



U.S. Department
of Transportation

Transportation Management Area Planning Certification Review

Federal Highway
Administration
Maryland Division

Federal Transit
Administration
Region III

Baltimore, Maryland TMA Certification Review Baltimore Regional Transportation Planning Board

July 13, 2020

Final Report





Table of Contents

1.0	EXECUTIVE SUMMARY	3
1.1	Previous Findings and Disposition.....	3
1.2	Summary of Current Findings	9
2.0	INTRODUCTION.....	13
2.1	Background.....	13
2.2	Purpose and Objective	14
3.0	SCOPE AND METHODOLOGY	14
3.1	Review Process.....	14
3.2	Documents Reviewed.....	15
4.0	PROGRAM REVIEW	16
4.1	MPO Structure and Agreements	16
4.2	Unified Planning Work Program	19
4.3	Financial Planning and Fiscal Constraint in the LRTP and TIP	21
4.4	Transportation Improvement Program.....	22
4.5	Civil Rights (Title VI, EJ, LEP, ADA)	24
4.6	Air Quality.....	26
4.7	Congestion Management Process / Management and Operations	27
4.8	Performance Based Planning and Programming	29
5.0	CONCLUSION AND RECOMMENDATIONS.....	37



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5.1	Commendations	37
5.2	Corrective Actions	38
5.3	Recommendations	38
	APPENDIX A - PARTICIPANTS	39
	APPENDIX B - STATUS OF FINDINGS FROM LAST REVIEW	40
	APPENDIX C – PUBLIC COMMENTS.....	44
	APPENDIX D - LIST OF ACRONYMS.....	45



1.0 EXECUTIVE SUMMARY

On April 22, 2020, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) conducted the certification review of the transportation planning process for the Baltimore urbanized area. FHWA and FTA are required to jointly review and evaluate the transportation planning process for each urbanized area over 200,000 in population at least every four years to determine if the process meets the Federal planning requirements.

1.1 Previous Findings and Disposition

The last certification review for Baltimore Regional Transportation Board (BRTB), the designated Metropolitan Planning Organization (MPO) for the Baltimore urbanized area was conducted in 2016. The previous Certification Review findings and their disposition are provided in Appendix B and summarized as follows.

Finding	Action	Disposition
MDOT should review the remaining balance of previous funding for the MPO and provide this information to the BRTB and all MD MPOs. The Federal Team requests that the MDOT prepare and submit to FTA a set of procedures to document how MDOT administers the Consolidated Grant Program funds pursuant to the requirement in Circular C8100.1C and the Common Grant Rule. MDOT should establish a procedure, in consultation with BRTB for ensuring that there is a process in place for tracking previous Federal funding available to BRTB and the remaining MD MPOs.	Recommendation	BMC, on behalf of the BRTB, keeps a running ledger of all invoices and apportionments that acts as our balance of available FHWA and FTA funding. This ledger is shared periodically with MDOT who confirms the amounts and transactions. This ledger is used in annual UPWP budgeting.



<p>The Federal Team recommends BRTB to incorporate in its financial plan specific information that describes the sources of Federal, State, and local transportation program funds, including historic trends and future projection, available to the region.</p> <p>Similar information is made available within the CTP regarding funds from the MDTA, Surface Transportation Block Grant Program, Section 5307 program funds, National Highway System, and other Federal, State, and local funds made available for transportation system preservation, expansion and operations in the Baltimore region.</p>	Recommendation	<p><i>Maximize2045</i>, the 2019 regional long-range transportation plan, includes a table and a chart from MDOT showing historic trends regarding operating and capital expenditures.</p> <p><i>Maximize2045</i> also includes a table with forecasted federal revenues by funding program. BMC staff applied the percentages accounted for by the major federal funding programs in the FY 2019 federal apportionment to MDOT to estimate how these federal revenues break down in the period from 2024-2045.</p>
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<p>The Federal Team recommends that the BRTB continue to improve its efforts in garnering more public support and participation in Air Quality initiatives.</p> <p>The BRTB should continue to make significant contributions to any future 8-hour ozone or PM2.5 SIPs which may be required under the new air quality standards which EPA has promulgated by providing technical support to MDE in developing motor vehicle emission budgets and emission reduction strategies which will contribute to the attainment of the air quality standard.</p>	<p>Recommendation</p>	<p>The BRTB has worked to add upon previous efforts of outreach to the public on the health aspects of poor air quality, ways in which the MPO works to improve air quality through planning, and initiatives they can participate in to reduce their personal impact. Part of this effort has been through the update of the BMC web site, and the development of a brochure highlighting the planning approach to improved protection of our air quality and other natural resources in the Baltimore region. BMC staff continues to be an active participating member of Clean Air Partners, an air quality outreach organization. BMC staff coordinate the Bike to Work Day event every May, which encourages and celebrates people who bike to work, rather than drive. Finally, staff also continues to provide outreach at heavily-attending events in the region to share the message of protecting your health on poor air quality days, and reducing your air quality impact from your transportation choices.</p> <p>The Interagency Consultation Group meetings provide an opportunity for MDE to share any plans they have to develop new SIPs or SIP budgets. Staff have not been made aware of any planned SIPs for the region over the past several years. When staff is made aware of any plans to develop a SIP, they are ready to become an active participant in the modeling and coordination necessary to develop SIP motor vehicle emissions budgets. As part of the conformity determination</p>
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		<p>process staff tracks emission reduction projects in local jurisdictions, and through state agencies. This information would become even more useful in the event that budgets become more difficult to meet. Staff is also working with state agencies to ensure that local jurisdictions are aware of efforts to gather information on the best locations of electric vehicle chargers. Staff had collected this information in GIS, and shared it with MDOT. MDOT is now surveying the jurisdictions directly with a Metroquest-developed survey software.</p>
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<p>While BRTB is commended for the use of surveys in evaluating the effectiveness of its Public Participation Plan, the plan does not report on the results and/or numbers gathered from surveys. We suggest BRTB should use the surveys to tell a broader story regarding its public and its process.</p>	Recommendation	<p>To date, staff have utilized surveys on a small scale. For example, staff gathered feedback on events such as the Every Voice Counts Transportation Academy and our What's on Tap series. Surveys were also used with current and past PAC members to gather input from key volunteers about the planning process and ways in which they believe staff can make improvements. Information from these surveys are used by staff to make improvements to future events and the planning process.</p> <p>In FY 2020, staff hired a consultant team to conduct an evaluation of public involvement activities and develop recommendations of ways in which the BRTB can revamp its public involvement program to better engage the public. The use of larger scale surveys to gather information about people's transportation experiences and share their stories is an idea which may be explored with the consultant team as part of this review and redesign of the BRTB's process</p>
<p>The Federal Team recommends BRTB make Title VI Complaint information easily available on the BRTB website.</p>	Recommendation	<p>Access to information on non-discrimination, and the complaint form are at the bottom of every page of the website. Further, the information may be found under Transportation – About the BRTB or Transportation – Getting Involved & Public Comment.</p>



<p>While the Federal Team was pleased to see BRTB coordination and participation in many commendable freight activities in the region, we also observed that the Freight initiatives are not readily available on the website or other means. We suggest BRTB provide additional documentation on the activities that they are facilitating to advance freight movement in the region.</p> <p>We further recommend BRTB work cooperatively with the State to ensure the State Freight Plan and Freight Network is in accordance with FAST ACT.</p>	Recommendation	<p>BMC staff update the BMC website on a regular basis and will include regional freight studies and activities as they are developed. These topics include specialized traffic counts to help members of the FMTF (for example oversize / overweight truck volumes leaving Dundalk Marine Terminal and truck restriction compliance along Wise Avenue in Baltimore County is online). The BRTB and FMTF are actively engaged in the development of the Statewide Freight Plan and Statewide Truck Parking Study.</p> <p>BMC staff worked closely with MDOT SHA in the development of 25 miles of critical urban freight corridors in accordance with the FAST Act.</p> <p>FMTF members from the trucking community also provided input into the regional congestion management process (CMP).</p>
The Federal Team recommends BRTB make available on its website additional information of efforts underway to improve pedestrian and bicycle planning in the metropolitan area.	Recommendation	<p>BMC staff update the BMC website on a regular basis and will include regional bicycle and pedestrian activities. Recent topics include: regional bicycle map with existing, programmed and planned facilities, the Patapsco Regional Greenway report as well as regional priorities.</p>



1.2 Summary of Current Findings

The current review found that the metropolitan transportation planning process conducted in the Baltimore urbanized area meets Federal planning requirements.

