



U. S. Department
of Transportation

TRANSPORTATION PLANNING CERTIFICATION REVIEW

OF THE

METROPOLITAN PLANNING PROCESS FOR THE BOSTON
TRANSPORTATION MANAGEMENT AREA

BOSTON REGION
METROPOLITAN PLANNING ORGANIZATION

Final Report – April 24, 2019

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I. INTRODUCTION

This document describes the review and findings of the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) planning certification review of the transportation planning process in the Boston urbanized area, as conducted by the Boston Region Metropolitan Planning Organization (BRMPO).

FEDERAL TRANSPORTATION LAW

The BRMPO is required by federal law to conduct the metropolitan transportation planning process according to the requirements of 23 United States Code 134 as amended by the Fixing America's Surface Transportation (FAST) Act, signed into law on December 4, 2015. On May 27, 2016, the United States Department of Transportation (U.S. DOT) updated the Statewide and Metropolitan Planning Final Rule, which sets forth federal requirements for the transportation planning process. These requirements are found in 23 Code of Federal Regulation (CFR) Part 450, the metropolitan planning regulations, and are closely tied with the Clean Air Act Amendments of 1990 through the U.S. Environmental Protection Agency's (EPA) Air Quality Conformity Regulations.

TRANSPORTATION PLANNING IN THE REGION

The BRMPO was originally designated in 1973, and is largest of eleven MPOs that serve the Boston, MA-NH-RI urbanized area (UZA). The Central Transportation Planning Staff (CTPS) provides staff support to the BRMPO. The BRMPO covers 97 cities and towns and approximately 1,400 square miles in the Boston urbanized area, representing nearly three million residents, and supports about two million jobs. The communities in the region range from relatively rural towns, such as Dover, to large urban centers, such as Boston and Cambridge. Its policy board currently has 22 members and is chaired by the Secretary of the Massachusetts Department of Transportation (MassDOT). The previous planning certification finding for the BRMPO was issued on June 16, 2015.

THE CERTIFICATION REVIEW PROCESS

The Review Team, comprised of FHWA and FTA officials, jointly evaluates the transportation planning process conducted in each transportation management area (TMA), defined as an urbanized area with a population over 200,000. This review must be conducted at least once every four years and assesses the extent to which each MPO's planning process meets the metropolitan planning regulations and, where applicable, EPA's Air Quality Conformity laws. Certification reviews generally consist of four components: a "desk review" of MPO planning products and documents, a site visit and meeting with the MPO (including a public meeting), a final report by the Review Team that summarizes the observations and findings for each area, and a letter transmitting the report and overall certification finding.

The topics of a certification review include compliance with federal laws and regulations; the challenges and successes of the planning process; and the cooperative relationship among the MPO, the public, and other transportation planning stakeholders. The certification review process is only one of several methods used to assess the quality of the metropolitan planning process and

compliance with applicable statutes and regulations. Other opportunities for review include routine oversight activities such as attendance at meetings, day-to-day interactions, review and approval of work products, and coordination with the MPO on prior certification review recommendations.

Upon completion of the review and evaluation, FHWA and FTA must either:

1. Certify that the transportation planning process meets the requirements of 23 United States Code (U.S.C.) 134, 49 U.S.C. 5303, and other associated federal laws;
2. Certify that the transportation planning process substantially meets federal requirements with conditions tied to resolution of specific corrective actions;
3. Certify the transportation planning process with conditions and additional project and program restrictions; or,
4. Not certify the planning process and withhold funds if the process does not meet federal requirements.

THE 2018 BOSTON REGION MPO CERTIFICATION REVIEW

On July 12, 2018, this review was initiated with a formal notice to the BRMPO. Also, on July 12, 2018, a list of requested advance materials was sent. These materials included the major Continuing, Comprehensive, Cooperative (3C) planning documents, planning agreements, bylaws, and the Title VI Plan. After a comprehensive desk review, the Review Team sent follow-up questions to the BRMPO on September 5, 2018 and then sent additional questions over the following month on specific issues. The responses received assisted the Review Team in formulating its agenda for the on-site review conducted on October 16 and 17, 2018.

During the on-site review, the Review Team engaged BRMPO staff and MassDOT personnel in a productive and wide-ranging discussion. All who were present participated in meaningful discussion and readily provided information about the planning process. On the evening of October 17, the Review Team conducted a public meeting that included a brief presentation on the federal planning certification review process. Appendix D contains a summary of comments.

ORGANIZATION OF THIS REPORT

This certification review report is organized around key transportation planning topic areas. Each report section presents the legal and regulatory basis for the review topic area, summarizes the observations of the Review Team, and lists the team's findings. Findings may include corrective actions, recommendations, or commendations. *Corrective actions* describe items that do not meet the requirements of the transportation statute and regulations, along with the actions that must be taken to attain compliance. *Recommendations* identify steps that should be implemented to improve processes and planning products that already meet minimum federal requirements. *Commendations* describe processes and products that are considered notable and identified as best practices. Failure to address a corrective action may result in a more restrictive certification or the withholding of federal funds.

While all facets of the planning process were included in the desk audit, this report focuses on areas with notable findings. All subject areas not included in the report were found to be compliant with federal requirements.

II. PREVIOUS FINDINGS AND DISPOSITION

One of the priorities of each certification review is assessing how well the planning partners in the area have addressed corrective actions and recommendations from the previous certification review. This section identifies the recommendations from the previous certification, issued on June 16, 2015, and summarizes discussions of how they have been addressed based on the November 7, 2018 BRMPO response. There were no corrective actions.

Planning Process	Recommendation	Status	Response
Unified Planning Work Program (UPWP)	Explore opportunities to expand outreach to communities who may not have benefited from a significant planning activity, such as a safety, corridor, or congestion management study.	Complete	BRMPO staff continue to analyze data on municipal participation with the goal of informing more effective and broader-reaching outreach strategies. Staff continue to update Appendix D of the UPWP, which tracks CTPS's and Metropolitan Area Planning Commission's (MAPC) UPWP work products by municipality and subregion; it now covers FFYs 2010–18.
UPWP	Make a special effort to engage these communities and see if they have any technical needs that the BRMPO can address.	Complete	Staff have continued to work with MAPC subregional groups, through their assigned coordinators, to offer opportunities for technical assistance and to propose "discrete" study ideas to municipalities.
UPWP	In addition, staff will explore opportunities to host BRMPO-sponsored events in the communities identified as not having benefited from a significant planning activity.	Complete	Staff have expanded their presence not only at MAPC subregional groups but also at meetings of other stakeholder groups across the region. Staff continue to seek out appropriate opportunities to host BRMPO meetings in different locations throughout the region and to co-sponsor events on transportation-related topics being held across the region, particularly in the communities identified as not having benefited from a significant planning activity.

Planning Process	Recommendation	Status	Response
Transportation Improvement Program (TIP)	Refine TIP project selection and prioritization process to: <ul style="list-style-type: none"> • develop a clear, mode-neutral process by which flexible funding programs such as CMAQ and STP may be allocated to both transit and highway projects • expand the definition of “Environmental Justice Area” beyond a simple threshold to one that reflects a range of low-income and minority population levels • add criterion related to transportation infrastructure resiliency, alignment with hazard mitigation plans, and/or climate change adaptation. 	Complete	Staff recommended, and the BRMPO adopted, an adjustment to the BRMPO’s TIP equity criteria, eliminating the 200-person protected population minimum for receiving points. Thus, regardless of the number of affected people, as long as an area served by a project has a share of a protected population that is higher than the region’s median, that project will receive a point. This reflects the recommendation under the first Title VI and Nondiscrimination Data Collection and Analysis recommendation that no segment of the population be excluded in the identification and analysis of Title VI / non-discrimination populations. The change is also consistent with Environmental Justice (EJ) guidance. When the TIP criteria are reviewed and revisited, likely after the adoption of a new LRTP in early 2019, staff will consider proposing a revision to award points based on varying concentrations of protected populations served by TIP projects.
TIP	Make a special effort to engage communities that appear to have not benefitted from the BRMPO Target Program, statewide road and bridge program, earmarks, or discretionary awards.	Complete	Staff continues to conduct analyses of TIP funding by municipality and by subregion. The current data is for FFY 2008 through FFY 2023, and each year staff adds the current year of funding and adjusts previous years to reflect any changes in TIP programming. In Appendix E of the current TIP, this analysis is presented for FFYs 2019–23.

Planning Process	Recommendation	Status	Response
TIP	Determine whether there are institutional barriers to accessing federal funding and develop a strategy to assist those communities to develop eligible projects.	Complete	BRMPO staff, working with the MAPC subregional coordinators, held a series of conference calls with municipalities in late summer/early fall 2017. Invited to the calls were the member municipalities of each subregion and municipal BRMPO representatives. Participants shared concerns and ideas for becoming more involved in BRMPO planning, programming, and other decision-making activities. Staff tailored the Fall 2017 outreach based on their input. The input received indicates that some municipalities do have challenges and barriers in advancing transportation projects. These range from the inability or unavailability of staff to lead project development to difficulties generating and prioritizing local revenue for transportation projects.
TIP	Include a general funding analysis as part of the introductory text of the TIP document that presents a basic overview of projects proposed in the TIP, including summaries of data about project and/or funding allocation by mode, geographical area, and socioeconomic and demographic equity.	Complete	The executive summary of the TIP summarizes funding by mode, BRMPO investment program category, and MAPC community type. In addition, the executive summary lists the specific municipalities in which TIP projects are located.
List of Obligated Projects	Demonstrate a better link between the TIP and the list of obligated projects. Publish a list of all federally-funded projects (including transit) that is consistent with the format of the TIP. Work cooperatively with responsible parties to ensure the list meets requirements of 23 CFR 450.314.	Complete	BRMPO staff will work with MassDOT, the Massachusetts Bay Transit Authority (MBTA), and the regional transit authorities to regularly post and bring more transparency to the list of obligated projects.

Planning Process	Recommendation	Status	Response
Air Quality	Update the current Memorandum of Understanding (MOU) between the MPOs, MassDOT, DEP, and RTAs to reflect the advent of MassDOT and the roles of all agencies including MassDOT.	On-going	MassDOT is reviewing the current MOU for updates.
Air Quality	Consider a UPWP study to determine how the State Implementation Plan (SIP) commitments have affected regional air quality.	Complete	This topic was also discussed by the UPWP committee during the FFY 2017 UPWP development process, but a study of this topic has been not included in any UPWP.
MPO Organizational Structure	Work cooperatively with Metrowest Regional Transit Authority (MWRTA) and Cape Ann Transportation Authority (CATA) to ensure that they are represented on the BRMPO board in a way that is satisfactory to all parties and satisfies the MAP-21 requirement for transit representation on MPO boards.	BRMPO Action	BRMPO approved creating a transit committee through a motion adopted in November 2018. The specifics of that committee are still under discussion.
Inter-Agency Agreements and Consultation	Update regional inter-agency MOU to include all MPOs in the Boston Urbanized Area (UZA), as defined by the 2010 U.S. Census.	Complete	UZA MOU completed and signed January 2019.
Inter-Agency Agreements and Consultation	Using the <i>Models of Regional Planning Cooperation</i> Planning Emphasis Areas, work with partner MPOs in the UZA (starting with the Northern Middlesex MPO, Merrimack Valley MPO, and Old Colony MPO) to coordinate the planning processes and better align regional transportation planning documents.	Complete	Addressed through the UZA MOU.

