



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
Karl H. Quackenbush, Executive Director, MPO Staff

MEMORANDUM

DATE: December 1, 2016
TO: Boston Region Metropolitan Planning Organization
FROM: Karl H. Quackenbush, Executive Director
RE: Work Plan for Long-Range Transportation Plan: FFY 2017

Action Required

Review

Project Identification

Unified Planning Work Program Classification

Certification Requirements

CTPS Project Number

8117

Client

Boston Region Metropolitan Planning Organization (MPO)

CTPS Project Supervisors

Principal: Lourenço Dantas

Manager: Anne McGahan

Funding

MPO Planning Contract #95411

MPO §5303 Contracts #91027 and subsequent contract

Impact on MPO Work

This is MPO work and will be carried out in conformance with the priorities established by the MPO.

Background

This work plan focuses on the Boston Region MPO's activities related to its Long-Range Transportation Plan (LRTP), which is one of the three major certification documents developed through the federally required "continuing, cooperative, and comprehensive planning process," or 3C process (discussed in more detail below). The LRTP guides transportation system investments for the Boston metropolitan region over a period of at least 20 years. The MPO adopted its most recent LRTP, *Charting Progress to 2040*, in July 2015 and amended it in August 2016. This LRTP serves as the Boston Region MPO's guiding document as it plans investments in the region's transportation system from now until the year 2040. During the development of this document, the MPO established regional goals and objectives, which the MPO will use for future decision-making.

While the LRTP document is prepared quadrennially, the MPO's 3C process—including its long-range planning activities—is ongoing. The MPO's robust LRTP development program helps meet the requirements of the current federal transportation legislation, Fixing America's Surface Transportation Act (FAST Act), which requires the measurement and tracking of the performance of the region's transportation system and the effectiveness of the MPO's programming in meeting regional goals. This work plan addresses those requirements and also scenario planning to generate data for future decision making.

The 3C Process

The federal government requires that MPOs conduct planning processes and prepare certain planning documents – the LRTP, Transportation Improvement Program (TIP), and Unified Planning Work Program (UPWP) – in accordance with federal regulations and guidelines for the purpose of guiding and supporting information gathering and decision making related to policies and to the programming of federal transportation funds. MPOs must conduct this 3C process in order to remain certified and eligible to receive these funds. The 3C activities conducted by the Boston Region MPO staff are called certification activities.

While the Certification Activities Group of the Central Transportation Planning Staff (CTPS), which is the staff to the MPO, has the primary responsibility for conducting this work and preparing the necessary documents, staff members from all of the groups at CTPS contribute.

The 3C process is so named because it must be a continuing, comprehensive, and cooperative transportation-planning process. To be “continuing,” the MPO must conduct the process all year long, not sporadically. To be “comprehensive,” the MPO must be aware of the activities of the many agencies and interested entities involved in transportation planning in the MPO region, and must consider these and the transportation needs identified by all interested parties in its decision making. Finally, to be “cooperative,” an MPO must invite the public to participate in its process, and must conduct its planning and decision making with an open and cooperative approach.

Objectives

This work plan describes the ongoing implementation of *Charting Progress to 2040*, as amended, which provides a vision for the future of the transportation system in the Boston region and means to monitor progress toward achieving that vision. A major part of LRTP implementation is the continued advancement of the MPO’s performance-based planning practice, which builds on the work conducted during development of the LRTP. The production of a new LRTP is scheduled for FFY 2019 and the work performed this year will be critical to inform the development of the next LRTP.

The objectives of this work plan are as follows:

1. Provide a comprehensive portrait of the Boston region that considers demographics, land use, economics, and the transportation system, as well as the relationships among these characteristics
2. Establish and implement the policies and priorities (including specific multimodal, intermodal, and management and operations strategies) needed to accomplish the MPO’s vision and goals
3. Develop performance measures and implement the MPO’s performance-based planning practice and other innovations that will inform the MPO’s investment decisions
4. Gather information, conduct analyses, and communicate the results to support decision making
5. Guide the development of the TIP, which is the implementing document for the LRTP
6. Maintain compliance with federal regulations and requirements

This work plan describes the specific tasks that will be conducted during FFY 2017, as well as work that will be ongoing over the next two years, prior to the adoption of

a new LRTP. The work plan also identifies which tasks will occur on an ongoing basis and which will be completed in this fiscal year.