As a result of this review, FHWA and FTA are jointly certifying the transportation planning process conducted by Maryland Department of Transportation (MDOT), BRTB and Public Transportation Operators. There are also recommendations in this report that warrant close attention and follow-up, as well as areas that the MPO is performing very well in that are to be commended.

Review Area	Action	Corrective Actions/ Recommendations/ Commendations
MPO Structure and Agreements 23 U.S.C. 134(d) 23 CFR 450.314(a)	Commendation #1	The Federal Team recognizes BRTB effort for updating a single comprehensive metropolitan planning agreement to support performance-based transportation planning responsibilities for the Baltimore region. The Master 3C Agreement outlines legal and contracting responsibilities for all Parties. It reflects changes to other Agreements and includes new partner of Queen Anne's County.
Unified Planning Work Program 23 CFR 450.308	Recommendation #1	MDOT should review the remaining balance of unobligated metropolitan planning funds (23 U.S.C. 104(d), 49 U.S.C. 5305(d)) and provide this information to BRTB and all Maryland MPOs. The Federal Team requests that MDOT then prepare and submit to FTA a plan (or set of procedures) to document how MDOT will allocate the Consolidated Grant Program funds pursuant to the requirement in FTA Circular 8100.1D and the Common Grant Rule.
Financial Plan & Fiscal Constraint (23 U.S.C. 134 (j) (2) (B))	Commendation #2	The Federal Team recognizes BRTB for including in the current LRTP a table showing the breakdown of forecasted federal revenues by funding program from 2024-2045.



Transportation Improvement Program 23 U.S.C. 134(c)(h)& (j) 23 CFR 450.326	Commendation #3 Recommendation #2 Commendation #4	<p>BRTB is commended for working with Baltimore City and FHWA Maryland Division to update the TIP project phase definitions to clarify the distinction between planning and preliminary engineering. The project phase definitions are consistent with 23 CFR 636.103 and will help ensure projects comply with FHWA's 10-year rule.</p> <p>The Team recommends the State use this project phase definitions in the next STIP update and should encourage the remaining MPOs to use similar definitions in their TIPs.</p> <p>The Federal Team acknowledges BRTB for developing interactive mapping for assisting the public locating TIP projects and associated data.</p>
Civil Rights Title VI Civil Rights Act, 23 U.S.C. 324, Age Discrimination Act, Sec. 504 Rehabilitation Act, Americans with Disabilities Act	Recommendation #3	The BRTB should revise and update the Title VI complaint process and policies on their website as requested by December 31, 2020.



Air Quality Clean Air Act 42 U.S.C. 7401 40 CFR Part 93 23 CFR 450.324(m)	<p>Commendation #5</p> <p>Commendation #6</p> <p>Recommendation #4</p> <p>Recommendation #5</p> <p>Recommendation #6</p>	<p>The Review Team commends BRTB for being innovative in air quality program, where the MPO publishes a report on Protecting Our Resources that utilizes data visualizations to explain regional air quality conformity to their stakeholders and the public.</p> <p>BRTB has consistently completed past conformity determinations with ample time to allow EPA to thoroughly review for concurrence in a timely matter, and EPA's most recent review of the 2020-2023 TIP and the 2045 Long- Range Transportation Plan met all the CAA requirements to allow approval of the conformity determinations according to relevant regulations.</p> <p>The Review Team recommends BRTB continue to coordinate with regional partners to determine emission reduction activities.</p> <p>The Review Team recommends BRTB train technical staff in upcoming MOVES modeling software.</p> <p>BRTB continue to make significant contributions to future development of any new 8-hour ozone and perhaps future PM_{2.5} SIP development, including development of relevant projects that will contribute to overall improved air quality.</p>
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Congestion Management Process / Management and Operations 23 U.S.C. 134(k)(3) 23 CFR 450.322	Commendation #7	The Review Team recognizes BRTB for including specific strategies in the CMP that provide congestion management benefits for each proposed project in Maximize2045.
Performance Based Planning & Programming 23 U.S.C. 150(b) 23 CFR 450.306(d)	Commendation #8	The Federal Team commends BRTB and its partner agencies for their written procedures for PM1, PM2, PM3, and Transit Asset Management measures and targets.
	Recommendation #7	The Federal Team encourages BRTB and its partners to continue to expand its PBPP framework to include using performance measures and targets to evaluate the success of the planning process and investment decisions toward achieving the region's transportation system goals.

Details of the certification findings for each of the above items are contained in this report.



2.0 INTRODUCTION

2.1 Background

Pursuant to 23 U.S.C. 134(k) and 49 U.S.C. 5303(k), the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) must jointly certify the metropolitan transportation planning process in Transportation Management Areas (TMAs) at least every four years. A TMA is an urbanized area, as defined by the U.S. Census Bureau, with a population of over 200,000. After the 2010 Census, the Secretary of Transportation designated 183 TMAs – 179 urbanized areas over 200,000 in population plus four urbanized areas that received special designation. In general, the reviews consist of three primary activities: a site visit, a review of planning products (in advance of and during the site visit), and preparation of a Certification Review Report that summarizes the review and offers findings. The reviews focus on compliance with Federal regulations, challenges, successes, and experiences of the cooperative relationship between the MPO(s), the State DOT(s), and public transportation operator(s) in the conduct of the metropolitan transportation planning process. Joint FTA/FHWA Certification Review guidelines provide agency field reviewers with latitude and flexibility to tailor the review to reflect regional issues and needs. As a consequence, the scope and depth of the Certification Review reports will vary significantly.

The Certification Review process is only one of several methods used to assess the quality of a regional metropolitan transportation planning process, compliance with applicable statutes and regulations, and the level and type of technical assistance needed to enhance the effectiveness of the planning process. Other activities provide opportunities for this type of review and comment, including Unified Planning Work Program (UPWP) approval, the MTP, metropolitan and statewide Transportation Improvement Program (TIP) findings, air-quality (AQ) conformity determinations (in nonattainment and maintenance areas), as well as a range of other formal and less formal contact provide both FHWA/FTA an opportunity to comment on the planning process. The results of these other processes are considered in the Certification Review process.

While the Certification Review report, itself may not fully document those many intermediate and ongoing checkpoints, the “findings” of Certification Review are, in fact, based upon the cumulative findings of the entire review effort.

The review process is individually tailored to focus on topics of significance in each metropolitan planning area. Federal reviewers prepare Certification Reports to document the results of the review process. The reports and final actions are the joint responsibility of the appropriate FHWA and FTA field offices, and their content will vary to reflect the planning process reviewed, whether or not they relate explicitly to formal “findings” of the review.



To encourage public understanding and input, FHWA/FTA will continue to improve the clarity of the Certification Review reports.

2.2 Purpose and Objective

Since the enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the FHWA and FTA, are required to jointly review and evaluate the transportation planning process in all urbanized areas over 200,000 population to determine if the process meets the Federal planning requirements in 23 U.S.C. 134, 40 U.S.C. 5303, and 23 CFR 450. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), extended the minimum allowable frequency of certification reviews to at least every four years.

The BRTB is the designated MPO for the Baltimore urbanized area. The Maryland Department of Transportation is the responsible State agency and Maryland Transit Administration is the responsible public transportation operator. Current membership of the BRTB consists of elected officials and empowered representatives from the political jurisdictions in: the cities of Annapolis and Baltimore; the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's.

Certification of the planning process is a prerequisite to the approval of Federal funding for transportation projects in such areas. The certification review is also an opportunity to provide assistance on new programs and to enhance the ability of the metropolitan transportation planning process to provide decision makers with the knowledge they need to make well-informed capital and operating investment decisions.

3.0 SCOPE AND METHODOLOGY

3.1 Review Process

The last certification review was conducted in 2016. A summary of the status of findings from the last review is provided in Appendix B. This report details the 2020 review, which consisted of a formal virtual visit and a public involvement opportunity, conducted on April 22, 2020.

Participants in the review included representatives of FHWA, FTA, Maryland DOT, Maryland Transit Administration, and Baltimore Metropolitan Council (BMC) staff. A full list of participants is included in Appendix A.