Planning Process	Recommendation	Status	Response
Intermodal Transportation Coordination	Clearly present basic information about the modal breakdown of funds and projects in the TIP and Metropolitan Transportation Plan (MTP) documents in an attractive format, so that stakeholders can easily gain a broad understanding of the region's transportation priorities.	Complete	The executive summary of the TIP includes a written description of the modal breakdown of funding as well as a figure illustrating the breakdown of regional target funding in the TIP by BRMPO investment program. This figure could be expanded to include all TIP funding as well as a more visually engaging analysis of the modal breakdown.
Public Outreach and Public Involvement	Reduce duplicative emails while ensuring full dissemination of information.	Complete	BRMPO notices are now disseminated via MailChimp. This software facilitates database management by removing duplicates and allowing members of the public to personalize their subscriptions so that they will receive only content that is of interest to them. The notices provide an attractive, easy-to-follow format, with links to documents and webpages that complement the content.
Public Outreach and Public Involvement	Identify types of oral comments that may warrant written responses. Track the disposition of these responses and share them publicly in the same manner as written comments.	Complete	Staff have implemented the following process for the disposition of comments related to the TIP and intend to replicate the same process for all certification documents; staff write a message to acknowledge each written comment received; staff compile the full text of written comments about certification documents into a single document, which staff post to the appropriate web timeline as well as to the BRMPO's meeting calendar; staff transcribes oral comments made during BRMPO meetings in meeting minutes; staff includes summaries of and responses to all written and oral comments in a table, which is included in the final document BRMPO members vote to endorse.
Public Outreach and Public Involvement	Pursue proactive methods to engage the public in all planning efforts including corridor and subarea planning studies and similar activities, for example through inclusion of residents in study advisory groups, etc.	On-going	The public participation program manager and administrative and communications assistant continue to support CTPS's Transit Analysis and Planning group and Traffic Analysis and Design group on selected activities, as time and resources allow. Additionally, the Traffic Analysis and Design group distributes surveys gathering information on transportation needs in study locations. The group also endeavors to engage local bicycle and pedestrian advisory committees in corridor and subarea planning studies. Finally, the group relies upon its municipal partners to manage the public process for implementing study recommendations.

Planning Process	Recommendation	Status	Response
Title VI Notice and Complaint Procedures	Work with MassDOT's Title VI Specialist to revise complaint procedure and form, translate them in accordance with BRMPO's Language Assistance Plan (LAP), and post on BRMPO web site.	Complete	MassDOT ODCR provided the revised complaint procedure and form, along with translations. The revised complaint procedure and form - translated into Spanish, Chinese (simplified and traditional), Portuguese, and Haitian Creole in accordance with the BRMPO's Language Assistance Plan (LAP) - are posted on the BRMPO's website. Because MassDOT provided translations in Arabic, French, Italian, Khmer, Russian, and Vietnamese, these are also posted on the BRMPO website.
Title VI and Nondiscrimination Data Collection and Analysis	Expand data collection and analysis to encompass both environmental justice and Title VI/Nondiscrimination Program requirements, including persons protected on the basis of race, color, national origin/LEP, age, gender, disability, and low-income.	Complete	This recommendation was addressed prior to the final Certification Review Report in May 2015. To the degree possible, staff include these additional populations in existing equity analyses and continue to explore other methods for analyzing these populations. Staff continue to include these additional populations as appropriate in existing equity analyses and explore other methods for analyzing these populations.
Title VI and Nondiscrimination Data Collection and Analysis	Establish definitions to identify populations in each category that are meaningfully greater or above average; no segment of the population should be excluded.	Complete	Staff will revisit these thresholds in 2020 during the development of the next triennial report.
Title VI and Nondiscrimination Data Collection and Analysis	Analyze data to consider the impacts to all populations in terms of access to and equity of each program element.	Complete	A study to develop a methodology for the TIP was completed in FFY 2017. Continued efforts are conducted under the Transportation Equity Program.
Title VI and Nondiscrimination Outreach and Access	Introduce new contacts to the benefits/goals/objectives of outreach and advise existing Title VI/nondiscrimination contacts periodically on how to "opt-in" for additional communications.	Complete	BRMPO staff uses MailChimp's e-message delivery service. All individuals who subscribe to the BRMPO's e-mailing list receive an introductory message with an explanation of the BRMPO, its processes, and the type of information distributed through the email list. Subscribers can opt into five distribution lists. BRMPO staff also use the equity contact list to prioritize meetings with organizations that represent Title VI/nondiscrimination populations in order to provide them with more information and opportunities for involvement, and to identify populations that are not yet receiving information about the BRMPO.

Planning Process	Recommendation	Status	Response
Title VI and Nondiscrimination Outreach and Access	Target outreach efforts to seek representation on the Advisory Council from Title VI/nondiscrimination populations. Collaboration with key organizations that serve Title VI/nondiscrimination populations would most likely produce results.	On-going	Staff have been developing a method for prioritizing outreach to organizations that represent Title VI/nondiscrimination populations and evaluating the success of these efforts.
Limited English Proficiency	Revisit the BRMPO's Four-factor analysis to determine whether vital documents should be translated into more than the top three Non-English Safe Harbor Languages.	Complete	The BRMPO's vital documents are now translated into Spanish, Chinese (simplified and traditional), Portuguese, and French/Haitian Creole. These languages make up almost 70 percent of all LEP persons in the region. [The 2017 Triennial Title VI Report, Appendix D, Section 2.1 of the Language Assistance Plan, has further details about this analysis.] Staff will conduct a new four-factor analysis when updating the LAP for the next triennial submission in 2020.
Limited English Proficiency	Examine the contacts in the Transportation Equity Outreach Database to ensure adequate representation of organizations serving the other 21 Non-English Safe Harbor Language groups.	Complete	Staff have prioritized inclusion of organizations that serve non-English Safe Harbor Language groups in its outreach efforts and continues to expand the number of such organizations in the TE database. The BRMPO's equity contact list includes organizations serving Spanish, Haitian Creole, Portuguese, and Chinese speakers. MassDOT is assembling a list of contacts who speak other languages, and staff will add these contacts to the Transportation Equity Outreach Database.
Management and Operations Considerations	Financial planning for management and operations should be presented in the TIP. An analysis depicting the shortfall of revenue to properly operate and maintain the highway system should be completed for the highways portion of the MTP.	Complete	BRMPO staff obtained this information from the MassDOT Capital Improvement Plan and included it in the TIP and MTP that were approved in July 2015. Staff will continue to seek this information from MassDOT, and report it in these two documents.

III. SUMMARY OF REVIEW FINDINGS

CORRECTIVE ACTIONS

List of Obligated Projects

The BRMPO, in coordination with MassDOT and public transit operators, shall develop and publish a complete listing of obligated projects within 90 days after the close of the federal fiscal year. The listing shall also include the approved amount programmed in the TIP, the total amount obligated, and the remaining balance for each project. This will ensure that the list of obligated projects fully meets all the required elements per 23 CFR 450.334. This corrective action must be completed by December 30, 2019.

Air Quality

At the time of this report, MassDOT has developed a draft update of the 1996 MOU and has shared it with the other signatory agencies. This draft update to the MOU between the MPOs, MassDOT, the Department of Environmental Protection (DEP), and providers of public transportation should include current requirements and the specific requirements of the *South Coast Air Quality Management District vs. EPA* ruling. This was a recommendation as part of the 2015 Boston Certification Review. This corrective action must be completed by September 30, 2019.

RECOMMENDATIONS

Metropolitan Transportation Plan

The MTP should include a description of performance measures and targets used in assessing the performance of the transportation system in accordance with 23 CFR 450.306(d). The MTP must also include a system performance report evaluating progress in meeting performance targets.

The MTP should integrate in the MTP the goals, objectives, performance measures and targets described in other transportation planning documents, such as the transportation asset management plan (TAMP), highway safety improvement program (HSIP), Freight Plan, transit asset management (TAM) plan and others as applicable.

Transportation Improvement Program and Project Selection Process

The TIP should include specific descriptions of the anticipated effect of the TIP toward achieving the performance targets and linking investment priorities to those performance targets.

Financial Planning

The Review Team recommends the BRMPO, in cooperation with MassDOT and the other MPOs, explore updating the Massachusetts Association of Regional Planning Agencies (MARPA) formula to reflect current inputs (i.e., population and road mileage).

Congestion Management Process

The BRMPO should develop and implement a process for periodic assessment of implemented strategies to better inform decision-making on potential congestion management strategies in the future. This should include evaluating projects and strategies beyond those that have been constructed with BRMPO target funds.

Air Quality

The Review Team recommends ensuring all files associated with air quality conformity are readily available, should the public or another entity request to review (i.e., Motor Vehicle Emission Simulator (MOVES) input files, Conformity SIP).

MPO Organizational Structure

The BRMPO should develop an operations plan, as called for in its MOU. An operations plan should clarify roles and responsibilities among BRMPO members and staff, particularly among CTPS, MAPC, and MassDOT, pertaining to collaboration, communication, work assignments, and products. Additionally, it should provide further clarification on the roles of the Chair and Vice Chair, define officer roles for sub-committees, and identify other necessary processes to support an effective 3C process and facilitate BRMPO operations as the regional forum for transportation decision-making.

The BRMPO should review voting procedures for BRMPO Board seats to ensure that they effectively engage all communities in the region and result in effective representation.

The BRMPO should seek to broaden the information and training opportunities available to the board members about current best practices in transportation planning.

Public Outreach and Public Involvement

The Review Team recommends that the BRMPO refine its efforts to measure the effectiveness of its public involvement strategies.

FHWA recommends that the BRMPO establish a social media policy that makes clear to the public how comments received through social media will be used, i.e., whether or not they will become part of the public record and be considered for incorporation into plans and projects.

Transit Planning

The BRMPO should refine its TIP project selection and prioritization process in consideration of the following:

- Developing a clear, mode-neutral process by which transit projects, including, but not limited to, bus priority projects, can be planned and programmed with consideration for all eligible funding sources.
- Clarifying in its public documents how it evaluates proposed project lists from MassDOT and the MBTA, (for inclusion in the TIP), how these proposals address the targets which have been adopted for Performance Based Planning and Programming, and how the CIP and TIP project selection processes are aligned.

The BRMPO, MassDOT, and MBTA should develop a consolidated list of ferryboat funding in the TIP, such as a separate summary table, including FBP funds, any discretionary funds awarded to the region, and 5307 and 5337 funds allocated for ferry capital projects.

The MBTA and CTPS should use their combined expertise in reporting to the NTD to identify any other eligible services within the TMA which could be voluntary reporters and contribute to the state's formula fund apportionment, including, but not limited to, ferry operators, intercity bus operators, and municipal transit systems.