Work Description

This work plan consists of seven tasks, which outline all of the LRTP work that will be undertaken during FFY 2017. Some of this work will continue in subsequent years during development of the next LRTP, which will be approved in FFY 2019. Each task identifies the time frame in which each activity will occur.

Task 1 Update the LRTP Needs Assessment

The Needs Assessment has become a foundational resource for the MPO's transportation-planning work. The Needs Assessment includes information on the current state of the region's transportation system, how it is used now and projected to be used in the future, and how it interacts with the region's current and projected land-use conditions and environment.

Staff developed a Needs Assessment as part of *Charting Progress to 2040* and made it available to the public via the Needs Assessment application on the MPO's website. In FFY 2017, staff will continue to update the Needs Assessment with new information, as it becomes available. Staff will also perform analyses to keep the Needs Assessment current and will use the results of the analyses for future studies, reports, and deliberations. The updated information will also be made available to the public via the MPO's website. Data from the Needs Assessment will support two MPO initiatives: the MPO's scenario-planning activities and its performance-based planning practice.

In FFY 2017, staff will use data from the Needs Assessment to develop and analyze land-use and transportation options and scenarios. The data will also be used to review performance measures, set performance targets, evaluate progress toward the targets, and track other indicators of interest.

Subtask 1.1 Gather Data

Staff will identify newly available data from state- and CTPS-managed databases, and identify additional sources of data that will be needed to implement the MPO's performance-based planning practice. The data collected will be used for several purposes: tracking performance measures and targets; understanding trends; and updating data in the current Needs Assessment for an improved understanding of needs in the region.

Staff will continue to work with the Metropolitan Area Planning Council (MAPC) to develop a process for projecting demographic trends for use in the MPO's regional travel demand model. The projections will reflect the MPO's vision and goals, planned developments (documented in MAPC's

development databases), and the goals and policies in MAPC's land-use plan, MetroFuture.

Schedule:

- FFY 2017: develop a process and schedule for demographic projections
- Ongoing: update information as new data become available

Subtask 1.2 Analyze Data

Staff will review the new data and use it for analyses that will explore the extent of demographic and development changes and the implications for the region's transportation network and land use. Staff will discuss the changes and trends with the MPO and the public. Using the new data and the performance measures established in Task 2, staff will assess and report on the progress toward reaching the MPO's vision for the region. This Needs Assessment report will be developed prior to the adoption of the next LRTP.

Schedule: Ongoing

Subtask 1.3 Incorporate New Data into the Web-Based Needs Assessment

New data will be incorporated into the existing web-based edition of the Needs Assessment. This will involve developing text, tables, maps, and charts that summarize the new data and the analyses performed in Subtask 1.2. It will also require the preparation of informational materials for the MPO and the public.

Schedule: Ongoing

Subtask 1.4 Make the Needs Assessment Available for Public Review

The Needs Assessment data that are currently available on the MPO's website will be updated for public review and comment. Staff will produce a table that summarizes the public comments received.

Schedule: Ongoing

Products of Task 1

- A process and schedule for preparing demographic projections
- Summary of data analyses (including updated maps, tables, and charts)
- Updated web-based Needs Assessment
- A table summarizing public comments on the updated Needs Assessment data

Task 2 Develop Performance Measures and Targets

Under the FAST Act, the MPO is required to develop and use performance measures in its planning process and decision making; this work is well under way. The MPO adopted its goals, objectives, and an initial set of performance measures in FFY 2015 as part of *Charting Progress to 2040*. These performance measures were used for scenario planning and for evaluating LRTP projects and programs. In FFY 2016, the MPO initiated the development of performance targets, which are specific levels of performance the MPO desires to achieve within a certain time frame.

