



**BALTIMORE REGION
FY 2024-2025
UNIFIED PLANNING WORK PROGRAM
FOR TRANSPORTATION PLANNING**

**FINAL
APRIL 21, 2023**

**PREPARED FOR THE
BALTIMORE REGIONAL TRANSPORTATION BOARD
The designated Metropolitan Planning Organization
for the Baltimore Region**



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BALTIMORE METROPOLITAN COUNCIL

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**BALTIMORE REGION
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM
FOR TRANSPORTATION PLANNING**

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April 21, 2023

**Produced under the auspices of the Baltimore Regional Transportation Board,
the Metropolitan Planning Organization for the Baltimore Region**

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INTRODUCTION

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UNIFIED PLANNING WORK PROGRAM DEVELOPMENT PROCESS

The Fiscal Years (FY) 2024-2025 Unified Planning Work Program (UPWP) 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, 2023 through June 30, 2025). It defines the regionally agreed upon planning priorities and the roles and responsibilities of the various participants in this process.

The work program reflects a careful consideration of critical transportation issues currently facing the region, as well as the analytical capabilities needed to address them. The UPWP is required as a basis and condition for all federal funding assistance for transportation planning by the joint planning regulations of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Through the FY 2024-2025 UPWP, as well as previous UPWP initiatives, the Baltimore Regional Transportation Board (BRTB), acting as the designated metropolitan planning organization (MPO), will address and support the short-term and long-range transportation planning priorities of the Baltimore metropolitan area. In July 2019, the BRTB approved *Maximize2045: A Performance-Based Transportation Plan*, the long-range regional transportation plan that guides the region's short-term and long-term multimodal investments. The BRTB completed all phases for this plan including submittal to the Federal Highway Administration, Federal Transit Administration, and U.S. Environmental Protection Agency for review and approval. This included the continued development of processes and procedures to address requirements related to performance-based planning and programming. This UPWP includes studies and programs to those ends.

The UPWP is funded through an 80 percent planning grant provided by FHWA and FTA and a 20 percent match provided by the Maryland Department of Transportation (MDOT) and the local governments of the Baltimore metropolitan planning area. Federal funding sources include Title 1, Section 112 metropolitan planning funds (Federal Highway Act (PL-93-87)) and Title III, Section 5303 metropolitan planning funds. The total funding proposed for the FY 2024 transportation planning activities for the Baltimore region is \$10.7 Million and the estimated budget for FY 2025 is \$7.4 Million.

Developing this UPWP has relied on the continued cooperation among State (specifically transportation, air quality, and planning agencies), local, and regional entities. This and previous UPWPs were prepared with the involvement of these organizations, acting through the BRTB and its subcommittee structure.

The work tasks delineated in the UPWP are performed primarily by staff working in the Transportation Planning Division of the Baltimore Metropolitan Council (BMC), with limited support provided by other functioning units within the BMC. Specific elements of the UPWP, at times, are 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.

METROPOLITAN PLANNING AREA

At a minimum, a Metropolitan Planning Area (MPA) must cover the urbanized area and contiguous

geographic areas likely to become urbanized within the next 20 years. The Baltimore MPA consists of Baltimore City as well as Anne Arundel, Baltimore, Carroll, Harford, Howard and portions of Queen Anne's counties (see **Figure 1** for the geographic location of each participating local jurisdiction).

The planning area is part of the 2010 U.S. Census Bureau's Baltimore-Columbia-Towson Metropolitan Statistical Area (MSA), containing the Baltimore Urbanized Area, the Aberdeen-Havre De Grace-Bel Air Urbanized Area, the Westminster Urbanized area, and a portion of Queen Anne's County. Also included within the Baltimore region are thirteen smaller incorporated municipalities. The renamed Baltimore-Towson metropolitan area (excluding Queen Anne's County) has also been designated by the Environmental Protection Agency (EPA) as a "moderate" nonattainment area for the 8-hour ozone standard.

The entire nonattainment area is in the northern portion of the 2010 U.S. Census Bureau designated Washington-Baltimore-Northern Virginia, DC-MD-VA-WV Combined Statistical Area.

PUBLIC INPUT INTO THE UPWP

In keeping with the proactive public involvement spirit of the Fixing America's Surface Transportation (FAST) Act, the FY 2022-2023 UPWP is being released to the public for a 30-day review and comment opportunity. Information on the public review process (including outreach) is shown in Appendix C this document.

