalities in the North Shore, North Suburban and South Shore subregions, and 37 communities in the MetroWest region and along I-495.



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC 4

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FFY 2014 Activities and Expected Work Products: Maps, identified priority development and preservation areas, municipal coordination, subregional priority transportation infrastructure investments that will support the development and preservation areas, demographic data and analysis.

Opportunities for and Impediments to Creating Transit-Oriented Development:

(\$87,520) MAPC will continue planning work that can support transit-oriented development (TOD). MAPC will use demographic data to identify two or three existing transit stations (subway or commuter rail) that have the potential to support TOD. MAPC will analyze these sites and identify potential impediments to development, such as existing zoning, inadequate pedestrian connections, outdated parking requirements, and infrastructure elements, and offer recommendations on how to improve the sites' potential for TOD. Where applicable, MAPC will conduct a market analysis to determine whether the market can support additional development at the chosen station areas. MAPC will work closely with the MBTA, CTPS, MassDOT, land owners, and the municipality in which the stations are located.

FFY 2014 Activities and Expected Work Products: Analysis, identified transit stations with potential to support TOD, mapping and visualization products, demographic and vehicle-miles-traveled data for chosen station areas, community engagement, recommendations to overcome impediments to TOD, technical support to municipalities.

Redevelopment Analysis for Selected Parcels within Routes 99, 16, and 28 in Boston, Everett, Medford, Somerville, and Cambridge: (\$15,000)

A tremendous amount of development is being planned or proposed directly north of Boston, with much of it encouraged by the Green Line Extension project to Somerville, the new Orange Line station at Assembly Square, and proposed improvements to Routes 99 and 16 in Everett and Medford. MAPC will quantify the amount of redevelopment projected to occur on the edge of Boston, Everett, Medford, Somerville, and Cambridge (Inner Belt, North Point, Assembly Row, Sullivan Square,



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC 4

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

South Broadway in Everett) to better understand the potential impacts on the regional transportation system. A tremendous amount of redevelopment is planned on the border of these municipalities, and MAPC has identified this as an area in need of regional coordination.

FFY 2014 Activities and Expected Work Products: Better understanding of where and when development may occur, regional coordination among municipalities, baseline of existing land uses and traffic patterns, estimated trips that will be generated from redevelopment, travel modes used, potential transportation improvements needed to accommodate growth, mapping.

Land Use Baseline for Bus Rapid Transit (BRT): (\$15,000) MassDOT and the MBTA are working with the Institute for Transportation and Development Policy (ITDP) to identify major bus corridors in Greater Boston that have the potential to be upgraded to high-quality bus rapid transit (dedicated lanes, pre-pay, consolidated stops). After MassDOT, MBTA and ITDP identify the corridors, MAPC will perform a land use baseline analysis to document the existing housing units, households, population, jobs, square footage of development, types of jobs, and other information that can be used in the future to determine if an implemented BRT upgrade has supported additional growth in its corridor.

FFY 2014 Activities and Expected Work Products: Baseline data collection and mapping.

FHWA/FTA Grant Application Task and Element: 44.23.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$167,520		\$167,520		\$114,820	\$52,700					



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 22336

BUDGET: \$191,750

STATUS: 70%

The project is to provide planning and modeling assistance to the Massachusetts Bay Transportation Authority (MBTA), as part of completion of work on a New Starts submission for the Green Line Extension. It includes an extension of Green Line service from a relocated Lechmere Station through Cambridge to Somerville and Medford and with a spur to Union Square in Somerville. CTPS will provide needed analytical support for the state and federal environmental review documents and conduct other design-related activities involving travel-demand forecasting. The work also includes continuing support for the New Starts submission and using the most current data to update the Boston Region MPO regional model set to produce the most accurate and timely results.

FFY 2014 Activities and Expected Work Products: CTPS will support the MBTA with their New Starts application and submission. Memoranda will be produced as requested and required.

This work is related to a recommended, regionally significant project that is identified in the Long-Range Transportation Plan (LRTP) and included in the MBTA’s Program for Mass Transportation (PMT). Also see Appendix A.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$40,000	\$40,000								\$40,000	

GREEN LINE EXTENSION DELAY: SIP MITIGATION



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 11377

BUDGET: \$80,000

STATUS: 95%

The Green Line Extension is one of the four outstanding transportation control measure (TCM) commitments currently listed in the State Implementation Plan (SIP). It has a legal deadline of December 31, 2014. MassDOT and the MBTA are currently estimating that the Green Line Extension project will be ready for in-service start-up sometime after the aforementioned legal deadline.

A provision exists in the Massachusetts Department of Environmental Protection (DEP) regulation 310 CMR 7.36 which allows for approval of project delays if interim measures are implemented that result in emission reductions in non-methane hydrocarbons (NMHC), carbon monoxide (CO), and nitrogen oxides (NOx) equal to or greater than the emission reductions that would have been achieved had the required project not been delayed. In order to act on this provision, MassDOT must petition the DEP to authorize delay of the project and to accept one or more interim offset projects that can be demonstrated to achieve the aforementioned desired level of emission reductions for NMHC, CO, and NOx. MassDOT is beginning the process of developing a list of projects, programs, and other measures for interim offsets. CTPS, using the MPO's regional travel-demand model set, will test these measures to ascertain their impacts and determine if they meet or exceed the emission reductions forecast for the Green Line Extension project.

FFY 2014 Activities and Expected Work Products: CTPS will continue to provide air quality data on SIP projects that will be used to offset the delay in opening the Green Line Extension.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$3,700	\$3,700						\$3,700			



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC5

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

This UPWP task includes funding to support MAPC’s review of potential development projects in the region. In particular, projects will be reviewed for consistency with MetroFuture, impacts on the transportation network and projects identified in the Transportation Improvement Program (TIP) and the Long-Range Transportation Plan (LRTP), and consistency with the MPO’s livability goals and the Commonwealth’s sustainable-development principles.

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 will also recommend appropriate mitigation measures. MAPC coordinates these reviews with MassDOT and is working with MassDOT to identify updated requirements to be included in Transportation Impact Assessments that developers must conduct.

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 may also involve other types of proposed development.

FFY 2014 Activities and Expected Work Products: Analysis and write-up of MEPA reviews, development of mitigation recommendations, coordination with municipalities and transportation agencies, maintenance and update 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.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$90,000		\$90,000		\$59,400	\$30,600					



STAFF: Central Transportation Planning Staff

CLIENT: Massport

ID #: 22124

BUDGET: \$150,000

STATUS: Contract¹

CTPS will continue to provide technical assistance to Massport’s Department of Economic Planning and Development. The services are expected to support Logan Airport ground access planning and might include data collection and analysis, analysis related to Logan Airport, air quality analysis, and support for additional, to-be-determined transportation-planning activities. This work may be redirected or modified in response to emerging issues.

FFY 2014 Activities and Expected Work Products: CTPS will continue to support Massport in its desire to examine and improve ground access options.

¹ The term “contract” has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

FHWA/FTA Grant Application Task and Element: Not Applicable

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$15,000	\$15,000									\$15,000



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11390

BUDGET: \$52,000

STATUS: 0%

The MBTA regularly receives requests from elected officials and the public for limited-stop service in many of the Key Route bus corridors. However, dividing existing vehicles on a route between limited-stop and local service would fail to provide an adequate level of service on either. This project would evaluate criteria and costs for establishing additional limited-stop bus services based on existing and future ridership demand, operating strategies, and equipment needs. This methodology could ultimately be used in RTAs beyond the MBTA. This project then would analyze which Key Route corridors would be most likely to support both local and limited-stop service, as well as estimate the resources needed to provide both types of service. The results of the analysis could be used to justify additional operating funds at some point in the future. If additional MBTA operating resources become available, the results of this study could be used to prioritize the implementation of limited-stop service on Key Routes.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$52,000	\$52,000				\$52,000					



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC 6

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

MetroFuture, the comprehensive land use plan for Metro Boston, was adopted as the future land use scenario for the MPO's long-range transportation plan, *Paths to a Sustainable Region*, in FFY 2011. This UPWP task will continue to support the implementation of MetroFuture's local transportation and land use elements around increasing community engagement in MAPC's local planning work, with an emphasis on reaching diverse groups of people. This task will also support coordination with the Sustainable Communities Initiative (SCI). In FFY 2010, MAPC secured a \$4 million planning award on behalf of the region from the federal partnership of the U.S. Department of Transportation (U.S. DOT), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Environmental Protection Agency (EPA) to implement MetroFuture in furtherance of federal sustainability goals.

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 enable livable communities and sustainable transportation. This will include engaging the public in planning and dialogue that enhances corridor planning, identifying priority development and preservation areas, and other decision making to enhance the land-use / transportation connection.

Increasing Equity Focus in Planning and Policy at Local and Regional Levels: MAPC's State of Equity work, which will soon complete its recommendation phase, and the HUD SCI Fair Housing Equity Assessment (FHEA) provide a greater understanding of the importance of social equity in greater Boston. MAPC will take emerging best practices to municipal planners, nonprofit organizations, and other entities for workshops that help foster an appreciation for and skill in inclusive engagement and planning processes.

Showcasing Positive Models of Livable Communities and Sustainable Transportation: Best practices on land use planning from local to state practice across the country provide both ideas and "proof of concept." MAPC will continue to identify such best practices, tailor their application to the Greater Boston context, and use appropriate means to advocate for their consideration in the region. Through the Friends of MetroFuture Walks and Talks series and other opportunities as



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC 6

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

appropriate, MAPC will feature municipal, regional, and other actors who have advanced livable communities and sustainable transportation in greater Boston using approaches that could be instructive to others.

Updating MetroFuture Objectives and Strategies: As it nears its fifth anniversary, MetroFuture’s goals remain as “bold but achievable” as ever. But intervening studies and greater data availability now allow us to express those goals with more numerical objectives than when MetroFuture was adopted in December 2008. Beyond that, the strategies to achieve the MetroFuture goals need to be updated on an ongoing basis if they are to represent the most efficient and opportune ways for the region to move forward. This work would support updates in each component of the MetroFuture plan.

FFY 2014 Activities and Expected Work Products: Public engagement, workshops, identified best practices, white papers, policy briefs, and updated MetroFuture objectives and strategies.

FHWA/FTA Grant Application Task and Element: 44.23.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$100,000		\$100,000		\$69,400	\$30,600					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 53312

BUDGET: \$30,000

STATUS: 60%

When the MetroWest Regional Transit Authority (MWRTA) was established, CTPS conducted a study that explored potential markets and provided service planning assistance. As the MWRTA enters its fifth year of service, it could benefit from an evaluation of route efficiencies and demands. CTPS will evaluate existing transit service, identify potential improvements to present routes and schedules, and propose new services to meet untapped demand and relieve traffic congestion.

FFY 2014 Activities and Expected Work Products: CTPS will provide technical assistance to MWRTA in developing possible service changes and prepare a technical memorandum summarizing the findings of any requested service analyses.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$12,500	\$12,500				\$12,500					



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 73216

BUDGET: \$157,000

STATUS: 50%

The I-93/I-95 interchange north of Boston was built in the early 1970s using then-current design standards and serving substantially lower volumes than the roadway experiences today. As the number of vehicles increases, merges and weaves become congested to a greater extent. This interchange has been ranked among the five worst crash sites in Massachusetts in terms of safety between 2006 and 2010. As a part of the required National Environmental Policy Act (NEPA) and Massachusetts Environmental Policy Act (MEPA) processes, and to complete an Environmental Impact Statement (EIS), MassDOT’s Highway Division will develop an environmental document that will evaluate transportation improvements at the I-93/ I-95 interchange in the towns of Reading, Stoneham, and Wakefield and the city of Woburn. A set of alternatives, including interchange improvements, transit service improvements, and other types of improvements, will be modeled and analyzed using the Boston Region MPO’s regional travel-demand model set.

FFY 2014 Activities and Expected Work Products: Tasks associated with this project will be conducted as requested by MassDOT.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$78,500	\$78,500						\$78,500			



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13262

BUDGET: \$70,000

STATUS: 0%

Corridor analysis is a logical way to approach transportation studies in the region. Possible corridors of critical and strategic concern might best be viewed in a programmatic way. An arterial management roadway improvement effort would recommend conceptual improvements for corridors that the Congestion Management Process (CMP) and the Long-Range Transportation Plan (LRTP) identified as part of the needs assessment process. These corridor improvements could be recommended to implementing agencies and funded through various federal, state, and local sources, separately or in combination.

This project would constitute an additional phase of the Priority Corridors for Long-Range Transportation Plan (LRTP) Needs Assessment project, which was included in the FFY 2013 UPWP.

A particular corridor or several small sections of multiple corridors could be selected. This list, based on the LRTP needs assessment, includes examples of candidate locations, some of which may already be under study.

- Route 9 in Framingham, Natick, and Southborough (West Corridor)
- Route 30 in Framingham (West Corridor)
- Mystic Valley Parkway in Medford (North Corridor/Central Area)
- Route 203 in Boston (Southwest Corridor/Central Area)
- Route 145 in Boston and Winthrop (Northeast Corridor/Central Area)
- Route 37 in Braintree (Southwest Corridor)
- Route 16 in Newton and Wellesley (West Corridor)
- Route 3A in Quincy and Weymouth (Southeast Corridor)
- Route 16 in Chelsea and Revere (Northeast Corridor/ Central Area)
- Route 140 in Wrentham (Southwest Corridor)
- Route 138 in Stoughton and Canton (Southwest Corridor)



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13262

BUDGET: \$70,000

STATUS: 0%

- Route 1 in Norwood and Dedham (Southwest Corridor)
- Route 3/3A in Burlington and Woburn (North Corridor)
- Route 60 in Arlington (Northwest Corridor)
- Route 140 in Franklin (Southwest Corridor)

Note: Corridors are listed roughly in priority order according to traffic flow.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.23.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$70,000	\$70,000			\$56,000	\$14,000					



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 43214

BUDGET: \$60,000

STATUS: 85%

This study builds upon the Route 79/Davol Street, Fall River, Transportation Study, which was completed in June 2008. That effort examined the overall feasibility of creating an urban boulevard by developing and analyzing various alternatives that would consolidate or realign Route 79 and Davol Street, which run parallel along Fall River’s waterfront area between Brightman Street and Interstate 195. Ancillary goals of that study were to reconnect the waterfront to the downtown area, to promote economic development, and to incorporate plans for the South Coast Rail project.

This new study aims to conduct a more detailed planning review and analysis of the earlier study’s findings, including the alternatives that were suggested for advancement. It involves consideration of regional transportation impacts, economic and land use feasibility, environmental constraints, refinement of the conceptual layouts, and coordination with the South Coast Rail project.

FFY 2014 Activities and Work Products: CTPS will perform an environmental justice analysis and an air quality analysis, and produce technical memoranda.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$9,000	\$9,000						\$9,000			



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13261

BUDGET: \$67,100

STATUS: 0%

The purpose of this study is to examine mobility and safety issues at major intersections in the region’s arterial highways, where, according to the MPO’s crash data system, many crashes occur. These locations are also congested during peak traffic periods. The resulting bottlenecks can be at a large single intersection but usually spill over to a few adjacent intersections along an arterial. They may also carry multiple transportation modes, including buses, bicyclists, and pedestrians.

This study builds directly on the monitoring results of the Congestion Management Process (CMP) for delays and safety along arterial roadways, and the resulting recommendations will be of the “management and operations” type. Municipalities in the region are very receptive to this type of study, as these studies give them an opportunity to begin looking at the needs of these locations, starting at the conceptual level, before they commit funds for design. Eventually, if the project qualifies for federal funds, the study’s documentation is also useful to MassDOT.

FFY 2014 Activities and Expected Work Products: Additional intersection locations will be selected for transportation planning, operations, and complete-streets analysis. The number of locations studied will depend on the amount of funding available.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$67,100	\$61,700			\$45,630	\$21,470					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 43212

BUDGET: \$40,000

STATUS: 95%

MassDOT and the MBTA are developing the environmental review documents required by the state and federal governments for the South Coast Rail project, which would restore passenger rail service between the cities of Fall River and New Bedford and downtown Boston. The project would include the construction of passenger stations and terminal layover facilities. The work also includes providing modeling support to examine the impacts of the service plan on transit ridership, vehicle miles traveled (VMT), and emissions estimates for various pollutants in the system.

FFY 2014 Activities and Expected Work Products: Tasks associated with this project will be conducted as requested by MassDOT/MBTA.

This work is related to a recommended, regionally significant project identified in the Long-Range Transportation Plan (LRTP). Also see Appendix A for related work.

FHWA/FTA Grant Application Task and Element: 44.23.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$16,000	\$16,000						\$16,000			

SOUTH STATION EXPANSION PROJECT: SUPPORT



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 12311, 12320
-12323

BUDGET: \$350,000

STATUS: 60%

Boston’s South Station is the premier passenger hub in New England, serving rail passengers from the Northeast Corridor and beyond, connecting them to local and intercity destinations. South Station offers commuters and travelers not only Amtrak and MBTA commuter rail service, but also intercity bus, MBTA rapid transit, and MBTA bus rapid transit services. At present, however, South Station operates above its design capacity for efficient train operations and convenient passenger queuing. In addition, South Station lacks sufficient ancillary vehicle storage capacity, constraining operations today and limiting future growth. Several recent transportation studies have highlighted the existing limitations at South Station and how they limit the expansion of local, regional, and Northeast Corridor–wide rail service. In order to realize the cumulative 50 percent increase in Amtrak high-speed and intercity passenger service outlined in the Northeast Corridor Plan, South Station and its support facilities need to be expanded and improved. In addition, the Commonwealth of Massachusetts is planning a number of major commuter rail expansion projects, and greater capacity at South Station is a prerequisite for the full realization of these plans. MassDOT’s South Station Expansion project will make possible all of these rail improvements for the benefit of not only Boston and New England but also the entire Northeast Corridor.

FFY 2014 Activities and Expected Work Products: CTPS will support the project team in developing and testing options for expanding South Station.

Also see Appendix A for related work.