In FFY 2017, the MPO will formalize and expand its performance-based planning practice in the context of developing additional performance measures and associated targets. Furthermore, MPO staff will review the performance measures developed in FFY 2015 and 2016 and fine-tune them, if necessary. Additional updates may be made, or new measures added, based on guidance from the Federal Highway Administration and Federal Transit Administration. New measures may also be recommended by the Massachusetts Department of Transportation (MassDOT) or identified from emerging data sources. As the performance measures become further refined, staff will develop targets for a subset of the performance measures.

Subtask 2.1 Continue to Develop Performance Measures

Staff will continue to research and develop performance measures that correspond with the vision and goals in *Charting Progress to 2040*. Staff will recommend performance measures for adoption by the MPO and prepare a memorandum explaining the process of developing the recommendations and the reasoning behind them. The memorandum will also explain how the MPO will use the performance measures to track how well implementation of projects programmed in the TIP and the LRTP helps to achieve the MPO's targets and goals, and to identify performance trends for measures that do not have specific associated targets.

As part of this research, information will be gathered on the development of MassDOT's performance measures, and staff will utilize this material when making recommendations. The development of performance measures will be an ongoing process, and new information will be incorporated as it becomes available.

Throughout this process, staff will prepare materials for the MPO and lead a series of discussions with the MPO and MassDOT about performance measures, staff recommendations, and the process for implementing the MPO's performance-based planning practice. Staff will ask for guidance and concurrence from the MPO in all of the discussions. Discussion materials will

be posted on the MPO's website and circulated for public discussion and comment.

Schedule: Fall 2016 and winter 2017

Subtask 2.2 Gather Data on Performance Measures

Staff has been working on a Performance Dashboard—a web-based visual tool that houses, organizes, manages, and presents performance measurement data. This tool will be used to communicate information about the transportation system's performance to policymakers, stakeholders, and the public. This work is being coordinated with the Needs Assessment work and the MPO's Congestion Management Process (CMP), along with other MPO programs, including the Regional Equity and Bicycle and Pedestrian programs.

In addition, an agency-wide committee has been established to develop an inventory of the data available for use by MPO staff and the public. Staff will continue to develop formats for housing and presenting data, giving consideration to the analysis needs of the performance-based planning work. Staff will then assemble the data into the agreed-upon formats.

Schedule:

- Winter 2016: Performance Dashboard
- Ongoing: Data Committee

Subtask 2.3 Develop Performance Measure Targets

Working from the baseline and updated data, and applying the national and state goals and the MPO's vision and goals, staff will develop recommended targets in each of the performance measurement areas. Staff will consider the availability of data and will also account for the possibility that some information may be qualitative. Time frames for achieving targets will be established for each performance measure.

Schedule:

- Winter and spring 2017: establish targets based on available data
- Ongoing: develop additional targets as new information and guidance become available

Products of Task 2

- Memorandum reporting on the process for developing the performance measures and targets along with the recommended measures and targets

- Presentations and materials supporting discussions with the MPO and MassDOT
- Web-based Performance Dashboard
- Additional formats and vehicles for housing, managing, and reporting on performance measurement data
- Performance measurement data
- A summary of public comments on performance measures

Task 3 Incorporate Performance-based Planning Practice into MPO Decision Making

As is the case for many of the tasks in this work plan, all of the tasks outlined below will involve ongoing and often detailed consultation with the MPO with the goal of creating agreement and policy on the MPO's performance-based planning practices. In FFY 2017, the MPO will formalize and expand its performance-based planning practice in the context of both the LRTP and TIP programs. This work will be coordinated with the MPO's ongoing CMP.

Subtask 3.1 Integrate Performance Measures into Certification Document Criteria

Staff will review the current criteria that are used for project selection in the MPO's 3C certification documents – the LRTP, TIP, and UPWP – and make recommendations for revisions to the criteria that are consistent with the performance measures identified in Tasks 1 and 2, as needed. This work will be done in conjunction with the work plans for the TIP and UPWP.