Title VI and Nondiscrimination Data Collection and Analysis

Further analysis should be completed to ensure that the transportation needs of Title VI and EJ communities are being met.

The BRMPO should develop disparate impact/disproportionate thresholds as referenced in the MTP. Accurate thresholds are critical to ensuring and demonstrating equitable transportation planning.

The BRMPO should update the website to publicize the findings/recommendations or status update of the DI/DB policy working group. The participating stakeholders may feel their efforts to be heard were a futile and become discouraged from participating in future events.

Title VI and Nondiscrimination Outreach, Access & Limited English Proficiency (LEP)

The BRMPO should continue to implement innovative outreach techniques designed to engage traditionally underserved Title VI/EJ populations. The targeted outreach efforts can include participating in special events that may not have a transportation focused agenda but are held in LEP communities.

Environmental Mitigation

The BRMPO should address resiliency of the transportation system in the MTP and TIP selection criteria; and seek other opportunities to emphasize the importance of resiliency in transportation planning and programming of projects.

Performance-Based Planning and Programming

The BRMPO's Performance Dashboard website should distinguish what content is related to federal performance measures and what is not related to federal performance measures. Throughout its planning documents the BRMPO should ensure that performance measures, metrics, and related data and information are clearly defined and not conflicting.

The Review Team recommends that the BRMPO, MassDOT, and providers of public transportation evaluate existing planning agreements for any necessary updates regarding the roles and responsibilities for performance data, information sharing, target selection, and performance reporting.

Freight Planning

The BRMPO should consider adopting a routine cycle to updating the Freight Action Plan.

Connected and Autonomous Vehicles and Transportation Network Company

The BRMPO is recommended to include rideshare CAVs into its long-term planning activities.

The BRMPO is recommended to explore opportunities to more formally integrate rideshare and CAV interest into the RTAC, stakeholder working committees, etc. This could include representation from Massachusetts Department of Public Utilities, neighborhood associations and/or the business community.

COMMENDATIONS

Air Quality

The Review Team recognizes the BRMPO's efforts to proactively conduct an air quality conformity analysis on the MTP to minimize project delays as a result of the *South Coast Air Quality Management District vs. EPA* court ruling.

Title VI and Nondiscrimination Data Collection and Analysis

The BRMPO staff is commended for the series of Disparate Impact/Disproportionate Working Group sessions. The three-part series was held with the objective of obtaining consensus on a DI/DB Policy recommendation for the upcoming MTP to identify/prioritize the impacts used to assess the equity of the program of projects. The sessions included the Executive Director, Title VI Coordinator and key members of the BRMPO staff. It's worthwhile to note, the meetings were held in the evenings and conveniently located for groups traditionally underrepresented from the transportation planning process.

Connected and Autonomous Vehicles and Transportation Network Company

The BRMPO is recognized for their proactive engagement with MassDOT, Massachusetts Department of Public Utilities and Uber in 2017.

IV. CERTIFICATION ACTION

FHWA and FTA have determined that the transportation planning process of the Boston Region Metropolitan Planning Organization (BRMPO) portion of the Boston, MA-NH-RI Transportation Management Area substantially meets the Metropolitan Planning Rule requirements subject to resolution of two specific corrective actions (23 CFR Part 450 Subpart C and 49 CFR Part 613). FHWA and FTA conditionally certified the transportation planning process of the BRMPO, effective April 24, 2019. Once both corrective actions have been resolved and accepted by FHWA and FTA, we will send a letter certifying the transportation planning process of the BRMPO. This certification shall remain in effect until the next certification review to be completed within four years of April

24, 2019. While this report identifies a series of recommendations that are intended to improve the transportation planning process, the corrective actions cited herein are required for full compliance with federal regulations. Considering these findings, the BRMPO shall submit an action plan as described in the transmittal letter accompanying this report by June 3, 2019.

V. KEY METROPOLITAN PLANNING DOCUMENTS AND PROCESSES

A. UNIFIED PLANNING WORK PROGRAM

REGULATORY BASIS

MPOs are required to develop Unified Planning Work Programs (UPWPs) in TMAs to govern work programs for the expenditure of FHWA and FTA planning and research funds (23 CFR 450.308). The regulation 23 CFR 420.111 governs work programs required for the expenditure of FHWA highway planning and research funds. MPOs are required to develop UPWPs in cooperation with the State and public transit agencies. (23 CFR 450.308(c))

OBSERVATIONS

The BRMPO develops and adopts its UPWP on an annual basis. The development process is overseen by a UPWP Committee which meets 6 to 7 times per year. Development of the UPWP begins in the fall when the BRMPO solicits ideas and proposals from various stakeholders. BRMPO staff divides input received into two classification groups. One group contains work that can be performed through the BRMPO's technical assistance programs or other ongoing BRMPO planning activities, which assist municipalities with bicycle and pedestrian planning, small-scale traffic analysis, freight planning, and transit planning, including for first- and last-mile connections. The second group is a List of Discrete Studies to be undertaken over the year. All UPWP studies include a transportation equity component. The UPWP includes other transportation studies taking place in the region that are not funded by the BRMPO.

During the last Certification Review, the Review Team encouraged the BRMPO to make a special effort to engage communities that appear to have not benefitted from the planning program; and see if they have any technical needs related to safety, congestion, livability, or any other activity that the BRMPO can address through their work. The Review Team recognizes the BRMPO's efforts to assess municipalities' levels of participation in the BRMPO's processes, identify barriers to participation, and develop strategies to engage municipalities with historically low participation rates in the transportation planning process. BRMPO staff noted that the enhanced outreach efforts have been very helpful and appreciated by both the BRMPO and member communities. Only two out of 97 municipalities haven't been included in a location-specific UPWP study or technical assistance activity in the past eight years.

BRMPO staff highlighted its recent work to develop a UPWP Database that will be used to track the status of recommendations from UPWP studies and technical memorandums. This database will enable the BRMPO to track which recommendations have been implemented as parts of TIP

projects and will be updated annually. The Review Team encourages the BRMPO to continue development of the UPWP Database and eagerly looks forward to the results.

FINDINGS

The transportation planning process in the Boston Region is consistent with the federal requirements for this topic area.

B. METROPOLITAN TRANSPORTATION PLAN

REGULATORY BASIS

Federal regulations require the development of the MTP as a key product of the metropolitan planning process. The MTP shall address at least a 20-year planning horizon, and the MPO shall review and update the MTP at least every four years in air quality nonattainment and maintenance areas, and at least every five years in attainment areas. The transportation plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods to address current and future transportation demand. (23 CFR 450.324)

An MPO MTP requires valid forecasts of future demand for transportation services. These forecasts are frequently made using travel demand models, which allocate estimates of regional population, employment and land use to person-trips and vehicle-trips by travel mode, route, and time-period. The outputs of travel demand models are used to estimate regional vehicle activity for use in motor vehicle emissions models for transportation conformity determinations in nonattainment and maintenance areas, and to evaluate the impacts of alternative transportation investments being considered in the MTP.

OBSERVATIONS

The current MTP, titled *Charting Progress to 2040* was endorsed by the BRMPO in July 2015. The MTP was developed through an extensive collaborative process that included establishing goals and objectives, assessing the region's transportation needs, analyzing investment strategies with scenario planning, culminating with selecting and analyzing projects and programs to include in the MTP. The six goals of the MTP are safety for all transportation modes, preservation of the system, capacity management and mobility through efficient use of existing system and increase healthy transportation capacity, clean air and clean communities by creating an environmentally friendly transportation system, transportation equity that provides comparable transportation access and service quality among communities, regardless of income level or minority population, and economic vitality to ensure the transportation network serves as a strong foundation for economic vitality.

The MTP includes a chapter on performance-based planning and programming and how this federally required practice has been integrated into the development of the MTP and how it will influence transportation investment decisions. The BRMPO is currently in the process of updating the MTP, *Destination 2040*, and it is anticipated to be endorsed and finalized in the summer of 2019.

FINDINGS

Recommendation: The MTP should include a description of performance measures and targets used in assessing the performance of the transportation system in accordance with 23 CFR 450.306(d). The MTP must also include a system performance report evaluating progress in meeting performance targets.

Recommendation: The MTP should integrate in the MTP the goals, objectives, performance measures and targets described in other transportation planning documents, such as the transportation asset management plan (TAMP), highway safety improvement program (HSIP), Freight Plan, transit asset management (TAM) plan and others as applicable.

C. TRANSPORTATION IMPROVEMENT PROGRAM AND PROJECT SELECTION PROCESS

REGULATORY BASIS

The BRMPO is required, under 23 CFR 450.326, to develop a TIP in cooperation with the State and public transit operators. The TIP shall cover a period of at least four years, must be updated at least once every four years, and must be approved by the BRMPO and the governor. If the TIP is updated more frequently, the cycle must be compatible with the State Transportation Improvement Program (STIP) development and approval process.

OBSERVATIONS

The FFYs 2019 – 2023 TIP, includes a chapter on TIP Performance Monitoring that provides background on both FHWA and FTA performance measures and the role the TIP plays in implementing projects and programs to improve performance. The chapter has sections that address roadway safety, system preservation, and capacity management and mobility performance as well as transit system asset condition and performance. Each of these sections discusses asset performance, investment and project programming decision processes, targets, and monitoring of BRMPO, MassDOT, and some federal performance measures. Since BRMPO has now adopted targets for each of the FHWA performance measure and the FTA transit asset management performance measures as required by regulations, the 2020-2024 TIP should include specific descriptions of the anticipated effect of the TIP toward achieving the performance targets and linking investment priorities to those performance targets.

FINDINGS

Recommendation: The TIP should include specific descriptions of the anticipated effect of the TIP toward achieving the performance targets and linking investment priorities to those performance targets.

D. FINANCIAL PLANNING

REGULATORY BASIS

The metropolitan planning statutes state that the MTP and TIP (23 U.S.C. 134(j)(2)(B)) must include a “financial plan” that “indicates resources from public and private sources that are reasonably expected to be available to carry out the program” and demonstrates fiscal constraint for these documents. Estimates of funds available for use in the financial plan must be developed cooperatively by the MPO, public transportation operator(s), and the State (23 CFR 450.314). This cooperative process must be outlined in a written agreement that includes specific provisions for developing and sharing information related to the development of financial plans that support the metropolitan transportation plan (23 CFR 450.314).