FHWA/FTA Grant Application Task and Element: 44.23.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$111,500	\$111,500						\$111,500			

TRAFFIC SIGNAL RETIMING PROGRAM



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13263

BUDGET: \$40,000

STATUS: 0%

This program will conduct detailed analyses and assessments in support of traffic signal retiming for intersections throughout the region. Traffic signal retiming is one of the most cost-effective ways to improve traffic movement through an intersection. The Institute of Transportation Engineers reports that comprehensive signal retiming programs have documented benefits of 7 to 13 percent reduction in overall travel time and 15 to 37 percent reduction in delay; traffic signal retiming also supports reduced fuel consumption. Signal timing should be reviewed throughout the region to evaluate its effectiveness and to make necessary changes. Phases can be implemented in order to achieve the most efficiency over time.

Candidate intersections for traffic signal retiming analysis may be based on information from the Congestion Management Process (CMP) intersection performance monitoring activities, as well as from the MPO’s crash data. Signal timing recommendations from these analyses could be implemented through the Intersections Improvement Program of the Transportation Improvement Program (TIP) or using funding from other federal, state, or local sources.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$40,000	\$40,000			\$36,000	\$4,000					



Technical Support/Operations Analysis Projects

The projects in this chapter will be conducted during federal fiscal year 2014. They are technical in nature and may include support for larger projects, which are described in Appendix A: Other Boston Region Transportation-Planning Projects.

Project ID #	Project Name	Page
MAPC7	Alternative-Mode Planning and Coordination	7-3
13150, MAPC9	Community Transportation Technical Assistance Program	7-6
11389	Environmental Justice and Title VI Analysis Methodology Review	7-8
11145	Freight Planning Support	7-10
11151	Greenhouse Gas Reduction Strategy Cost-Effectiveness Analysis	7-11
11146	Household Survey-Based Profiles and Trends	7-12
11148	Identifying Areas with Mode-Shift Opportunities	7-13
MAPC10	Land Use, Demographics, and Mode Shift in Transportation	7-14
13801, MAPC8	Livable Community Workshop Program	7-16
60616	MassDOT Road Inventory Supplemental Grant	7-18
23299, 97101-97115	MassDOT Statewide Planning and Research Program Support	7-19

Boston Region MPO FFY 2014 Unified Planning Work Program

13154	MassDOT Title VI Program	7-20
11380	MassDOT Transit Planning Assistance	7-21
14333	MBTA 2013 National Transit Database: Directly Operated	7-22
14332	MBTA 2013 National Transit Database: Purchased Bus	7-23
11385	MBTA 2013-2014 Title VI Program Monitoring	7-24
14341	MBTA 2014 National Transit Database: Directly Operated	7-25
14340	MBTA 2014 National Transit Database: Purchased Bus	7-26
11384	MBTA Bus Service Data Collection VIII	7-27
14339	MBTA Rider Oversight Committee Support	7-28
13264	Pedestrian Signal Phasing Study	7-29
14342	Regional Transit Service Planning Technical Support – FFY 2014	7-30
11150	Roadway Safety Audits	7-31
12203	TIP Project Impact Before-After Evaluations – FFY 2014	7-32
11149	Transportation Investments for Economic Development	7-33
90080	Travel Data Forecasts	7-34
90040	Travel Operations Analyses	7-35



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC7

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

MAPC provides alternative-mode transportation-planning support to the Boston Region MPO and municipalities in the region. This work benefits bicycle and pedestrian transportation, encourages transit in areas currently underserved by the region's existing regional transit authorities (RTAs), and identifies and supports transportation demand management (TDM) strategies.

Route 128 Business Council TMA Support: MAPC will continue to support the implementation of the 128 Business Council Smart Bus project, which was funded through the MPO's Clean Air and Mobility Program in the FFY 2011 element of the Transportation Improvement Program (TIP). MAPC will continue to work with MassDOT Intelligent Transportation Systems (ITS) staff, the Federal Highway Administration (FHWA), and the 128 Business Council to launch a pilot program that creates an automated shuttle bus dispatching system that is technologically driven and demand-responsive to better facilitate variable-route bus services. MAPC will work with 128 Business Council and MassDOT ITS to evaluate the pilot and offer recommendations.

Transportation Demand Management Best Practices and Municipal Bylaw Development: MAPC has been participating in a MassDOT-led review of the state's Transportation Impact Assessment guidelines for new development projects. Many of the recommendations include analysis to better understand how transportation demand management strategies (TDM) can reduce the single-occupant vehicle trips accessing a site. To encourage the use of TDM at the local level, MAPC will research municipal bylaws in Massachusetts and best practices from across the country that pertain to TDM requirements associated with new development projects and will develop a model bylaw for municipalities based on this research. MAPC will then work with select suburban communities to adopt a TDM model bylaw.

Bike Share Program Implementation: 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. In the summer of 2011 Boston launched a 600-bicycle and 60-station bike share system, which has expanded into neighboring municipalities. Funding for the program comes from the Clean Air and Mobility



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC7

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Program, a separate Federal Transit Administration Bus Livability award, and local support from the municipalities. The bike share vendor for this project, Alta Bike Share, was selected through competitive procurement by MAPC in FFY 2011. Implementation efforts need to be undertaken by MAPC to continue to guide the process. Working with officials from the four municipalities as well as institutions in the greater Boston area, MAPC will continue to implement a program that can be expanded to neighboring municipalities.

Local Bicycle and Pedestrian Plans in Selected Communities: MAPC will continue to work with selected municipalities to develop local bicycle and pedestrian plans. MAPC will provide technical support to identify implementable steps municipalities, MassDOT, the Massachusetts Department of Conservation and Recreation (DCR), and other entities can take to advance bicycle and pedestrian infrastructure in specific locations. This work is the next step in furthering the goals of the MPO's 2007 Regional Bicycle Plan and 2010 Regional Pedestrian Plan.

Regional Greenway Planning and Mapping: MAPC will continue to work with MassDOT, CTPS, and municipalities 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. Trail development is occurring in greater frequency in most of the 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 connecting points of interest. The binding theme of all of the proposed and completed corridors is creating attractive places to walk, bike, or otherwise travel through low-traffic or traffic-free green areas. These greenways are often local in nature; however, if all of these separate projects can be brought into a regional system, a world-class regional network can be created.



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC7

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Rose Kennedy Greenway Bicycle Accommodation: MAPC, working closely with the City of Boston, MassDOT, and the Greenway Conservancy, will conduct a public engagement effort to identify potential bicycle-related improvements along and within the Rose Kennedy Greenway. Based on public input, MAPC will provide technical analysis to identify specific bicycle infrastructure improvements and facilities. The final product of this work will be a report to the City of Boston and the Conservancy on recommendations to improve bicycle accommodation. The City and the Conservancy will then decide the timeline for which improvements to design and implement.

FY 2014 Activities and Expected Work Products: MAPC will help implement the 128 Business Council Smart Bus system and evaluate the pilot program, develop bicycle and pedestrian plans in selected municipalities, support regional trail and greenway development, implement the regional bike share program, develop a municipal TDM bylaw and work with selected municipalities to adopt it, and develop conceptual design for improved bicycle accommodation along and within the Rose Kennedy Greenway.

FHWA/FTA Grant Application Task and Element: 44.22.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$171,390		\$171,390		\$117,600	\$53,790					



STAFF: Central Transportation Planning Staff &
Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: 13150,
MAPC9

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Local community officials often identify transportation issues of concern about which they would like to have technical advice. In this project, 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 or on such things as parking, traffic calming, walking, bicycling, and bus-stop-related issues that the community might have identified. In many cases, there will be a site visit to better understand the potential problem, review existing data, and make suggestions on further data that may be needed. General types of solutions, along with appropriate follow-up and contact information, might be recommended. Descriptions of the various planning processes at MassDOT, the MBTA, the MPO, and MAPC, and guidance on how communities can get involved, might also be provided. The project may produce conceptual designs for some project locations. The project 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 of system preservation, modernization, and efficiency; mobility; and land use and economic development. It will also be consistent with the MPO's Congestion Management Process (CMP) and other staff-identified needs. It will also include a safety component in which staff will respond to community requests to conduct analyses at crash locations and will recommend possible mitigation strategies.

FFY 2014 Activities and Expected Work Products: Town requests for technical assistance will be solicited early in FFY 2014. The number of technical assistance cases will depend on the funding amount. MAPC and CTPS will coordinate and collaborate on a case-by-case basis. It is expected that two to five person-days will be spent on each community problem identified. Requests for services will be fielded and prioritized by the CTPS and MAPC staff. Teams of professionals will be dispatched to client municipalities, and memoranda on the consultations will document the work, recommendations, and outcomes.



STAFF: Central Transportation Planning Staff & Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: 13150, MAPC9

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$71,200	\$41,200	\$30,000		\$48,020	\$23,180					

**STAFF: Central Transportation Planning Staff****CLIENT: Boston Region MPO****ID #: 11389****BUDGET: \$60,000****STATUS: 0%**

As a recipient of FTA and FHWA funds, the MPO is required to comply with both Title VI of the Civil Rights Act of 1964 and the U. S. Department of Transportation’s environmental justice (EJ) policy. While there is significant overlap between the two, Title VI and EJ analyses are not interchangeable. Title VI is a Federal statute that prohibits discrimination on the basis of race, color, or national origin and applies to all activities, while EJ is an executive order that requires the identification of disproportionately high and adverse human health or environmental effects of programs, policies, or activities on minority populations and low-income populations; Title VI is one tool for achieving the principals of environmental justice.

Prior to 2012, Title VI and EJ requirements were paired. In 2012, the FTA developed separate policy guidance in the form of two circulars, one for Title VI and one for EJ. The FHWA continues to include EJ in its Title VI Nondiscrimination Handbook.

The MPO carries out various activities to support the inclusion of Title VI and environmental justice principles in the transportation planning process and to identify the needs of Title VI and environmental justice communities within the Boston Region. This study would take an overall look at the way that Boston Region MPO staff conduct environmental justice and Title VI analyses and identify opportunities for improvement and standardization. These recommendations would support the MPO in meeting the Title VI and EJ requirements of both FTA and FHWA; they may also enhance the MPO implementation of performance-based planning.

The study would consider four elements:

- Methodology
- Appropriate geographic levels for analysis and factors to consider in defining a project impact area or population affected
- Metrics for evaluating benefits and burdens
- Methods and thresholds for determining disparate impacts and disproportionate burdens



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11389

BUDGET: \$60,000

STATUS: 0%

Data to support this study could include the Massachusetts Household Travel Survey data, MBTA Systemwide Passenger Survey data, regional travel model data, and other data.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

For more information on MPO environmental justice efforts, see Transportation Equity/Environmental Justice Support on page 5-24. For more information on Title VI efforts carried out by MPO staff, see Boston Region MPO Title VI Reporting on Page 5 -14, MassDOT Title VI Program on Page 7-20, and MBTA 2013-2014 Title VI Program Monitoring on Page 7-24.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$60,000	\$60,000			\$36,000	\$24,000					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11145

BUDGET: \$34,600

STATUS: 0%

The MPO’s 2010 Freight Study, “A Profile of Truck Impacts,” revealed gaps in the knowledge of freight transportation in the Boston region. To fill in these gaps, MPO staff members have developed a freight program framework for the consideration of the MPO that is based on this document and the statewide freight planning efforts to date. This was one of the products of the FFY 2013 Freight Study II.

FFY 2014 Activities and Expected Work Products: Based on recommendations for freight planning elements from the freight framework developed in FFY 2013, work activities that may be pursued as part of this program are:

- Collecting data related to truck safety and incidents, truck classification count data at key locations, and other data as needed
- Incorporating input from stakeholders representing the freight shipping community in the Boston region to learn about obstacles and transportation needs for freight movement

FHWA/FTA Grant Application Task and Element: 44.21.05

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$34,600	\$34,600			\$34,600						



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11151

BUDGET: \$55,000

STATUS: 0%

This project aims to develop quantitative information to help guide the MPO in its efforts to plan and program in ways that most effectively reduce greenhouse gas (GHG) emissions and thereby enhance sustainability. The technical work will be designed to analyze various actions and strategies for their GHG reduction potential and their likely costs. Examples of actions or strategies that support GHG reduction include programming projects that improve traffic flow or shifting travelers from single-occupancy vehicles to biking, walking, or taking transit. A variety of the MPO staff's tools, such as the regional travel model and the EPA's Motor Vehicle Emissions Simulator (MOVES) model, will be employed. Costs associated with these actions and strategies will be estimated based on the MPO's project programming experience, as well as on the experiences of MassDOT, the MBTA, and other agencies, as necessary. This information will be used to derive a cost-effectiveness range for the types of actions that the MPO would typically program and that Massachusetts transportation agencies would normally fund or operate. This work is consistent with the MPO's goals in the area of environmental sustainability and MassDOT's GreenDOT initiative.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$55,000	\$55,000			\$55,000						



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11146

BUDGET: \$66,700

STATUS: 80%

In 2011, the Massachusetts Travel Survey obtained travel information from 15,017 Massachusetts households, 10,399 of which were in the CTPS model region. Every household member prepared a diary for a specified day and reported all trips, modes of travel, and the type of activity at each visited location from the beginning of the day to the end. A similar survey using a smaller sample (3,743 households) was undertaken in 1991 for the CTPS model region only. The 1991 survey was used for model development and later topical investigations.

The present study has two primary purposes: first, to analyze the 2011 survey in order to create a statistical household and travel profile of the CTPS model region; and second, to develop a set of comparisons between 1991 and 2011 with respect to trip-making patterns and household characteristics such as household size, income, and auto ownership. There is particular interest in measuring any trends in average trip length when the data are analyzed by trip purpose, travel mode, and time-of-day travel distributions and by auto occupancy and travel speeds. Measuring these trends may have important implications for calibration and validation of the current MPO regional model set.

FFY 2014 Activities and Expected Work Products: The majority of this work will be completed in FFY 2013. In the first two months of FFY 2014, staff will complete the documentation, including the development and editing of graphics, development of slide presentations, and making presentations.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$18,500	\$18,500			\$12,580	\$5,920					

IDENTIFYING AREAS WITH MODE SHIFT OPPORTUNITIES



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11148

BUDGET: \$68,000

STATUS: 0%

This project would identify the areas in the region where there is the most potential for shifting travelers away from single-occupant-vehicle trips to other modes, such as transit, walking, and bicycling. This effort would support the Commonwealth’s mode shift goals, as documented in the GreenDOT Implementation Plan.

This project would be undertaken in partnership with the Metropolitan Area Planning Council (MAPC). To carry out this project, MPO staff would use existing and historical data on population and employment density, zero-vehicle households, and transit and roadway networks, along with other spatial datasets, to accomplish this goal. In the MPO’s part of the project, a statistical analysis would be conducted to determine what factors have been the most important determinants of successful transit service. Using this analysis, coupled with land use forecasts from MAPC, staff could determine which areas would be most likely to support transit in the future. Using the same datasets, MAPC could conduct analysis for other modes, such as walking and biking, using datasets applied to other parts of the analysis. This information will be used to identify areas in which to possibly focus mode shift attention.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

This project will be supported by MAPC participation and funding described under Land Use, Demographics, and Mode Shift in Transportation (page 7-14).

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$68,000	\$68,000			\$34,000	\$34,000					



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC10

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

In FFY 2014, MAPC will support the MPO by compiling data for the land use model development, preparing population and employment projections, and conducting analysis to support transportation modeling, plan development, and project evaluation.

Long-Range Transportation Plan (LRTP) Development: MAPC will develop regional, municipal, and traffic analysis zone (TAZ)-level household and population projections for the LRTP update. Using current employment data developed collaboratively with CTPS, the land use model, and updated information from the Development Database, MAPC will prepare employment projections for the region, municipalities, and transportation analysis zones. MAPC will also help CTPS prepare a scenario-based planning approach to the LRTP.

Land Use Allocation Model Development: MAPC will begin the development of a regional TAZ-level dataset of land use and zoning, land value, development potential, and attractiveness attributes as inputs for the development of a land use model. Additional data (such as zoning, sewer, and priority development and preservation areas) that are collected through MAPC planning activities will be used to inform the development of the land use model. MAPC will develop alternative scenarios for modeling the impact of transportation investments.

Identifying Mode Shift Opportunity Areas: In partnership with CTPS, MAPC will identify areas in the region with the most potential for shifting travelers away from single-occupant-vehicle trips to other modes, such as transit, walking, and bicycling. Staff will use existing and historical data on population and employment density, zero-vehicle households, and transit and roadway networks, and other spatial datasets to accomplish this goal.

FFY 2014 Activities and Expected Work Products: Data development and analysis, documentation, and mapping products to support advanced transportation modeling; analysis in support of identifying mode shift opportunity areas.



STAFF: Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: MAPC10

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

This project supports Long-Range Transportation Plan (LRTP) development activities presented in the Certification Requirements project group. Work done under the “Identifying Mode Shift Opportunity Areas” portion of this project will support work being conducted under Identifying Areas with Mode Shift Opportunities (page 7-13).

**FHWA/FTA Grant Application Task and Element: 44.22.03
FFY 2014 Budget**

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$100,000		\$100,000		\$66,000	\$34,000					



STAFF: Central Transportation Planning Staff &
Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: 13801,MAPC8

BUDGET:Not applicable to ongoing projects

STATUS: Ongoing

The MPO livability initiative furthers the goals of the state’s Healthy Transportation Compact and the recent federal guidance encouraging MPOs to promote thinking about how the built environment, mobility, affordability, health, and quality of life in a community are related to one another.

This means offering information, analysis, and technical assistance from a number of different perspectives, such as active transportation, transit, parking, air quality, environment, land use, transit-oriented development, urban design, and public health. The program seeks to support livability by way of several primary components: regional forums, workshops, and online resources, described below.