A desk audit of current documents and correspondence was completed prior to the site visit. In addition to the formal review, routine oversight mechanisms provide a major source of information upon which to base the certification findings.

The certification review covers the transportation planning process conducted cooperatively by the MPO, State, and public transportation operators. Background information, current status, key findings, and recommendations are summarized in the body of the report for the following subject areas selected by FHWA and FTA staff for on-site review:

- MPO Structure and Agreements
- Unified Planning Work Program
- Metropolitan Transportation Plan (MTP)
- Transportation Improvement Program (TIP)
- Public Participation
- Civil Rights (Title VI, EJ, LEP, ADA)
- Air Quality
- Emerging Technologies
- Congestion Management Process
- Performance Based Planning and Programming (PBPP)

3.2 Documents Reviewed

The following MPO documents were evaluated as part of this planning process review:

- MPO Master Agreement, 2020
- FY 2020 Unified Planning Work Program for the BRTB
- BRTB Maximize2045 (2019)
- MPO FY2020-2023 TIP and Self-Certification
- Public Participation Plan (2018)
- Civil Rights/Title VI/Environmental Justice Information
- Congestion Management Process (CMP)
- Financial Planning and Fiscal Constraint
- Performance Based Planning and Programming (PBPP)



4.0 PROGRAM REVIEW

4.1 MPO Structure and Agreements

4.1.1 Regulatory Basis

23 U.S.C. 134(d) and 23 CFR 450.314(a) state the MPO, the State, and the public transportation operator shall cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities shall be clearly identified in written agreements among the MPO, the State, and the public transportation operator serving the MPA.

4.1.2 Current Status

In 2004 the Baltimore Region Transportation Board (BRTB) was designated as the MPO for the Baltimore region by agreements between the Governor of the State of Maryland and the BRTB. The members of the BRTB are made up of elected officials from the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's. In addition, the Board includes the Secretaries of the Maryland Departments of Transportation, Environment, and Planning, and the Administrator of the Maryland Transit Administration as well as the Administrator of Harford Transit. Voting rights are extended to all members except for the Maryland Department of the Environment, the Maryland Department of Planning, and Maryland Transit Administration. These agencies serve the BRTB in an advisory capacity.

The BRTB has established relationships through agreements with the State of Maryland and the regional transit operators. The Table I below shows agreements signed which govern how BRTB conducts planning in the region.



Table 1: BRTB Agreements

Planning Responsibility	Memoranda of Understanding/Agreements	Date Executed	Status	Changes Planned
UPWP Development	Formal MOU between MDOT and BMC establishing the BRTB as Baltimore MPO and develop an annual UPWP consistent with the 3-C planning process.	7/1/2004	In Effect	No
UPWP Development	Formal MOA between MDOT and BMC outlining managerial oversight of the UPWP.	7/1/2004	In Effect	No
Transportation Conformity and State Implementation Plan Development	Formal procedures of Interagency Consultation Process between the MPO, MDOT, MDE, EPA, USDOT, and operating agencies	1996	In Effect	An update was mentioned then put on hold for now.
Public Transit Operators and MPO Process	Formal MOA between MPO, MDOT and MTA defining roles and responsibilities of public transit operators and State Department of Transportation in the Baltimore regional planning process.	2/26/2008	Amended on 8/26/08	No
Financial Plan for Long-range Transportation Plan and Transportation Improvement Program	Formal MOA between MPO, MDOT and MTA defining roles and responsibilities of public transit operator and State Department of Transportation in the Baltimore regional planning process.	2/26/2008	In Effect	No
Corridor Planning Studies	Formal MOA between MPO, MDOT and MTA defining roles and responsibilities of public transit operator and State Department of Transportation in the Baltimore regional planning process.	2/26/2008	In Effect	No
MPO Certification	Formal MOA between MPO, MDOT and MTA defining roles and responsibilities of public transit operator and State Department of Transportation in the Baltimore regional planning process.	2/26/2008	In Effect	No
Data Agreement	An agreement between MPO, MDOT and MTA for sharing data and methodologies to effectively apply a performance-based approach to planning and programming	5/22/18	In Effect	No



Public Transit Operators and MPO Voting	The selection process for the representative of providers of public transportation on the BRTB	9/23/14	In Effect	No
Metropolitan Planning Agreement	Establishing a metropolitan planning agreement to support performance-based transportation planning responsibilities for the Baltimore region	2/25/20	In Effect	No

The Master 3C Agreement which was just recently updated in February 2020 is a single agreement between the BRTB, State of Maryland and Operators of Public Transportation that governs the entire planning and programming process. The Master Agreement is very comprehensive. It outlines legal and contracting responsibilities and the more complicated funding mechanics for BRTB, the State and Operators of Public Transportation.

The Parties mutual responsibilities are described in the following twelve subject areas: (1) Purpose and Scope of the Agreement; (2) Funding for Transportation Planning and the Unified Planning Work Program; (3) Metropolitan Planning Organization Designation and Re-designation; (4) Metropolitan Planning Area Boundaries; (5) Metropolitan Planning and Supporting Agreements; (6) Metropolitan Transportation Plan; (7) Transportation Improvement Program; (8) Stakeholder Participation and Consultation; (9) Transportation Planning Studies, Programmatic Mitigation Plans and Project Development Process Under the National Environmental Policy Act; and (10) Annual Listing of Obligated Projects; Article (11) Performance-Based Planning; and (12) Self-Certifications and Federal Certifications

4.1.3 Findings

BRTB satisfies the regulatory requirements for the MPO Structure and Agreements

Commendation: The Federal Team recognizes BRTB effort for updating a single comprehensive metropolitan planning agreement to support performance-based transportation planning responsibilities for the Baltimore region. The Master 3C Agreement outlines legal and contracting responsibilities for all Parties. It reflects changes to other Agreements and includes new partner of Queen Anne's County.



4.2 Unified Planning Work Program

4.2.1 Regulatory Basis

23 CFR 450.308 sets the requirement that planning activities performed under Titles 23 and 49 U.S.C. be documented in a Unified Planning Work Program (UPWP). The MPO, in cooperation with the State and public transportation operator, shall develop a UPWP that includes a discussion of the planning priorities facing the MPA and the work proposed for the next one- or two-year period by major activity and task in sufficient detail to indicate the agency that will perform the work, the schedule for completing the work, the resulting products, the proposed funding, and sources of funds.

4.2.2 Current Status

The MPO's 2020-2021 Unified Planning Work Program (UPWP) contains over 25 work tasks and outlines the planning activities to be performed by all state, regional, and local participants involved in the Baltimore metropolitan transportation planning process over the two fiscal years (July 1, 2019 through June 30, 2021). It defines the regionally agreed upon planning priorities and the roles and responsibilities of the various participants in this process. On the second year of the work program an Addendum is adopted mainly to update the yearly UPWP budget and introduce any new work efforts/priorities. Both the UPWP and Addendum were released to the public for a 30-day review and comment opportunity.

Work tasks in the two-year UPWP are performed mainly by MPO staff. Some task or planning products our contracted out to consultants in accordance with the work program project descriptions and the budget. Some UPWP funds are also “passed through” to local jurisdiction members of the BRTB for specific transportation planning studies that support the regional transportation planning process.

The UPWP development is “member driven”, with work products originating by the MPO’s network of subcommittees and advisory groups. The subcommittees provide input to the Technical Committee and they begin a several-month deliberation of the value and contribution to the regional process. Likewise, the BRTB establishes a Budget Subcommittee annually to review projects and work tasks included in the UPWP to ensure regional significance and fiscal constraint.

The UPWP is consistent with other MPO planning products. The tasks delineated in the UPWP are linked to the region’s transportation goals in the Maximize2045, the current long-range regional transportation plan (LRTP) that guides the region’s short- and long-term multimodal investments.



In addition to the typical UPWP tasks, the work program also identifies “Focus Areas” that are a discussion of planning priorities facing the TMA. The FY20 UPWP focus list is a mix of special studies and planning efforts to be undertaken based on needs of the region including: transit, bike/ped, health, safety, and other mobility studies to address new challenges in the region.