OBSERVATIONS

The BRMPO integrates the financial plan, as required per 23 CFR 450.324 for the MTP and 23 CFR 450.326 for the TIP, into the MTP and TIP documents themselves, rather than having it separate. As part of the desk review, the BRMPO stated: “The financial chapter in the MTP includes all of the information outlined in 23 CFR 450.324(f)(11), including the estimates of highway and transit funds that are expected to be available over the lifetime of the MTP. It outlines the federal, state, and local funds that are expected to be available for both capital projects and operation and maintenance of the system, including funding for the timely implementation of the required SIP projects. The TIP acts as the implementation arm for the first five years of the MTP and includes all of the information outlined in 23 CFR 450.326(e-k). The TIP includes all of the funding for capital projects and operation and maintenance of both the highway and transit system over its five-year time period and outlines how the federal and state funds are allocated for these purposes in the Boston region.” The current MTP, *Charting Progress to 2040*, describes in detail major highway and public transit investments through 2040, while assuming revenues will increase by 1.5 percent per year and project costs will inflate by 4 percent per year

Every year, MassDOT seeks highway revenue funding guidance from FHWA for the TIP and STIP, and every four years for the MTP. Based on FHWA’s guidance, MassDOT provides the highway revenue estimates to the MARPA, usually at the annual MARPA meeting held each winter. MARPA holds the formula for how the highway funding is distributed amongst each MPO. The “MARPA formula” has been in effect without change since 1991 and is primarily based on each region’s road mileage and population. As stated in the FFY 2019-2023 TIP and noted at the on-site meeting on October 16, “the BRMPO receives about 43 percent of the total funds” available to the MPOs within Massachusetts each year. At the on-site meeting on October 16, when asked about the need to revisit the MARPA formula, the BRMPO stated: “This formula is of legendary status. The derivation is lost in time. The actual underpinning of the formula is lost... Periodically there are rumblings about the formula and possibly reopening the formula. This hasn’t happened. The fractions have been fairly stable over the years.” Since 1991 when the MARPA formula was initially developed or last updated, four communities left the BRMPO, there has been the 2000 and 2010 censuses, significant transportation and other development has taken place, and populations throughout the regions of Massachusetts have changed.

FINDINGS

Recommendation: The Review Team recommends the BRMPO, in cooperation with MassDOT and the other MPOs, explore updating the MARPA formula to reflect current inputs (i.e., population and road mileage).

E. LIST OF OBLIGATED PROJECTS

REGULATORY BASIS

MPOs, transportation operators, and the State must cooperatively develop a listing of projects for which federal funds have been obligated in the previous year in accordance with 23 CFR 450.334. The listing must include all federally funded projects authorized or revised to increase obligations in the preceding program year and, at a minimum, the following for each project:

- The amount of funds requested in the TIP;
- Federal funding obligated during the preceding year;
- Federal funding remaining and available for subsequent years;
- Sufficient description to identify the project or phase; and
- Identification of the agencies responsible for carrying out the project or phase.

OBSERVATIONS

The latest annual listing of obligated projects is posted on the BRMPO's website and is dated October 16, 2017. The process for developing this document is initiated each fall when MassDOT provides the BRMPO with a list of projects that received funding in the prior fiscal year. The document includes a table that is not accompanied by any narrative.

The list of obligated projects was incomplete and did not include all projects funded through FTA. Also missing from the table were the required amount of funds requested in the TIP, federal funding obligated during the preceding years, and federal funding remaining and available for subsequent years.

FINDINGS

Corrective Action: The BRMPO, in coordination with MassDOT and public transit operators, shall develop and publish a complete listing of obligated projects within 90 days after the close of the federal fiscal year. The listing shall also include the approved amount programmed in the TIP, the total amount obligated, and the remaining balance for each project. This will ensure that the list of obligated projects fully meets all the required elements per 23 CFR 450.334. This corrective action must be completed by December 30, 2019.

F. CONGESTION MANAGEMENT PROCESS

REGULATORY BASIS

The State(s) and MPOs must develop a systematic approach for managing congestion through a process that "provides for safe and effective integrated management and operation of the multimodal transportation system. The Congestion Management Process (CMP) applies to

transportation management areas (TMAs) based on a cooperatively developed and implemented metropolitan-wide strategy of new and existing transportation facilities eligible for funding under 23 U.S.C. and Title 49 U.S.C., Chapter 53 through the use of travel demand reduction and operational management strategies.” (23 CFR 450.322)

OBSERVATIONS

The Congestion Management Process (CMP) for the BRMPO was most recently documented in 2013, although the process has evolved since that time. For the BRMPO, the CMP’s purposes are to identify locations with extreme congestion and to identify strategies to alleviate congestion at those locations. In general, the identification of areas of congestion may lead to UPWP studies which may ultimately result in the implementation of TIP projects. A few TIP evaluation criteria are tied to congestion but rely primarily on functional design reports for input to scoring. Before and after studies, or other attempts to evaluate the impact of implementing CMP strategies, have been limited.

Data collection and analysis is a clear strength of the region’s CMP. The BRMPO maintains a website which includes visualization of various performance measures and data points. For example, an application maps the change in congestion between 2012 and 2015 over the network of arterials and expressways. The analysis of expressways includes roadways that are outside of the BRMPO’s metropolitan planning area (MPA) but are part of the travel demand model that it maintains. The arterials analyzed are limited to those within the MPA. At the time of this review, the BRMPO had just initiated a study to identify multimodal and transit performance measures that could be used in the CMP. One data limitation that the staff reported was for freight data. Freight has not been incorporated into the CMP previously due to limited data available; however, staff is now looking into the National Performance Management Research Data Set (NPMRDS) freight dataset, which will provide travel speeds from freight vehicles on the NHS network.

The CMP committee is a good venue for engaging additional partners in the process. As a subcommittee of the BRMPO’s Policy Board, it is currently an opportunity for members most interested and affected by congestion to provide input and direction for the CMP. Outreach and engagement of other partners such as transportation management associations, freight providers, chambers of commerce, etc. could add additional value to the CMP.

While the BRMPO’s CMP includes a significant amount of data analysis, much of the data provided on the online dashboard appears to be several years old. The use of older data inhibits the ability to evaluate the impact that congestion management strategies may have had on congestion.

FINDINGS

Recommendation: The BRMPO should develop and implement a process for periodic assessment of implemented strategies to better inform decision-making on potential congestion management strategies in the future. This should include evaluating projects and strategies beyond those that have been constructed with BRMPO target funds.

G. AIR QUALITY

REGULATORY BASIS

For MPOs that the EPA classifies as air quality nonattainment or maintenance areas, many special requirements apply to the metropolitan planning process. Section 176(c)(1) of the Clean Air Act Amendments of 1990 (CAAA) states: “No metropolitan planning organization designated under section 134 of title 23, United States Code, shall give its approval to any project, program, or plan which does not conform to an implementation plan approved or promulgated under section 110.”

In nonattainment or maintenance areas, if the MPO is not the designated agency for air quality planning under section 174 of the Clean Air Act, there shall be a written agreement between the MPO and the designated air quality planning agency describing their respective roles and responsibilities for air quality related transportation planning.

OBSERVATIONS

Air Quality was selected as a topic and thought to be a risk area during the desk review, in large part due to the February 16, 2018 decision by the U.S. Court of Appeals for the D.C. Circuit in *South Coast Air Quality Management District vs. EPA* (No. 15-115), which becomes effective on February 16, 2019. This decision struck down portions of the 2008 Ozone NAAQS SIP Requirements Rule concerning the ozone NAAQS. The portions of the 2008 Ozone NAAQS SIP Requirements Rule addressed implementation requirements of the 2008 ozone NAAQS as well as the anti-backsliding requirements (ensuring that areas do not revert to nonattainment) associated with the revocation of the 1997 ozone NAAQS. The impact of the decision affects areas that were designated as nonattainment for the 1997 ozone NAAQS at the time of revocation and are designated as attainment for the 2008 ozone NAAQS. In Massachusetts, these areas had not been required to make transportation conformity determinations for any ozone NAAQS since the 1997 ozone NAAQS were revoked by EPA in April 2016.

With this new court ruling, Massachusetts is required to perform a transportation conformity determination on any new MTP and TIP, updates, and amendments that include the addition of a project that is not exempt (also known as a regionally significant project) from transportation conformity, since a conformity determination was not performed for the current MTP or TIP. As a result, CTPS, in cooperation with DEP, was charged by MassDOT to proactively conduct an air quality conformity analysis on the MTPs, which incorporated projects from the 2019-2023 TIPs, to meet the requirements for the 1997 ozone NAAQS. In past transportation conformity determinations, it has been MassDOT’s policy that the TIP comes from an air quality conforming MTP. On August 16, 2018, the BRMPO endorsed Amendment #2 to the current MTP, documenting the air quality conformity determination for the plan, which shows that the MTP is consistent with the air quality goals set forth in the Clean Air Act and is consistent with the 1997 NAAQS for ozone.

Although the BRMPO was proactive in conducting air quality analyses to meet the new court ruling requirements, the Review Team understood that the BRMPO and others within MassDOT had not been required and therefore had not performed a transportation conformity analysis and

determination for any ozone NAAQS in over two years. The Review Team requested the assistance of FHWA Headquarters and their air quality experts to engage in the review. FHWA Headquarters requested to review the EPA's MOVES input modeling files associated with the recent Air Quality Analysis MTP Amendment #2, to ensure appropriate assumptions and methodology was being applied. The MOVES input files were not readily available to the public as required. However, they were provided to the Review Team. After assessing the files, the Review Team had no further concern. Air Quality was removed from the agenda for the on-site review.

In November 2018, EPA issued guidance clarifying the requirements for compliance with the *South Coast Air Quality Management District vs. EPA* ruling. Based on that guidance, regional emissions modeling, such as that conducted by CTPS and its partners, will not be required in order to make a conformity determination for the 1997 ozone NAAQS.

In 2015, FHWA and FTA conducted a certification review of the BRMPO planning process. At that time, an observation was made stating that “The Boston Region MPO is part of an air quality MOU, entitled ‘Concerning the Conduct of Transportation Air Quality Planning and Implementation of the State Implementation Plan.’ This is an agreement among the Massachusetts MPOs, the Massachusetts Department of Environmental Protection (DEP), the Executive Office of Transportation and Construction (now MassDOT), the RTAs, the MBTA, and the Massachusetts Port Authority. This MOU was last signed in 1996 and has not been updated since then.” This observation resulted in a recommendation to update the MOU.

FINDINGS

Corrective Action: At the time of this report, MassDOT has developed a draft update of the 1996 MOU and has shared it with the other signatory agencies. This draft update to the MOU between the MPOs, MassDOT, the Department of Environmental Protection (DEP), and providers of public transportation should include current requirements and the specific requirements of the *South Coast Air Quality Management District vs. EPA* ruling. This was a recommendation as part of the 2015 Boston Certification Review. This corrective action must be completed by September 30, 2019.

Recommendation: The Review Team recommends ensuring all files associated with air quality conformity are readily available, should the public or another entity request to review (i.e., MOVES input files, Conformity SIP).

Commendation: The Review Team recognizes the BRMPO’s efforts to proactively conduct an air quality conformity analysis on the MTP to minimize project delays as a result of the *South Coast Air Quality Management District vs. EPA* court ruling.

VI. COORDINATED, COOPERATIVE, AND COMPREHENSIVE PLANNING PROCESS

A. MPO Organizational Structure

REGULATORY BASIS

Federal legislation 23 U.S.C. 134(d) requires the designation of an MPO for each urbanized area with a population of more than 50,000 individuals. When an MPO representing all or part of a TMA is initially designated or redesignated according to 23 CFR 450.310(d), the policy board of the MPO shall consist of (a) local elected officials, (b) officials of public agencies that administer or operate major modes of transportation within the metropolitan area, including representation by providers of public transportation, and (c) appropriate State transportation officials. The voting membership of an MPO that was designated or redesignated prior to December 18th, 1991, will remain valid until a new MPO is redesignated. Designation is required whenever the existing MPO seeks to substantially change the proportion of voting members representing individual jurisdictions or the State or the decision-making authority or procedures established under MPO bylaws.