Regional Forums and Workshops: MAPC and CTPS will identify communities to participate in the workshops through regional forums and discussion at subregional meetings. MAPC and CTPS will work with municipalities interested in promoting livability locally. They will conduct a “livability” assessment and then, with this information, conduct a workshop with local planning staff and residents to identify short- and long-term recommendations that will improve livability in the municipality, including specific steps for facilitating active transportation modes, access to transit (if applicable), and coordinated land use and transportation solutions. Staff will update and develop toolkits on topics such as parking policies, complete streets, funding opportunities, public engagement, and transit-oriented development. In addition, because the workshops will seek to involve people with a broad range of interests and expertise (elected officials, planning and health boards, conservation commissions, public safety, public works and school representatives, engineering departments, chambers of commerce and businesses, community groups, and interested individuals), it is hoped that the workshops will stimulate community-based discussion of other livability-related topics and locally based actions.



STAFF: Central Transportation Planning Staff & Metropolitan Area Planning Council

CLIENT: Boston Region MPO

ID #: 13801,MAPC8

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

Online Resources: Staff will update and expand the MPO Livability Indicators Database. The database serves as an online resource for exploring data associate with livability throughout the Boston region. The database provides access to data, by municipality, related to demographics, transportation options, existing transportation patterns, and other topics related to livability. The purpose is to facilitate a better understanding of the conditions that support livability. Staff will conduct research, provide analysis, and update the indicators.

FFY 2014 Activities and Expected Work Products:

- Outreach through regional forums and local workshops to be held in selected MPO municipalities
- “Livability” analysis of selected areas
- Recommendations and ideas for municipalities to use to improve local livability
- Updated Livability Indicators database
- Development and distribution of toolkits

FHWA/FTA Grant Application Task and Element: 44.21.05

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$61,620	\$46,300	\$15,320		\$38,400	\$23,220					



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 60616

BUDGET: \$259,750

STATUS: 60%

In this project, CTPS will assist MassDOT by updating street name attributes in the Road Inventory in order to help improve the accuracy of the Crash Records database.

FFY 2014 Activities and Expected Work Products: Tasks associated with this project will be conducted as requested by MassDOT. Work products are (1) periodic updates to the Road Inventory line-work and attributes, and (2) a tool to automate generation of the intersection table used by the RMV to report crash locations.



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 23299, 97101
-97115

BUDGET: \$498,000

STATUS: Contract¹

CTPS provides support to MassDOT’s Statewide Planning and Research (SPR) Program as requested. This work includes studies, analyses, and technical assistance. Projects that are either already underway or currently expected to begin during FFY 2014 are listed below. Additional projects may be added during FFY 2014.

- 2013-2014 North and Southeast Xway HOV Lane Monitoring
- Boston Ramps/Back Bay/Bowker Overpass: Modeling
- Boston Ramps/Back Bay/Bowker Overpass: Traffic Analysis
- Diversity Posters
- Ferry Compact
- Miscellaneous Graphics
- Road Inventory Physical Attribute/Misc. Bicycle Updates
- Statewide Travel Model Assistance
- TEAM Assistance (Travel Efficiency Assessment Model)

FFY 2014 Activities and Expected Work Products: Activities and work products will depend on tasks requested by MassDOT’s Office of Transportation Planning. Projects of appropriate scope will be submitted to the MPO before proceeding.

See Appendix A for additional information on several of the projects described above.

¹ The term “contract” has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$498,000	\$498,000					\$498,000				

MASSDOT TITLE VI PROGRAM



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT

ID #: 13154

BUDGET: \$50,000

STATUS: 0%

CTPS will provide technical support to MassDOT in the implementation of its Title VI Program for both the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

FFY 2014 Activities and Work Products: Staff will provide technical support to MassDOT as described above.

FHWA/FTA Grant Application Task and Element: 44.21.04

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$50,000	\$50,000						\$50,000			



STAFF: Central Transportation Planning Staff

CLIENT: MassDOT Office of Transportation Planning

ID #: 11380

BUDGET: \$256,120

STATUS: Contract¹

CTPS provides transit planning assistance to MassDOT and the MBTA by conducting various studies under MassDOT’s federally funded Section 5303 Program. This assistance includes:

- Short-term and ongoing analysis of projects and proposals, including travel-demand modeling, impact analyses, air quality analyses, traffic engineering analyses, and other types of quick-response analyses
- Preparation of supporting data, graphics, maps, and other materials for MassDOT studies and presentations
- Support of environmental document preparation for projects under development

FFY 2014 Activities and Expected Work Products: Activities and work products will depend on tasks requested by MassDOT’s Office of Transportation Planning. Projects of appropriate scope will be submitted to the MPO before proceeding.

¹ The term “contract” has been applied to UPWP entries that reflect contracts with transportation agencies that include multiple individual projects.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$256,120	\$256,120							\$256,120		



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 14333

BUDGET: \$95,900

STATUS: 99%

The objective of this project is to develop estimates of passenger boardings and passenger miles for directly operated bus, trackless trolley, heavy-rail, and light-rail services. The data that form the basis of the estimates will be collected through onboard ridechecks, station faregate observations, and passenger surveys. The MBTA will be submitting its state fiscal year (SFY) 2013 National Transit Database (NTD) estimates of passenger boardings and passenger miles for various transit modes to the Federal Transit Administration (FTA) with the aid of CTPS. The final reports, however, will not be completed until FFY 2014.

FFY 2014 Activities and Work Products: Technical memorandum for the MBTA summarizing estimates of passenger boardings and passenger miles for directly operated bus, trackless trolley, heavy-rail, and light-rail services for SFY 2013 NTD reporting.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$500	\$500								\$500	



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 14332

BUDGET: \$21,580

STATUS: 98%

The objective of this project is to develop estimates of passenger boardings and passenger miles for bus routes operated as part of the MBTA’s Suburban Transportation Program and other contracted MBTA local bus service. The data that form the basis of the estimates will be collected through onboard ridechecks. The MBTA will be submitting its state fiscal year (SFY) 2013 National Transit Database (NTD) estimates of passenger boardings and passenger miles to the Federal Transit Administration (FTA) with the aid of CTPS. The final reports, however, will not be completed until FFY 2014.

FFY 2014 Activities and Expected Products: Technical memorandum for the MBTA summarizing estimates of passenger miles and boardings on purchased transportation services for SFY 2013 NTD reporting.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$500	\$500								\$500	



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 11385

BUDGET: \$135,270

STATUS: 47%

CTPS will provide the MBTA with technical assistance in collecting data on and conducting assessments of the level of service provided in minority communities compared to non-minority areas. Data will be collected on service indicators such as service coverage; vehicle load; vehicle headway; on-time performance; station condition, amenities, and cleanliness; the distribution of neighborhood maps; the operability of automated fare collection (AFC) faregates and fare vending machines; the distribution of AFC retail sales terminals; the distribution of variable message signs; station elevator and escalator location and operability; vehicle age and condition; and the utilization of parking facilities. The location of passenger security inspections will also be gathered and used in the assessments. These activities will help to fulfill monitoring required as part of the MBTA’s ongoing Title VI Program. The results of the analyses will be reported internally at the MBTA and will be folded into the triennial Federal Transit Administration (FTA) reporting.

FTA released an updated Title VI Circular in October 2012. Work will be completed under this scope to respond to new requirements.

FFY 2014 Activities and Expected Work Products: CTPS will provide documentation of selected level-of-service evaluations for FFY 2013 and 2014 MBTA revenue service and amenities, and will prepare the 2014 triennial MBTA Title VI Program Report.

FHWA/FTA Grant Application Task and Element: 44.21.04

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$80,000	\$80,000								\$80,000	



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 14340

BUDGET: \$121,490

STATUS: 3%

The MBTA will be submitting its state fiscal year (SFY) 2014 National Transit Database estimates of passenger boardings and passenger miles for various transit modes to the FTA with the aid of CTPS. The final reports, however, will not be completed until FFY 2015.

FFY 2014 Activities and Expected Work Products:

- FFY 2014 data collection will be completed.
- Ridechecks will be conducted for the trackless-trolley and bus portions of the SFY 2014 National Transit Database reporting.
- Bus portions include bus routes operated as part of the MBTA’s contracted local bus service.
- Ridecheck data to be collected for bus routes will include boardings and alightings by stop, farebox readings (for contracted bus routes), trip-level travel times, departure and arrival times, and intermediate-stop arrival times.
- APC data may serve as an alternative to ridechecks if approved by the FTA.
- For heavy and light rail, origin-and-destination surveys will be conducted, and fare-mix data will be obtained.
- Results of the data collection and the estimation of passenger-miles and boardings will be documented.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$120,500	\$120,500							\$120,500		



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 14340

BUDGET: \$121,490

STATUS: 3%

The MBTA will be submitting its SFY 2014 National Transit Database estimates of passenger boardings and passenger miles for various transit modes to the FTA with the aid of CTPS. The final reports, however, will not be completed until FFY 2015.

FFY 2014 Activities and Expected Work Products:

- FFY 2014 data collection will be completed.
- Ridechecks will be conducted for the trackless-trolley and bus portions of the SFY 2014 National Transit Database reporting.
- Bus portions include bus routes operated as part of the MBTA's contracted local bus service.
- Ridecheck data to be collected for bus routes will include boardings and alightings by stop, farebox readings (for contracted bus routes), trip-level travel times, departure and arrival times, and intermediate-stop arrival times.
- APC data may serve as an alternative to ridechecks if approved by the FTA.
- For heavy and light rail, origin-and-destination surveys will be conducted, and fare-mix data will be obtained.
- Results of the data collection and the estimation of passenger-miles and boardings will be documented.



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 11384

BUDGET: \$450,000

STATUS: 6%

In order to assess bus service changes that are included in the biennial MBTA service plans, the MBTA requires ongoing data collection on its bus system. The data collected as part of this project also support future MBTA service plans, through which bus routes undergo comparative evaluations for cost-effectiveness, crowding, schedule adherence, and other indicators. Work may also include support for improving the ridecheck database so that it will be compatible with new software and data sources.

FFY 2014 Activities and Expected Work Products:

- Pointchecks on bus routes and other data collection, as requested by the MBTA for planning purposes
- Improvements to the ridecheck database

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$150,000	\$150,000								\$150,000	



STAFF: Central Transportation Planning Staff

CLIENT: MBTA

ID #: 14339

BUDGET: \$24,500

STATUS: Ongoing

The MBTA general manager established a Rider Oversight Committee (ROC) in 2004 to provide ongoing public input on a number of different issues, including strategies for increasing ridership, development of new fare structures, and prioritization of capital improvements.

FFY 2014 Activities and Expected Work Products: CTPS will continue to provide technical assistance to the MBTA Rider Oversight Committee and attend committee and subcommittee meetings.

FHWA/FTA Grant Application Task and Element: 44.21.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$6,130	\$6,130								\$6,130	



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 13264

BUDGET: \$30,000

STATUS: 0%

The selection of pedestrian signal phasing involves many complicated factors and is challenging to traffic engineers. Exclusive pedestrian phasing is favored for its safety considerations for pedestrians, though at heavy pedestrian crossing locations, concurrent phasing can sometimes be more effective for both traffic and pedestrian flow while providing a similar level of safety for pedestrians.

Municipalities in the Boston Region MPO area have become increasingly interested in converting some of their intersection signals from an exclusive pedestrian phasing to a concurrent pedestrian phasing, but they have not been able to find useful references or guidelines. This study will review the existing practices and available guidelines for the two types of pedestrian signal operation, perform case studies in the MPO region (including analysis of crash data), compare both operations, and summarize the findings for the MPO’s reference. This information will be disseminated to Boston-region municipalities through a variety of methods, which may include: 1) documents made available on the Boston Region MPO website; 2) information in the MPO’s newsletter, TRANSREPORT; and 3) presentations at MPO information sessions and workshops, MAPC subregional meetings, and other regional gatherings. Municipalities could then apply this information in making transportation improvements.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$30,000	\$30,000			\$30,000						



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 14342

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

The MPO has a policy of supporting transit services and taking steps to reduce single-occupant travel in the region. To support this policy, regional transit authorities (RTAs) in the region are provided with technical support to promote best practices and assistance in addressing issues of ridership, cost-effectiveness, route planning, and other service characteristics. The MPO also extends support to TMAs and municipalities seeking to improve the existing transit services that they operate or fund.

FFY 2014 Activities and Expected Work Products: CTPS will provide technical assistance to the RTAs, TMAs, and municipalities as described above.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$12,000	\$12,000				\$12,000					

ROADWAY SAFETY AUDITS



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11150

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

A Roadway Safety Audit (RSA), as defined by the Federal Highway Administration, is a formal safety performance examination of an existing or future road or intersection by an independent audit team. Additionally, 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-term and long-term recommendations to improve safety for vehicles, pedestrians, and bicyclists. These recommendations help communities to identify safety improvements that can be implemented in the short-term and to determine if more substantial improvements are also needed as part of a larger, long-term improvement process. Audit teams include MassDOT headquarters and district office staff, MassDOT consultants, and CTPS staff, 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 identifies safety issues; and 4) develops and documents recommendations.

FFY 2014 Expected Activities and Work Products: Participation in audit teams as requested by MassDOT.

FHWA/FTA Grant Application Task and Element: 44.23.02

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$6,000	\$6,000			\$6,000						



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 12203

BUDGET: \$40,000

STATUS: 0%

This will be a study to identify the effectiveness of TIP projects, applying the same methods as the study completed in the FFY 2012 UPWP. Measuring project effectiveness is important in order to know whether the employed strategies work well and are therefore suitable for application in similar situations.

To this end, staff will select projects that were constructed in federal fiscal years (FFY) 2010 and 2011. This will allow users at the project location to become familiar with the operations and for user demand to normalize in the area. The “before” data and relative measures of effectiveness will be gathered from existing functional design reports (FDRs) or traffic studies. The “after” data will be collected by MPO staff during FFY 2014. The measures of effectiveness will be calculated from these data.

The types of “before” and “after” data that will be collected and the associated performance measures that will be calculated depend on the types of project improvements that will be assessed and also on the primary objective of the TIP project. For example, for intersection improvement projects, intersection operations and safety will be evaluated using turning movement counts, operational performance measures, and crash data. Staff will compare the two sets of data and draw conclusions on changes in performance. This information would 1) aid Boston-region municipalities in developing transportation improvement projects, 2) support the Boston Region MPO in making decisions for future capital programming, and 3) enhance the MPO’s federally required performance-based planning activities.

FFY 2014 Activities and Expected Work Products: Activities associated with this project will be conducted as described above, and a report documenting the study results will be prepared.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$40,000	\$40,000			\$40,000						



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 11149

BUDGET: \$50,000

STATUS: 0%

This proposed study would examine which transportation investments may yield the greatest economic development benefits. Economic impacts can be assessed in terms of business output, value added (or gross regional product), property value, personal income, or jobs. By using economic analysis tools and other economic data, MPO staff would be able to describe potential economic development benefits in quantitative terms. The outputs of this study would inform the MPO’s efforts to prioritize transportation investments and would also support updates to the MPO’s Long-Range Transportation Plan. Analyses would focus on major infrastructure projects of regional significance.

FFY 2014 Activities and Expected Work Products: The specific tasks and work products associated with this project will be presented to the MPO in a work scope for approval to proceed.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$50,000	\$50,000			\$39,900	\$10,100					

TRAVEL DATA FORECASTS



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90080

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

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

FFY 2014 Activities and Expected Work Products: Work products will depend on the tasks requested by the MPO agencies, the general public, and consultants.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$5,000	\$5,000			\$3,420	\$1,580					



STAFF: Central Transportation Planning Staff

CLIENT: Boston Region MPO

ID #: 90040

BUDGET: Not applicable to ongoing projects

STATUS: Ongoing

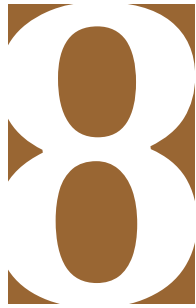
Through the performance of various planning studies for the MBTA, CTPS has accumulated a large amount of ridership, revenue, and service data. This project involves performing various short-term analyses using the available data, upon request.

FFY 2014 Activities and Expected Work Products: CTPS will respond to requests from public agencies, municipalities, and members of the public.

FHWA/FTA Grant Application Task and Element: 44.24.01

FFY 2014 Budget

FFY14 Total Budget	FUNDING RECIPIENT(S)			FUNDING SOURCE(S)						
	CTPS	MAPC	MassDOT	PL	MPO \$5303	SPR	MassDOT	MassDOT \$5303	MBTA	Other
\$7,800	\$7,800				\$7,800					



Boston Region MPO Budget and Operating Summaries

This chapter contains overall budget information by recipient agency and funding source for the projects listed in Chapters 4 through 7. The information is presented according to the same UPWP categories used in those chapters:

Administration and Resource Management Projects	\$778,210
Certification Requirements	\$2,632,000
Planning Studies	\$1,266,420
Technical Support/Operations Analysis Projects	\$2,023,090
Total	\$6,699,720

Funding for the projects listed in Chapters 4 through 7 comes from the following sources, which are described in Chapter 1:

FHWA 3C Planning (PL)/MassDOT Local Match	\$3,566,010
FHWA Statewide Planning and Research (SPR)/MassDOT Local Match	\$498,000
FTA/MassDOT and MAPC Local Match	\$1,825,380
MassDOT	\$397,700
MBTA	\$397,630
Other	\$15,000
Total	\$6,699,720

On the following pages, the funding information presented in the preceding chapters is summarized in four tables, one for each UPWP category. These tables are followed by a one-page summary showing the entire budget by recipient agency and funding source, and a table showing the federally designated elements and tasks for projects

Boston Region MPO FFY 2014 Unified Planning Work Program

utilizing Section 5303 funding. Charts presenting schedules and staff assignments for CTPS projects in this UPWP follow the budget summaries. The purpose of this budget and operating summary information is to assist federal and state contract administrators in reviewing the overall work program in detail.