The FY2020-2021 budgets are broken down by work task and by funding sources, as well as by project sponsor/regional partner. The second-year budget is essentially an estimate of revenue and expenditures to be updated in the following year UPWP Addendum. The budgeting process for the UPWP begins in the months of December and January. MPO staff estimate expected expenditures for staff and projects during the current fiscal year UPWP and then estimate potential expected federal resources from the appropriations process. The budgets also indicate carryover funds from the previous fiscal year that were not spent.

4.2.3 Findings

The FY2020-2021 UPWP properly documents the metropolitan transportation planning activities and includes all required elements. It also appears to be developed cooperatively between the MPO, State, and public transportation operator (MTA). The BRTB’s biennial UPWP is unique among MPOs, and it was explained this two-year approach remains effective, despite the need for an annual budget update and changing work tasks from year to year.

The MPO’s member driven approach in developing the UPWP through its subcommittees and advisory groups results in a balanced list of work assignments that support and advance regional planning. Determining this diversity of needs is not always achieved in other TMAs, and the Team recognizes the extra time and resources that go into this process.

The UPWP budgets tend to indicate a very conservative approach, with almost 15% of the UPWP budget being carried-over each year. The MPO indicated this is due to several variables; local jurisdiction’s delays in handling contracts, unexpected changes in work task status, and unpredictable federal budget cycles. To this end, BRTB mentioned they are proposing to manage all consultant projects moving forward to help streamline practices.

The use of focus areas is also a good practice, addressing the region’s current needs and priorities, while still providing the core planning work products. However, as a large TMA, BRTB encounters many new and complex transportation challenges, requiring further planning. It was noted during the certification that the MPO could use additional FTA and FHWA metropolitan planning funds for congestion management studies.

Recommendations: MDOT should review the remaining balance of unobligated metropolitan planning funds (23 U.S.C. 104(d), 49 U.S.C. 5305(d)) and provide this information to BRTB and



all Maryland MPOs. The Federal Team requests that MDOT then prepare and submit to FTA a plan (or set of procedures) to document how MDOT will allocate the Consolidated Grant Program funds pursuant to the requirement in FTA Circular 8100.1D and the Common Grant Rule. For instance, MDOT is using mostly Federal FY18 planning funds (PL) to fund Statewide FY20 UPWPs. After the FY20 UPWPs are funded, MDOT will still have approximately \$3.2 million in FY19 PL funds and \$1.3 million in FY19 Section 5303 funds unobligated with FTA.

Schedule for Process Improvement: Requested plan or procedures to the Federal Team by December 1, 2020.

4.3 Financial Planning and Fiscal Constraint in the LRTP and TIP

4.3.1 Regulatory Basis

The metropolitan planning statutes state that the long-range transportation plan 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."

(23 U.S.C. 134 (j) (2) (B)) **Financial plan.** --The TIP shall include a financial plan that-- **(i)** demonstrates how the TIP can be implemented; **(ii)** indicates resources from public and private sources that are reasonably expected to be available to carry out the program; **(iii)** identifies innovative financing techniques to finance projects, programs, and strategies; and **(iv)** may include, for illustrative purposes, additional projects that would be included in the approved TIP if reasonable additional resources beyond those identified in the financial plan were available. The purpose of the financial plan is to demonstrate fiscal constraint.

In addition, the regulations provide that projects in air quality nonattainment and maintenance areas can be included in the first two years of the TIP only if funds are "available or committed" Finally, the Clean Air Act's transportation conformity regulations 40 CFR 93.108 specify that a conformity determination can only be made on a fiscally constrained long-range transportation plan and TIP.

4.3.2 Current Status

The Maryland Department of Transportation (MDOT) continues to take the lead in developing a financial plan in coordination with the MPOs in Maryland. This coordination is outlined in Article 2 of the 2020 Master Funding Agreement. The MPO's financial plan is well documented



in Chapter 6 of the Maximize2045 and Section V of FY 2020 TIP. Anticipated revenues and expenditures estimates are in Year of Expenditure (YOE) dollars.

BRTB uses forecasts from the financial plan developed by MDOT to estimate the revenues expected to be available for the LRTP and TIP. This includes forecasted revenues to cover system preservation, system operations, and major capital projects. For the Maximize2045, MDOT based these forecasts on trends seen in actual expenditures from FY 1981-2016 and on expected expenditures from the FY 2017-2022 Consolidated Transportation Program (CTP). FY 2023- 2045 projections of state and federal funds use a historical and CTP data of annual average growth rate of 5.3% and 3.0% respectively. The forecast results show 40.3%, (slightly lower than four years ago) of the Statewide transportation revenues (federal + state + private funds) will be spent in Baltimore Metropolitan areas from 2024-2045 period.

Project cost estimate is a joint effort that includes the aid and assistance of staff from state agencies, local jurisdictions, transportation consultants, and BMC. The State Highway Administration (SHA) provides cost estimates for state highway facilities. Cost estimates for local facilities, as well as bicycle and pedestrian projects, are supplied by sponsoring jurisdictions. The Maryland Transit Administration develops cost estimates for transit projects. The most important component of the cost methodology for highway projects is the Maryland SHA's Highway Construction Cost Estimating Manual. The manual is intended to provide uniform and consistent guidelines for preparing engineering cost estimates on highway construction projects. It includes an internally created program with a supporting database.

4.3.3 Findings

BRTB's financial plan for the Long-Range Transportation plan and Transportation Improvement Program is consistent with Federal requirements.

Commendation: The Federal Team recognizes BRTB for including in the current LRTP a table showing the breakdown of forecasted federal revenues by funding program from 2024-2045.

4.4 Transportation Improvement Program

4.4.1 Regulatory Basis

23 U.S.C. 134(c),(h) & (j) set forth requirements for the MPO to cooperatively develop a Transportation Improvement Program (TIP). Under 23 CFR 450.326, the TIP must meet the following requirements:



- Must cover at least a four-year horizon and be updated at least every four years.
- Surface transportation projects funded under Title 23 U.S.C. or Title 49 U.S.C., except as noted in the regulations, are required to be included in the TIP.
- List project description, cost, funding source, and identification of the agency responsible for carrying out each project.
- Projects need to be consistent with the adopted MTP.
- Must be fiscally constrained.
- The MPO must provide all interested parties with a reasonable opportunity to comment on the proposed TIP.

4.4.2 Current Status

Since 2016 the MPO has annually been updating the TIP document. The current FY 2020 TIP was approved by the BRTB on July 23, 2019. The TIP emphasizes linkages to the current Long Range Transportation Plan by incorporating: capacity improvements projects; system preservation and system operations activities. Furthermore, the TIP is aligned with the LRTP goals, strategies, performance measures and targets. The FY 2020 TIP is the first to document Performance-Based Planning and Programming measures and targets. Section II.G of the TIP has summaries of measures and targets for Highway Safety, Pavement and Bridge Condition, Highway System Performance, Congestion Mitigation and Air Quality Program, and Transit Asset Management. The FY 2020 TIP will serve as the baseline against which progress towards these targets will be measured in the future.

To be consistent with 23 CFR 636.103 the TIP project phase definitions have also been updated to clarify the distinction between planning and preliminary engineering. These definitions are:

- Planning: Initial phase of project development where the need and feasibility of a project is documented and scoping is broad and involves the public.
- Engineering: Engineering projects include preliminary and final design. Engineering funds involving detailed environmental studies and engineering to obtain NEPA are under preliminary design. Design activities following preliminary design involve the preparation of final construction plans and are under final design.

The current program includes 138 projects of which 22 are new projects. The four years total approximated cost of the FY 2020 TIP is \$3.66 billion of which \$2.28 billion is provided by federal funding while the local and state matching funds are \$1.38 billion.



4.4.3 Findings

BRTB satisfies the regulatory requirements for the Transportation Improvement Program.

Commendations: BRTB is commended for working with Baltimore City and FHWA Maryland Division to update the TIP project phase definitions to clarify the distinction between planning and preliminary engineering. The project phase definitions are consistent with 23 CFR 636.103 and will help ensure projects comply with FHWA's 10-year rule.

The Federal Team acknowledges BRTB for developing interactive mapping for assisting the public to locate easily TIP projects and associated data.

Recommendations: The Team recommends the State use this project phase definitions in the next STIP update and encourage the remaining MPOs to use similar definitions in their TIPs.