The addition of jurisdictional or political bodies into the MPO or of members to the policy board generally does not require a designation of the MPO.

OBSERVATIONS

MPO organization structure and operation is a common component of MPO Certification Reviews. In addition to the usual steps of reviewing pertinent documents and discussion during the onsite meeting, the Review Team sought to involve BRMPO members directly and retained the U.S. DOT Volpe National Transportation Systems Center (Volpe Center) to conduct one-on-one listening sessions; the Review Team did not participate in the discussions. Participation was voluntary, and BRMPO members contacted the Volpe Center staff if they were interested; the discussions were anonymous and feedback in this Review are not attributed to individuals. The Volpe Center engaged the members on the functions and operation of the BRMPO and opportunities for improvement. The Volpe Center summarized the feedback for use by the Review Team. Consequently, this section of the Review includes information gathered through the listening sessions.

MPO STRUCTURE AND LEADERSHIP

The BRMPO operates under a Memorandum of Understanding (MOU) dated July 7, 2011. The MOU states that the “The Boston Region MPO shall be the forum for cooperative decision making by principal elected officials of general purpose governments in the Boston region, and shall endeavor to provide the federal government the view of ‘responsible local official’ of the Region where called for under federal law with respect to the initiation of certain transportation programs and projects.”

According to the MOU, the BRMPO policy board has two officers, the Chair and Vice Chair. The MOU states that “The Chair of the Boston Region MPO is the Secretary of MassDOT or the Secretary’s designee.” In practice the meetings are chaired by the Secretary’s designee, usually the Executive Director of the Office of Transportation Planning, but occasionally other MassDOT staff step in to chair the meetings. The Vice Chair, either a municipality or one of the two regional agencies (MAPC or the MBTA Advisory Board), is an elected one-year term position. MAPC has been the Vice Chair since the role was established.

According to the MOU, “The Chair or his/her official designee shall set agenda with the advice and input of the Vice Chair; call meetings; preside at meetings; and disseminate timely information to members.” These are the only powers of the Chair defined in the MOU. As noted in the listening sessions, it is rare for MassDOT not to have a representative present; in the unlikely instance that this occurs, MAPC would conduct the meeting in its capacity as Vice Chair. According to the BRMPO board member listening sessions, other MPO members are not involved in agenda setting. A member shared their impression that, “You get a sense that nothing will happen if the State does not want it.”

The Review Team is aware of only one out of the 387 non-Massachusetts MPOs nationwide that is permanently chaired by the State DOT. In addition, it is unusual for the State DOT to have more than one vote: MassDOT, with three votes, has over 13% of the votes on the BRMPO. According to the FHWA report *MPO Staffing and Organizational Structures* (October 2017), State DOTs have on average 1.1 MPO board seats, and are not voting members in 24% of the MPOs nationwide. The FHWA report further states that many MPOs seek to address balancing authority and influence through seat rotation, allocation of seats, and vote weight. Nothing in federal law or regulation prohibits a State DOT from chairing an MPO.

Additionally, the UPWP sub-committee is chaired by MassDOT and that has been the case for many years. This arrangement is not defined in the BRMPO’s MOU. During the board member listening sessions, chairing of the UPWP was identified as a concern and an opportunity for board members, aside from MassDOT to play a more active role in the BRMPO.

According to the board member listening sessions, those that participated felt they understood BRMPO’s structure, but shared that they were not well informed how MPOs in other States or regions of the country are structured and function. All recognized that there are several seemingly unique elements of the BRMPO’s structure. A majority of board members that participated in the listening sessions expressed interest in information-sharing about MPO structures; and some noted that there has never been a presentation to MPO members looking at MPO structures across the country or a discussion of the BRMPO structure. Also noted in the listening sessions was that CTPS used to send members to annual meetings of the national Association of Metropolitan Planning Organizations (AMPO), but this no longer occurs. A board member felt that the BRMPO was “in its own silo” and discussed that the BRMPO does not engage closely with other MPOs in Massachusetts or in neighboring states. Another member said that MassDOT has “Built a bubble around the MPO, because it is not inclusive” and “There is a lot of deference given to MassDOT, but sometimes it is

good to question this. Because of the power dynamic, people see MassDOT as the place to go to get funding.”

MPO STAFF FUNCTION AND INDEPENDENCE

The MOU designated CTPS as the primary staff to the BRMPO: “The Boston Region MPO agencies shall contribute resources in the form of funds, staff, and other contributions, to support a unified inter-agency transportation planning staff, known as the Central Transportation Planning Staff (“CTPS”), to assist in carrying out the Region’s 3-C process under the policy control of the Boston Region MPO.” CTPS is funded to conduct the work of the MPO by federal metropolitan planning funds, both highway and transit, through annual contracts with MassDOT, totaling approximately \$4 million. The local match (20%, or about \$800,000) is provided by MassDOT.

The MOU states that the BRMPO shall retain a fiduciary agent to manage the financial resources because neither the BRMPO nor its staff CTPS is an entity that can legally accept and disburse funds or execute contracts. The current Fiduciary Agent Agreement between the BRMPO and MAPC designates MAPC as the fiduciary agent. The Fiduciary Agent Agreement states that “...CTPS staff will receive overall direction from the Boston MPO...”

The Fiduciary Agreement states that “It is understood and agreed that the Boston MPO and CTPS, within the context of the Unified Planning Work Program (UPWP), may be requested by various agencies, authorities, administrations, or other entities to provide planning services that may be unrelated to the Boston MPO...” Given approval by the BRMPO and as defined in the UPWP, CTPS may undertake transportation planning services in addition to those performed on behalf of the MPO. Approximately one-third of CTPS’ annual budget is devoted to non-BRMPO work, mostly for MassDOT by the Office of Transportation Planning (OTP), the MBTA, and others.

The MOU states that the BRMPO will “adopt a revised operations plan” that will address administration and finance, programming, policy, and technical products. That action has not been taken. The Fiduciary Agent Agreement states that “CTPS shall operate under the direction of a staff director (the “CTPS Executive Director”) who shall be appointed by the Boston MPO.” The Review Team notes that the process to recruit, hire, and approve the Executive Director is not defined in the MOU.

The Review Team has observed that BRMPO products are not released to the BRMPO unless they are reviewed, edited, and approved by MassDOT.

ELECTION OF MPO MEMBERS

The MOU establishes 22 voting seats divided into two groups, permanent and elected members. There are ten permanent voting seats: three are from MassDOT, two from the City of Boston, and the remaining permanent voting seats are held by the MBTA, the MBTA Advisory Board, MassPort, MAPC, and the Regional Transportation Advisory Committee (RTAC). The 12 elected voting

members are cities and towns drawn from the 97 municipalities that comprise the BRMPO, not including the City of Boston. These elected municipal voting members are comprised of two at-large cities, two at-large towns, and eight cities and towns elected to represent each of the eight MAPC sub-regional groups. FHWA and FTA are ex-officio, non-voting members.

According to the MOU, MAPC and the MBTA Advisory Board jointly administer elections. Nominees for the elected municipal seats are the chief elected official of the municipality that will hold the seat. A candidate must receive nominations from at least five chief elected officials in the Boston region. Each chief elected officer in the region may vote for one candidate municipality for each open seat; consequently, municipalities are not only voting for representative for their sub-region and the at-large seats, but for all sub-regional representatives.

The Review Team notes that of the 96 BRMPO municipalities (excluding Boston) only 17 have served in elected seats on the BRMPO Board in the past 21 years. Two communities of these 96 have been on the BRMPO for 21 years, four others for over ten years, and nine for six years or more. All seats were contested in only one year (1999); for 11 years no seats were contested, including a five-year period from 2012 to 2017 when there was no change in membership of the BRMPO. Seven municipalities have run for BRMPO seats and never won. The Review Team notes that in the past 21 years only 17% of the eligible municipalities have held seats on the BRMPO.

FINDINGS

Recommendation: The BRMPO should develop an operations plan, as called for in its MOU. An operations plan should clarify roles and responsibilities among BRMPO members and staff, particularly among CTPS, MAPC, and MassDOT, pertaining to collaboration, communication, work assignments, and products. Additionally, it should provide further clarification on the roles of the Chair and Vice Chair, define officer roles for sub-committees, and identify other necessary processes to support an effective 3C process and facilitate BRMPO operations as the regional forum for transportation decision-making.

Recommendation: The BRMPO should review voting procedures for BRMPO Board seats to ensure that they effectively engage all communities in the region and result in effective representation.

Recommendation: The BRMPO should seek to broaden the information and training opportunities available to the board members about current best practices in transportation planning.

B. PLANNING AGREEMENTS AND COORDINATION

REGULATORY BASIS

In accordance with 23 U.S.C. 134 and 23 CFR 450, MPOs must consult with agencies and officials responsible for other planning processes when developing TIPs and MTPs, and must carry out a planning process that is 3C. This includes establishing MOUs identifying the mutual roles, responsibilities, and procedures governing their cooperative efforts. These agreements must

identify the designated agency for air quality planning under the Clean Air Act and address the responsibilities and situations arising from there being more than one MPO in a metropolitan area. On April 23, 2014, then United States Department of Transportation Secretary Anthony Foxx outlined three Planning Emphasis Areas for FY 2016. These are not regulations, but rather are topic areas that MPOs and State departments of transportations are encouraged to focus on when conducting their planning processes and developing their planning work programs. One of these Planning Emphasis Areas is Models of Regional Planning Cooperation, which reads:

“Promote cooperation across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning. This is particularly important where more than one MPO or State serves an urbanized area or adjacent urbanized areas. The cooperation could occur through the metropolitan planning agreements..., through the development of joint planning products, and/or by other locally determined means.”

OBSERVATIONS

At the time of the on-site review, the current regional inter-agency memorandum of understanding (MOU) between the BRMPO and the adjacent Boston-area MPOs of Merrimack Valley MPO, Northern Middlesex MPO, Old Colony MPO, and the Southeastern Massachusetts MPO was dated September 9, 2003. The 2010 Census updated the Boston urbanized area (UZA) boundary to cover portions of several MPOs not covered under the regional inter-agency MOU described above. These include Montachusett MPO and Central Massachusetts MPO in Massachusetts; Rockingham Planning Council, Southern New Hampshire Planning Council, and Nashua Regional Planning Council in New Hampshire; and the Rhode Island Statewide Planning Council in Rhode Island. Additionally, the regulations require that the States and public transportation operators are all parties to the agreement.

The BRMPO coordinated with its neighboring MPOs and MassDOT to develop a new MOU to address these regulations. MassDOT coordinated with the transit providers and agencies in New Hampshire and Rhode Island. The MOU was fully executed January 30, 2019.

FINDINGS

The transportation planning process in the Boston Region is consistent with the federal requirements for this topic area.