**Table 8-1: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries –
Administration and Resource Management Projects**

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient (s)			Funding Source(s)							
			CTPS	MAPC	MassDOT	PL	MPO §5303 Funding	SPR	MassDOT	MassDOT §5303	MBTA	Other	
Computer Resource Management	60405- 60492	\$358,600	\$358,600			\$251,320	\$107,280						
Data Resources Management	60120- 60600	\$290,800	\$290,800			\$202,540	\$88,260						
Direct Support	90000	\$128,810	\$128,810			\$57,540	\$22,500	\$43,000		\$5,000		\$770	
Administration and Resource Projects Subtotal		\$778,210	\$778,210			\$511,400	\$218,040	\$43,000		\$5,000		\$770	

Table 8-2: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries – Certification Requirements

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient(s)			Funding Source(s)						
			CTPS	MAPC	MassDOT	PL	MPO \$5303 Funding	SPR	MassDOT	MassDOT \$5303	MBTA	Other
3C Planning and MPO Support	90011-90090	\$634,200	\$634,200			\$442,830	\$191,370					
Access Advisory Committee Support	90024	\$85,700	\$85,700			\$58,280	\$27,420					
Air Quality Conformity Determinations	10112	\$13,000	\$13,000			\$8,840	\$4,160					
Air Quality Support Activity	90061	\$43,300	\$43,300			\$31,040	\$12,260					
Boston Region MPO Title VI Reporting	11355	\$14,000	\$14,000			\$9,520	\$4,480					
Long-Range Transportation Plan	10101	\$300,000	\$300,000			\$204,000	\$96,000					
MPO/MAPC Liaison and Support Activities	MAPC1	\$157,000		\$157,000		\$109,000	\$48,000					
Provision of Materials in Accessible Formats	90028	\$70,000	\$70,000			\$54,000	\$16,000					
Regional Model Enhancement	11124	\$790,000	\$790,000			\$553,550	\$236,450					
Subregional Support Activities	MAPC2	\$157,000		\$157,000		\$109,000	\$48,000					
Transportation Equity/Environmental Justice Support	11147	\$96,000	\$96,000			\$67,330	\$28,670					
Transportation Improvement Program	10103	\$170,000	\$170,000			\$118,020	\$51,980					
Unified Planning Work Program [CTPS]	10104	\$91,800	\$91,800			\$63,380	\$28,420					
Unified Planning Work Program [MAPC]	MAPC3	\$10,000		\$10,000		\$7,000	\$3,000					
Certification Requirements Subtotal		\$2,632,000	\$2,308,000	\$324,000		\$1,835,790	\$796,210					

**Table 8-3: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries –
Planning Studies**

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient (s)			Funding Source(s)							
			CTPS	MAPC	MassDOT	PL	MPO \$5303 Funding	SPR	MassDOT	MassDOT \$5303	MBTA	Other	
Accelerated Bridge Program Support	13258	\$10,000	\$10,000						\$10,000				
Addressing Safety, Mobility, and Access on Subregional Priority Roadways	13259	\$45,000	\$45,000			\$30,600	\$14,400						
Addressing Safety, Mobility, and Access on Subregional Priority Roadways – FFY 2014	13265	\$80,000	\$80,000			\$68,000	\$12,000						
Bicycle/Pedestrian Support Activities	13208	\$46,200	\$46,200			\$33,020	\$13,180						
Congestion Management Process	11123	\$212,400	\$212,400			\$144,430	\$67,970						
Corridor/Subarea Planning Studies	MAPC4	\$167,520		\$167,520		\$114,820	\$52,700						
Green Line Extension: Completion of New Starts Analysis	22336	\$40,000	\$40,000									\$40,000	
Green Line Extension Delay: SIP Mitigation	11377	\$3,700	\$3,700						\$3,700				
Land Use Development Project Reviews	MAPC5	\$90,000		\$90,000		\$59,400	\$30,600						
Massport Technical Assistance SFY 2012–SFY 2014	22124	\$15,000	\$15,000										\$15,000
Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes	11390	\$52,000	\$52,000				\$52,000						
MetroFuture Engagement	MAPC6	\$100,000		\$100,000		\$69,400	\$30,600						
MetroWest RTA Transit Planning Assistance II	53312	\$12,500	\$12,500				\$12,500						
Modeling Support: I-93/I-95 Interchange Improvements North of Boston	73216	\$78,500	\$78,500						\$78,500				
Priority Corridors for LRTP Needs Assessment – FFY 2014	13262	\$70,000	\$70,000			\$56,000	\$14,000						

cont.

**Table 8-3: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries –
Planning Studies (cont.)**

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient (s)			Funding Source(s)						
			CTPS	MAPC	MassDOT	PL	MPO \$5303 Funding	SPR	MassDOT	MassDOT \$5303	MBTA	Other
Route 79 Transportation Study: Evaluation of Alternatives	43214	\$9,000	\$9,000						\$9,000			
Safety and Operations Analyses at Selected Intersections – FFY 2014	13261	\$67,100	\$67,100			\$45,630	\$21,470					
South Coast Commuter Rail FEIR	43212	\$16,000	\$16,000						\$16,000			
South Station Expansion Project: Support	12311, 12320-12323	\$111,500	\$111,500						\$111,500			
Traffic Signal Retiming Program	13263	\$40,000	\$40,000			\$36,000	\$4,000					
Planning Studies Subtotal		\$1,266,420	\$908,900	\$357,520		\$657,300	\$325,420		\$228,700		\$40,000	\$15,000

FEIR Final Environmental Impact Report. RTA Regional Transit Authority. SIP State Implementation Plan.

**Table 8-4: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries –
Technical Support / Operations Analysis Projects**

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient (s)			Funding Source(s)						
			CTPS	MAPC	MassDOT	PL	MPO §5303 Funding	SPR	MassDOT	MassDOT §5303	MBTA	Other
Alternative-Mode Planning and Coordination	MAPC7	\$171,390		\$171,390		\$117,600	\$53,790					
Community Transportation Technical Assistance Program	13150, MAPC9	\$71,200	\$41,200	\$30,000		\$48,020	\$23,180					
Environmental Justice and Title VI Analysis Methodology Review	11389	\$60,000	\$60,000			\$36,000	\$24,000					
Freight Planning Support	11145	\$34,600	\$34,600			\$34,600						
Household Survey-Based Travel Profiles and Trends	11146	\$18,500	\$18,500			\$12,580	\$5,920					
Greenhouse Gas Reduction Strategy Cost-Effectiveness Analysis	11151	\$55,000	\$55,000			\$55,000						
Identifying Areas for Mode Shift Opportunities	11148	\$68,000	\$68,000			\$34,000	\$34,000					
Land Use, Demographics, and Mode Shift in Transportation	MAPC10	\$100,000		\$100,000		\$66,000	\$34,000					
Livable Community Workshop Program	13801, MAPC8	\$61,620	\$46,300	\$15,320		\$38,400	\$23,220					
MassDOT Road Inventory Supplemental Grant	60616	\$119,000	\$119,000						\$119,000			
MassDOT State Planning and Research Program Support ¹	23299, 97101-97115	\$498,000	\$498,000					\$498,000				
MassDOT Title VI Program	13154	\$50,000	\$50,000						\$50,000			
MassDOT Transit Planning Assistance ¹	11380	\$256,120	\$256,120							\$256,120		
MBTA Bus Service Data Collection VIII ¹	11384	\$150,000	\$150,000								\$150,000	
MBTA 2013 National Transit Database: Directly Operated	14333	\$500	\$500									\$500
MBTA 2013 National Transit Database: Purchased Service	14332	\$500	\$500									\$500

cont.

**Table 8-4: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget Summaries –
Technical Analysis / Operations Support Projects (cont.)**

UPWP Project	FFY 2014 UPWP Project ID	FFY 2014 UPWP Total Budget	Funding Recipient (s)			Funding Source(s)							
			CTPS	MAPC	MassDOT	PL	MPO §5303 Funding	SPR	MassDOT	MassDOT §5303	MBTA	Other	
MBTA 2014 National Transit Database: Data Collection and Analysis ¹	14340	\$120,500	\$120,500									\$120,500	
MBTA Rider Oversight Committee Support	14339	\$6,130	\$6,130										\$6,130
MBTA 2013-2014 Title VI Program Monitoring ¹	11385	\$80,000	\$80,000										\$80,000
Pedestrian Signal Phasing Study	13264	\$30,000	\$30,000			\$30,000							
Regional Transit Service Planning Technical Support – FFY 2014	14342	\$12,000	\$12,000					\$12,000					
Roadway Safety Audits	11150	\$6,000	\$6,000			\$6,000							
TIP Before-After Evaluations – FFY 2014	12203	\$40,000	\$40,000			\$40,000							
Transportation Investments for Economic Development	11149	\$50,000	\$50,000			\$39,900	\$10,100						
Travel Data Forecasts	90080	\$5,000	\$5,000			\$3,420	\$1,580						
Travel Operations Analyses	90040	\$7,800	\$7,800				\$7,800						
Technical Support/Operations Analysis Projects Subtotal		\$2,071,860	\$1,755,150	\$316,710		\$561,520	\$229,590	\$498,000	\$169,000	\$256,120	\$357,630		

¹ Dollar amounts shown for these projects include salary, overhead, and direct costs.

TIP Transportation Improvement Program.

Table 8-5: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget by Recipient Agency

UPWP Category	UPWP Total	CTPS								MAPC			MassDOT	
		Total CTPS	PL ¹	MPO \$5303 ¹	SPR ¹	MassDOT	MassDOT \$5303 ¹	MBTA	Other	Total MAPC	PL ¹	MPO \$5303 ¹	MassDOT Total	MassDOT \$5303 ¹
Administration and Resource Management Projects	\$778,210	\$778,210	\$511,400	\$218,040	\$43,000		\$5,000	\$770						
Certification Requirements	\$2,632,000	\$2,308,000	\$1,610,790	\$697,210						\$324,000	\$225,000	\$99,000		
Planning Studies	\$1,266,420	\$908,900	\$413,680	\$211,520		\$228,700		\$40,000	\$15,000	\$357,520	\$243,620	\$113,900		
Technical Support/Operations Analysis Projects ²	\$2,023,090	\$1,706,380	\$352,600	\$121,800	\$455,000	\$169,000	\$251,120	\$356,860		\$316,710	\$208,920	\$107,790		
Total	\$6,699,720	\$5,701,490	\$2,888,470	\$1,248,570	\$498,000	\$397,700	\$256,120	\$397,630	\$15,000	\$998,230	\$677,540	\$320,690		

¹Funds include local match. ²The SPR, MassDOT, and MassDOT \$5303 totals reflect salary and overhead costs.

Table 8-6: Federal Fiscal Year (FFY) 2014 Unified Planning Work Program Budget by Funding Source

UPWP Category	UPWP Total	Federal Highway Administration (FHWA) Funding				Federal Transit Administration (FTA) Funding							Non-Federal Funding				
		Total FHWA PL and SPR with Match	PL Federal Funds	SPR Federal Funds	MassDOT PL and SPR Match	Total FTA with Match	CTPS		MAPC		MassDOT			Total Non-Federal	MassDOT	MBTA	Other
							MPO FFY 2014 \$5303 Federal Funds	MPO FFY 2014 \$5303 Match	MPO FFY 2014 \$5303 Federal Funds	MPO FFY 2014 \$5303 Match	MassDOT FFY 2014 \$5303 Federal Funds	MassDOT FFY 2014 Match					
Administration and Resource Management Projects	\$778,210	\$554,400	\$409,120	\$34,400	\$110,880	\$223,040	\$174,432	\$43,608				\$4,000	\$1,000	\$770			\$770
Certification Requirements	\$2,632,000	\$1,835,790	\$1,468,632		\$367,158	\$796,210	\$557,768	\$139,442	\$79,200	\$19,800							
Planning Studies	\$1,266,420	\$657,300	\$525,840		\$131,460	\$325,420	\$169,216	\$42,304	\$91,120	\$22,780				\$283,700	\$228,700	\$40,000	\$15,000
Technical Support/Operations Analysis Projects ¹	\$2,023,090	\$1,016,520	\$449,216	\$364,000	\$203,304	\$480,710	\$97,440	\$24,360	\$86,232	\$21,558	\$200,896	\$50,224	\$525,860	\$169,000	\$356,860		
Total Funds Programmed	\$6,699,720	\$4,064,010	\$2,852,808	\$398,400	\$812,802	\$1,825,380	\$998,856	\$249,714	\$256,552	\$64,138	\$204,896	\$51,224	\$810,330	\$397,700	\$397,630		\$15,000

¹The SPR, MassDOT, and MassDOT \$5303 totals reflect salary and overhead costs.

Table 8-7: Programmed Federal Fiscal Year (FFY) 2013 Federal Transit Administration \$5303 Funding by Element and Task

Projects by Element and Task	Project ID	Federal Transit Administration (FTA) Funding by Agency with Local Match						
		FTA \$5303 Total	CTPS		MAPC		MassDOT	
			Federal	Local	Federal	Local	Federal	Local
44.21.00 Program Support and Administration		\$435,000	\$260,800	\$65,200	\$87,200	\$21,800		
21.01 Unified Planning Work Program	10104, MAPC3	\$31,420	\$22,736	\$5,684	\$2,400	\$600		
21.02 3C Planning Process and Public Outreach Activities								
3C Planning and MPO Support	90011-90090	\$191,370	\$153,096	\$38,274				
MPO/MAPC Liaison Support Activities	MAPC1	\$48,000			\$38,400	\$9,600		
Subregional Support Activities	MAPC2	\$48,000			\$38,400	\$9,600		
21.03 Environment/Climate Change Support								
Air Quality Conformity Determinations	10112	\$4,160	\$3,328	\$832				
Air Quality Support Activity	90061	\$12,260	\$9,808	\$2,452				
21.04 Support to Targeted Populations								
Access Advisory Committee Support	90024	\$27,420	\$21,936	\$5,484				
Boston Region MPO Title VI Reporting	11355	\$4,480	\$3,584	\$896				
Provision of Materials in Accessible Formats	90028	\$16,000	\$12,800	\$3,200				
Transportation Equity/Environmental Justice Support	11147	\$28,670	\$22,936	\$5,734				
21.05 Livable Community Workshop Program	13801, MAPC8	\$23,220	\$10,576	\$2,644	\$8,000	\$2,000		
44.22.00 General Development and Comprehensive Planning		\$600,930	\$410,512	\$102,628	\$70,232	\$17,558		
22.01 Data Resources Management	60120-60600	\$88,260	\$70,608	\$17,652				
22.02 Alternative-Mode Program Support								
Alternative-Mode Planning and Coordination	MAPC7	\$53,790			\$43,032	\$10,758		
Bicycle/Pedestrian Support Activities	13208	\$13,180	\$10,544	\$2,636				
Congestion Mangement Process	11123	\$67,970	\$54,376	\$13,594				
22.03 Technical Capacity Management								
Computer Resource Management	60405-60492	\$107,280	\$85,824	\$21,456				
Land Use, Demographics, and Mode Shift in Transportation ¹	MAPC10	\$34,000			\$27,200	\$6,800		
Regional Model Enhancement	11124	\$236,450	\$189,160	\$47,290				
44.23.00 Long-Range Transportation Planning		\$245,370	\$105,176	\$26,294	\$91,120	\$22,780		
23.01 Systems-Level Planning								
Corridor/Subarea Planning Studies	MAPC4	\$52,700			\$42,160	\$10,540		
Long-Range Transportation Planning	10101	\$96,000	\$76,800	\$19,200				
MetroFuture Engagement	MAPC6	\$30,600			\$24,480	\$6,120		
Priority Corridors for LRTP Needs Assessment – FFY 2014	13262	\$14,000	\$11,200	\$2,800				
23.02 Project-Level Planning								
Land Use Development Project Reviews	MAPC5	\$30,600			\$24,480	\$6,120		
Safety and Operations at Selected Intersections – FFY 2014	13261	\$21,470	\$17,176	\$4,294				

cont.

Table 8-7: Programmed Federal Fiscal Year (FFY) 2013 Federal Transit Administration §5303 Funding by Element and Task (cont.)

Projects by Element and Task	Project ID	Federal Transit Administration (FTA) Funding by Agency with Local Match						
		FTA §5303 Total	CTPS		MAPC		MassDOT	
			Federal	Local	Federal	Local	Federal	Local
44.24.00 Short-Range Transportation Planning		\$464,600	\$162,784	\$40,696	\$8,000	\$2,000	\$200,896	\$50,224
24.01 Special Activities								
Addressing Safety, Mobility and Access on Subregional Priority Roadways	13259	\$14,400	\$11,520	\$2,880				
Addressing Safety, Mobility and Access on Subregional Priority Roadways – FFY 2014	13265	\$12,000	\$9,600	\$2,400				
Community Transportation Technical Assistance Program	13150, MAPC9	\$23,180	\$10,544	\$2,636	\$8,000	\$2,000		
Environmental Justice and Title VI Analysis Methodology Review	11389	\$24,000	\$19,200	\$4,800				
Household Survey-Based Travel Profiles and Trends	11146	\$5,920	\$4,736	\$1,184				
Identifying Areas With Mode Shift Opportunities	11148	\$34,000	\$27,200	\$6,800				
MassDOT Transit Planning Assistance	11380	\$251,120					\$200,896	\$50,224
Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes	11390	\$52,000	\$41,600	\$10,400				
MetroWest RTA Transit Planning Assistance II	53312	\$12,500	\$10,000	\$2,500				
Regional Transit Service Planning Technical Support – FFY 2014	14342	\$12,000	\$9,600	\$2,400				
Traffic Signal Retiming Program	13263	\$4,000	\$3,200	\$800				
Transportation Investments for Economic Development	11149	\$10,100	\$8,080	\$2,020				
Travel Data Forecasts	90080	\$1,580	\$1,264	\$316				
Travel Operations Analyses	90040	\$7,800	\$6,240	\$1,560				
44.25.00 Transportation Improvement Program		\$51,980	\$41,584	\$10,396				
25.01 Transportation Improvement Program	10103	\$51,980	\$41,584	\$10,396				
44.27.00 Other Activities		\$27,500	\$18,000	\$4,500			\$4,000	\$1,000
27.01 Direct Support	90000	\$27,500	\$18,000	\$4,500			\$4,000	\$1,000
Total Boston Region MPO 5303 Funds Programmed		\$1,825,380	\$998,856	\$249,714	\$256,552	\$64,138	\$204,896	\$51,224

¹The "Land Use, Demographics, and Mode-Shift in Transportation" project includes MAPC support for the "Identifying Areas with Mode-Shift Opportunities" project.