METROPOLITAN TRANSPORTATION PLANNING

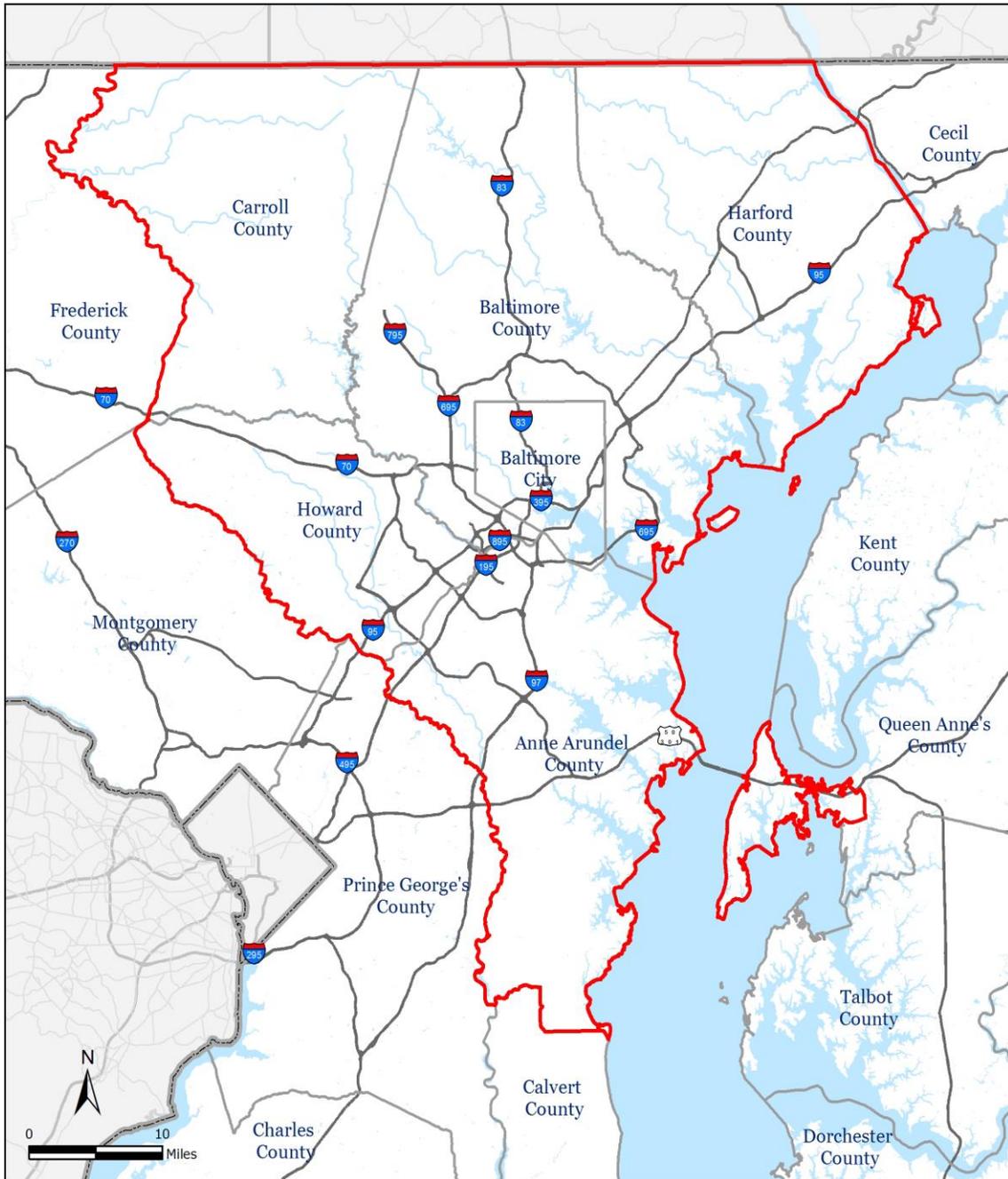
The most recent federal transportation legislative program, Infrastructure Invest and Jobs Act (IIJA) (also known as the Bi-Partisan Infrastructure Law (BIL) was signed into law by President Biden on November 15, 2021. The prior federal transportation legislative program, known as the Fixing America's Surface Transportation (FAST) Act, was signed into law on December 4, 2015. Both the IIJA/BIL and the FAST Act preserve the commitment to the metropolitan transportation planning process established in previous federal initiatives. On May 27, 2016, the U.S. Department of Transportation (U.S. DOT) issued the latest regulations regarding metropolitan transportation planning, specifically outlining the planning requirements associated with the metropolitan planning process, including the Transportation Improvement Program and the Long- Range Transportation Plan.

Performance-Based Planning and Programming

In an effort to plan for future regional transportation needs and to comply with the intention of the previous federal transportation program known as MAP-21 and the Clean Air Act (CAA) Amendments of 1990, the BRTB developed *Maximize2045: A Performance-Based Transportation Plan*, the long-range transportation plan, during 2018 and 2019. The factors that guided development of *Maximize2045* are listed in the Metropolitan Planning Regulations effective May 27, 2016. These regulations continue and strengthen the emphasis on performance-based planning and programming.

Maximize2045 includes a set of overarching regional goals, specific implementation strategies that support these goals, and a series of performance measures and targets. These measures and targets are consistent with the performance-based approach to planning and programming set forth the IIJA/BIL and FAST Act and corresponding regulations. These measures and targets help the BRTB and operating agencies gauge system-wide progress relative to regional goals and strategies.

FIGURE 1
THE BALTIMORE REGION



Compliant with requirements of the IJJA/BIL and the FAST Act and deadlines set forth in regulations, MDOT, public transportation providers, and the BRTB coordinated efforts to develop and adopt a series of regional performance targets. Performance targets have been adopted for transit asset management, roadway safety, roadway and bridge conditions, and system performance.

Out of the set of 25 federally mandated performance targets, the BRTB has adopted all 25. In some instances updates to original targets have been adopted. The 25 mandated targets include:

- four transit asset management measures and targets (adopted in March 2023): (1) percentage of non-revenue service vehicles that have either met or exceeded their Useful Life Benchmarks (ULBs), (2) percentage of revenue vehicles within an asset class that have either met or exceeded their ULBs, (3) with respect to infrastructure (rail fixed-guideway, track, signals, systems): percentage of track segments with performance restrictions, and (4) percentage of facilities within an asset class rated below condition 3 on the TERM scale
- five highway safety measures and targets (first adopted in January 2018, and updated each year through January 2023): (1) Number of fatalities, (2) rate of fatalities per 100 million VMT, (3) number of serious injuries, (4) rate of serious injuries per 100 million VMT, and (5) number of non-motorized fatalities + non-motorized serious injuries – pedestrian and bicycle.
- two system performance measures and targets to assess traffic congestion (unified MDOT/BRTB targets for the urbanized area; adopted in May 2018 and updated in March 2023): (1) annual hours of peak-hour excessive delay per capita and (2) percentage of non-single-occupancy vehicle) travel.
- one measure to assess on-road mobile source emissions (applies to projects with CMAQ funding) (adopted in June 2018, updated in September 2020 and again in August 2022): total emissions reduction: 2-year and 4-year cumulative reported emission reductions of each criteria pollutant and applicable precursors (PM_{2.5}, PM₁₀, CO, VOC, and NO_x) for which the area is designated nonattainment or maintenance [*Note: the BRTB region is in nonattainment only with respect to ozone*]
- four measures to assess pavement condition (adopted in October 2018 and updated in March 2023): (1) percentage of pavement on the interstate system in good condition, (2) percentage of pavement on the interstate system in poor condition, (3) percentage of pavement on the NHS (excluding the interstate system) in good condition – state/local, and (4) percentage of pavement on the NHS (excluding the interstate system) in poor condition – state/local
- two measures to assess bridge condition (adopted in October 2018 and updated in March 2023): (1) percentage of NHS bridges by deck area classified as in good condition and (2) percentage of NHS bridges by deck area classified as in poor condition
- two measures to assess performance of the National Highway System (NHS) under the National Highway Performance Program (expressed as Level of Travel Time Reliability (LOTTR) (adopted in October 2018 and updated in March 2023): (1) percentage of person-miles traveled on the interstate system that are reliable (Interstate Travel Time Reliability measure) and (2) percentage of person-miles traveled on the non-interstate NHS that are reliable (non-interstate NHS Travel Time Reliability measure)
- one measure to assess freight movement on the interstate system (adopted in October 2018 and updated in March 2023): percentage of interstate system mileage providing for reliable truck travel times (Truck Travel Time Reliability Index)

- four transit safety measures (reported by mode) (adopted in January 2021 and updated in March 2023): (1) number of reportable fatalities and rate per total vehicle revenue miles, (2) number of reportable injuries and rate per total vehicle revenue miles, (3) number of reportable safety events and rate per total vehicle revenue miles, and (4) mean distance between major mechanical failures.