C. PUBLIC OUTREACH AND PUBLIC INVOLVEMENT

REGULATORY BASIS

MPOs are required to engage in a metropolitan planning process that creates adequate opportunities for the public to participate in, and comment on, the products and planning processes of the MPO. The requirements for public involvement are detailed in 23 CFR 450.316, which requires the MPO to develop and implement a documented public participation plan that includes explicit procedures and strategies to include the public and other interested parties in the transportation planning process. Additionally, 23 CFR 450.324 and 23 CFR 450.326 require the

MPO to create opportunities for public involvement, participation, and consultation throughout the development of the MTP and TIP, respectively.

Specific requirements include: providing adequate and timely notice of opportunities to participate in, or comment on, transportation issues and processes; employing visualization techniques to describe MTPs and TIPs; making public information readily available in electronically accessible formats; holding public meetings at convenient and accessible locations and times; demonstrating explicit consideration of, and responding to, public input; and periodically reviewing the effectiveness of the procedures and strategies contained in the public participation plan to ensure a full and open participation process.

OBSERVATIONS

The BRMPO's transportation planning process includes sufficient public involvement measures to meet the regulatory requirements outlined in 23 CFR 450.316.

The BRMPO's public involvement strategies include public meetings, emails, web-based surveys, a web forum, social media, interactive web-maps used mainly for one-way communication, and coordination with MAPC subregional councils. These subregional councils include planners, engineers, elected officials, and residents who identify priorities and concerns in those subregions on behalf of the public. The BRMPO conducts minimal outreach in the subregions beyond communication with the MAPC contacts. The BRMPO maintains a comprehensive tracking spreadsheet that includes all public comments and information about the stakeholders who submitted the comments as available. The BRMPO incorporated public input into its MTP, including a request for dedicated bus lanes and changes to the MTP's visions and goals.

With the exception of voluntary demographic information collected through surveys, the BRMPO does not monitor the demographics of those who participate in their public involvement processes; and stated that it is engaged in limited efforts specifically aimed toward, and is accordingly experiencing limited success with, outreach to LEP populations, minority populations, and young stakeholders. As such, the degree to which the BRMPO is reaching a population representative of the Boston TMA is questionable and difficult to evaluate. These circumstances also hamper the BRMPO's ability to measure the effectiveness of its public involvement efforts, despite its maintenance of the comment tracker described above. The BRMPO has considered virtual tools to expand its reach but stated that it found them cost-prohibitive.

The BRMPO uses a Twitter account to disseminate information and does not consider comments received through Twitter as official public comments. When members of the public attempt to submit official public comments via Twitter, BRMPO staff directs them to attend a public meeting or formally ask their question through the web forum used for that purpose. The BRMPO does not have a social media policy.

The BRMPO should consider expanding its toolbox of public involvement activities to expand its reach, making efforts to target LEP communities, minority communities, young stakeholders and/or other demographics as the BRMPO identifies gaps in engagement. One such gap includes outreach

in MAPC subregions: the BRMPO should note that outreach to MAPC contacts in subregions does not constitute sufficient public involvement in those subregions.

Many public involvement tools can be used to target specific populations and tailored to the budget of the BRMPO. FHWA does not recommend any particular tool or type of tool as there is no one-size-fits-all solution: rather, the BRMPO should examine its needs and identify tools that are suitable for the situation, demographic, and budget at hand. Geotargeted ads and meetings-in-a-box are two examples of low-cost strategies that can be tailored to reach specific populations.

FINDINGS

Recommendation: The Review Team recommends that the BRMPO refine its efforts to measure the effectiveness of its public involvement strategies.

Recommendation: FHWA recommends that the BRMPO establish a social media policy that makes clear to the public how comments received through social media will be used, i.e., whether or not they will become part of the public record and be considered for incorporation into plans and projects.

D. TRANSIT PLANNING

REGULATORY BASIS

49 U.S.C. 5303 and 23 U.S.C. 134 require the transportation planning process in metropolitan areas to consider all modes of travel in the development of their plans and programs. Federal regulations cited in 23 CFR 450.314 state that the MPO in cooperation with the State and operators of publicly owned transit services shall be responsible for carrying out the transportation planning process.

OBSERVATIONS

The MBTA, MetroWest Transit Authority, and Cape Ann Transit Authority are the primary providers of fixed-route transit service in the Boston region. There are several additional regional transit authorities (RTAs) that provide fixed-route service within neighboring MPOs and may also provide service to portions of the Boston Region's MPA. The region is also served by commuter rail service from the Northern New England Passenger Rail Authority, several intercity bus operators, corporate shuttle services, and independently-operated ferries. Since the last certification review, significant changes have taken place in the region, including:

- Reorganization of the MBTA's governance under a Fiscal Management and Control Board
- Increased capital spending towards state of good repair projects
- The groundbreaking of the Green Line Extension and associated project redesign
- Implementation of FTA's Transit Asset Management and Performance Based Planning processes.
- Increased coordination between municipalities and the MBTA on the provision of bus priority projects.

Bus Priority Lane Projects

Interest in municipal collaboration on improving bus service has been on the rise, driven by several factors, including decreasing ridership, increased traffic congestion, and increased competition from Transportation Network Companies. The MBTA's Better Bus project is examining ways to meet service standards through better coordination with municipalities on bus stop locations, roadway designs, and signals. In addition, several high-profile bus priority lane pilots have taken place with the support of local funds and private foundation funds.

As additional bus priority pilot projects are completed, and parties involved begin to seek funding for permanent implementation of them, several pools of eligible funding are available. For example, depending on the particular roadway, a bus priority project could be constructed using regional target funds, 5307 transit funds, MassDOT highway funds, or a combination.

However, the current process for selecting projects is currently largely siloed by funding sources. Locally-sponsored projects using MPO target funds are scored using project selection criteria developed by the MPO, MassDOT highway funds and transit projects are evaluated through the State's Capital Improvement Program (CIP) process. Transit projects are added to the CIP by the MBTA for its services, and by MassDOT for the RTAs. During the CIP development process, MassDOT, the MBTA, and the RTAs submit project lists to the MPO for consideration and inclusion in the TIP. The RTAs coordinate with the MassDOT Rail and Transit Division as part of this process. Massachusetts MPO TIPs are endorsed before MassDOT finalizes its CIP, and so there is some reconciliation of project data in TIPs after the start of the federal fiscal year.

The most recent certification report included a recommendation for the MPO "to develop a clear, mode-neutral process by which flexible funding programs such as CMAQ and STP may be allocated to both transit and highway projects." The future of bus priority projects illustrates the need to revisit this recommendation, finding a way to ensure that project funding decisions are made efficiently and transparently with regard to all eligible funding sources. The continued implementation of performance-based planning and programming make cross-mode coordination and ensuring the funds available to the MPO are directed toward meeting the performance priorities set by the MPO increasingly important.

Ferries

Funding for ferry systems in the region is varied and spread across modes and recipients in ways which are unique to the ferry program, making planning for ferry projects challenging. Funding sources include FTA discretionary funds, 5307, 5337, and the FHWA Ferryboat Program (FBP). When projects are implemented, they often involve non-traditional recipients or subrecipients, such as municipalities or developers, which lack experience in administering federal programs, and could benefit from additional technical assistance. Some private, municipal, and public entities operate routes which may qualify as public transportation for the purposes of reporting to the National Transit Database, but do not currently report.

FINDINGS

Recommendation: The BRMPO should refine its TIP project selection and prioritization process in consideration of the following:

- Developing a clear, mode-neutral process by which transit projects, including, but not limited to, bus priority projects, can be planned and programmed with consideration for all eligible funding sources.
- Clarifying in its public documents how it evaluates proposed project lists from MassDOT and the MBTA, (for inclusion in the TIP), how these proposals address the targets which have been adopted for Performance Based Planning and Programming, and how the CIP and TIP project selection processes are aligned.

Recommendation: The BRMPO, MassDOT, and MBTA should develop a consolidated list of ferryboat funding in the TIP, such as a separate summary table, including FBP funds, any discretionary funds awarded to the region, and 5307 and 5337 funds allocated for ferry capital projects.

Recommendation: The MBTA and CTPS should use their combined expertise in reporting to the NTD to identify any other eligible services within the TMA which could be voluntary reporters and contribute to the state's formula fund apportionment, including, but not limited to, ferry operators, intercity bus operators, and municipal transit systems.

E. TITLE VI NOTICE AND COMPLAINT PROCEDURES

REGULATORY BASIS

It has been the long-standing policy of U.S. DOT to actively ensure nondiscrimination under Title VI of the Civil Rights Act of 1964. Title VI states that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” Title VI bars intentional discrimination (i.e., disparate treatment) as well as disparate-impact discrimination stemming from neutral policy or practice that has the effect of a disparate impact on protected groups based on race, color, or national origin. The planning regulations 23 CFR 450.336 require an MPO to self-certify that “the planning process . . . is being carried out in accordance with all applicable requirements of . . . Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21.” More specifically, the following authorities address the requirements for Notification and Complaint Procedures: 49 CFR 21.9(d); 28 CFR 35.107; 23 CFR 200.9 (b) (3); FTA C4702.1B, Chapter III, 5 & 6.

OBSERVATIONS

The BRMPO's Title VI/Nondiscrimination Complaint Procedure is posted on the website. The site includes a description of both federal and State protections against discrimination. It contains pertinent information on the Title VI Coordinator for the BRMPO as well as MassDOT. The MPO successfully collaborated with MassDOT to ensure the revised complaint procedure was made available to the public. The instructions and forms were translated into Spanish, Chinese

(simplified and traditional), Portuguese, and Haitian Creole in accordance with the MPO's Language Assistance Plan (LAP), are posted on the BRMPO's website. In addition, the BRMPO provided translations in Arabic, French, Italian, Khmer, Russian, and Vietnamese.

FHWA recently issued updated guidance on Title VI procedure and complaint processing. The clarification includes complaint routing, investigative authority, and efforts to informally resolve complaints are desirable. These distinctions are critical, as the FHWA does not delegate authority to recipients to investigate themselves or make findings under Title VI. For matters related to the BRMPO's FTA-funded activities or transit planning actions, FTA guidance regarding Title VI complaint handling remains unchanged. Specifically, on such matters, the BRMPO retains the delegated authority to consider allegations of Title VI violations made against the organization. While striving for consistency of process, FHWA continues to recommend that BRMPOs check-in with MassDOT's Title VI Specialist in the Office of Diversity and Civil Rights if /when such complaints are received to coordinate on the making of jurisdictional determinations and on strategizing next steps.

FINDINGS

The transportation planning process in the BRMPO is consistent with the federal requirements for this topic area.

F. TITLE VI AND NONDISCRIMINATION DATA COLLECTION AND ANALYSIS

REGULATORY BASIS

All recipients must collect and analyze data to determine the extent to which they are serving or impacting the public. This fundamental requirement was established in the U.S. Department of Justice's Title VI regulation 28 CFR 42.406, and, further, in U.S. DOT's implementing regulations at 49 CFR 21.9(b). The FHWA Title VI regulations 23 CFR 200.9(b) (4) and the FTA Circular C4702.1B, Chapter V, 2.e., also contain specific requirements for data collection and analysis. It should be noted that data collection and analysis is essential to implementing a system for both project and program level monitoring to determine if any impediments exist regarding access or equity.