RTA Regional Transit Authority.

Table 8-8: FFY 2014 Unified Planning Work Program CTPS Schedule and Staff Assignments - Ongoing Planning Activities

The charts below present estimated schedules and staff assignments for the CTPS projects in this UPWP. They are subject to revision as the projects move through implementation. All projects are supported by CTPS's Administrative Services Group, Technical Editing Group, and Graphics Group, and are overseen by the CTPS Directors.

Project ID	Ongoing Planning Activities	Certification Activities Group	Information Technology and Services Group	Transit Service Planning Group	Traffic Analysis and Design Group	Transportation Systems Analysis Group	Travel Model Development Group	Anticipated Completion Date
90011-90900	3C Planning and MPO Support	✓	✓	✓	✓	✓	✓	Ongoing
90024	Access Advisory Committee Support	✓						Ongoing
10112	Air Quality Conformity Determinations	✓				✓	✓	Ongoing
90061	Air Quality Support Activity	✓	✓			✓		Ongoing
13208	Bicycle/Pedestrian Support Activities	✓	✓		✓			Ongoing
11355	Boston Region MPO Title VI Reporting	✓						Ongoing
13150	Community Transportation Technical Assistance Program			✓	✓			Ongoing
60405-60492	Computer Resource Management		✓					Ongoing
11123	Congestion Management Process		✓		✓			Ongoing
60120-60600	Data Resources Management		✓					Ongoing
90000	Direct Support	✓	✓	✓	✓	✓	✓	Ongoing
13801	Livable Community Workshop Program	✓	✓		✓			Ongoing
10101	Long-Range Transportation Plan	✓	✓	✓	✓	✓	✓	Ongoing
90028	Provision of Materials in Accessible Formats	✓	✓					Ongoing
11244	Regional Model Enhancement		✓			✓	✓	Ongoing
14342	Regional Transit Service Planning Technical Support – FFY 2014			✓				Ongoing
11150	Roadway Safety Audits				✓			Ongoing
11147	Transportation Equity/Environmental Justice Support	✓	✓	✓		✓		Ongoing
10103	Transportation Improvement Program	✓	✓		✓			Ongoing
90080	Travel Data Forecasts				✓			Ongoing
90040	Travel Operations Analyses			✓				Ongoing
10104	Unified Planning Work Program [CTPS]	✓	✓	✓	✓	✓	✓	Ongoing

Table 8-9: FFY 2014 Unified Planning Work Program CTPS Schedule and Staff Assignments – Studies and Activities Currently Underway

Project ID	Studies and Activities Currently Underway	Certification Activities Group	Information Technology and Services Group	Transit Service Planning Group	Traffic Analysis and Design Group	Transportation Systems Analysis Group	Travel Model Development Group	Anticipated Completion Date
13258	Accelerated Bridge Program Support					✓		December 2013
13259	Addressing Safety, Mobility, and Access on Subregional Priority Roadways			✓	✓			November 2013
22336	Green Line Extension: Completion of New Starts Analysis					✓		December 2013
11377	Green Line Extension Delay: SIP Mitigation					✓		December 2013
11146	Household Survey-Based Travel Profiles and Trends				✓			November 2013
60616	MassDOT Road Inventory Supplemental Grant		✓					June 2014
23299, 97101-97115	MassDOT State Planning and Research Program Support	✓	✓		✓	✓	✓	March 2014
13154	MassDOT Title VI Program			✓				December 2014
11380	MassDOT Transit Planning Assistance		✓	✓		✓		September 2014
22124	Massport Assistance SFY 2012–SFY 2014		✓	✓		✓		June 2014
14333	MBTA 2013 National Transit Database: Directly Operated			✓				November 2013
14332	MBTA 2013 National Transit Database: Purchased Bus			✓				November 2013
11385	MBTA 2013–2014 Title VI Program Monitoring			✓				June 2014
14340	MBTA 2014 National Transit Database: Data Collection and Analysis			✓				November 2014
11384	MBTA Bus Service Data Collection VIII			✓				March 2016

cont.

Table 8-9: FFY 2014 Unified Planning Work Program CTPS Schedule and Staff Assignments – Studies and Activities Currently Underway (cont.)

Project ID	Studies and Activities Currently Underway	Certification Activities Group	Information Technology and Services Group	Transit Service Planning Group	Traffic Analysis and Design Group	Transportation Systems Analysis Group	Travel Model Development Group	Anticipated Completion Date
14339	MBTA Rider Oversight Committee Support			✓				March 2017
53312	MetroWest RTA Transit Planning Assistance II			✓				October 2013
73216	Modeling Support: I-93/I-95 Interchange Improvements North of Boston					✓		May 2014
43213	Route 79 Transportation Study: Evaluation of Alternatives					✓		December 2013
43212	South Coast Commuter Rail FEIR					✓		December 2013
12311, 12320-12323	South Station Expansion Project: Support			✓		✓		June 2015

Table 8-10: FFY 2014 Unified Planning Work Program CTPS Schedule and Staff Assignments –
Studies With Work Scopes to Be Developed

Project ID	Studies with Work Scopes to be Developed	Certification Activities Group	Information Technology and Services Group	Transit Service Planning Group	Traffic Analysis and Design Group	Transportation Systems Analysis Group	Travel Model Development Group	Anticipated Completion Date
13265	Addressing Safety, Mobility, and Access on Subregional Priority Roadways – FFY 2014			✓	✓			TBD ¹
11389	Environmental Justice and Title VI Analysis Methodology Review	✓		✓		✓		TBD
11145	Freight Planning Support	✓			✓	✓	✓	TBD
11151	Greenhouse Gas Reduction Strategy Cost-Effectiveness Analysis	✓				✓		TBD
11148	Identifying Areas With Mode Shift Opportunities			✓		✓		TBD
11390	Methodology for Evaluating the Potential for Limited-Stop Service on Transit Routes			✓		✓		TBD
13264	Pedestrian Signal Phasing Study				✓			TBD
13262	Priority Corridors for LRTP Needs Assessment – FFY 2014			✓	✓			TBD
13261	Safety and Operations at Selected Intersections – FFY 2014				✓			TBD
12203	TIP Project Impact Before-After Evaluations – FFY 2014	✓			✓			TBD
13263	Traffic Signal Retiming Program				✓			TBD
11149	Transportation Investments for Economic Development	✓			✓	✓		TBD

¹ To be determined.

Appendix A: Other Boston Region Transportation-Planning Projects

This appendix consists of brief descriptions of planning studies that will be conducted in the Boston Region Metropolitan Planning Organization (MPO) area by individual agencies, such as MassDOT and the MBTA. MPO funding will not be used for these studies, although in certain instances an agency or one of its consultants may contract with MPO staff, specifically, the Central Transportation Planning Staff (CTPS), to provide support work for the preparation of an environmental impact report or a large-scale study. For these projects, CTPS support work is described in Chapters 4 through 7, with a cross-reference to the project listing in this appendix. Likewise, projects listed in this appendix indicate whether there is a CTPS component. An example of this is the South Station Expansion Project; CTPS support work is described in Chapter 6, and the MassDOT project itself is presented in this appendix.

The projects in this appendix are not subject to the MPO's public participation process. Rather, they follow their own public processes with established citizen advisory committees, as required by the Massachusetts Environmental Policy Act (MEPA). They are included here to provide a more complete picture of all the surface-transportation planning projects occurring in the region.

A.1 OTHER BOSTON REGION TRANSPORTATION-PLANNING PROJECTS

Central Broadway Streetscape Improvements

**Agency: City of
Somerville**

The City of Somerville will be studying existing transportation needs, and evaluating and preparing an urban streetscape design that improves safety and function along Central Broadway. It will also foster a distinctive sense of place along Central Broadway that builds on the character of the Winter Hill neighborhood.

Charles River Basin Bridge Projects

Agency: MassDOT

As part of the Accelerated Bridge Program, over \$400 million in funding has been allocated to improving the conditions of structurally deficient bridges in the Lower Basin area of the Charles River. Created 90 years ago from tidal marshes and mud flats, the Charles River Basin operates as a complex transportation and linkage system. This area serves as a host to many historic and natural resources, including parks, shared-use pathways, public boat landings, boat houses, recreational facilities, and leading higher-educational institutions. Bridge rehabilitation projects currently under construction or in design include the Craigie Dam Bridge and Craigie Drawbridge, Longfellow Bridge, Boston University Bridge, Western Avenue Bridge, River Street Bridge, Anderson Memorial Bridge, and Magazine Street Pedestrian Bridge.

The historic Charles River Basin bridges provide critical connections for travelling in and out of Boston for a wide range of users, including businesses, universities, hospitals, bicyclists, pedestrians, and drivers. The bridges are important evacuation routes and serve countless recreational users along the Charles River.

Downtown Framingham Traffic Impact Analysis

Agency: MassDOT

The Towns of Framingham and Ashland are concurrently developing projects to improve access across the CSX Boston Line/MBTA Worcester Line through their respective communities. Many major roads used for north–south travel in each community cross the railroad at grade and are significantly disrupted by the frequent crossings of CSX freight, MBTA commuter rail, and Amtrak trains along the railroad

Appendix A: Other Boston Region Transportation-Planning Projects

corridor. These disruptions have a negative effect on each community's quality of life, public safety, and economic development.

MassDOT's Highway Division and Office of Transportation Planning are conducting a study of the area as part of an Environmental Notification Form (ENF). The purpose of the study is to evaluate the impacts that several proposed modifications to the rail crossing intersections would have on traffic congestion and travel patterns in the downtown Framingham area.

Fairmount Planning Initiatives

**Agency: MassDOT/MBTA/
City of Boston/MAPC**

State transportation agencies are partnering with federal agencies, the City of Boston, and neighborhood-based organizations on a number of planning initiatives designed to improve access to transit and promote sustainable development in the Fairmount Corridor. These initiatives, which are underway as the MBTA completes major infrastructure improvements and three of the four planned new stations on the Fairmount Line, include:

- *Fairmount Corridor Business Development and Transit Ridership Growth Strategy:* Fairmount CDC Collaborative with the MBTA has received a Transportation, Community and System Preservation grant to improve transit service connection to job development in the Fairmount Corridor.
- *Fairmount Indigo Corridor Planning Initiative:* The Boston Redevelopment Authority is spearheading this planning process, which involves the participation of community and agency stakeholders. A vision for Corridor land use and neighborhood change focused on enhanced transit is being developed, along with an action plan for targeted redevelopment and public infrastructure upgrades at station areas.

Fenway-Longwood-Kenmore Transportation Action Plan

Agency: City of Boston

This study involves identifying land use, transportation, and urban design goals for the East and West Fenway. The West Fenway Plan includes two major components: a transportation plan, and land use and urban design guidelines for two special study areas (Brookline Avenue/Lansdowne Street and Boylston Street). The East Fenway Plan

addresses five categories: land use, institutions, housing and economics, transportation, and urban design.

Ferry Compact

Agency: Various

The Ferry Compact's principal mission is to identify an overall vision for the ferry system in Massachusetts that improves the transportation of people, goods, and vehicles by water. The Compact's membership—which includes MassDOT, the MBTA, Massport, the Massachusetts General Court, the Steamship Authority, the Seaport Advisory Council, the Boston Harbor Association, and several Boston Region municipalities—is a mix of state agencies, state and local elected officials, and other organizations that are dedicated to improving ferry transportation in the Commonwealth. For more information, visit <http://www.massdot.state.ma.us/planning/Main/StatewidePlans/FerryCompact.aspx>.

CTPS will support the Ferry Compact through the MassDOT Statewide Planning and Research Program Support project (page 7-19).

Green Line Extension Project New Starts Agency: MassDOT/MBTA Application Development

The Green Line Extension (GLX) Project is an initiative to extend existing MBTA Green Line service from a relocated Lechmere Station in East Cambridge to Somerville and Medford with a spur to Union Square in Somerville. The purpose of this project is to boost transit ridership, improve air quality, ensure equitable distribution of transit services, and support opportunities for smart growth initiatives and sustainable development in Cambridge, Somerville, and Medford. The project is required by the State Implementation Plan (SIP) and fulfills a longstanding commitment of the Central Artery/ Tunnel project to increase public transit.

The Federal Transit Administration (FTA) New Starts program provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors. In June 2012, FTA approved the GLX Project to enter the Preliminary Engineering phase of project development under the New Starts Program. This approval makes MassDOT and the MBTA eligible to apply for New Starts funding from FTA to reimburse expenditures associated with the GLX project. Final authority to seek reimbursements, however, depends on the GLX project's being able to successfully continue to compete against other public transit projects

Appendix A: Other Boston Region Transportation-Planning Projects

within the New Starts program. For this to occur, the Green Line Extension project must continue to advance the design and complete the tasks associated with applying for New Starts Funding, including updating data for New Starts criteria.

CTPS will support the Green Line Extension project's New Starts application development through the Green Line Extension: Completion of New Starts Analysis project (page 6-13).

Inland Route High-Speed Rail Corridor Feasibility Study

Agency: MassDOT

This study of the Inland Route High-Speed Rail Corridor will examine more frequent and higher-speed intercity passenger rail service on the 160.2-mile corridor between Boston, MA, and New Haven, CT, via Springfield, MA, along with the corresponding ridership potential and necessary infrastructure improvements necessary to develop a Tier 1 Draft Environmental Impact Statement (DEIS) and companion Service Development Plan. This study will be coordinated with the effort to upgrade the Springfield–New Haven line, which is being led by the State of Connecticut, using analysis and design previously developed for that segment of the corridor, to the extent possible. Improvements to the Inland Route will facilitate initiation of passenger train service along a second route between Boston and New York at speeds comparable to the existing Amtrak regional trains that travel along the Northeast Corridor. This study will be integrated into the companion effort led by the State of Vermont to study intercity passenger rail service between Boston and Montreal via the Inland Route.

Intelligent Transportation Systems: Development and Implementation

Agency: MassDOT

MassDOT is engaged in planning, developing, and implementing intelligent transportation systems (ITS) to more effectively operate the transportation system in Massachusetts. MassDOT's Office of Transportation Planning conducts ITS planning described in the State Planning and Research Program – Part I. Current planning activities include implementing a statewide ITS planning program, developing a statewide ITS strategic plan, maintaining and updating the regional ITS architectures for metropolitan Boston and other regions within the state, increasing awareness of ITS within the transportation community and among related stakeholders, planning activities in support of the use of

ITS as a tool to improve system performance and function, and providing assistance in planning for the use of ITS for all modes.

MassDOT's Highway Division established the ITS Programs Unit within the Statewide Operations Division to design, develop, implement, and maintain ITS systems for the state highway system. The ITS Programs Unit works with consultants and contractors on these rapidly evolving technologies. Current activities in the Boston region include operation of the Statewide Traffic Operations Center in South Boston, operation of the high-occupancy-vehicle (HOV) lanes on I-93 into Boston from the north and south, expansion of the transportation communications system, operation of the Massachusetts Interagency Video Information System (MIVIS) and advanced traveler-information system, and development of an Advanced Transportation Management System.

Massachusetts Turnpike – Boston Ramps Study

Agency: MassDOT

The goal of this study is to investigate the potential for new or revised access between the Massachusetts Turnpike Extension (I-90) and the regional express highway network in the city of Boston along the segment between Commonwealth Avenue in Allston and Interstate 93 in Chinatown. These new connections would help address the traffic congestion caused by the economic growth in the Back Bay, Longwood Medical Area (LMA), Fenway, and Seaport District neighborhoods in the city of Boston.

CTPS will support the Massachusetts Turnpike – Boston Ramps Study through the MassDOT Statewide Planning and Research Program Support project (page 7-19).

Massachusetts Turnpike Corridor Plan (Boston Extension)

Agency: MassDOT

MassDOT's Office of Transportation Planning is leading an effort to conduct a thorough review of the Massachusetts Turnpike Boston Extension corridor. The review will include an examination of current and proposed transportation and land use projects, the status of existing bridge infrastructure conditions (state of good repair), and a review of any planning studies covering the corridor. In addition to Turnpike infrastructure, the review will also include a summary of proposed tolling technologies, passenger and freight rail interrelationships with the Turnpike corridor, other significant

Appendix A: Other Boston Region Transportation-Planning Projects

transportation projects crossing the corridor, and the status of non-Turnpike key bridges directly impacting the corridor.

CTPS will support the South Coast Rail project through work on the South Coast Commuter Rail FEIR project (page 6-26).

Pre-Engineering for Union Square in Somerville Agency: City of Somerville

The purpose of the study is to evaluate existing transportation analysis and recommend a design for roadway and utility improvements in and around Union Square. In 2002, Edwards and Kelcey (E&K) completed the *Union Square Transportation Plan*, which identified several potential options to improve transportation traffic flow, pedestrian and bike safety, open space and public bus service throughout the Square. The recommendations were based on community consensus that took place as part of the study. In 2009, Howard/Stein-Hudson compiled more detailed transportation-related data that resulted in three recommendations and a functional design report for the then preferred alternative. The City wishes to advance transportation and infrastructure improvements to the Square by having a consultant re-evaluate all findings, identify all other possible design alternatives, add utility improvement design work, and recommend a design solution that would be documented in a report. Public meetings will be held to solicit significant public input and, using that information combined with the empirical data collected, develop and present the recommended design solutions. The consultant, working with the City and all other partners, will be required to develop a phased implementation plan for the design improvements.

Region One University Transportation Center: Universities Research Program Colleges and Universities

Research programs involving educational institutions such as Harvard University, the Massachusetts Institute of Technology, and the University of Massachusetts are conducted at the Region One University Transportation Center. For further information on specific projects, contact Paula Magliozzi at (617) 253-0753.