All of the measures and targets will be used to guide MDOT and the BRTB in carrying out the requirements of the applicable FHWA and FTA laws and regulations, including the Highway Safety Improvement Program (HSIP).

All Transportation Improvement Programs (TIPs) adopted after May 2019 will follow the performance-based approach described in the long-range transportation plan. These TIPs now include a narrative explaining how the programmed projects relate to specific regional performance measures and targets.

MPO Roles and Responsibilities

The BRTB is the federally designated MPO acting as the regional transportation planning and policy making body for the Baltimore region. In this capacity, the BRTB is directly responsible for conducting the continuing, cooperative and comprehensive (3-C) transportation planning process for the Baltimore metropolitan region in accordance with the metropolitan planning requirements of Section 134 (Title 23 U.S.C.) of the Federal Highway Act of 1962 and Section 8 of the Federal Transit Act. The BRTB provides overall program management of the UPWP work tasks and budget as well as policy direction and oversight in the development of the federally mandated long-range transportation plan, the Transportation Improvement Program, and the transportation element of the State Air Quality Implementation Plan.

The BRTB is a 13-member policy board consisting of the cities of Annapolis and Baltimore; the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's; and MDOT, the Maryland Department of the Environment (MDE), the Maryland Department of Planning (MDP), the Maryland Transit Administration (MDOT MTA) and a Representative of Public Transportation (currently Annapolis Transit). Voting rights are extended to all members with the exception of the Maryland Department of the Environment, the Maryland Department of Planning and the Maryland Transit Administration. These agencies serve the BRTB in an advisory capacity. Annapolis Transit currently serves the role of "representative of public transportation" on the Board based on a vote of the public transit providers in the region. Representatives from the local jurisdictions and agencies have been designated and empowered by their respective lead elected official or department secretary to integrate locally oriented policies and needs into a regionally based agenda.

In the Baltimore metropolitan area, the roles and responsibilities of the BRTB, state and local transportation operators and transportation-related state agencies for cooperatively conducting transportation planning and programming have been established over several years.

A network of committees and subcommittees was formulated to focus on specific technical and policy areas at the direction of the BRTB. In 2020, the BRTB approved a new committee, the Congestion

Management Process Committee. Coordination of this diversified transportation planning structure, a direct responsibility of the BRTB, serves to ensure that transportation planning is integrated with the region's efforts to address economic and environmental challenges, land development and quality of life issues such as public health. If necessary, the BRTB establishes a Budget Subcommittee annually to review projects and work tasks included in the UPWP to ensure regional significance and quality control.

The MDOT has a standing Memorandum of Understanding (MOU) with the BMC that delineates responsibilities in support of the regional transportation planning process. This agreement, initiated in 1992 with the re-designation of the BRTB and reauthorized in 2004 and amended most recently in 2020, stipulates that MDOT will apply for federal transportation planning grants from both FHWA and FTA to support the UPWP as well as provide a portion of the nonfederal matching funds required. In addition, MDOT formally represents all State-affiliated transportation modes and authorities on the BRTB.

As the leading air quality agency, MDE is an active member in the transportation planning process. Providing technical input and direction, MDE has assumed an advocacy role in the development of transportation system improvements that enhance the region's efforts to reach attainment by the prescribed timelines. MDP provides a direct linkage between transportation planning decisions and statewide growth management and land planning strategies.

MDOT MTA operates a comprehensive transit system throughout the Baltimore and Washington metropolitan areas. The MDOT MTA works closely with the BRTB on planning improved transit in the Baltimore region.