OBSERVATIONS

The desk audit revealed the BRMPO employs a variety of methods to collect and analyze data to evaluate transportation equity. The analysis is well documented and available to the public on the website. The Transportation Equity Program and the 2017 Triennial Title VI Report demonstrated that the BRMPO works diligently to consider the needs of traditionally underserved populations designed to ensure minority and low-income communities are treated equitable manner. The BRMPO's efforts to establish a Disparate Impact/Disproportionate Burden Policy for the MTP is publicized on the website. It provides a definition of disparate impact and disproportionate burden, the goal of the BRMPO's program and provides a method for the public to participate in the discussion.

There were a series of three stakeholder meetings designed to assist with the establishment of the Disparate Impact/Disproportionate Burden Policy for the MTP. The sessions began on May 21, 2018 and ended on July 17, 2018 and then scheduled to be presented to the BRMPO.

During the on-site meeting, the BRMPO delivered an informative presentation on Transportation Equity Studies as well as a presentation on Community Transportation Technical Assistance. During the ensuing Title VI presentation, a member of the Review Team inquired if the BRMPO is collecting data on the equitable distribution of transportation projects in smaller town/cities particularly Gateway cities. The staff responded by stating this issue was explored several years ago. It was their opinion that any absence of participation stemmed from a lack of resources such as staffing or funding and therefore found no evidence of intentional discrimination.

The current MTP *Charting Progress to 2040* indicated there was an absence of disparate impact or disproportionate burden to EJ populations; however, the data within the report does not support these findings. In fact, page 7-3 of the report indicates “the MPO has yet to develop thresholds for these populations to identify specific areas for the purposes of performing an equity analysis.”

There appeared to be additional disparities within the 2017 – Triennial Report. The report indicates, in part, on page 61 “Approximately 26.0 percent of the transit investments benefit minority riders, who consisted of 34.0 percent of all public transit passengers within the MPO region.” The report further indicates “Additionally, the BRMPO plans to develop a DI/DB policy that determines whether the results of this analysis cause disparate impacts and disproportionate burdens.”

FINDINGS

Recommendation: Further analysis should be completed to ensure that the transportation needs of Title VI and EJ communities are being met.

Recommendation: The BRMPO should develop disparate impact/disproportionate thresholds as referenced in the MTP. Accurate thresholds are critical to ensuring and demonstrating equitable transportation planning.

Recommendation: The BRMPO should update the website to publicize the findings/recommendations or status update of the DI/DB policy working group. The participating stakeholders may feel their efforts to be heard were a futile and become discouraged from participating in future events.

Commendation: The BRMPO staff is commended for the series of Disparate Impact/Disproportionate Working Group sessions. The three-part series was held with the objective of obtaining consensus on a DI/DB Policy recommendation for the upcoming MTP to identify/prioritize the impacts used to assess the equity of the program of projects. The sessions included the Executive Director, Title VI Coordinator and key members of the BRMPO staff. It’s worthwhile to note, the meetings were held in the evenings and conveniently located for groups traditionally underrepresented from the transportation planning process

G. TITLE VI AND NONDISCRIMINATION OUTREACH, ACCESS & LIMITED ENGLISH PROFICIENCY (LEP)

REGULATORY BASIS

As part of the planning and project development processes, seeking out and considering the needs of traditionally underserved, including Title VI /EJ populations, as well as providing timely notification to ensure ample opportunity to participate, is required. The following authorities address these requirements: 23 CFR 450.316(a) (1) (ii); 23 CFR 450.316(a) (1) (vii); 23 CFR 771.111(h) (2) (IV); FTA C4702.1B, Chapter III, 8.

OBSERVATIONS

The BRMPO's planning and project development processes consist of traditional and innovative methods to meet the needs of various communities including Title VI/EJ populations. The BRMPO staff uses MailChimp's e-message delivery service. Subscribers can opt into five distribution lists. The BRMPO staff also use the equity contact list to prioritize meetings with organizations that represent Title VI/nondiscrimination populations in order to provide them with more information and opportunities for involvement. In fact, the contact list was incorporated into MassDOT's "Engage" Title VI mapping tool. The latest version of this tool features a mapping component that allows MPOs to delineate impacted areas and identify stakeholders within them.

The BRMPO reported it has not received a request for interpretative services for a public meeting within the past 3 years. It's possible this is the result of the BRMPO's extensive involvement in the community.

FINDINGS

Recommendation: The BRMPO should continue to implement innovative outreach techniques designed to engage traditionally underserved Title VI/EJ populations. The targeted outreach efforts can include participating in special events that may not have a transportation focused agenda but are held in LEP communities.

VII. PLANNING FOCUS AREAS

A. ENVIRONMENTAL MITIGATION

REGULATORY BASIS

The specific requirements for environmental mitigation are set forth at 23 CFR 450.324 (f)(10). However, the requirements for addressing environmental mitigation are described at 23 CFR 450.316 (a) (1) (2) (3) and (b) – Interested parties, participation, consultation; 23 CFR 450.324 (g) (1) (2), and (j) – Development and content of the metropolitan transportation plan.

OBSERVATIONS

The MTP, *Charting Progress to 2040*, includes the goal of Clean Air/Clean Communities: create an environmentally friendly transportation system. This goal is supported by four objectives including, “Reduce greenhouse gases generated in the Boston region by all transportation modes as outlined in the Global Warming Solutions Act.” State law, Global Warming Solutions Act (GWSA) largely influences climate change related activities in Massachusetts. GWSA was passed in August of 2008 and created a framework to reduce Green House Gas (GHG) emissions. The law is outlined in the Massachusetts Clean Energy and Climate Plan for 2020.

To implement the MTP goal and objectives in project selection, the BRMPO’s TIP Evaluation Criteria includes 16 points for projects that meet the Clean Air/ Clean Communities criteria. Projects can also receive points for congestion reduction and mode shift from single-occupancy vehicle to less polluting transportation. However, minimal attention is given to resiliency during the TIP selection process and there is not a clear direction on how it can be incorporated into the transportation program. Further, during the on-site review, the BRMPO stated that it was not their role to encourage resilient design in project planning. It appeared that the BRMPO had only a basic understanding of resiliency and the focus was only on coastal flooding and sea level rise. There are more inland communities than coastal communities served by the BRMPO that need resilient infrastructure. The BRMPO did not have a way to readily address resiliency throughout the region.

Extreme weather, sea level change, and changes in environmental conditions threaten the considerable federal investment in transportation infrastructure. Nationwide MPOs and states can increase the health and longevity of the nation’s highways through assessing vulnerabilities and considering resilience in the transportation planning process. There is a new requirement that MTPs assess capital investment and other strategies that reduce the vulnerability of the existing transportation infrastructure to natural disasters, improve the resiliency and reliability of the transportation system, and reduce (or mitigation) storm water impacts of surface transportation. (450.324(f)(7)), (450.206(a)(9))

FINDINGS

Recommendation: The BRMPO should address resiliency of the transportation system in the MTP and TIP selection criteria; and seek other opportunities to emphasize the importance of resiliency in transportation planning and programming of projects.

B. PERFORMANCE-BASED PLANNING AND PROGRAMMING

REGULATORY BASIS

Performance based planning and programming (PBPP) refers to the application of performance management within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation system. The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision-making as required by 23 U.S.C. 134(h)(2)(A) to support the national goals described in 23 U.S.C. 150(b) and the general purposes described in section 49

U.S.C 5301. This includes a range of activities and products undertaken by a transportation agency together with other agencies, stakeholders, and the public as part of a 3C planning process. It includes the development of MTPs and other plans and processes, such as Strategic Highway Safety Plans (SHSP), Transportation Agency Safety Plans, and programming documents, including the STIP and the TIP. PBPP attempts to ensure that transportation investment decisions are made—both in long-term planning and short-term programming of projects—based on their ability to meet established goals.

MAP-21 placed increased emphasis on performance management within the Federal-aid Highway Program and transit programs, and requires use of performance-based approaches in statewide, metropolitan, and non-metropolitan transportation planning, and the FAST Act continued this emphasis.

OBSERVATIONS

Nation-wide PBPP is still in the early stages of implementation, however important milestones have passed. The BRMPO has taken many actions toward integrating PBPP into its overall processes and 3C documents. The current MTP *Charting Progress to 2040* and the 2019-2023 TIP were developed using key elements of PBPP. Specific discussion of the PBPP in the MTP is found on page 17 and the TIP found on page 18 of this report.

In September 2018, the BRMPO released a pamphlet titled “Boston Region Metropolitan Planning Organization: Performance-Based Planning and Programming” that serves as a primer for FHWA and FTA performance planning requirements and how the BRMPO is responding to these requirements. The review team commends BRMPO for this effort. The BRMPO regularly updates a PBPP website that provides general background on PBPP, lists BRMO actions taken relating to PBPP, and includes links to resources for more information.

One of the links on the performance management website is the BRMPO’s Performance Dashboard. The dashboard was developed in 2015 and contains information and data on performance measures primarily for roadway condition and performance. It is an interactive site and can be queried to provide town specific information about asset inventory and performance. The dashboard also contains some demographic information and data relating the BRMPO’s transportation equity efforts. However, the dashboard’s performance measures are not consistent with federally required performance measures. The BRMPO website does state that the dashboard will be updated and modified as the PBPP expands and is further adopted. But based on information on the dashboard and how it is represented elsewhere, the dashboard could be misinterpreted as demonstrating implementation of federally required PBPP. As an example, there are five FHWA defined Safety Performance Measures and associated targets that were acknowledged by the BRMPO on February 2018. However, the safety related performance measures on the dashboard found under Crashes are different than the federal performance measures. The difference between the dashboard’s performance measures and federal performance measures also applies to pavement and bridge condition and roadway congestion. Additionally, the dashboard includes asset information for length of sidewalks and bike lanes,

neither of these are federal performance measures. Lastly, the dashboard does not include information about transit performance management or FTA requirements. The dashboard in its current state serves a useful resource for understanding the concept of asset inventory and performance. However, its content and use should be clearly defined both on the dashboard site and BRMPO documents that reference or link to it. A distinction should be made between the dashboard's performance tracking and the federal performance measures.

FINDINGS

Recommendation: The BRMPO's Performance Dashboard website should distinguish what content is related to federal performance measures and what is not related to federal performance measures. Throughout its planning documents the BRMPO should ensure that performance measures, metrics, and related data and information are clearly defined and not conflicting.

Recommendation: The Review Team recommends that the BRMPO, MassDOT, and providers of public transportation evaluate existing planning agreements for any necessary updates regarding the roles and responsibilities for performance data, information sharing, target selection, and performance reporting.