South Coast Rail Project

Agency: MassDOT/ MAPC/MBTA

MassDOT and the MBTA are developing state and federally required environmental review documents and a smart-growth corridor plan for the South Coast Rail Project, which would restore passenger rail service between the cities of Fall River and New Bedford and downtown Boston. The project includes the construction of passenger stations and terminal layover facilities. MAPC is assisting MassDOT and the MBTA with land use planning for this project. In addition, MassDOT is working in coordination with the Southeastern Regional Planning Development District and with the South Coast Rail Project staff in the development of this project. Visit www.mass.gov/southcoastrail for more information on this study.

South Station Expansion Project

Agency: MassDOT

The 13 tracks currently available at Boston's South Station significantly constrain current and future rail mobility not only within Massachusetts but throughout New England and the Amtrak Northeast Corridor. South Station operates above its design capacity for efficient train operations and orderly passenger queuing and lacks comfortable, modern facilities for passenger queuing, leaving riders standing in the elements as they wait to board their trains.

This project will complete all necessary alternatives analysis, environmental review, and preliminary engineering (approximately 30 percent design) required for the expansion of South Station and the development of a new midday commuter rail layover facility. The project will plan and design an enhanced passenger environment at South Station through improved streetscape and pedestrian, bicycle, local transit, and vehicular facilities in and around South Station, including the re-opening of Dorchester Avenue for public use. The project will consider opportunities for joint public-private development above an expanded South Station and also include a plan for the relocation of the existing U.S. Postal Service General Mail Facility, which must be moved to accommodate the station's expansion.

CTPS will support the South Station Expansion Project project through work on the South Station Expansion Project: Support project (page 6-27).

Transit Asset Management FTA Pilot Program

Agency: MBTA

The MBTA, with an award provided by the FTA through the Transit Asset Management (TAM) Pilot Program, is putting in place systems for maintaining condition inventory, and monitoring and prioritizing transit infrastructure. The program includes:

1. Preparing a transit asset management plan
2. Developing a capital asset inventory
3. Performing condition assessments for assets and the system as a whole
4. Implementing decision support tools for investment prioritization
5. Establishing annual performance targets and measuring performance against them

This FTA Pilot Program work is intended to serve as a model for other U.S. transit agencies in meeting the asset management requirements of MAP-21.

**Urban Streetscape and Adaptive Reuse Plan
for the Inner Belt and Brickbottom Districts**

**Agency: City of
Somerville**

The City of Somerville is conducting a study of the Inner Belt and Brickbottom districts, located in the southeast section of the city. The purpose of this Urban Streetscape & Adaptive Reuse Plan is to identify a collective vision for the area through the civic engagement process and to develop an economic development phasing plan that includes catalyst reuse projects and incorporates an analysis of market trends and economic feasibility. In addition, a financing plan will be proposed that calculates the costs of and details the financing options for the recommended improvements and catalyst reuse projects. The end product will be a plan for future development including but not limited to land use, streetscape, roadway networks, and multimodal transportation options.

Appendix B: Public Participation

Public involvement in the development of the FFY 2014 UPWP followed the procedures set forth in the MPO's adopted "Public Participation Plan for the Boston Region Metropolitan Planning Organization." These procedures are designed to ensure early, continued, and inclusive public involvement in the transportation-planning process.

Steps to develop this year's UPWP began in November 2012, when staff requested study suggestions at Metropolitan Area Planning Council (MAPC) subregional group meetings. As part of these discussions, attention was paid to the extensive needs assessment that was conducted during the development of the MPO's Long-Range Transportation plan, *Paths to a Sustainable Region*. Staff also sought suggestions at Regional Transportation Advisory Council meetings and through outreach to the general public at the Transportation Improvement Program (TIP)-UPWP Building Workshops and at the MPO's "Be Informed, Be Involved" information sessions. These suggestions, along with comments received during the FFY 2013 review period and inputs from recent planning documents, were considered in the Draft FFY 2014 UPWP development process, which is described in detail in Chapter 1. This process culminated in the MPO's UPWP Committee recommending a budget and set of new studies for inclusion in the public-review Draft FFY 2014 UPWP, which was subsequently approved for public circulation by the MPO.

Following the MPO's approval of the Draft FFY 2014 UPWP on May 16, 2013, the document was posted for downloading from the MPO's website, www.bostonmpo.org. Notice of its availability and a 30-day period for public review and comment was published in English in the *Boston Globe*, the *Bay State Banner*, and *TRANSREPORT*. The notice was also published in Spanish in *La Semana*, a major Spanish-

Boston Region MPO FFY 2014 Unified Planning Work Program

language newspaper in the region. Press releases were sent to local and regional newspapers. In addition, notification of the availability of the draft document was distributed to the chief elected officials and planning directors of the region's 101 municipalities, the Regional Transportation Advisory Council, the MAPC subregional groups, participants in the MPO's transportation equity work, state legislators and public libraries in the region, and many other interested parties.

During the review period, the MPO held two public workshops (in Framingham and Lynn), as well as two "Be Informed, Be Involved" information sessions (in Boston), for discussion of the Draft FFY 2014 UPWP and for gathering input from members of the public about their planning priorities. In keeping with the MPO's Title VI and Public Participation Programs, some meeting materials for the workshops were translated. MPO staff has also presented the new studies for the Draft FFY 2014 UPWP to the Regional Transportation Advisory Council and will present information about the UPWP at MAPC subregional group meetings. All MPO meetings and public workshops at which the Draft FFY 2014 UPWP was discussed are accessible to persons with disabilities.

A summary of written comments received during the review period and MPO responses to these comments is included on the following pages.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
4/5/2013 (prior to public comment period)	N/A	Frank DeMasi for Ed Lowney	Expresses a study idea regarding the potential for using bar coding along trail markers as a way for users to determine location and data about surroundings using a cell phone application.	The MPO appreciates this study suggestion. The request to study the use of the interaction of bar codes or other markers with technology for wayfinding and obtaining location-specific data will be considered during the development of the federal fiscal year (FFY) 2015 UPWP.
5/28/2013	Conservation Law Foundation	Rafael Mares, Staff Attorney	Supports the inclusion of the GHG Reduction Strategy Cost-Effectiveness Analysis (ID #11151) in the UPWP. This analysis is designed to develop quantitative information to help guide the MPO in its efforts to plan and program in ways that most effectively reduce greenhouse gas (GHG) emissions. Such important information is currently not fully available to the MPO in its decision making. This analysis therefore has the potential to significantly help the MPO meet its requirements under GreenDOT and to advance the state's climate change goals.	The MPO appreciates the support of the Conservation Law Foundation (CLF) for the Greenhouse Gas Reduction Strategy Cost-Effectiveness Analysis.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/12/2013	Town of Wilmington	Carole Hamilton, Director of Planning and Conservation	<ul style="list-style-type: none"> • Notes that planning projects in the draft proposal are worthy and appear to include studies across all parts of the planning region. • Expresses interest in the "Addressing Safety, Mobility, and Access on Subregional Priority Roadways—FFY 2014" project. Offers two possible study locations in Wilmington: Route 38 from the Tewksbury border to the Woburn border with particular scrutiny of the intersection of Routes 38 and 62, and Route 62 from Main Street in Wilmington to the North Reading line. Notes that both routes serve as conduits through Wilmington to Route 93 and Route 95, contain signalized sections, and should be looked at for pedestrian safety issues. Highlights a dangerous rail crossing on the Route 62 corridor. Notes signalization and pedestrian safety needs at the Route 62/38 intersection, where significant multifamily housing development is occurring, and notes that some issues may involve simple fixes. 	The MPO appreciates the support for the proposed new projects included in the draft UPWP and the input on potential study locations for the "Addressing Safety, Mobility, and Access on Subregional Priority Roadways—FFY 2014" project. These locations will be considered as part of the study selection process, which will seek to achieve a balanced geographic distribution of study corridors.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/13/2013	The Commonwealth of Massachusetts Senate, Second Suffolk and Middlesex District	State Senator William Brownsberger	<ul style="list-style-type: none"> • Expresses concern for the increased pressure on the transportation infrastructure and limitations of public transit options throughout the Back Bay, Fenway, and Longwood Medical Area. • References a proposal for a comprehensive transportation study for the Back Bay, Fenway, and Longwood Medical Area that he and several colleagues and neighborhood associations submitted in February. Acknowledges that the proposal was not recommended in the draft FFY 2014 UPWP but hopes to still find a way to address these issues. Expresses interest in the results of the Massachusetts Department of Transportation's (MassDOT) Massachusetts Turnpike-Boston Ramps study, but also a hope that the MPO's planning process can do more to anticipate the impact of development in the area. Suggests a meeting to discuss this challenge. 	The MPO discussed this proposal as part of selecting projects from the FFY 2014 UPWP Universe of Proposed New Projects. At that time, it was noted that there are several other ongoing MassDOT study efforts in this area, and in order to perform this study appropriately, those other efforts should be allowed to advance to the point where preferred solutions can be identified and then analyzed collectively in the manner suggested by this proposal. The MPO plans to revisit this topic and proposal as part of the development of the FFY 2015 UPWP. MassDOT acknowledges the Senator's comments and recognizes the need for further coordination with all stakeholders.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/17/2013	Regional Transportation Advisory Council (comment continues on the following page)	Steven Olanoff, Chair	<ul style="list-style-type: none"> • Expresses that efforts to understand the UPWP and evaluate its studies could be improved if descriptions included explanations on how results will be used and how recommendations will be implemented • Recommends that sites selected for study give priority to areas that serve the greatest number of residents and workers, address Environmental Justice communities, encourage the growth of transit development centers, and help identify and capitalize on reverse commuting opportunities. • Is especially concerned that Massachusetts does not seem to be proactively planning for the substantial increase and impact of heavier freight and more trucks on Routes I-95, I-495, the MassPike, and connecting roads — and cites a likely effect on safety — while Massachusetts ports become increasingly underutilized and non-competitive. Supports the "Freight Planning Support" program and its funding level, but would like to see more funds and more studies in the future in order to better understand and promote freight movement in the region. Suggests that 	<ul style="list-style-type: none"> • So noted; implementation is an important factor that the MPO considers when selecting UPWP projects. MPO staff have worked to enhance references to study implementation in FFY 2014 UPWP descriptions and will continue to do so in future UPWPs. • The MPO appreciates the Regional Transportation Advisory Council's recommendations for study location selection criteria and will consider incorporating these priorities into location selection criteria. • The MPO appreciates the Council's support for the "Freight Planning Support" program. The Council's recommendations for studies on various aspects of regional freight transportation will be considered to the extent they are consistent with MPO policy and the "Freight Planning Support" program as it evolves.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/17/2013	Regional Transportation Advisory Council (continued; comment continues on the following page)	Steven Olanoff, Chair	<p>future freight studies investigate and describe the MPO Region's multi-modal freight delivery system and the need to meet demand in all modes. Suggests that some studies may develop a better understanding of the effects of "Truck-to-Rail Diversion" and "Short-Line Railroads." Recommends that studies be undertaken to 1) determine the effects of the Panama Canal Expansion Project on freight movement within, through, and around the region, and 2) to study the impact of truck traffic flows resulting from the relocation of the Commonwealth's rail hub to Worcester.</p> <ul style="list-style-type: none"> • Supports the UPWP's "Transportation Investments for Economic Development" study, and recommends that the study involve the Massachusetts Executive Office of Housing and Economic Development and seek its input. Recommends that freight movement be an important part of the Commonwealth's overall economic development strategy. • Recommends that studies of maritime freight and passenger demand and investment include all ports in Massachusetts. 	<ul style="list-style-type: none"> • The MPO appreciates the Council's support for the "Transportation Investments for Economic Development" study as well as the suggestion to seek input from the Massachusetts Executive Office of Housing and Economic Development (EOHED). Staff will consider the suggestion during work scope development and may include consultation with EOHED and other relevant parties as appropriate. • The MPO will consider the Council's comment regarding the ports to be included in studies of maritime freight and passenger demand and investment to the extent consistent with MPO policy and the framework of the "Freight Planning Support" program as it evolves.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/17/2013	Regional Transportation Advisory Council (continued)	Steven Olanoff, Chair	<ul style="list-style-type: none"> • Encourages the MPO to give more attention to the impact of transportation on public health, including impacts related to air quality, noise and light pollution and overall impacts from motor vehicles on bicyclists, pedestrians, and residents • Supports planning and construction activities that support pedestrian and bicycle improvements and transit expansion. • Promotes accessibility in transportation. 	<ul style="list-style-type: none"> • The MPO agrees with the Council's comment regarding public health and is attentive to staff expertise in the conduct of public health assessments. • The MPO's policies and selection criteria favor projects that advance the modes supported by the Advisory Council's comment. • The MPO has incorporated accessibility into its UPWP criteria and it will consider incorporating accessibility into other selection criteria.
6/17/2013	A Better City (ABC)	Richard A. Dimino, President and CEO	Notes that the list of planning studies in the Unified Planning Work Program for the upcoming federal fiscal year includes many studies related to projects included in the Transportation Improvement Program (TIP) as well as forward-thinking studies that address other important needs. Recommends adoption of the UPWP as presented.	The MPO appreciates the support for the projects included in the draft UPWP.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/18/2013	N/A (comment continues on the following page)	Ellin Reisner	<ul style="list-style-type: none"> • Appreciates that the UPWP is addressing MassDOT GreenDOT and mode shift goals. • Supports Central Transportation Planning Staff (CTPS) work on bicycle and pedestrian planning [discussed under "Bicycle/Pedestrian Support Activities"] and also supports agency-funded work related to the Green Line Extension. • Supports several Metropolitan Area Planning Council (MAPC) projects and activities. These include continued work on the Rutherford Avenue land use visioning, transit-oriented development (TOD) market analysis, and the study of parcels within Routes 99, 16, and 28 in Boston, Everett, Medford, Somerville and Cambridge [discussed under "Corridor/Subarea Planning Studies"]. These also include MAPC's tracking of Massachusetts Environmental Policy Act (MEPA) findings ["Land Use Development Project Reviews"] and MetroFuture activities, which include increasing the equity focus in planning and policy at local and regional levels ["MetroFuture Engagement"]. 	So noted; The MPO appreciates the support for the projects included in the draft UPWP and for MPO efforts to address the GreenDOT initiative and statewide mode-shift goals.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/18/2013 (continued)	N/A	Ellin Reisner	<ul style="list-style-type: none"> • Supports several projects in Appendix A: Other Boston Region Transportation Planning Projects, including "Central Broadway Streetscape Improvements," "Pre-Engineering Study for Union Square in Somerville," and the "Urban Streetscape and Adaptive Reuse Plan for the Inner Belt and Brickbottom Districts". 	(see previous page)
6/17/2013	Minuteman Advisory Group on Interlocal Coordination (MAGIC)	Keith Bergman, MAGIC Chairman	<ul style="list-style-type: none"> • Noted the exclusion of MAGIC priority projects chosen by the MPO for assistance and that MAGIC towns have invested significant financial resources and staff time to design and develop the projects listed in the letter. • Lists MAGIC UPWP Priorities, which include: <ul style="list-style-type: none"> - Bruce Freeman/Minuteman Trail Gap Analysis - Bicycle Access to Fitchburg Line - Bicycle Pedestrian Planning Across Subregional Boundaries - Mapping and Traffic Study of Major School Intersections - Bus Express Lane (Break-Down Lane) Feasibility on Large Routes (Routes 128, 495, and 27) - Route 20 Congestion Study - Regional HOV-Lane Systems Planning Study, Phase II 	So noted. The MPO will consider MAGIC's bicycle and pedestrian study proposals as part of the MPO's bicycle and pedestrian program and when developing the FFY 2015 UPWP. The MPO considered a study concept regarding mapping and traffic analysis at intersections near schools when selecting projects for the FFY 2014 UPWP and will revisit this topic when developing the FFY 2015 UPWP. The "Regional HOV-Lane Systems Planning Study, Phase II" is currently underway as part of the FFY 2013 UPWP. The other MAGIC study proposals will be considered during the development of the FFY 2015 UPWP.

Table B-1: Summary of Written Comments on the Draft FFY 2014 Unified Planning Work Program (UPWP), with MPO Responses

Dated	Community/ Organization	Name and Title	Comment	MPO Response
6/19/2013	SouthWest Advisory Planning Committee (SWAP)	Gino Carlucci, Chair	Supports a proposed study of Route 140 in Franklin and Wrentham identified in the UPWP document under "Priority Corridors for LRTP Needs Assessment—FFY 2014." Notes that a study encompassing a transportation corridor that includes more than one community is a comprehensive approach to managing traffic and safety issues. Notes that a multi-community corridor study also aligns with SWAP's goal of seeking regional solutions to land use and transportation issues.	So noted. The MPO appreciates the input on potential study locations for the "Priority Corridors for LRTP Needs Assessment—FFY 2014" project. These locations will be considered as part of the study selection process, which will seek to achieve a balanced geographic distribution of study corridors.

Appendix C: FFY 2014 UPWP Project Universe Tables

This section includes two tables. The first table, titled the “CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type” describes the new discrete project proposals that MPO staff at CTPS collected or developed for the FFY 2014 UPWP. The Universe includes the project’s name, description, cost estimates, and, where applicable, a comments field that provides supporting information about the project. Each project proposal has been categorized as a low, medium, or high priority by Boston Region MPO staff. The proposals have also been rated against a series of focus areas, which reflect MPO visions and policies (as articulated in the MPO Long-Range Transportation Plan), national goals and planning factors, federal guidance and other regional priorities. For more information about these focus areas, please see Chapter 1 of this document.

The second table is titled “FFY 2014 UPWP MAPC Project Concepts.” This table documents the set of MAPC projects that were developed for the MPO’s consideration. This table maintains the structure used in the “CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type” table.