4.5 Civil Rights (Title VI, EJ, LEP, ADA)

4.5.1 Regulatory Basis

Title VI of the Civil Rights Act of 1964, prohibits discrimination based upon race, color, and national origin. Specifically, 42 U.S.C. 2000d 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.” In addition to Title VI, there are other Nondiscrimination statutes that afford legal protection. These statutes include the following: Section 162 (a) of the Federal-Aid Highway Act of 1973 (23 U.S.C. 324), Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973/Americans with Disabilities Act (ADA) of 1990. ADA specifies that programs and activities funded with Federal dollars are prohibited from discrimination based on disability.

Executive Order #12898 (Environmental Justice) directs federal agencies to develop strategies to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. In compliance with this Executive Order, USDOT and FHWA issued orders to establish policies and procedures for addressing environmental justice in minority and low-income populations. The planning regulations, at 23 CFR 450.316(a)(1)(vii), require that the needs of those “traditionally underserved” by existing transportation systems, such as low-income and/or minority households, be sought out and considered.



Executive Order # 13166 (Limited-English-Proficiency) requires agencies to ensure that limited English proficiency persons are able to meaningfully access the services provided consistent with and without unduly burdening the fundamental mission of each federal agency.

4.5.2 Current Status

The BRTB's Title VI complaint process and form are displayed on its website as required by Federal regulations.

The BRTB uses the goal developed by the Maryland Department of Transportation – Office of Planning and Programming as the primary recipient of U.S. Department of Transportation funds located in the same or a substantially similar market upon approval it is sent to MDOT and ultimately FTA reviews for approval. Also, the BRTB evaluates each project with Federal funds awarded to consultants to ensure DBE subconsultants have maximum access to participate in Federal funded projects.

Clarification: Many years ago, FTA and FHWA agreed that FHWA's Planning (PL) funds provided to Maryland to support both highway and transit planning activities, be merged or consolidated in to single consolidated grant. Consequently, FHWA agreed to transfer metro planning funds to FTA for administration under this agreement.

4.5.3 Findings

The Federal Team reviewed the BRTB Title VI complaint process posted on their website. The compliant process says that all filed Title VI complaints would be investigated by the BRTB's Title VI coordinator or its designee. The BRTB updated the review procedure to include the MDOT Office of Diversity and Equity as a partner to review any complaints against the BRTB. That information is located on page 10 of the online Title VI Plan.

Recommendations: The Federal Team recommends BRTB update its website to specifically state where to submit Title VI Complaint against the BRTB (such that it appears in the Title VI Plan).

Schedule for Process Improvement: The BRTB should revise and update the Title VI complaint process and policies on their website as requested by December 31, 2020.



4.6 Air Quality

4.6.1 Regulatory Basis

The air quality provisions of the Clean Air Act (42 U.S.C. 7401) and the MPO provisions of Titles 23 and 49 require a planning process that integrates air quality and metropolitan transportation planning, such that transportation investments support clean air goals. Under 23 CFR 450.324(m), a conformity determination must be made on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations of 40 CFR Part 93. A conformity determination must also be made on any updated or amended TIP, per 23 CFR 450.326(a).

4.6.2 Current Status

The amendments to the Fiscal Year (FY) 2020-2023 TIP and Maximize2045 Long Range Transportation Plan (LRTP) were completed in order to demonstrate that mobile source emissions for each analysis year of the long-range plan, adhere to all nitrogen oxides (NOx) and volatile organic compounds (VOCs) emissions budgets for the 1997 8-Hour Ozone National Ambient Air Quality Standard (NAAQS), the 2008 8-Hour Ozone NAAQS, and the 2015 8-Hour Ozone NAAQS. The conformity determinations were reviewed in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR part 93, sections 93.106, 93.108, 93.110, 93.111, 93.112, 93.113(b), and (c), and 93.118.

4.6.3 Findings

Recommendations: The Review Team commends BRTB for being innovative in air quality program, where the MPO publishes a report on Protecting Our Resources that utilizes data visualizations to explain regional air quality conformity to their stakeholders and the public.

BRTB has consistently completed past conformity determinations with ample time to allow EPA to thoroughly review for concurrence in a timely matter, and EPA's most recent review of the 2020-2023 TIP and the 2045 Long- Range Transportation Plan met all CAA requirements to allow approval of the conformity determinations according to relevant regulations.

Recommendations: The Review Team recommends BRTB continue to coordinate with regional partners to determine emission reduction activities.



The Review Team recommends BRTB train technical staff in upcoming MOVES modeling software.

BRTB continue to make significant contributions to future development of any new 8-hour ozone and perhaps future PM_{2.5} SIP development, including development of relevant projects that will contribute to overall improved air quality.

Schedule for Process Improvement: This can be a continuous process.

4.7 Congestion Management Process / Management and Operations

4.7.1 Regulatory Basis

23 U.S.C. 134(k)(3) and 23 CFR 450.322 set forth requirements for the congestion management process (CMP) in TMAs. The CMP is a systematic approach for managing congestion through a process that provides for a safe and effective integrated management and operation of the multimodal transportation system. TMAs designated as non-attainment for ozone must also provide an analysis of the need for additional capacity for a proposed improvement over travel demand reduction, and operational management strategies.

23 CFR 450.324(f)(5) requires the MTP include Management and Operations (M&O) of the transportation network as an integrated, multimodal approach to optimize the performance of the existing transportation infrastructure. Effective M&O strategies include measurable regional operations goals and objectives and specific performance measures to optimize system performance.

4.7.2 Current Status

At the time of Certification review the MPO has established a CMP Steering Committee and was working closely with a consultant team to update the CMP for the Baltimore Region. The Team is charged to help develop a CMP to identify recurring and non-recurring congestion and propose strategies to improve travel safety and reliability for people and goods. The team meets every other month. This project is scheduled to be completed in June 2020.

The MPO has an established a CMP and is described in Appendix D of Maximize2045, Long Range Transportation Plan. There are seven key elements including: developing regional



objectives; defining network; developing multi-modal performance measures; collecting data and monitoring system performance; analyzing areas of congestion; identifying and applying strategies that implement regional objectives; and evaluating effectiveness of the CMP strategies.

The CMP has influenced the work activities of the MPO's metropolitan planning process. Five of the goals that have been identified in the MPO's Maximize2045 long range plan relate directly or indirectly to the CMP- safety improvement, maintain existing infrastructure, mobility, accessibility, and conserve and enhance environment. The CMP network covers the MPO planning areas. Furthermore, the CMP system components include: highway system (interstates, arterials); Transit system (MTA bus, light rail, MARC, local transit service providers); and Freight routes/ intermodal connections (intermodal terminals, and airport etc.

Performance measures are a critical component of the CMP. The MPO has developed performance measures to access the extent and duration of congestion on both highways and transit facilities. Examples of these performance measures include: volume/capacity ratios; delay and travel time reliability measures; vehicle volumes (direction, time of day, peak hour, average daily traffic); duration of congestions; ratios of bus to auto speed (for bus systems) average peak period vehicle load factors (passenger per vehicle) etc.

As part of data collection effort BRTB has been in partnership with the I-95 Corridor Coalition and University of Maryland Center for Advanced Transportation Technology Lab (CATT Lab) since 2013. This setup enables the agency to have access to continuous (24/7) probe data to monitor traffic conditions throughout the region. Access to the data is through the Probe Data Analytics (PDA) Suite, an online set of tools that can be accessed through a web browser. This eliminates the need for the many hours of processing of raw data that BMC's previous approach (collecting GPS speed data) required. The Vehicle Probe Project (VPP) began in 2008 with the primary goal of enabling Coalition members to acquire reliable travel time and speed data for their roadways without the need for sensors and other hardware. Using VPP data, beginning in 2013 BMC developed the "Quarterly Congestion Analysis Report" identifying the Top 10 Bottlenecks in the Baltimore Region.

The CMP strives to integrate management and operations strategies to improve system performance and reliability. One way this is done is through BRTB's continue coordination with MDOT SHA on Transportation Systems Management and Operations (TMSO) activities to



address congestion. Maryland's real-world application of TSMO is the Coordinated Highways Action Response Team (CHART). A program that focuses on the safety and efficient movement of people and goods on Maryland's highways. CHART, centers on addressing nonrecurring congestion, such as crashes. Through the Statewide Operations Center and satellite operations centers in the region, roadways are surveyed to quickly identify incidents. During peak traffic periods, traffic patrols are available on state highways to address vehicle crashes and breakdowns. With the combination of quick incident detection and the prompt availability of traffic patrols to respond to the incidents, crashes can be cleared more quickly.