C. FREIGHT PLANNING

REGULATORY BASIS

The regulations at 23 U.S.C. 134 (a) and 23 CFR 450.306(b) (4), 450.316(a), 450.316(b), 450.104 - Metropolitan transportation planning section indicates that it is in the national interest to encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between States and urbanized areas, while minimizing transportation related fuel consumption and air pollution through metropolitan and statewide transportation planning processes; and encourages the continued improvement and evolution of the metropolitan and statewide transportation planning processes by MPOs, State departments of transportation, and public transit operators as guided by the planning factors identified in subsection (h) and section 135(d).

OBSERVATIONS

The BRMPO has taken a proactive approach to address freight concerns during the past five years. Beginning in 2013, the BRMPO commissioned a "Freight Action Plan" that identifies the major freight objectives to be worked on over the next few years. The Freight Action Plan is organized by identifying topical studies, stakeholder outreach, and freight model improvements. The initiative receives ongoing BRMPO funding support and buy-in before BRMPO staff begin work. It is unclear how often the Freight Action Plan is updated or what triggers an update. Recent studies initiated through the Freight Action Plan include the *Trucks in South Boston Waterfront* and *Improving Truck Travel in the Everett/Chelsea Industrial Area*.

Organizationally, the BRMPO includes freight industry input through its public involvement and consultation effort and maintains a stakeholder mailing list to solicit feedback throughout the

region. At one point, the Regional Transportation Advisory Council (RTAC) had a Freight sub-committee. However it was merged with the RTAC which now fully engaged in the BRMPO freight planning program. BRMPO staff maintain an active working relationship with professional, industry and municipal officials with regards to freight concerns. However, BRMPO staff have expressed concern that industry leaders are busy running their businesses and are most likely to get involved if their bottom line is affected. BRMPO staff have actively participated in Federal and State initiatives including Jason's Law Truck Parking and the Massachusetts State Freight Advisory Committee. Given the challenges of urban freight in densely populated town centers, the BRMPO has partnered with MassDOT recently completing its first Urban Freight Forum in Cambridge.

The current MTP has identified two objectives for freight, project freight facilities that are vulnerable to climate change and eliminating freight bottlenecks. TIP projects that improve freight are considered in four of the six TIP scoring categories. The BRMPO has adopted a system of critical urban freight corridors for inclusion as part of the National Highway Freight Network.

FINDINGS

Recommendation: The BRMPO should consider adopting a routine cycle to updating the Freight Action Plan.

D. CONNECTED AND AUTONOMOUS VEHICLES AND TRANSPORTATION NETWORK COMPANY

REGULATORY BASIS

Currently, there are no Federal regulations in the transportation planning process that mandate consideration of connected and automated vehicles (CAVs) or transportation network companies (TNC) that provide ridesharing services. However, in recent years, there has been an increased focus towards understanding and researching how CAVs and TNCs will impact transportation. A FHWA Press Release (FHWA-08-18) issued on June 7, 2018 quoted, Acting FHWA Administrator Brandye Hendrickson, stating, "cutting-edge technologies, like automated vehicles, have the potential to dramatically change the nation's use of highways. Without hampering innovation in our federal role, we need to fully understand such advances, so we can inform our state and local transportation partners and anticipate needs." FHWA has partnered with stakeholders, launched national meetings, conducted research, and published documents to facilitate this new era of transportation, ensuring that our country remains a leader in automation. U.S. DOT has published several documents to provide guidance to help states and locals prepare for planning for CAVs. FHWA continues to encourage states and locals to engage in preparing for the advent of this new technology, as they serve an important role in planning for how these vehicles impact our communities and transportation network.

OBSERVATIONS

CAVs and TNC services are emerging topics for the BRMPO. Given the recent development in both areas, BRMPO staff have been attempting to integrate these practices into their planning process. Such efforts are documented through funding commitments in their latest UPWP. Under the UPWP

activity, Regional Model Development, the BRMPO has committed funding for quantifying the effect of rideshare trips in comparison to overall trips in the travel demand model. Further, the BRMPO has approved funding for topical studies focusing on rideshare and CAVs. BRMPO studies completed recently include the MAPC Fare and Share Choice Surveys and Connected and Autonomous Vehicles and the BRMPO – A First Look. CTPS also conducted the Shared Use Mobility Services study published in 2017; this study was funded by MassDOT.

During the on-site review, the Review Team learned that the BRMPO staff view CAVs and TNC rideshare tasks as interrelated; that rideshare is the precursor to CAVs. Therefore, the primary focus for BRMPO staff has been understanding rideshare while anticipating further market place development in the field of CAVs. However, this does not preclude the BRMPO from staying educated and up-to-date on the latest CAV research and technologies. Like most transportation agencies, the BRMPO is seeking to understand how to proactively manage these innovations.

In 2016, the Commonwealth of Massachusetts passed legislation regulating TNCs, enforced through the Massachusetts Department of Public Utilities. The BRMPO staff secured a meeting with Uber in 2017 and requested that Uber share and disaggregate data in an accessible format. The process has been viewed as cooperative and staff have kept in touch with staff at Uber and Lyft on certain issues, and intend to continue that dialogue. In addition, the BRMPO has been involved in several regional efforts including the World Economic Forum, a National Cooperative Highway Research Program (NCHRP) panel on modeling tools, the Boston Consulting Group and participated in the South Boston CAV testing study.

Given the preponderance of rideshare trips in the region, the BRMPO still lacks a unified vision for incorporating rideshare services into its long-range planning activities. Both the recent TIP and the current MTP make no reference to strategies or goals to properly address the impacts of rideshare or CAVs in the region. The last Massachusetts Travel Survey was completed in 2011, which predates rideshare mode choice options. The Review Team learned during the on-site visit that the topic of rideshare is discussed at nearly at every public meeting, with CAVs discussed about half the time.

FINDINGS

Recommendation: The BRMPO is recommended to include rideshare CAVs into its long-term planning activities.

Recommendation: The BRMPO is recommended to explore opportunities to more formally integrate rideshare and CAV interest into the RTAC, stakeholder working committees, etc. This could include representation from Massachusetts Department of Public Utilities, neighborhood associations and/or the business community.

Commendation: The BRMPO is recognized for their proactive engagement with MassDOT, Massachusetts Department of Public Utilities and Uber in 2017.

APPENDIX A – AGENDA

Boston Region Metropolitan Planning Organization Transportation Planning Certification Review

10 Park Plaza, Boston, MA

October 16 and 17

Agenda

DAY 1: Tuesday, October 16

8:30 -8:45 Introductions & Opening Remarks

8:45-9:15 Boston Region MPO Showcase (30 min)

- Activities/Accomplishments
- Products/Services
- Future

9:15-10:45 Metropolitan Planning Process and Key Documents

- Performance-Based Planning and Programming (PBPP)
- Long-Range Transportation Plan (LRTP)
- Congestion Management Process (CMP)
- Unified Planning Work Program (UPWP)

10:45-11:00 15-Minute Break

11:00-12:00 Metropolitan Planning Process and Key Documents (cont.)

- Transportation Improvement Program (TIP), Financial Planning & Project Programming

12:00-1:00 Lunch Break

1:00-2:30 Intermodal Transportation Coordination

- Transit Planning (Trains, buses, ferries)
- Active Transportation

2:30-2:45 15-Minute Break

2:45-3:45 Planning Focus Areas

- Automated Vehicles/Connected Vehicles
- Ridesharing (Uber/Lyft, etc.)

3:45-4:00 Wrap up Day 1

DAY 2: Wednesday, October 17

8:30-9:30 Civil Rights & Non-Discrimination

- Environmental Justice

9:30-10:45 MPO Public Participation Process and Outreach

10:45-11:00 15-Minute Break

11:00-12:00 Inter-Agency Agreements

- MPO Organization structure
- RTA involvement
- UZA MOU

12:00-1:00 Lunch Break

1:00-2:15 Environmental Mitigation/Climate Change/Resiliency

2:15-3:15 Planning Focus Areas

- Freight

3:15-4:00 Wrap-up

6:00 – 7:30 FHWA and FTA Public Meeting

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Boston Region Metropolitan Planning Organization Transportation Planning Certification Review

October 16, 2018

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Boston Region Metropolitan Planning Organization Transportation Planning Certification Review

October 16, 2018

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Boston Region Metropolitan Planning Organization Transportation Planning Certification Review

October 17, 2018

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APPENDIX D – PUBLIC COMMENTS

An FHWA and FTA Public Meeting was held October 17, 6:00 PM – 7:30 PM at 10 Park Plaza, Boston, MA. List of attendees is included below. The following is a summary of comments made during the public meeting and from letters submitted. These comments were considered in writing this report.

Commendations of the BRMPO (some comments in this section are repeated below)

- Blown away by all the thoughtful work going into the process
- BRMPO works well with neighboring MPOs
- Appreciates that people care so much about equity and making the system work
- New to transportation planning, impressed so far.
- CTPS staff is great, often goes above and beyond
- Very positive view of CTPS – they went above and beyond on DB/DI policy work in public outreach

Transit

- Process for including MBTA program of projects into the TIP and MTP should be improved.
- Public needs more information on how the BRMPO interacts with transit.
- Should be increased RTA representation on the BRMPO.

Metropolitan Transportation Plan

- MTP's model's 20-year timeframe leads to large margin of error therefore hard to assess potential impacts- consider using a shorter timeframes, i.e. 5 years.
- Modeling seems to work
- UPWP hard to read.
- Shouldn't forget about cars

Organization Structure of BRMPO

- Confusion about the role of BRMPO versus MAPC. Impression that BRMPO is part of MassDOT. General concern of transparency.
- If process is too onerous, should be reworked
- Concern about the membership of the BRMPO being approximately 20% state agencies.
- BRMPO members were also caught by surprise by the change from municipality membership from 101 to 97. Unfortunately, that they had little notice and no real choice.

Public Involvement

- Public access to BRMPO meetings are limited should allow for livestreaming.
- Lack of public involvement isn't necessarily a failure of the BRMPO, just reflects that it takes a lot of work to be involved.
- Structure of BRMPO meetings prioritizes MassDOT input and comment; could be revised to encourage easier public involvement
- Project information format- presented in unwieldy table format (TIP)
- Loves the TIP tables- any change should be additional information, not in lieu of existing format
- UPWP hard to read.

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- Lack of transparency of data and analysis- e.g. South Boston Seaport study (data never released to public- MassDOT/MassPort/Boston were clients), Lower Mystic Region Working Group- analysis and data behind the recommendations not shared- should have timely access
 - Public comment period seems short
 - Public comment period should be four weeks/30 days - need time for other organizations that met monthly to respond, i.e. Rider Oversight Board

Equity

- Equity- ensuring don't do harm or make things worse is not the same as ensuring equity; e.g. black riders spend X more hours on buses than white riders- not making this worse isn't enough- should make it better
- Appreciates that people care so much about equity and making the system work
- DI/DB being presented as equity which it isn't
- Very positive view of CTPS – they went above and beyond on DB/DI policy work in public outreach

APPENDIX E – PUBLIC MEETING PARTICIPANTS



FHWA/FTA Transportation Planning Certification Review (2018)
 Boston Region Metropolitan Planning Organization (BRMPO)
 10 Park Plaza, Boston MA

Sign in Sheet – MPO Certification October 17, 2018

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