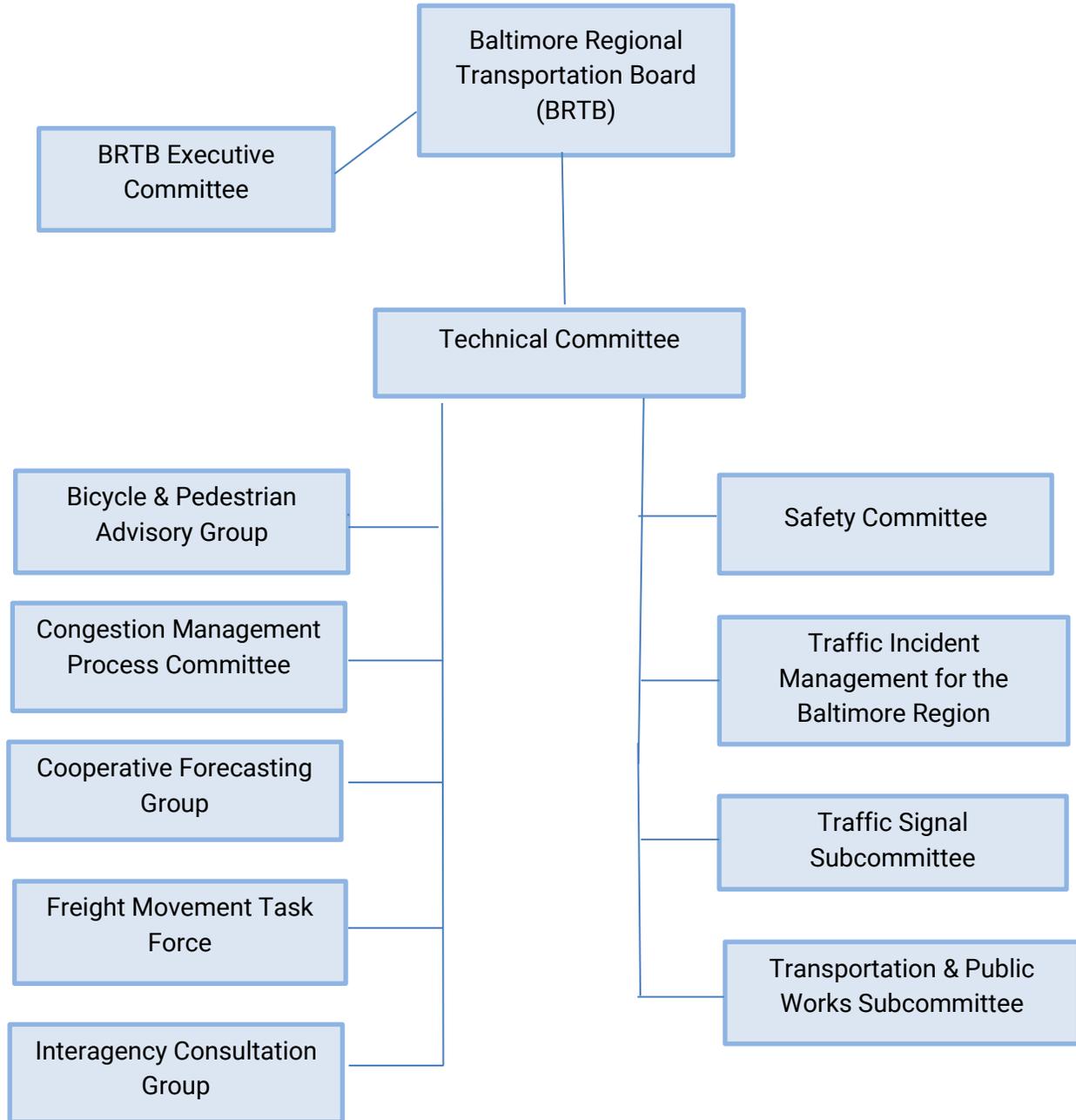
TABLE 1

ROLES AND RESPONSIBILITIES FOR TRANSPORTATION PLANNING AND PROGRAMMING

Planning Responsibility	Memorandum of Understanding (MOU)	Date Executed	Status	Changes Planned
UPWP Development	Formal MOU establishing the BRTB as the Baltimore MPO and develop a UPWP consistent with the 3-C planning process.	7/1/2004	In Effect	No
UPWP Development	Formal Memorandum of Agreement (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	1996	In Effect	No
Public Transit Operators and MPO Process	Formal MOA between BRTB, MDOT and MDOT 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
Financial Plan for Long-range Transportation Plan and Transportation Improvement Program	Formal MOA between BRTB, MDOT and MDOT 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 BRTB, MDOT and MDOT MTA defining roles and responsibilities of public transit operator and State Department of Transportation in the Baltimore regional planning process.	2/29/2008	In Effect	No
MPO Certification	Formal MOA between BRTB, MDOT and MDOT MTA defining roles and responsibilities of public transit operator and State Department of Transportation in the Baltimore regional planning process.	2/29/2020	In Effect	No

FIGURE 2

**BALTIMORE REGIONAL TRANSPORTATION BOARD
COMMITTEE STRUCTURE**



Federal Certification Review Process

At least every four years, the FTA and FHWA must jointly certify that the transportation planning process in urbanized areas with a population greater than 200,000 (i.e. Transportation Management Area (TMA)), is being conducted in accordance with the joint planning requirements. The primary purpose of a certification review is to formalize the continuing oversight and day-to-day evaluation of the planning process. The certification review process ensures that the planning requirements under Title 23 are being satisfactorily implemented. In a broader sense, the certification review process is a valuable opportunity to provide advice and guidance to a TMA, for enhancing the planning process and improving the quality of transportation investment decisions.

While the FHWA and FTA interact with TMA planning officials, state DOTs, transit operators, etc. on a routine basis—reviewing and approving planning products, providing technical assistance, and promoting good practice—the formal assessment during a certification review provides an objective view of the TMA transportation planning process. It can serve as a catalyst to improve the effectiveness and efficiency of the planning process, and help ensure that the major transportation planning issues facing a metropolitan area are being addressed.

2020 Federal Certification Review

The most recent certification review took place virtually on April 22 2020. In general, the federal team determined that the BRTB continues to conduct a “3-C” transportation planning process that satisfies the federal provisions governing metropolitan planning.

The review team commended the BRTB for its efforts in several areas, including:

- updating a single comprehensive metropolitan planning agreement to support performance-based transportation planning
- including in the current LRTP a table showing the breakdown of forecasted federal revenues by funding program from 2024-2045
- working with Baltimore City and FHWA Maryland Division to update the TIP project phase definitions to clarify the distinction between planning and preliminary engineering
- developing interactive mapping for assisting the public locating TIP projects and associated data
- for being innovative in air quality program, for publishing “Protecting Our Resources” that utilizes data visualizations to explain regional air quality conformity to their stakeholders and the public
- consistently completed past conformity determinations with ample time to allow EPA to thoroughly review for concurrence in a timely matter
- including specific strategies in the Congestion Management Process that provide congestion management benefits for each proposed project in Maximize2045
- for written procedures for PM1, PM2, PM3, and Transit Asset Management measures and targets

The team also identified areas in need of improvement. These include:

- MDOT should review the remaining balance of unobligated metropolitan planning funds and provide this information to the BRTB and all Maryland MPOs

- MDOT should use the updated TIP project phase definitions in the next STIP update and should encourage the remaining MPOs to use similar definitions in their TIPs
- revise and update the Title VI complaint process and policies on the BMC website
- continue to coordinate with regional partners to determine emission reduction activities
- train technical staff in upcoming MOVES modeling software
- continue to make significant contributions to future development of any new 8-hour ozone and perhaps future PM2.5 SIP development
- 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

The FY 2024-2025 UPWP attempts to encompass all of the required planning and programming tasks, to continue to build on the commended practices identified in the 2020 federal certification review, and to address the recommendations for improvement identified in this certification review.

UPWP Priorities: Regional Transportation Goals / Performance-Based Approach

The tasks delineated in the UPWP are linked to the region's transportation goals, as adopted by the BRTB in developing the next plan, *Maximize2045: A Performance-Based Transportation Plan*. The region's transportation goals as adopted for *Maximize2045* are:

1. **Improve System Safety** – Make conditions safer for pedestrians, bicyclists, transit riders and operators, and motorists.
2. **Improve and Maintain Existing Infrastructure** – Improve the conditions of existing transportation facilities; systematically maintain and replace transportation assets as needed.
3. **Improve Accessibility** – Help people of all ages and abilities to reach specific destinations.
4. **Increase Mobility** – Help people and freight to move reliably and efficiently.
5. **Conserve and Enhance the Environment** – Pass on to future generations the healthiest natural and human environments possible.
6. **Improve Transportation System Security** – Provide a secure traveling environment for everyone; improve the region's ability to respond to natural and man-made disasters.
7. **Promote Prosperity and Economic Opportunity** – Support the revitalization of communities, the development of activity centers, and the movement of goods and services.
8. **Foster Participation and Cooperation among Stakeholders** – Enable all interested and affected parties to participate and cooperate to find workable solutions.
9. **Promote Informed Decision Making** – Ensure that adopted transportation policies and performance measures guide the regional decision making process.