Table C-1: CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type

Project Name	Project Cost	Proposed FFY 2014 UPWP Budget	Project Description	FFY 2014 UPWP Staff Evaluation	Focus Areas*														Comments
					Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift	
ROADWAY NETWORK PERFORMANCE PROJECTS																			
Traffic Signal Retiming Program	\$40,000	\$40,000	<p>Traffic signal retiming is one of the most cost-effective ways to improve traffic movement through an intersection. Comprehensive signal retiming programs have documented benefits of 7%-13% reduction in overall travel time, 15%-37% reduction in delay, and a 6%-9% fuel savings.</p> <p>The signal retiming program can minimize congestion, fuel consumption and emissions. Signal timing should be reviewed throughout the region to evaluate its effectiveness and to make necessary changes. Phases can be implemented in order to achieve the most efficiency over time. The current CMP Committee effort can be used as a pilot study.</p>	High		✓	✓	✓	✓									✓	<p>The listed cost of \$40,000 would fund the retiming of 12 signals. The project scope is scalable.</p>
Priority Corridors for Long-Range Transportation Plan (L RTP) Needs Assessment	\$70,000	\$70,000	<p>This project would constitute an additional phase of the Priority Corridors for Long-Range Transportation Plan (L RTP) Needs Assessment project, which was included in the FFY 2013 UPWP. It would recommend conceptual improvements for a selected number of corridors or corridor segments that the Congestion Management Process (CMP) and the Long-Range Transportation Plan identified in the needs assessment process.</p> <p>Two MAPC subregions, Inner Core Committee (ICC) and Minuteman Advisory Group for Interlocal Coordination (MAGIC), suggested corridor study concepts that may be addressed through this proposed study.</p>	High		✓		✓	✓	✓		✓	✓	✓		✓	✓	<p>The project scope may be scalable.</p> <p>A "Priority Corridors for Long-Range Transportation Plan (L RTP) Needs Assessment" project was funded under the FFY 2013 UPWP for \$105,000. The proposed \$70,000 shown here would fund additional corridor study work beyond that detailed in the FFY 2013 UPWP (and in the approved work scope).</p>	

Focus Areas Key: ✓ Major Consideration ✓ Minor Consideration

* Focus areas are based on MPO visions and policies, national transportation goals and planning factors, federal guidance and other regional priorities. The MPO vision topics are: mobility; safety and security, transportation equity; system preservation, modernization, and efficiency; livability; environment; and climate change.

Table C-1, ctd.: CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type

Project Name	Project Cost	Proposed FFY 2014 UPWP Budget	Project Description	FFY 2014 UPWP Staff Evaluation	Focus Areas*															Comments
					Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift	Enhance Technical Capacity, Knowledge, and Insights	
ROADWAY NETWORK PERFORMANCE PROJECTS																				
Addressing Safety, Mobility, and Access on Subregional Priority Arterial Roadways	\$80,000	\$80,000	<p>This project would constitute an additional phase of Addressing Safety, Mobility, and Access on Subregional Priority Arterial Roadways, which was included in the FFY 2013 UPWP. This project would identify priority arterial bottleneck locations in the MPO region, with an emphasis on issues identified by subregional groups, and would develop recommendations for low-cost improvements. Staff will consider numerous strategies, including examining and evaluating traffic signals, bus stop locations, and access management, among others.</p> <p>Four MAPC subregions -- Inner Core Committee (ICC), North Shore Task Force (NSTF), South Shore Coalition (SSC), and Three Rivers Interlocal Council (TRIC) -- suggested corridor study concepts that may be addressed through this proposed study.</p>	High	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<p>The project scope may be scalable.</p> <p>This project was funded under the FFY 2013 UPWP for \$120,000, with \$75,000 to be funded in FFY 2013 and the remaining \$45,000 to be funded in FFY 2014. The proposed \$80,000 shown here would fund additional corridor study work beyond that detailed in the FFY 2013 UPWP (and the approved work scope).</p>		
TIP Project Impacts Before-After Evaluation	\$40,000	\$40,000	<p>This project would continue a pilot study begun in FFY 2012. Its purpose is to identify the effectiveness of TIP projects. Measuring project effectiveness is important in order to know whether the employed strategies work well and are therefore suitable for application in similar situations.</p> <p>To this end, staff will select TIP projects that are programmed for construction during a specified time period. It is likely that only traffic management and operations projects will be selected, as the construction period of projects in this category is shorter than for other projects, such as the construction of freeway interchanges. The "before" data will be collected in the early spring of the selected year, before specified projects begin. The "after" data will be collected upon project completion, which may be later than the identified year.</p> <p>The type of "before" and "after" data that staff will collect depends on the nature of the project. For traffic management and operations it is likely that traffic flow, speed, delay, and safety information will be collected. If budget allows, level-of-service and air quality information will also be calculated for the "before" and "after" conditions. Staff will compare the two sets of data and draw conclusions.</p>	High		✓										✓	✓	✓	✓	

Table C-1, ctd.: CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type

Project Name	Project Cost	Proposed FFY 2014 UPWP Budget	Project Description	FFY 2014 UPWP Staff Evaluation	Focus Areas*														Comments		
					Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift		Enhance Technical Capacity, Knowledge, and Insights	Support Performance-Based Planning
NONMOTORIZED TRANSPORTATION PROJECTS																					
Pedestrian Signal Phasing Study	\$30,000	\$30,000	The selection of pedestrian signal phasing involves many complicated factors and is challenging to traffic engineers. Exclusive pedestrian phasing is favored for its safety considerations for pedestrians, though at heavy pedestrian crossing locations, concurrent phasing can sometimes be more effective for both traffic and pedestrian flow while providing a similar level of safety for pedestrians. Municipalities in the Boston Region MPO area have become increasingly interested in converting some of their intersection signals from an exclusive pedestrian phasing to a concurrent pedestrian phasing, but they have not been able to find useful references or guidelines. This study will review the existing practices and available guidelines for the two types of pedestrian signal operation, perform case studies in the MPO region (including analysis of crash data), compare both operations, and summarize the findings for the MPO's reference.	High		✓	✓				✓	✓	✓	✓	✓		✓	✓	✓		
TRANSPORTATION EQUITY AND ACCESSIBILITY PROJECTS																					
Environmental Justice-Analysis Methodology Review	\$60,000	\$60,000	This study would analyze the way that CTPS conducts its environmental justice (EJ) analyses. Data to support this study could include Massachusetts Household Travel Survey data, MSTA Systemwide Passenger Survey data, regional travel model data, and other data. The study would consider four elements: methodology (including techniques to assign EJ designations to individual travel modes and submodes), service area, thresholds, and metrics for analysis. This project could include a Title VI-oriented component that addresses guidelines for conducting a benefits-and-burdens analysis. These guidelines could include 1) factors to consider in defining the project impact area, 2) methods for determining benefits and burdens, 3) methods for evaluating whether minority or low-income populations are burdened by the project, and 4) definition of a threshold for "disproportionally high."	High												✓	✓	✓	✓	✓	This project scope may be scalable. It could also be incorporated into ongoing MPO transportation equity programs.
LAND USE, ENVIRONMENT AND ECONOMY PROJECTS																					
Transportation Investments for Economic Development	\$50,000	\$50,000	This proposed study would examine which transportation investments may yield the greatest economic development benefits using transportation economic impact analysis tools and other economic data. Analyses would focus on major infrastructure projects of regional significance.	High	✓	✓			✓						✓		✓	✓	✓	✓	This project could be incorporated into ongoing MPO development and analysis efforts related to the Long-Range Transportation Plan.
GHG Reduction Strategy Cost-Effectiveness Analysis	\$55,000	\$55,000	The proposed study would examine which are the most cost-effective greenhouse gas (GHG) reduction strategies for the transportation sector using EPA Motor Vehicle Emission Simulator (MOVES), regional travel model, and other data.	High		✓		✓			✓						✓	✓	✓		This project could be conducted in conjunction with the TEAMS Technical Assistance program. The project scope may be scalable.

Table C-1, ctd.: CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type

Project Name	Project Cost	Proposed FFY 2014 UPWP Budget	Project Description	FFY 2014 UPWP Staff Evaluation	Focus Areas*													Comments
					Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	
TRANSIT PROJECTS																		
Development of a Methodology to Evaluate Potential Limited-Stop Service on Transit Routes (incl. Key Route Corridors)	\$52,000	\$52,000	The MBTA regularly receives requests from elected officials and the public for limited-stop service in many of the Key Route bus corridors. However, dividing existing vehicles on a route between limited-stop and local service would fail to provide an adequate level of service on either. This project would evaluate criteria and costs for establishing additional limited-stop bus services based on existing and future ridership demand, operating strategies, and equipment needs. This methodology could ultimately be used in RTAs beyond the MBTA. This project then would analyze which Key Route corridors would be most likely to support both local and limited-stop service, as well as estimate the resources needed to provide both types of service. The results of the analysis could be used to justify additional operating funds at some point in the future. If additional MBTA operating resources become available, the results of this study would be used to prioritize the implementation of limited-stop service on Key Routes.	High		✓	✓	✓				✓	✓		✓	✓	✓	The project scope may be scalable.
Identification of Areas with Mode Shift Opportunities (includes MAPC participation)	\$68,000	\$68,000	This project would be undertaken in partnership with MAPC. It would identify the areas in the region where there is the most potential for shifting travelers away from single-occupant-vehicle trips to other modes, such as transit, walking, and bicycling. Staff would use existing and historical data on population and employment density, zero-vehicle households, and transit and roadway networks, and other spatial datasets, to accomplish this goal. In the MPO's part of the project, a statistical analysis would be conducted to determine what factors have been the most important determinants of successful transit service. Using this analysis coupled with land use forecasts from MetroFuture, staff could determine which areas would be most likely to support transit in the future. Using the same datasets, MAPC could conduct analysis for other modes, such as walking and biking.	High	✓	✓		✓			✓			✓	✓	✓	✓	This project reflects the combination of projects, "Travel Options for Zero-Auto Households," and "Analysis of Subregional and Other Factors on MBTA Ridership," along with an MAPC project proposal to analyze mode shift opportunities. This project would be a joint effort between CTPS and MAPC. Costs shown reflect the CTPS portion of the project.

Table C-1, ctd.: CTPS FFY 2014 UPWP Universe of Proposed New Projects, by Project Type

Project Name	Project Cost	Proposed FFY 2014 UPWP Budget	Project Description	FFY 2014 UPWP Staff Evaluation	Focus Areas*													Comments		
					Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals		Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift	Enhance Technical Capacity, Knowledge, and Insights
ROADWAY NETWORK PERFORMANCE PROJECTS																				
Congestion Costs for the Boston Region	\$38,500	\$0	This proposed study would examine the extent of congestion in the Boston region and how it can be valued economically using commercial electronic traffic data and value-of-time measures.	High		✓												✓	✓	
Congestion-Generating Location Analysis	\$75,000	\$0	The proposed study would analyze whether there are specific locations in the Boston region that generate particularly congestion-inducing traffic using commercial electronic traffic data and regional travel model data. Outputs could support MPO efforts to prioritize investment dollars.	High	✓	✓		✓						✓			✓	✓	Ongoing discussion is occurring regarding a university-based project with related focus.	
Roadway Network Reliability Evaluation	\$92,000	\$0	The proposed study would evaluate the reliability of travel times and speeds on roadways in the Boston region using commercial electronic traffic data and other information. Outputs could be used to make more effective comparisons between roadway and transit travel times and speeds.	High				✓					✓					✓	✓	This project could be coordinated with the MPO's Congestion Management Process. The project scope is scalable.
Comprehensive Transportation Study for the Back Bay, the Fenway, and the Longwood Medical Area	\$200,000	\$0	<p>There are several transportation improvement efforts ongoing or proposed in an area that encompasses the Back Bay, the Fenway, and the Longwood Medical and Academic Area. Concerns have been expressed by elected officials and others about how all of these projects will interact and whether, as a whole, they will adequately serve the future transportation needs of this area.</p> <p>The proposed study, therefore, would comprehensively examine whether the major existing and proposed transportation facilities that support the Back Bay, the Fenway, and the Longwood Medical and Academic Area will be able to accommodate transportation demand from anticipated growth. Project concepts proposed for this area include the addition of Tumpike ramps in the Back Bay, Kenmore Square/Fenway, and Longwood Medical and Academic areas, expansion of Green Line capacity and of cross-town services that reduce congestion on the Green Line, extension of the Silver Line, commuter rail enhancements at Yawkey and Ruggles Stations, repair or elimination of the Bowker Overpass, and repair or downsizing of Storrow Drive in certain areas.</p> <p>Elements of the proposed study would include an assessment of expected development and projections of future traffic growth within the area, along with identification of relevant regionwide traffic growth trends that affect the area. The study would then compare future traffic growth to existing capacity and planned capacity enhancements to identify areas of significant congestion or other transportation deficiencies, and provide an inventory of possible solutions for these areas. It would also identify any major existing routes that are currently and likely to remain below capacity.</p>	Low	✓			✓				✓				✓	✓	<p>This study may duplicate portions of several other ongoing MassDOT study efforts in this area and is probably premature at this point. In order to perform this study appropriately, those other efforts should be allowed to advance to the point where preferred solutions can be identified and then analyzed collectively in the manner suggested by this proposal.</p> <p>This project idea was submitted by State Senators Brownsberger and Chang-Diaz and State Representatives Fox, Ruffing, and Walz, with express support from several area neighborhood associations (these include the Audubon Circle Association, Back Bay Association, Fenway Civic Association, Fenway Community Development Corporation, Medical Academic and Scientific Community Association, and Neighborhood Association of the Back Bay).</p> <p>Updates have been made to this project description to more closely parallel the State Sen. Brownsberger, et al., letter.</p>		

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SAFETY AND SECURITY PROJECTS																				
Traffic Safety Countermeasures	\$30,000	\$0	<p>CTPS staff would help prepare a document that identifies safety topics and relevant countermeasures to address many important safety concerns. The FHWA has a recommendation for nine such countermeasures: 1) enhanced delineation and friction for horizontal curves, 2) pedestrian hybrid beacons, 3) backplates with reflective borders, 4) longitudinal rumble strips and stripes on two-lane roads, 5) corridor access management, 6) medians and pedestrian crossing islands in urban and suburban areas, 7) "Road Diet" roadway configuration, 8) roundabouts, and 9) safety edges.</p> <p>This empirical research study will point to these or other countermeasures to adopt and promote in Massachusetts. The study will review policies and other material that MassDOT already has for reference. The final product will be a memorandum documenting the analytical procedure that led to the selection of the MA safety countermeasures, a description of each countermeasure, safety facts, and MassDOT contact information for help.</p>	Low																<p>This project may be a candidate for MassDOT SPR funding.</p>
Crash Reduction Factors Analysis	\$30,000	\$0	<p>Safety countermeasures are design elements that address various types of roadway crashes at intersections and on roadway segments. Each crash type may have several countermeasures associated with it, and each countermeasure associates with a crash reduction factor. Staff will select TIP projects that applied various countermeasures and compare before-and-after data to calculate crash reduction factors from each countermeasure. An adequate sample size of TIP projects that employ the same countermeasure will be selected for a valid estimate. Interested parties may include Massachusetts area MPOs, MassDOT, municipalities, and consultants.</p>	Low																<p>This project may be a candidate for MassDOT SPR funding.</p>

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SAFETY AND SECURITY PROJECTS																			
Safety and Mobility near Schools (MAGIC Subregion Pilot)	\$100,000	\$0	This proposed study would have two phases. In the first, staff would map the locations of schools within the Minuteman Advisory Group for Interlocal Coordination (MAGIC) subregion and provide crash rates and/or Equivalent Property Damage Only (EPDO) values for intersections surrounding those schools. For the second phase, the results of this mapping effort would be used to select a series of study locations for more detailed evaluation. Staff would analyze access, egress, safety, mobility, and congestion issues for those traveling to or from school, including students that walk or bike. This may include evaluations of traveler adherence to existing school and traffic policies and regulations (such as in reduced-speed school zones). The results of these analyses would be used to recommend operations, policy, and other improvements. This proposed study could be used as a pilot project for similar studies that could be conducted in other MAPC subregions. Results from the mapping effort could also be used to support efforts to prioritize funding for intersection improvements.	Low		✓	✓				✓	✓					✓	✓	This project incorporates a related idea submitted by the MAGIC subregion. The concept of this project, previously named "Reduced-Speed School Zones Study," has been revised since the February 7 UPWP Committee meeting. The listed cost of \$100,000 would cover 25 schools.
Impacts of Coastal Storms, Tidal Surges, and Climate Change on MassDOT Highway and Transit Tunnels	\$85,000	\$0	This project is suggested in light of the tunnel flooding experienced in New York during Hurricane Sandy and continuing accumulation of evidence regarding climate change and its effects on sea-level rise and storm frequency and intensity. It would include: 1. Examining existing data on the vulnerability to flooding and other storm-related impacts of highway and transit tunnels in the MPO region. 2. Identifying and generating any additional data needed to assess current and future vulnerability, including vulnerability to the effects of sea-level rise and changes in storm and precipitation intensity projected for the next 50 years, at least. This study would assess specific tunnels and consider both direct effects (e.g., storm surge water entering tunnel systems) and indirect effects (e.g., loss of power).	Medium				✓					✓	✓			✓	✓	MassDOT's pilot proposal for Climate Change and Extreme Weather Vulnerability Assessments and Adaptation Options of the Central Artery was selected for funding by FHWA. Elements of this study concept not addressed in the MassDOT pilot proposal may be addressed through other avenues, including future UPWPs. Step 3 of the initial request for the proposed study, "Evaluating options to reduce flooding and other vulnerabilities of existing tunnels," has been removed. This study idea was submitted by the City of Boston.