Schedule:

- Winter 2017: TIP criteria
- Ongoing: UPWP and LRTP criteria

Subtask 3.2 Track Data: Compare Current Conditions to Baseline Conditions

Staff will use the data collected in Tasks 1 and 2 for each of the performance measure categories to document the current conditions in the Boston region's transportation system and incorporate it into the Performance Dashboard. New data will be compared to the baseline data established in *Charting Progress to 2040* in each of the performance measurement areas.

Schedule: Ongoing

Subtask 3.3 Report on the MPO's Progress toward Performance Targets

In addition to the Performance Dashboard, both the LRTP and TIP will include a performance report that describes trends and progress toward targets and the trends of non-target indicators of interest. In FFY 2017, staff will develop a format for performance reports to include in the TIP and in future LRTPs. The LRTP performance report will chart progress at the systems and project levels, as applicable, and will include a full assessment of the progress made toward the MPO's goals. The TIP performance report will account for project-level performance and provide the results of system-level analyses, as applicable. In the future, the development of each LRTP will provide an opportunity to review and document progress in meeting performance goals and, if needed, make adjustments to the LRTP to meet those goals.

Schedule:

- Spring 2017: FFY 2018–22 TIP Performance Report – update of progress toward MPO goals
- Ongoing: Future TIPs and LRTPs will report on progress toward established targets

Subtask 3.4 Develop Strategies

Using the recommended targets in each of the performance measurement areas developed in Task 2, staff will develop recommendations for strategies to reach these targets. Once adopted by the MPO, these strategies will be used to guide the MPO's investment decisions.

Schedule:

- Summer 2017: establish strategies to reach established targets
- Ongoing: develop additional strategies as new information and guidance become available

Subtask 3.5 Prepare Memoranda

Staff will prepare memoranda explaining how the performance-based planning process will be used to guide decision making on programming the transportation funds that are available to the MPO. These memoranda will build on previously prepared memoranda that documented the development of the performance measures and TIP criteria. The new memoranda will describe the national, state, and MPO goals and policy frameworks. In addition, they will discuss the plans and schedules for monitoring the performance of the transportation system, the development of the targets and strategies, the methods for evaluating progress, and the reporting of data.

Schedule:

- Summer 2017: memorandum on first-year implementation
- Ongoing: additional memoranda, as new information becomes available

Products of Task 3

- Updated LRTP, TIP, and UPWP project-selection criteria as needed
- Comparisons to baseline data for performance measures
- Recommendations for strategies to meet the targets
- Tables, databases, and other materials populated with performance measurement data
- Memoranda on the MPO's performance-based planning program

Task 4 Develop and Analyze Future Scenarios

The MPO has an ongoing practice of using model-based planning tools and off-model processes to generate forecasts and information about regional conditions and future transportation needs. These tools are also used to assess the effects of potential changes to the transportation network. The MPO plans to continue to use this information to make policy and capital investment decisions.

Throughout the year, staff will explore the impacts of different investment strategies on transportation, air quality, climate change, mode shift, the economy, and land use by comparing various scenarios. Some possible study topics are as follows:

- What transportation improvements would yield the greatest mobility on the truck freight network?
- Which investment scenario would result in the most carbon dioxide reduction?
- Which investment program would generate the land-use pattern closest to MetroFuture's development goals?
- Where are the congestion points in a regional evacuation scenario?

Some of this work also may explore policy-related implications, as was done in the scenario-planning process conducted during the development of the current LRTP. In this way, the LRTP program will serve as an ongoing resource for current information, insights, and analysis for everyone involved in managing and improving the regional transportation network.

Schedule: Winter, spring, and summer, 2017

Products of Task 4

- A set of future investment scenarios for use in studying one or more issues of concern
- Results of scenario testing
- Memorandum documenting the results of the scenario testing

Task 5 Prepare the Groundwork for the Next LRTP

The LRTP program plays an important role in keeping the MPO abreast of current state-of-the-practice communication methods, planning tools, and approaches. In collaboration with MAPC, the MPO staff will explore effective ways to gather information, understand the Boston region's needs, and analyze transportation and land-use options. As part of FFY 2017 work activities, staff will research the best practices in metropolitan transportation planning and other facets of planning.