These goals and their supporting strategies are the means by which the Baltimore region can make sound, responsible investments in transportation systems. They also provide the framework through which the region can make progress toward improving accessibility and mobility for people and goods, in as safe and secure and environmentally sustainable a manner as possible, to advance the overall prosperity of the Baltimore region and the opportunities available to its communities and citizens.

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Table 2 below shows how the UPWP tasks relate to these regional transportation goals:

TABLE 2

UPWP Tasks	Regional Goals (✓ = primary association; ▪ = peripheral association)								
	1	2	3	4	5	6	7	8	9
Program Management and Coordination									
UPWP Management								✓	✓
Professional Consultant Services:									
Changing Employment & Retail			✓	✓			✓		
Affordable Housing & Transportation			✓				✓	✓	
Labor Force Participation & Travel			✓	✓			✓		
LOTS Skills Training & Support	✓							✓	
Making TOD Viable			✓	✓			✓		
Micro-Transit & Last Mile Solutions			✓	✓					
PRG: Branding + Ops & Maintenance	✓	✓	✓		✓	✓			
Regional Freight Profile	✓	✓		✓			✓		
RTP - Corridor Analysis			✓	✓					
Traffic Signal Infra. Inspection		✓							
Transportation & Land Use Grants			✓				✓		
Transportation Planning Institute	✓	✓						✓	✓
Support for State and Local Initiatives		✓	✓	✓			✓		✓
Planning Context									
Long-range Transportation Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transportation Improvement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓
Promoting Inclusiveness and Cooperation									
Public Participation and Community Outreach	▪	▪	▪	▪	▪	▪	▪	✓	✓
Transportation Equity Planning			✓				▪	✓	✓
Gathering and Analyzing Data									
GIS Activities	▪	▪	▪	▪	▪	▪	▪	▪	✓
Demographic and Socioeconomic Forecasting				▪			✓	✓	✓
Development Monitoring					▪		✓		✓

BALTIMORE REGION UPWP
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UPWP Tasks	Regional Goals (✓ = primary association; ▪ = peripheral association)								
	1	2	3	4	5	6	7	8	9
Analysis of Regional Data and Trends	✓		✓	✓	▪	▪	▪		✓
Maintenance of Current Simulation Tools			✓	✓			▪		✓
Applications and Analysis Using Simulation Tools			✓	✓			▪		✓
Safety and Security									
Safety Planning and Analysis	✓							▪	✓
Congestion Management, Operations, & Technology Planning	▪			✓		✓		▪	✓
Emergency Preparedness Planning				▪		✓			✓
Mobility, Accessibility and Connectivity									
System Performance: Monitoring and Adapting				✓					✓
Freight Mobility Planning	▪	▪		✓		▪	✓	▪	✓
Bicycle and Pedestrian Planning	✓	▪	✓		▪			▪	✓
Transit and Human Service Transportation Planning	▪	▪	✓	▪		▪		✓	✓
Protecting Current and Future Resources									
Environmental Planning					✓			▪	✓
Air Quality Conformity Analysis				▪	✓			▪	✓

PROGRAM MANAGEMENT & COORDINATION

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UPWP MANAGEMENT

PURPOSE: To manage, coordinate and guide the activities included in the Unified Planning Work Program (UPWP) and the regional transportation planning process. This requires a variety of means, including: direct involvement in planning activities, public education and public participation opportunities, and support of the multi-disciplined and multi-agency transportation committees essential to a coordinated regional planning process.

During Fiscal Year (FY) 2023 staff coordinated with local jurisdictions to collect products and billing information. Monthly Progress Reports and Invoices were submitted to the Maryland Department of Transportation (MDOT). Agendas and minutes for the Baltimore Regional Transportation Board (BRTB) as well as all standing committees were made available to the public and remain available online. The Executive Committee provided guidance on BRTB agendas as well as direction on Transportation Improvement Program (TIP) related Administrative Modifications. Baltimore Metropolitan Council (BMC) managed numerous contracts throughout the year as identified in the FY 2023 UPWP Addendum. In late 2022 the Technical Committee (TC) assessed progress in the current year and planned the upcoming UPWP work program. A schedule was endorsed to complete the work program with an opportunity for the public to review.

In FY 2024-2025, BMC staff will continue to provide administrative support for the UPWP. Staff manages the work program and budget, and is charged with preparation of work programs, contracts and progress reports. Included within this budget category are non-staff expenses that support transportation planning functions. Typical expenses include: 1) staff training and education, participation at meetings and other transportation-related seminars, workshops and conferences; 2) membership fees for professional organizations and associations; 3) publication costs including printing and design; 4) travel expenses; 5) preparation for special events; 6) purchase of computers and related software for BMC staff; and 7) annual computer maintenance agreements for BMC. The BMC continues to work with MDOT to identify and spend down available funds.

Staff also will provide support activity to committees such as the BRTB, TC, Interagency Consultation Group, Bicycle & Pedestrian Advisory Group, Freight Movement Task Force, Congestion Management Process Committee, Cooperative Forecasting Group, etc., including the preparation of meeting notices, minutes, agendas, mailings, and reports on issues of special committee interest.

Local jurisdictions are also responsible for a similar set of work tasks that are required as part of their involvement in the administration of the UPWP. This includes preparation of invoices and progress reports, financial reports, project work programs, annual UPWP contracts, and related correspondence. This activity also supports the professional development and training activities of the local government staffs.

BMC staff will continue to promote participation of minority business enterprises in the planning process and implementation of transportation projects within the Baltimore region in accordance with Title VI of the Civil Rights Act of 1964 and the requirements set forth in 49 Code of Federal

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Regulations (CFR) Part 23. Staff will also promote Federal Transit Administration's (FTA) policy to encourage private enterprise participation in the planning and provision of transportation services.

In addition to following federal guidance, this UPWP was developed with consideration of the December 2021 letter titled: *2021 Planning Emphasis Areas for use in the development of Metropolitan and Statewide Planning and Research Work programs*. The eight Planning Emphasis Areas are threaded throughout this UPWP in one or more tasks.