4.7.3 Findings

The BRTB's documented CMP meets the requirements of 23 CFR 450.32 and includes all eight elements, as specified in the USDOT Final CMP Guidebook.

Commendation: The Review Team recognizes BRTB for including specific strategies in the CMP that provide congestion management benefits for each proposed project in Maximize2045.

4.8 Performance Based Planning and Programming

4.8.1 Regulatory Basis

23 U.S.C. 150(b) identifies the following national goals for the focus of the Federal-aid highway program: Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reduced Project Delivery Delays. Under 23 U.S.C. 134(h)(2), the metropolitan planning process shall provide for the establishment and use of a performance-based approach to transportation decision-making to support the national goals, including the establishment of performance targets.

23 CFR 450.306(d) states that each MPO shall establish performance targets to support the national goals and track progress towards the attainment of critical outcomes. Each MPO shall coordinate with the relevant State to ensure consistency, to the maximum extent practicable, and establish performance targets not later than 180 days after the State or provider of public transportation establishes its performance targets. The selection of performance targets that address performance measures described in 49 U.S.C. 5326(c) and 49 U.S.C. 5329(d) shall be coordinated to the maximum extent practicable, with public transportation providers to ensure consistency with the performance targets that public transportation providers establish under 49 U.S.C. 5326(c) and 49 U.S.C. 5329(d). Additionally, each MPO shall integrate the goals,



objectives, performance measures, and targets from other performance-based plans and programs integrated into the metropolitan transportation planning process.

23 CFR 450.314(h) states that the MPO, the State, and the public transportation operator shall jointly develop specific written provisions PBPP, which can either be documented as part of the metropolitan planning agreements or in some other means. See section [4.1 MPO Agreements](#) for more information.

23 CFR 450.324(f) states that MTPs shall include descriptions of the performance measures and performance targets used in assessing the performance of the transportation system, a system performance report evaluating the condition and performance of the transportation system with respect to the performance targets, and progress achieved in meeting the performance targets in comparison with system performance recorded in previous reports.

23 CFR 450.326(d) states that the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the programmed investments with respect to the performance targets established in the MTP, the anticipated future performance target achievement of the programmed investments, and a written narrative linking investment priorities to those performance targets and how the other PBPP documents are being implemented to develop the program of projects.

23 CFR 450.340 states that MPOs have two years from the effective dates of the planning and performance measures rule to comply with the requirements.

4.8.2 Current Status

On April 22, 2018, the BRTB, and partners established a general and specific Letter of Agreement (LOA) for cooperatively developing and sharing information related to: transportation performance data; selection of performance targets; reporting of performance targets; reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO; and collection of data for the State asset management plans for the National Highway System (NHS). The Federal Team suggest as part of the next Constrained Long-Range Plan Update the BRTB should start preparing for a System Performance Report on the Region's transportation performance.

Consistent with Federal Performance Based Planning and Programming (PBPP) requirements the BRTB have coordinated with Maryland Department of Transportation (MDOT) and public transportation provider, and have set regional targets. In some cases, the BRTB chose to adopt the statewide targets, and in other cases the BRTB adopted different regional targets to reflect regional concerns, as this option was provided in federal regulations. Several measures require



MDOT and BRTB to coordinate and report on a single unified set of performance targets for each of the measures for the urbanized area. The BRTB have set performance targets for the following six major areas:

- Highway Safety Targets (PM1) – Adopted 1-26-18
- Bridge and Pavement Performance Targets (PM2) – 10-23-18
- Truck Travel Time Reliability Index Performance Targets (PM3) -10-23-18
- Urbanized Area Targets: 1) peak hour excessive delay, and 2) percent non-SOV travel (PM3) – Adopted 5-22-18
- CMAQ Performance Target – Emissions (PM3) – Adopted 6-26-18
- Transit Asset Management Targets – Adopted 6-27-17

Table 1: Baltimore Region Yearly Highway Safety Targets

Performance Measure	2016	2017	2018	2019	2020
Number of Fatalities	188	182	176	171	166
Number of Serious Injuries	1,224	1,200	1,176	1,153	1,130
Fatality Rate per 100 Million VMT	0.72	0.70	0.68	0.66	0.64
Serious Injury Rate per 100 Million VMT	4.46	4.31	4.18	4.05	3.92
Number of Non-motorized Fatalities & Serious Injuries	216	209	202	195	188

The Baltimore Region yearly highway safety targets for the five performance measures (PM1) are shown in Table 1 above. The safety targets were adopted by BRTB on January 26, 2018. MDOT and the BRTB coordinated on a methodology using crash data to develop regional targets. The source for all fatality data is the most recently available NHTSA Fatality Analysis Reporting System (FARS) data. Serious injury data were obtained through the state's crash data system. The methodology uses 5-year rolling averages for each of the measures.



Table 2: Baltimore Region System Performance Targets Related to Bridge & Pavement Conditions

Performance Measure	2-Year Targets	Target Year	4-Year Targets	Target Year
Percent of NHS bridges in Good Condition	20.0%	2019	20.0%	2021
Percent of NHS bridges in Poor Condition	3.0%	2019	5.0%	2021
Percent of NHS Interstate pavement in Good Condition	60.0%	2018	60.0%	2020
Percent of NHS Interstate pavement in Poor Condition	2.0%	2018	2.0%	2020
Percent of NHS non-Interstate pavement in Good Condition	30.0%	2018	30.0%	2020
Percent of NHS non-Interstate pavement in Poor Condition	7.0%	2018	8.0%	2020

Table 2 above shows the Baltimore Region's targets for the six system performance measures (PM2) for highways and bridges. BRTB and MDOT coordinated on a methodology for developing 2- and 4-year targets for the Baltimore region. Pavement condition is based on a calculation using measures of international roughness index (IRI), cracking, and rutting or faulting. A pavement section condition rating (good, fair, poor) is based on the worst measure (IRI, cracking, rutting or faulting) for the section.

Bridge condition is based on National Bridge Inventory (NBI) condition ratings for items 58 - Deck, 59 - Superstructure, 60 - Substructure, and 62 - Culvert. Condition is determined by the lowest rating of deck, superstructure, substructure, or culvert. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if is less than or equal to 4, the classification is poor. (Bridges rated below 7 but above 4 will be classified as fair; the final rule does not include a performance measure related to fair condition.) Deck area is computed using NBI items 49 - Structure Length and 52 - Deck Width or 32 - Approach Roadway Width (for some culverts).



Table 3: Baltimore Region System Performance Targets Related to Travel Time Reliability

Performance Measure	2-Year Targets (2019)	4-Year Targets (2021)
LOTTR (Interstate) measure: Percent of person-miles traveled on the Interstate System that are reliable	72.1%	72.1%
LOTTR (non-Interstate) measure: Percent of person-miles traveled on the non-Interstate NHS that are reliable	Not applicable	81.7%
TTTR Index: Ratio of Interstate System mileage indicating reliable truck travel times	1.87	1.88

Table 3 above shows 2-year and 4-year targets for the Baltimore region for the system performance measures related to Travel Time Reliability. BRTB coordinated with counterparts and worked diligently to adopt these targets on October 23, 2018. The Federal Highway Administration (FHWA) issued a final rule establishing performance measures for state departments of transportation (DOTs) and MPOs to use to assess the performance of the National Highway System (NHS) under the National Highway Performance Program (NHPP). These include three measures related to Level of Travel Time Reliability (LOTTR): (1) percent of person-miles traveled on the Interstate System that are reliable; (2) percent of person-miles traveled on the Non-Interstate NHS that are reliable; and (3) Truck Travel Time Reliability (TTTR) Index: ratio of Interstate System mileage indicating reliable truck travel times.