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SAFETY AND SECURITY PROJECTS																			
Roadway Network Inventory for Emergency Needs: Phase II	\$25,000	\$0	<p>This proposed study would expand on the MPO's Roadway Network Inventory for Emergency Needs pilot study. The pilot, which is in the FFY 2013 UPWP, will gather data on traffic signal equipment in Boston and adjacent communities and create a GIS data layer of that information for use in the MPO's All-Hazards Planning application. It will also update an existing data layer in the application that depicts the location and condition of bridges.</p> <p>In addition to developing GIS layers, the pilot will inventory the locations and characteristics of signals on evacuation routes, documenting whether the existing signals have emergency management features such as the ability to be controlled from a traffic management or operations center or emergency-vehicle pre-emption. The condition of bridges on the evacuation routes will be documented as well.</p> <p>The study proposed for the FFY 2014 UPWP would expand upon the pilot to gather and map signal data from additional communities within the Route 128 area. Products of the study would also include, for both the pilot study communities and the additional ones, updated GIS data layers for signals and bridges, as well as updates to other data layers in the web application as new information becomes available.</p>	Medium														<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	
NONMOTORIZED TRANSPORTATION PROJECTS																			
Trip Purposes and Impacts of Bicycle and Pedestrian Paths	\$30,000	\$0	<p>The proposed study would examine the trip purposes for which travelers use different types of bicycle and pedestrian paths. In particular, this study would analyze which types of paths serve the highest number of commuting trips, and would evaluate the validity of the assumption that off-road, shared-use paths are primarily for noncommuting trips. Where appropriate, this study may evaluate impacts created by accessing paths, including emission impacts generated when motor vehicles are used to access trails.</p> <p>This study would require data collection. An element of this study would be the development and employment of a smartphone application for collecting study-supporting and other data on bicycle and pedestrian trips in the Boston region. This element may include a literature review, work on creating the prototype smartphone application, and then the collection, review, and analysis of data from the application. Upon completion of this project, this smartphone application may be available for long-term and regionwide use. The data collected from this application could be made publicly available on the MPO's website for use by external agencies and to support future bicycle and pedestrian facility research.</p>	Low														<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	This proposed project may potentially be coordinated with MassDOT statewide bicycle and pedestrian plan development.

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NONMOTORIZED TRANSPORTATION PROJECTS																			
Bicycle/ Pedestrian Level of Service Analysis	\$30,000	\$0	<p>In this proposed study, CTPS staff would develop bicycle/pedestrian level-of-service criteria that are customizable to the Boston region, using already-available data or by acquiring additional data. This study would create an interactive tool available on the Boston Region MPO website that could analyze the bicycle/pedestrian facilities in the region based on the criteria. The interactive tool could also provide users, including Boston region municipalities, with the option of inputting additional data from municipal or other surveys.</p> <p>Data that would support these level-of-service criteria and the tool could include the number of travel lanes, the number of curb cuts per mile, the presence of lighting, of bicycle parking, or of pedestrian signals, or other items. Possible measures derived from data could include municipal mode split, motor vehicle volumes, adjacent vehicle speeds, speed limits, and bicycle and pedestrian volumes.</p> <p>The users of this interactive tool would benefit from having a standardized rating of the quality of a specific bicycle facility. For example, this information helps transportation planners and government officials make decisions for bicycle and pedestrian programs and projects, including prioritizing projects and allocating funding. Outputs from this tool may have the potential to be incorporated into the TIP selection process. They may also help to justify bicycle and pedestrian facilities as an integral component of the region's transportation network.</p>	Medium														<p>This proposed project may potentially be coordinated with the MPO Congestion Management Process or bicycle and pedestrian programs of MassDOT statewide bicycle and pedestrian plan development.</p>	
Bicycle and Pedestrian Crash Analysis	\$42,500	\$0	<p>This proposed study would analyze the key causes of bicycle and pedestrian crashes in the Boston region using crash data to improve recommendations for reducing crash incidence.</p>	Low														<p>This proposed project may potentially be coordinated with MPO bicycle and pedestrian programs or MassDOT statewide bicycle and pedestrian plan development.</p>	

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TRANSPORTATION EQUITY AND ACCESSIBILITY PROJECTS																			
Household Survey-Based Comparisons between Income and Racial Groups	\$35,000	\$0	<p>The 2011 Massachusetts Household Travel Survey obtained travel information from households on a statewide basis. Every member in selected households prepared a diary for a specific day and reported all trips, methods of travel, and the type of activity at each location visited from the beginning to the end of that day. The survey method was designed to have representative results by income and race.</p> <p>In keeping with the MPO's Transportation Equity vision of conducting analyses of low-income and minority populations, this proposed study would analyze household survey data (including variables such as trip length, number of trips, types of trips, and modes used) for low-income and minority households and compare them with data from nonminority and higher-income households to determine what the differences are. This analysis would include an effort to identify the locations of households that meet environmental justice criteria (including those based on income and minority status) and may fall outside of known clusters. Data from sources other than the household survey may also be used, as necessary. The data used in this study will be analyzed in conjunction with the LRTP Needs Assessment issues to identify specific recommendations and needed improvements.</p>	High															<p>This project could be incorporated into the ongoing MPO Transportation Equity Program.</p> <p>The components of the "Environmental Justice Households, Locations Analysis" project proposal, which is no longer listed as an independent project, have been incorporated into this study.</p>
Wayfinding Tools for the Visually Impaired	Not Estimated	N/A	<p>This study would examine the steps involved and possible costs of implementing markers that, through interaction with technology, would provide wayfinding information through portable digital devices, such as smartphones. This would be especially useful for the visually impaired. Bar codes or other types of markers could be scanned by smartphones, bar code scanners, or other tools to provide users with information about their location and the nearby community landmarks and services.</p>	Not evaluated															<p>This project proposal was received after the development of the UPWP Committee recommendation to the MPO on new discrete studies for the FFY 2014 UPWP.</p>
LAND USE, ENVIRONMENT AND ECONOMY PROJECTS																			
Comparing Auto Usage and Land Use Characteristics	\$32,500	\$0	<p>This proposed study would use statistical and other analysis techniques to evaluate differences in auto trips between dense or mixed-use communities and other areas. In doing so, staff would examine the assumption that increasing density or the mix of land uses reduces vehicular travel. This study would use Massachusetts Household Transportation Survey data and other land use data.</p>	Low	✓														<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>

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LAND USE, ENVIRONMENT AND ECONOMY PROJECTS																				
Boston Transportation Fact Book and Neighborhood Profiles: 21st Century	\$75,000	\$0	The proposed project, which would be a joint effort with the City of Boston, would develop a Boston Transportation Fact Book that reflects contemporary issues such as climate change and equity in access to transportation services. The data, tables, and charts would guide decision makers in a number of areas by identifying trends and establishing performance measures. The proposed areas to cover are reducing GHG emissions, providing equity in access to transportation services such as car and bike sharing, encouraging mode shift, decreasing obesity rates, supporting small businesses and the "new" economy, and managing parking. Neighborhood and regional connection profiles would also be created. A previous iteration of the Boston Transportation Fact Book and Neighborhood Profiles was completed in 2002.	Low	✓							✓					✓	The previous iteration of this project was funded with SPR funds. The project cost shown reflects the cost to the Boston Region MPO, the total funding for the project (currently estimated at \$175,000) would include City of Boston funds. This study idea was submitted by the City of Boston.		
TRANSIT PROJECTS																				
Determinants of Walking to Transit	\$32,500	\$0	This proposed study would examine the determinants of walking to transit using Massachusetts Household Transportation Survey data and other collected field data. Outputs may provide guidance to the MPO on what infrastructure improvements to prioritize.	Low	✓		✓		✓	✓	✓					✓	✓	✓	✓	

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TRANSIT PROJECTS																					
Actions to Increase Transit Ridership; Cost-Effectiveness Analysis	\$70,000	\$0	This proposed study would analyze the most cost-effective systemic actions for increasing transit ridership, using regional travel model data. Outputs from this study would support the MPO in focusing resources for achieving mode-share goals.	High		✓			✓			✓					✓	✓	✓	✓	This project may relate to MBTA Service Standards.
Enhancing Transit to Better Serve Our Aging Population	\$25,000	\$0	The proposed study would look at availability of transit options for accessing health care. Studies have shown that lack of transportation reduces health care utilization among children, seniors, low-income people, and people with disabilities. The study would use analytical mapping tools to assess transit access to health care facilities, particularly from minority and low-income neighborhoods. It would include local transit services such as those provided by councils on aging, the Massachusetts Department of Health and Human Services, and others, as well as services of the MBTA and RTAs. This study could be conducted in a subregion as a pilot, or it could include the entire MPO region.	Low				✓				✓				✓	✓	✓			This proposed project should be coordinated with MassDOT and MBTA plans and activities regarding THE RIDE and other transit options for elderly individuals.
Transit Connections to and within Cambridge and Somerville	\$75,000	\$0	A study could evaluate how to improve transit connections within Cambridge and Somerville and between these cities and other parts of the Boston region. Connections of concern include those between Kendall Square and North Point, Kendall Square and Sullivan Square, and Kendall Square and the Longwood Medical Area, and also some existing connections, such as the EZRide Shuttle that serves Cambridgeport, MIT's Northwest Campus, Kendall Square, Lechmere, and North Station, that are at capacity.	Low	✓			✓				✓	✓				✓	✓	✓		Work proposed in this project would need to be closely coordinated with MassDOT and MBTA plans and activities related to transit within, to, and from Cambridge and Somerville. This suggestion was provided at an Inner Core Committee subregion meeting. If work on this project did not include use of the MPO's regional travel demand model set, project costs could potentially be reduced to \$30,000.

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TRANSIT PROJECTS																		
MAGIC Area Study for Transit Service Integration	\$37,500	\$0	The Minuteman Advisory Group on Interlocal Coordination's (MAGIC) priorities include analyses that look at innovative ways to integrate existing transit services (school buses, Council on Aging vans, locally funded shuttles, private business shuttles, etc.) into a more coherent and coordinated public transportation system.	Low	✓	✓			✓		✓			✓	✓	✓	<p>This proposed project should be coordinated or considered with respect to other past, current, or future MAGIC-area transit service projects.</p> <p>This study suggestion was based on an idea from the MAGIC subregion.</p>	
MBTA Fare-Box Non-Interaction	\$30,000	\$0	As the MBTA faces growing deficits and rising fares, it is important that as many fares as possible are collected, both to close the financial gap and to ensure equity among riders. The MBTA's Automated Fare Collection (AFC) system has been instrumental in reducing fare evasion, but non-interaction still exists. It occurs both through active means, such as forcing open fare-gates or "tailgating" fellow passengers through the gates, and passive means, such as when trains become too crowded for conductors to collect all fares. This study would start the process of developing a comprehensive review of how much fare-box non-interaction (both active and passive) occurs in the MBTA system and how much revenue is thereby lost to the MBTA. In this proposed project, staff would first conduct a peer and literature review to gain an understanding of how this issue is approached at other transit agencies around the country and world. The second task would be to design a procedure for data collection, based on the knowledge gained in task 1. Data collection would include representative samples from multiple mode and entrance types, such as rapid-transit manned entrances, rapid-transit unmanned entrances, surface trolley, bus, and commuter rail. Samples may also be taken during different weather events and times of day. The methodology would need to be repeatable to enable tracking over time, as well as cost-efficient. Implementation of the data collection effort developed in and recommended by this study would be included in a follow-up project the following year; the present effort would be only for design of the data collection methodology.	Low	✓		✓									✓	<p>This project may be a candidate for MassDOT 5303 funding.</p> <p>This study idea was submitted by the MBTA.</p>	

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TRANSIT PROJECTS																						
Transit Access to Health Care Facilities	\$30,000	\$0	The proposed study would look at availability of transportation options for accessing health care. Studies have shown that lack of transportation reduces health care utilization among children, seniors, low-income people, and people with disabilities. The study would use analytical mapping tools to assess transit access to health care facilities, particularly from minority and low-income neighborhoods. It would include local transit services such as those provided by councils on aging, the Massachusetts Department of Health and Human Services, and others. This study could be conducted in a subregion as a pilot, or it could include the entire MPO region.	Medium								✓	✓				✓	✓	✓	✓	✓	The listed cost would be for completing work for one subregion.
Transit Enhancements: Route 1/1A Corridor	\$35,000	\$0	This proposed study would conduct a comprehensive examination of transit service in the Route 1/1A corridor through Dedham, Norwood, Westwood, and Walpole and identify opportunities to enhance existing service and connections. Improved connections would support those commuting to employment centers in the study area, as well as area residents, who are traveling along or across the Route 1/1A corridor. Options may include expanding service on MBTA bus Route 34-E or providing other transit connections.	Not evaluated	✓						✓	✓	✓				✓	✓				

Table C-2: FFY 2014 UPWP MAPC Project Concepts

Project Name	Project Description	Focus Areas*														Comments/Cost Estimate	
		Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift		Enhance Technical Capacity, Knowledge, and Insights
MAPC PROJECT CONCEPTS																	
Identifying Mode-Shift Opportunity Areas	This proposed project would use available data to understand what geographies within the region have the most potential for mode shifting single-occupant-vehicle trips to transit, walk, bike, or carpool modes.	✓			✓									✓		✓	A proposal has been made to combine this project with FFY 2014 UPWP CTPS project proposals "Travel Options for Zero-Auto Households," and "Analysis of Subregional and Other Factors on MBTA Ridership." This project would be a joint effort between CTPS and MAPC. MAPC's portion would be funded at \$10,000.
Continuation of Transit-Oriented Development (TOD) Opportunities and Impediments Planning	This proposed project would continue community planning around MBTA station areas to understand the potential for TOD and what might be impeding growth in certain areas (outdated zoning, lack of bike/ped connectivity, community concerns against development) and offer solutions.	✓					✓	✓					✓			✓	This project is related to work included under MAPC's "Corridor/Subarea Planning Studies and Land Use Reviews" project in the FFY 2013 UPWP. Costs are estimated at \$75,000.
Land Use Baselines for BRT Development	MassDOT is working with the Institute for Transportation and Development Policy (ITDP) to identify major bus corridors in Greater Boston that have the potential to be upgraded to high-quality bus rapid transit (dedicated lanes, pre-pay, consolidated stops, etc). After MassDOT/MBTA and ITDP identify the top corridors, MAPC would perform a land use baseline analysis to document the existing housing units, households, population, jobs, square footage of development, types of jobs, etc. This data could then be used in the future to determine if the BRT upgrade supported additional growth in the corridor. The Silver Line to Chelsea would probably be the best example.	✓		✓			✓	✓							✓	✓	This would be an entirely new work program that builds off of and supports work that will be conducted by MassDOT, the MBTA, and CTPS to identify where there is potential to upgrade existing bus corridors to be more like bus rapid transit. This work would be included under MAPC's "Corridor/Subarea Planning Studies and Land Use Reviews." Costs are estimated at \$15,000.

Focus Areas Key: ✓ Major Consideration ✓ Minor Consideration

* Focus areas are based on MPO visions and policies, national transportation goals and planning factors, federal guidance, and other regional priorities. The MPO vision topics are: mobility; safety and security; transportation equity; system preservation, modernization, and efficiency; livability; environment; and climate change.

Table C-2, ctd.: FFY 2014 UPWP MAPC Project Concepts

Project Name	Project Description	Focus Areas*															Comments/Cost Estimate
		Link Land Use and Transportation	Work with Limited Financial Resources	Use a Management and Operations Approach	Protect Air Quality and Environment	Preserve and Maintain the Transportation System	Increase Transit and Healthy-Transportation Mode Share	Encourage Sustainable Communities and Livability	Advance Mobility, Access, and Congestion Reduction	Improve System Reliability	Increase Transportation Safety and Security	Support Economic Vitality	Consider Transportation Equity and Accessibility	Support MetroFuture Goals	Support Goals of PMT, youMove/weMove, GreenDOT, and MA Mode Shift	Enhance Technical Capacity, Knowledge, and Insights	
MAPC PROJECT CONCEPTS																	
Projected Development and Trip Generation within Routes 99, 28, 16 in Everett, Boston, Somerville, and Cambridge	This proposed project would quantify the amount of development projected to occur on the edge of Somerville, Cambridge, Everett, and Boston (Inner Belt, North Point, Assembly Row, Sullivan Square, South Broadway in Everett) to understand this projected development growth from a regional perspective, and would try to estimate the trips that will be generated and modes used (with hopefully a lot captured by the Green Line Extension (GLX), the Orange Line, MBTA bus, walking, and biking).		✓										✓		✓		This would be an entirely new work program seeking to foster regional coordination and understanding of the timing and impact of new development. This work would be included under MAPC's "Corridor/Subarea Planning Studies and Land Use Reviews." Costs are estimated at \$15,000.
Continuation of Subregional Priority Development and Priority Preservation Studies	This proposed project would continue to conduct Priority Preservation Area and Priority Development Area planning in the region.	✓		✓			✓	✓					✓	✓	✓		This is an ongoing work project included under MAPC's "Corridor/Subarea Planning Studies and Land Use Reviews" project in the FFY 2013 UPWP. Costs are estimated at \$25,000.
Continuation of Sullivan Square Land Use Visioning	Through this proposed project, MAPC would continue to support the City of Boston's land use visioning process around Sullivan Square Station on the Orange Line.	✓					✓	✓	✓				✓	✓			This is a follow-up project included under MAPC's "Corridor/Subarea Planning Studies and Land Use Reviews" project in the FFY 2013 UPWP. Costs are estimated at \$25,000.
TDM Best Practices and Municipal Bylaws	This proposed project would involve researching municipal bylaws in Massachusetts that pertain to transportation demand management (TDM) requirements associated with new development projects obtaining building permits. It would develop a model bylaw for municipalities based on this research and best practices, and work with select suburban communities to adopt a TDM model bylaw.	✓		✓				✓	✓			✓	✓	✓	✓		This would be a new project under MAPC's "Alternative Mode Planning and Coordination" project. Costs are estimated at \$10,000.
Rose Kennedy Greenway Bicycle Improvement Study	This proposed project would involve MAPC's working closely with the City of Boston, MassDOT, and the Greenway Conservancy to conduct a public engagement effort to identify potential bicycle improvements along and within the Greenway. Based on public input, MAPC would provide technical analysis to identify specific bicycle infrastructure improvements and facilities. The final product of this work would be a report to the City of Boston and the Conservancy on recommendations to improve bicycle accommodation. The City and the Conservancy would then decide the timeline for which improvements to design and implement.	✓					✓	✓					✓	✓			This would be a new project under MAPC's "Alternative Mode Planning and Coordination" project. Costs are estimated at \$25,000.