Based on the level of funding made available by the Federal Highway Administration (FHWA) and the FTA, funding for the FY 2024 UPWP is in place, with an estimated budget for FY 2025. Should some additional funding above that which is documented at this time, there will be an opportunity to consider additional BMC consultants and/or Focus Areas. Any changes will be reflected in an amended budget table.

PRODUCTS/MILESTONES	SCHEDULE
Minutes, resolutions and special reports	Monthly
Progress Reports, invoices, and financial reports	Monthly (BMC) Quarterly (Locals)
Training opportunities	As scheduled
FY 2024 UPWP amendments	Throughout Fiscal Year
FY 2024 UPWP budget adjustments	3 rd Quarter
FY 2025 UPWP budget development and local contracts as necessary	4 th Quarter

FY 2024 BUDGET: \$980,000

FY 2025 EST. BUDGET: \$980,000

PROFESSIONAL CONSULTANT SERVICES

PURPOSE: To retain consultant services for work activities in the Unified Planning Work Program (UPWP) that requires external support due to complexity or uniqueness of the tasks. These work efforts will strengthen the overall regional transportation planning process and expand the capabilities of the Baltimore Regional Transportation Board (BRTB).

During Fiscal Years (FY) 2022 and 2023, contracts were utilized for the following activities:

- A Resource Guide: Planning, Designing, Operating, and Maintaining Local Infrastructure in a Changing Climate
- Development of Local Financial Forecasts
- Graphic Design Services for MPO Public Involvement Materials
- Transportation Issues In Historic Town Centers
- Calibration And Validation For: Initiative To Simulate Individual Travel Events (InSITE) Model
- Online Transportation And Crash Data Dashboards
- Transportation Systems Impact Consideration In The Development Review And Building Permit Processes
- Central Maryland Regional Transit Plan Pilot Corridor Analysis - Corridor 25: BWI To Columbia Town Center
- Transportation Impact Study (TIS) Guidelines – Phase II
- Technical Assistance For The Transportation And Land Use Connections Grant Program
- Support For The Traffic Count Program
- Concept Plan For Bicycle And Pedestrian Improvements Along Us 40 In Harford County
- Explore Connected/Automated Vehicle (CAV) Integration For Local Governments
- Equity Scan And Recommendations
- Public Electric Vehicle Charging Infrastructure Siting Guide
- Evaluation Of Fares, Fees And Fines For Undue Burdens
- Preliminary Design – Patapsco Regional Greenway: Guinness To Southwest Area Park
- Safe System Approach
- Vision For A Regional Bicycle Network

In FY 2024, the continued use of consultant services will be employed. At the direction of the BRTB, BMC staff expects to explore using consultant services for the following activities:

New Tasks:

- Changing Face of Employment and Retail
- Making TOD Viable

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- Microtransit & Last Mile Solutions
- Coordinating Affordable Housing and Transportation Planning
- Regional Freight Profile
- Transportation Planning Institute
- PRG: Operations & Maintenance Model and Branding Concept - develop an operations and maintenance plan with standards for short, mid and long-term activities for the Patapsco Regional Greenway. Also develop a branding plan for the PRG.
- Local Signal Infrastructure Assessment
- Labor Force & Travel – Post Pandemic establish a continuous monitoring program to collect household labor force travel/location choices.

Continuing Tasks -

- Transportation/Land Use Connection Grants - Ongoing UPWP project
- Implementation of RTP - Corridor Analysis –Continuation of earlier UPWP project
- LOTS Skills and Technology Support
- Traffic Count Program
- Support for the Travel Demand Model

PRODUCTS/MILESTONES	SCHEDULE
Develop RFPs, select consultants, write contracts	1 st Quarter
Memoranda/Reports	Throughout Fiscal Year

FY 2024 BUDGET: \$3,310,000

FY 2025 EST. BUDGET: \$270,000

SUPPORT FOR STATE AND LOCAL INITIATIVES

PURPOSE: To provide the modal administrations of the Maryland Department of Transportation (MDOT) and local member agencies with technical assistance using regionally-generated data, development goals, forecasts, as well as regional priorities for transportation planning activities related to the Baltimore region. It is also intended to support local planning initiatives that directly support a regional transportation planning activity.

The Baltimore Metropolitan Council (BMC) continues to work cooperatively with MDOT's modal administrations, as well as local jurisdictions, coordinating data collection, model development, maintenance, and technical assistance for model application and data analysis.

During Fiscal Years (FY) 2022 and 2023 support was provided to a number of initiatives. The MDOT MTA requested Regional Transit Plan East/West and North/South transit corridor alternative modeling support. A 2019 InSITE base year evaluation led to staff implementing minor mode choice adjustments based on MDOT MTA's 2019 Automated Passenger Count (APC) route level ridership estimates and TAZ demographic adjustments based on 2020 Census PL194 redistricting data set. BMC staff coded CUBE transit networks based on transit corridor evaluation team-identified alternative route alignments, stops, and operating characteristics. An InSITE horizon year transit corridor simulation was executed. InSITE simulation results were analyzed, summarized, and evaluated supporting transit corridor key performance measures.

Staff supported Anne Arundel County I-97 express bus evaluation. A CUBE transit network, connecting the Parole Transit Center/Mall to Cromwell Light Rail, along with stops and operating characteristics was coded. An InSITE 2025 horizon year simulation was executed and model results were tabulated and summarized.

BMC staff has developed several demographic tools in processing aggregate Cooperative Forecasting household and population data into Jurisdiction and TAZ synthetic marginal control marginal tables. The developed tools provided other utility in the analysis of jurisdiction disaggregate demographic data. Working with Howard County, staff has applied the Population Trends: Interpreting Cohort Shifts (pOPTICS) spreadsheet model to forecasted jurisdiction gender and 18 age cohort population totals. The gender and age data support trend analysis such as horizon year school-age, prime working age, and elderly population totals.

Member jurisdictions requested support on the analysis of Federal, state, or local data sets. Staff supported Baltimore County Towson Loop ridership using MDOT MTA's APC data. MDOT MTA provided February 2020 and October 2022 APC stop and route data. Staff created dashboards summarizing MDOT MTA stop boarding/alighting COVID impact trends. An October 2022 route and stop dashboard was also developed. The MDOT MTA APC data is assisting in the Towson Loop ridership performance evaluation.