Table 4: System Performance Targets Related to Traffic Congestion for the Baltimore Urbanized Area

Performance Measure	2-Year Targets	4-Year Targets
Annual hours of peak-hour excessive delay (PHED) per capita	<21.8 hours (not required)	<22.6 hours
Percentage of non-SOV (single-occupancy vehicle) travel	24.85%	24.85%

Table 5: Baltimore Region System Performance Targets for On-road Mobile Source Emission Reductions from CMAQ-funded Projects

Performance Measure	2-Year Targets (2018-2019)	4-Year Targets (2018-2021)
Reduction of VOC (kg/day)	6.59	7.87
Reduction of NOx (kg/day)	88.57	123.39



On May 22, 2018 and June 26, 2018, BRTB set targets for the two System Performance Targets Related to Traffic Congestion for the Baltimore Urbanized Area and two On-road Mobile Source Emission Reductions measures. As required by Federal regulation BRTB and MDOT coordinated and report on a single unified set of System Performance Targets for On-road Mobile Source Emission Reduction measures. Table 4 and Table 5 above show these four system performance targets.

Table 6: Baltimore Region LOTs Tier 2 Baseline and Targets

Asset Class (National Transit Database)	Statewide LOTs Baseline % Past Useful Life	Initial Statewide LOTs Target	Baltimore Regional LOTs
Bus (Heavy Duty)	23.8%	23.8%	7.1%
Bus (Medium Duty)	17.0%	17.0%	16.2%
Bus (Light Duty) - Cutaway Bus	59.5%	59.5%	58.1%
Automobile (Revenue)	50.0%	50.0%	27.3%
Van (Revenue)	69.1%	69.1%	66.7%
Trucks (Non-Revenue)	31.3%	31.3%	66.7%
Other Rubber Tire Vehicles (Service - Non-Revenue)	59.5%	59.5%	40.0%



Table 7: Maryland Transit Administration Tier 1 Baseline and Targets

Mode	Asset Class	Baseline % Past Useful Life	MTA Target
Bus	Bus (60' Articulated)	0%	0%
Bus	Bus (40')	4.7%	4.7%
Metro	Heavy Rail	88.9%	88.9%
Light Rail	Light Rail	0%	0%
MARC	Locomotive	0%	0%
MARC	Passenger Coach	0%	0%
Mobility	Cutaway	0%	0%
Mobility	Automobile	4.4%	4.4%
Mobility	Van	0%	0%

FTA's final rule on Transit Asset Management (TAM) requires transit agencies receiving FTA funding to develop asset management plans and monitor performance for public transportation assets, including: vehicles, facilities, equipment, and transit infrastructure. The BRTB has adopted required transit asset management targets for public transportation on June 2017 (Resolution #17-27), with an update adopted in February 2019. In addition to the TAM targets for MTA, there are separate performance targets for Tier II transit agencies. Tables 6 and 7 above show these targets. Safety targets are forthcoming as the Public Transportation Agency Safety Plan (PTASP) compliance deadline has been extended to December 31, 2020.

4.8.3 Findings:

The MPO's jointly written PBPP provisions address FHWA and FTA requirements for all available performance measures and targets. Furthermore, the MPO's current TIP and LRTP have been updated to reflect a performance-based planning process including required performance



measures and targets. These planning documents have begun to prioritize investments and describe progress made toward target achievement.

The Federal Team acknowledges the many steps the MPO has taken over the years regarding PBPP and recommends the MPO continue these efforts to fully implement the BPP process.

To this end, the Federal Team suggest as part of the next Constrained Long-Range Plan Update the BRTB should start preparing for a System Performance Report on the Region's transportation performance.

Commendation: The Federal Team commends BRTB and its partner agencies for their written procedures for PM1, PM2, PM3, and Transit Asset Management measures and targets.

Recommendation: The Federal Team encourages BRTB and its partners to continue to expand its PBPP framework to include using performance measures and targets to evaluate the success of the planning process and investment decisions toward achieving the region's transportation system goals.



5.0 CONCLUSION AND RECOMMENDATIONS

The FHWA and FTA review found that the metropolitan transportation planning process conducted by BRTB meets Federal planning requirements as follows.

5.1 Commendations

The following are noteworthy practices that the BRTB is doing well in the transportation planning process:

1. The Federal Team recognizes BRTB effort for updating a single comprehensive metropolitan planning agreement to support performance-based transportation planning responsibilities for the Baltimore region. The Master 3C Agreement outlines legal and contracting responsibilities for all Parties. It reflects changes to other Agreements and includes new partner of Queen Anne's County.
2. The Federal Team recognizes BRTB for including in the current LRTP a table showing the breakdown of forecasted federal revenues by funding program from 2024-2045.
3. BRTB is commended for working with Baltimore City and FHWA Maryland Division to update the TIP project phase definitions to clarify the distinction between planning and preliminary engineering. The project phase definitions are consistent with 23 CFR 636.103 and will help ensure projects comply with FHWA's 10-year rule.
4. The Federal Team acknowledges BRTB for developing interactive mapping to make it easier for the public to locate TIP projects and associated data.
5. The Review Team commends BRTB for being innovative in air quality program, where the MPO publishes a report on Protecting Our Resources that utilizes data visualizations to explain regional air quality conformity to their stakeholders and the public.
6. BRTB has consistently completed past conformity determinations with ample time to allow EPA to thoroughly review for concurrence in a timely matter, and EPA's most recent review of the 2020-2023 TIP and the 2045 Long- Range Transportation Plan met CAA requirements to allow approval of the conformity determinations according to relevant regulations.
7. The Review Team recognizes BRTB for including specific strategies in the CMP that provide congestion management benefits for each proposed project in Maximize2045.



8. The Federal Team commends the MPO and partner for its specific written procedures for all available performance measures and targets for PM1, PM2, PM3 and Transit Asset Management target.

5.2 Corrective Actions

There are no corrective actions that the BRTB must take to comply with Federal Regulations.

5.3 Recommendations

The following are recommendations that would improve the transportation planning process:

1. MDOT should review the remaining balance of unobligated metropolitan planning funds (23 U.S.C. 104(d), 49 U.S.C. 5305(d)) and provide this information to BRTB and all Maryland MPOs. The Federal Team requests that MDOT then prepare and submit to FTA a plan (or set of procedures) to document how MDOT will allocate the Consolidated Grant Program funds pursuant to the requirement in FTA Circular 8100.1D and the Common Grant Rule.
2. The Team recommends the State use this project phase definitions in the next STIP update and should encourage the remaining MPOs to use similar definitions in their TIPs.
3. The BRTB should revise and update the Title VI complaint process and policies on their website as requested by December 31, 2020.
4. The Review Team recommends BRTB continue to coordinate with regional partners to determine emission reduction activities.
5. The Review Team recommends BRTB train technical staff in upcoming MOVES modeling software.
6. BRTB continue to make significant contributions to future development of any new 8-hour ozone and perhaps future PM_{2.5} SIP development, including development of relevant projects that will contribute to overall improved air quality.
7. The Federal Team encourages BRTB and its partners to continue to expand its PBPP framework to include using performance measures and targets to evaluate the success of the planning process and investment decisions toward achieving the region's transportation system goals.



APPENDIX A - PARTICIPANTS

The following individuals were involved in the BRTB on-site review during the day on Wednesday, April 22nd:

FHWA MD Division: Kwame Arhin, Lindsay Donnellon, and Edwin Gonzalez

FTA Region III: Ryan Long and Abigail Lowe

EPA Region III: Gregory Becoat

Baltimore Metropolitan Council (BMC) staff (Baltimore MPO): Todd Lang, Terry Freeland, Don Halligan, Zach Kaufman, Eileen Singleton, Brian Shepter, Monica Haines Benkhedda, Regina Aris, Sara Tomlinson

Maryland Department of Transportation: MDOT-Tyson Byrne, Dan Janousek, Janet Moye Cornick, Louis Jones, Maxine Powell; MDOT SHA- Tara Penders, Lisa Sirota, Pete Regan; MDOT MTA- Zach Chissell and Jade Clayton

The following individuals were involved in the public meeting on the evening of Wednesday, April 22nd:

FHWA MD Division: Lindsay Donnellon

FTA Region III: Ryan Long

Baltimore Metropolitan Council: Todd Lang, Monica Haines Benkhedda, Terry Freeland, Don Halligan, Cindy Burch, Regina Aris, Mike Kelly

Baltimore Regional Transportation Board: Lynda Eisenberg (Carroll Co), D'Andrea Walker (Baltimore Co)

BRTB Public Advisory Committee: Eric Norton, Tafadzwa Gwitira, Mark Lotz, Michael Davis, Michael Thompson, Sharon Smith, Bruce Kinzinger, Jed Weeks, Paul Verchinski, Ben Groff, Arthur Petersen

Public: Tracee Strum-Gilliam (PRR Biz), Mark Radovic (MDOT SHA)



APPENDIX B - STATUS OF FINDINGS FROM LAST REVIEW

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 corrective actions and recommendations from the previous certification and summarizes discussions of how they have been addressed.