Schedule: Ongoing

Products of Task 5

- Summary of investment strategy research
- Adoption of state-of-the-practice communication methods and planning tools and approaches, as applicable

Task 6 Adopt LRTP Amendments

One or more amendments to the LRTP may be required in FFY 2017 if any changes are made to regionally significant projects in the TIP, or if there are changes to the State Implementation Plan. As these situations arise, staff will prepare informational materials for the MPO members' decision making and follow the MPO's procedures for informing and involving the public.

Schedule: As needed

Product of Task 6

LRTP amendment(s), if required

Task 7 Respond to Requests for Information

Throughout the course of the year, the MPO staff receives requests for information associated with the LRTP or information that was developed during the LRTP process, from MPO members, staff of various transportation and planning agencies, and members of the public. Staff will respond to these requests for information, as needed.

Product of Task 7

Responses to information requests

Estimated Schedule

This program is ongoing from year to year. Some tasks, as noted throughout this work plan, will be ongoing in preparation of the next LRTP, which will be adopted in FFY 2019. The tasks to be completed in this fiscal year are identified in this work plan, and will be completed throughout the 12 months of FFY 2017. The proposed schedule, by task, is shown in Exhibit 1.

Estimated Cost

The total cost of this program for FFY 2017 is estimated to be \$292,766. This includes the cost of 96.2 person-weeks of staff time and overhead at the rate of 102.7 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/AM/am

Exhibit 1
ESTIMATED SCHEDULE
Long-Range Transportation Plan: FFY 2017

Task	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Update the LRTP Needs Assessment	A											
2. Develop Performance Measures and Targets	B				C							
3. Incorporate PBPP into MPO Decision Making	D				E				F		G	
4. Develop and Analyze Future Scenarios				H			I					
5. Prepare the Groundwork for the Next LRTP												
6. Adopt LRTP Amendments (If Required)												
7. Respond to Requests for Information												

Products/Milestones

- A: Demographic projections: process and schedule
- B: Formats and vehicles for performance measures
- C: Memorandum on performance measures and target development
- D: Updated TIP project-selection criteria
- E: Comparisons to baseline data for performance measures
- F: Recommendation of strategies for meeting performance targets
- G: Memoranda on the MPO's performance-based planning program
- H: Set of future scenarios
- I: Memorandum documenting the results of the scenario planning

Exhibit 2
ESTIMATED COST
Long-Range Transportation Plan: FFY 2017

Direct Salary and Overhead	\$292,766
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Task	Person-Weeks							Direct Salary	Overhead (102.70%)	Total Cost
	M-1	P-5	P-4	P-3	P-2	Temp	Total			
1. Update the LRTP Needs Assessment	0.8	3.6	3.2	0.2	1.5	1.2	10.5	\$14,901	\$15,303	\$30,204
2. Develop Performance Measures and Targets	2.0	8.5	7.6	1.4	0.9	3.1	23.5	\$33,891	\$34,806	\$68,696
3. Incorporate PBPP into MPO Decision Making	2.3	8.9	7.6	0.2	0.4	2.0	21.4	\$32,662	\$33,544	\$66,207
4. Develop and Analyze Future Scenarios	2.6	14.4	13.2	1.0	1.1	1.0	33.3	\$52,201	\$53,610	\$105,811
5. Prepare the Groundwork for the Next LRTP	0.3	1.5	1.2	1.8	0.0	0.5	5.3	\$7,354	\$7,552	\$14,906
6. Adopt LRTP Amendments (If Required)	0.0	0.5	0.5	0.0	0.0	0.0	1.0	\$1,606	\$1,650	\$3,256
7. Respond to Requests for Information	0.0	0.5	0.5	0.0	0.2	0.0	1.2	\$1,818	\$1,867	\$3,685
Total	8.0	37.9	33.8	4.6	4.1	7.8	96.2	\$144,433	\$148,333	\$292,766

Other Direct Costs	\$0
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TOTAL COST	\$292,766
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Funding

MPO Planning Contract #95411
MPO §5303 Contract #91027 and subsequent contract