In FY 2024 and 2025, staff will continue to support MDOT modal administrations in several areas: 1) investigation/coordination data acquisition and analysis, 2) InSITE transition as the endorsed regional modeling tool, 3) state and regional technical tool coordination and enhancements, and 4) technical analysis.

Data collection and analysis are used to identify patterns and trends leading to policy decisions that enhance and improve personal travel movement and the flow of goods and services. MPOs and State DOTs have adopted the use of passively collected data from various sources as a cost-effective method to monitor system performance and travel patterns and trends on continuous bases. BMC staff will continue to monitor advancements in passively collected data and when appropriate will acquire data in support of regional performance monitoring, corridor/project planning analysis, and model calibration/validation.

With the InSITE adoption as the region's travel simulation model, BMC staff will support member agency transition and adoption. Support will be provided on the installation and setup of the advanced microsimulation travel model. With dissemination complete, BMC staff will support state and location InSITE application and analysis. Agency staff has developed methods to prepare required input data and created scripts to summarize and process simulation results.

The 2019 Maryland Household Travel Survey revealed data will be used to calibrate regional and statewide model components and provides an opportunity to enhance model capabilities in response to policy initiatives.

The second part of this task is to provide support for initiatives managed by local jurisdictions. After reviewing options from other UPWPs around the nation, each jurisdiction has identified local transportation planning projects that are expected to occur during FY 2024. These projects support regional planning practices (or relate to the BRTB work program). They are planning projects with no design beyond 30%, no construction and no operating funds. As do other tasks/projects, these tasks will result in a product. Projects will be identified by local jurisdictions and approved by the Executive Committee and may include items such as: Speed Management, Patapsco Regional Greenway elements, crash analysis and Transportation Elements of Comprehensive Plans."

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PRODUCTS/MILESTONES	SCHEDULE
Investigation/Coordination Data Acquisition and Analysis	Ongoing FY 2024-2025
InSITE Transition Support	Ongoing FY 2024-2025
Technical Tool Coordination and Enhancements	Ongoing FY 2024-2025
Technical Analysis	Ongoing FY 2024-2025

PARTICIPANTS: BMC, MDOT Modes, Local Members

FY 2024 BUDGET:	Annapolis	\$60,000
	Anne Arundel Co	\$60,000
	Baltimore City	\$60,000
	Baltimore Co	\$60,000
	Carroll Co	\$60,000
	Harford Co	\$60,000
	Howard County	\$60,000
	Queen Anne’s Co	\$60,000
	BMC Staff	\$190,000
	Total	\$670,000
FY 2025 EST. BUDGET:		\$670,000

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PLANNING CONTEXT

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LONG-RANGE TRANSPORTATION PLANNING

PURPOSE: Maintain the regional planning process in response to guidance in the Metropolitan Planning Regulations. Develop the plan guiding long-term investments in the region's transportation systems.

A range of activities supporting long-range transportation planning was completed during Fiscal Years 2022 and 2023. These activities focused on development of the 2023 LRTP, *Resilience 2050*.

Development of *Resilience 2050* will continue to follow the performance-based approach established in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and refined in the Fixing America's Surface Transportation (FAST) and Infrastructure Investment and Jobs Act (IIJA). To this end, BMC staff worked with MDOT to adopt and update federally required performance measures and targets. The BRTB adopted updated targets as follows: highway safety performance targets in January 2022 and January 2023; targets addressing the CMAQ program in August 2022; transit asset management targets in January 2023; bridge and pavement condition targets in February 2023; and travel time reliability targets in February 2023. BMC staff also discussed and drafted an improved system performance report required to be included in the LRTP.

As planning for *Resilience 2050* got underway, members coordinated with representatives from DOD facilities in the region to integrate the highway needs of the national defense network into the transportation planning and project programming process. The Strategic Highway Network consists of public highways that provide access, continuity, and emergency transportation of personnel and equipment in times of peace and war.

BMC launched public facing websites for *Resilience 2050*. Staff held a comment period for the goals and strategies, receiving more than 165 comments. Staff responded to and revised the goals and strategies, with BRTB approval in November 2021. BMC staff also revised the technical scoring criteria for *Resilience 2050*, with updates focusing on adding transit criteria that previously had been absent, allocating additional points to safety, and adding criteria related to potential impacts to EJ populations. The BRTB adopted the updated technical scoring criteria in November 2021.

Also, BMC coordinated with the Cooperative Forecasting Group to develop Round 10 forecasts through 2050 for households, population, and employment. The BRTB endorsed the Round 10 forecasts in July 2022.

BMC staff coordinated development of the financial forecast with MDOT staff in FY 2022 and FY 2023. MDOT submitted an initial financial forecast in April 2021. BMC requested an updated forecast incorporating the impacts of the IIJA. MDOT submitted an updated forecast in August 2022. BMC staff also worked with a consultant and local jurisdiction staff to develop a forecasting tool for local transportation revenues. The BRTB endorsed the financial forecast in January 2023. This included forecasted revenues and estimates of amounts expected to be spent on system operations, system preservation, and expansion projects.

BMC staff solicited major capital expansion projects from jurisdictions and state modal agencies in late FY 2022. Staff received 98 candidate projects from the jurisdictions and agencies and coordinated

with submitters as needed to gather additional information.

In FY 2023, BMC staff evaluated the submitted projects relative to adopted policy and technical scoring criteria. BMC staff completed the scoring and mapping of the candidate projects and coordinated with MDOT MTA and MDOT SHA to develop cost estimates for all candidate projects. Staff also compared the estimated year of expenditure costs of major capital expansion projects to forecasted revenues. This was in preparation for BRTB and Technical Committee development of a preferred alternative for *Resilience 2050*. The BRTB and Technical Committee reviewed and finalized a preferred alternative in winter 2023.

BMC staff evaluated the potential performance of the preferred alternative projects relative to expected travel demand, air quality conformity requirements, and Environmental Justice policies and concerns. Staff also coordinated with resource agencies on potential effects relative to natural and cultural resources. BMC continues to coordinate with Federal Land Management on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.

BMC staff developed a draft plan and held public meetings throughout the region to allow for public review of the document as well as posting recordings online for public review.

Throughout FY 2022 and FY 2023, BMC staff continued to keep committees informed about developments related to trends discussed in the LRTP. These efforts included continued updates to the Baltimore Regional Recovery Dashboard as well as presentations to the Technical Committee and BRTB on a wide variety of topics including air quality progress, demographic trends, selected analyses from the Maryland Household Travel Survey, progress on the Regional Transit Plan, and housing initiatives in the Baltimore region. BMC staff also launched a series of white papers related to LRTP topics in February 2022. Monthly releases extended through February 2023 and included 11 papers focused on project scoring, traffic safety, transit, active transportation, and emerging technologies, among others.