2016 BRTB TMA Certification Recommendations

Unified Planning Work Program

1. MDOT should review the remaining balance of previous funding for the MPO and provide this information to the BRTB and all MD MPOs.

The Federal Team requests that the MDOT prepare and submit to FTA a set of procedures to document how MDOT administers the Consolidated Grant Program funds pursuant to the requirement in Circular C8100.1C and the Common Grant Rule.

MDOT should establish a procedure, in consultation with BRTB for ensuring that there is a process in place for tracking previous Federal funding available to BRTB and the remaining MD MPOs.

Response: BMC, on behalf of the BRTB, keeps a running ledger of all invoices and apportionments that acts as our balance of available FHWA and FTA funding. This ledger is shared periodically with MDOT who confirms the amounts and transactions. This ledger is used in annual UPWP budgeting.

Financial Plan

2. The Federal Team recommends BRTB to incorporate in its financial plan specific information that describes the sources of Federal, State, and local transportation program funds, including historic trends and future projection, available to the region.

Similar information is made available within the CTP regarding funds from the MDTA, Surface Transportation Block Grant Program, Section 5307 program funds, National Highway System, and other Federal, State, and local funds made available for transportation system preservation, expansion and operations in the Baltimore region.



Response: *Maximize2045*, the 2019 regional long-range transportation plan, includes a table and a chart from MDOT showing historic trends regarding operating and capital expenditures.

Maximize2045 also includes a table with forecasted federal revenues by funding program. BMC staff applied the percentages accounted for by the major federal funding programs in the FY 2019 federal apportionment to MDOT to estimate how these federal revenues break down in the period from 2024-2045.

Air Quality

3. The Federal Team recommends that the BRTB continue to improve its efforts in garnering more public support and participation in Air Quality initiatives.

The BRTB should continue to make significant contributions to any future 8-hour ozone or PM2.5 SIPs which may be required under the new air quality standards which EPA has promulgated by providing technical support to MDE in developing motor vehicle emission budgets and emission reduction strategies which will contribute to the attainment of the air quality standard.

Response: The BRTB has worked to add upon previous efforts of outreach to the public on the health aspects of poor air quality, ways in which the MPO works to improve air quality through planning, and initiatives they can participate in to reduce their personal impact. Part of this effort has been through the update of the BMC web site, and the development of a brochure highlighting the planning approach to improved protection of our air quality and other natural resources in the Baltimore region. BMC staff continues to be an active participating member of Clean Air Partners, an air quality outreach organization. BMC staff coordinate the Bike to Work Day event every May, which encourages and celebrates people who bike to work, rather than drive. Finally, staff also continues to provide outreach at heavily-attending events in the region to share the message of protecting your health on poor air quality days, and reducing your air quality impact from your transportation choices.

The Interagency Consultation Group meetings provide an opportunity for MDE to share any plans they have to develop new SIPs or SIP budgets. Staff have not been made aware of any planned SIPs for the region over the past several years. When staff is made aware of any plans to develop a SIP, they are ready to become an active participant in the modeling and coordination necessary to develop SIP motor vehicle emissions budgets. As part of the conformity determination process staff tracks emission reduction projects in local jurisdictions, and through state agencies. This information would become even more useful in the event that budgets become more difficult to meet. Staff is also working with state agencies to ensure that local jurisdictions are aware of efforts to gather information on the best locations of electric



vehicle chargers. Staff had collected this information in GIS, and shared it with MDOT. MDOT is now surveying the jurisdictions directly with a Metroquest-developed survey software.

Public Participation Plan

4. While BRTB is commended for the use of surveys in evaluating the effectiveness of its Public Participation Plan, the plan does not report on the results and/or numbers gathered from surveys. We suggest BRTB should use the surveys to tell a broader story regarding its public and its process.

Response: To date, staff have utilized surveys on a small scale. For example, staff gathered feedback on events such as the Every Voice Counts Transportation Academy and our What's on Tap series. Surveys were also used with current and past PAC members to gather input from key volunteers about the planning process and ways in which they believe staff can make improvements. Information from these surveys are used by staff to make improvements to future events and the planning process.

In FY 2020, staff hired a consultant team to conduct an evaluation of public involvement activities and develop recommendations of ways in which the BRTB can revamp its public involvement program to better engage the public. The use of larger scale surveys to gather information about people's transportation experiences and share their stories is an idea which may be explored with the consultant team as part of this review and redesign of the BRTB's process.

Title VI

5. The Federal Team recommends BRTB make Title VI Complaint information easily available on the BRTB website.

Response: Access to information on non-discrimination, and the complaint form are at the bottom of every page of the website. Further, the information may be found under Transportation – About the BRTB or Transportation – Getting Involved & Public Comment.

Freight

6. While the Federal Team was pleased to see BRTB coordination and participation in many commendable freight activities in the region, we also observed that the Freight initiatives are not readily available on the website or other means. We suggest BRTB



provide additional documentation on the activities that they are facilitating to advance freight movement in the region.

We further recommend BRTB work cooperatively with the State to ensure the State Freight Plan and Freight Network is in accordance with FAST ACT.

Response: BMC staff update the BMC website on a regular basis and will include regional freight studies and activities as they are developed. These topics include specialized traffic counts to help members of the FMTF (for example oversize / overweight truck volumes leaving Dundalk Marine Terminal and truck restriction compliance along Wise Avenue in Baltimore County is online). The BRTB and FMTF are actively engaged in the development of the Statewide Freight Plan and Statewide Truck Parking Study. BMC staff worked closely with MDOT SHA in the development of 25 miles of critical urban freight corridors in accordance with the FAST Act. FMTF members from the trucking community also provided input into the regional congestion management process (CMP).

Pedestrian and Bicycle Planning

7. The Federal Team recommends BRTB make available on its website additional information of efforts underway to improve pedestrian and bicycle planning in the metropolitan area.

Response: BMC staff update the BMC website on a regular basis and will include regional bicycle and pedestrian activities. Recent topics include: regional bicycle map with existing, programmed and planned facilities, the Patapsco Regional Greenway report as well as regional priorities.



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APPENDIX C – PUBLIC COMMENTS

Two public comments were received during the virtual public meeting held at 6pm on Wednesday, April 22nd.

1. Bruce Kinzinger – PAC member. He was interested in seeing Hyperloop and MAGLEV transportation alternatives in the region and wanted to see them on the LRTP.
2. Paul Verchinski – PAC Member. He was concerned with the uncertainty of future transportation funding. He likes the MPO's public participation efforts so far. He likes the public transportation course. [Team was not sure if this a BRTB, APTA or NTI training]



APPENDIX D - LIST OF ACRONYMS

- ADA:** Americans with Disabilities Act
- AMPO:** Association of Metropolitan Planning Organizations
- CAA:** Clean Air Act
- CFR:** Code of Federal Regulations
- CMP:** Congestion Management Process
- CO:** Carbon Monoxide
- DOT:** Department of Transportation
- EJ:** Environmental Justice
- FAST:** Fixing America's Surface Transportation Act
- FHWA:** Federal Highway Administration
- FTA:** Federal Transit Administration
- FY:** Fiscal Year
- HSIP:** Highway Safety Improvement Program
- ITS:** Intelligent Transportation Systems
- LEP:** Limited-English-Proficiency
- M&O:** Management and Operations
- MAP-21:** Moving Ahead for Progress in the 21st Century
- MPA:** Metropolitan Planning Area
- MPO:** Metropolitan Planning Organization
- MTP:** Metropolitan Transportation Plan
- NAAQS:** National Ambient Air Quality Standards
- NO₂:** Nitrogen Dioxide
- O₃:** Ozone
- PM₁₀ and PM_{2.5}:** Particulate Matter
- SHSP:** Strategic Highway Safety Plan
- STIP:** State Transportation Improvement Program
- TDM:** Travel Demand Management
- TIP:** Transportation Improvement Program
- TMA:** Transportation Management Area
- U.S.C.:** United States Code
- UPWP:** Unified Planning Work Program
- USDOT:** United States Department of Transportation