FY 2024 activities will include: Gathering and responding to comments from the public, producing a final LRTP and submitting the plan to the Federal Highway Administration, Federal Transit Administration, and U.S. Environmental Protection Agency for review and approval; continuing to keep the Technical Committee and BRTB members informed about developments related to trends discussed in *Resilience 2050*; developing a draft schedule for the 2027 LRTP; and initial planning to incorporate recommendations from the FY 2023 equity scan related to the LRTP.

FY 2025 Activities are anticipated to include (and will be refined): further developing the draft schedule for the 2027 LRTP; reviewing project prioritization and scoring methods with a focus on a multi-modal approach; further planning to incorporate recommendations from the FY 2023 equity scan related to the LRTP; and early steps to develop the 2027 plan such as name, branding, templates, review of regional goals and strategies, and discussion of an implementation plan.

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FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Gathering and responding to comments from the public	1 st Quarter of FY 2024
Producing a final plan and submit to reviewing agencies	1 st Quarter of FY 2024
Develop draft schedule for 2027 LRTP	3 rd Quarter of FY 2024
Continue to inform committees and explore trends discussed in the LRTP such as population and employment growth, travel patterns, the environment, emerging technologies, etc.	Throughout FY 2024
Planning related to incorporating recommendations from the FY 2023 equity scan	Throughout FY 2024

FY 2024 BUDGET: \$190,000

FY 2025 EST. BUDGET: \$190,000

TRANSPORTATION IMPROVEMENT PROGRAM

PURPOSE: To assemble a comprehensive listing of requests for federal funds and regionally significant projects based on planned state and local transportation investments and in support of regionally adopted performance measures and targets over the next four-year period. Coordinate the Baltimore Regional Transportation Board (BRTB) Transportation Improvement Program (TIP) process to ensure member transportation projects fulfill all related federal requirements.

Baltimore Metropolitan Council (BMC) staff have utilized the web-based online TIP system to produce every TIP document for the last eight years. In addition, all jurisdictions and agencies submit, view and edit their TIP projects through the online web-based portal. BMC staff continue to train agency staff as necessary and distribute a step-by-step guide to using the web-based system at the beginning of each call for projects. A training session was held on October 19, 2022 and included agency staff that prepare annual updates as well as staff that prepare TIP modifications.

Staff continue to work with Data Transfer Solutions LLC (DTS) staff to integrate updates and functionality into the TIP system as necessary. For example, the 2020-2023 TIP included two additional project categories at the request of the Public Advisory Committee (PAC). Transit and commuter rail projects were split into “preservation” and “capacity” categories to match the categorization of highway projects. In FY 2021, staff worked with DTS to integrate recommendations from the updated Congestion Management Process. The TIP database was updated to include questions intended to capture and track CMP strategies associated with TIP projects.

The FY 2022 TIP cycle followed a relatively similar schedule to previous TIP years. The BRTB approved the 2022-2025 TIP on July 27, 2021, with federal approval received on November 11, 2021. The 2022-2025 TIP was published online in PDF form as well as in an interactive project map format developed by BMC staff. A public comment period was held from June 8, 2021 through July 9, 2021.

Obligated listing data for FY 2020 became available from the Maryland Department of Transportation (MDOT) on January 28, 2021. BMC staff prepared and published the FY 2020 obligated listing on March 17, 2021. Staff reviewed and coordinated with the region’s conformity determination in the processing of sixteen amendments and fifteen administrative modifications to the 2021-2024 TIP.

In FY 2022, BMC staff worked with BRTB members to prepare for the FY 2023-2026 TIP. Project sponsors completed project submittals in March 2022 followed by the Interagency Consultation Group (ICG) determination of exempt/nonexempt status for projects in June. The public comment period extended from June 29 through August 1. The public review was virtual due to the Coronavirus pandemic. Highlights included an ArcGIS Storymap, an interactive project map allowing commenting directly from the map, and a Tableau dashboard. BMC staff also held one virtual public meeting and presented to various committees. The public meeting was also recorded and posted on the BMC website for those that could not attend the meeting live. BMC staff anticipate using these materials for future TIP cycles.

As of December 2022, MDOT has not provided the necessary data to publish the FY 2021 obligated listing. Staff reviewed and coordinated with the region’s conformity determination in the processing of eight amendments and twenty-two administrative modifications to the 2022-2025 TIP.

BMC staff reviewed alternative definitions of low-income in the development of Environmental Justice mapping and analysis used by other MPO’s as well as the American Community Survey (ACS) data for use in the 2023-2026 TIP. As a result, BMC staff revised the Environmental Justice section, including more detailed data on EJ populations and a discussion of the methodology used to identify EJ Transportation Analysis Zones.

As required by the FAST Act and subsequent IIJA, the 2023-2026 TIP included a discussion of the 25 federally required performance measures and targets as well as a discussion of the anticipated impact of TIP investments towards their achievement.

FY 2023 and FY 2024 activities will include:

- A similar TIP production process to FY 2023 will take place in FY 2024 and FY 2025. In keeping with current surface transportation legislation, a listing of projects with federally obligated funds from the previous TIP’s annual element will be published within ninety days after the end of FY 2023 and FY 2024.
- BMC staff will continue to use and improve materials used to summarize and disseminate the TIP to the public including interactive maps, storymaps, and Tableau dashboards.
- BMC staff will work to improve the Performance-Based Planning and Programming section of the TIP. Specifically, BMC staff will work to improve the methods utilized to analyze the impact of TIP investments on the achievement of performance measures and targets.

PRODUCTS/MILESTONES	SCHEDULE
Approval of the FY 2024 – 2027 TIP	1st Quarter of FY 2024
Approval of the FY 2025 – 2028 TIP	1 st Quarter of FY 2025
FY 2023 Obligated Listing Development	2nd Quarter of FY 2024
FY 2024 Obligated Listing Development	2nd Quarter of FY 2025

FY 2024 BUDGET: \$190,000

FY 2025 EST. BUDGET: \$190,000

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PROMOTING INCLUSIVENESS & COOPERATION

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PUBLIC PARTICIPATION AND COMMUNITY OUTREACH

PURPOSE: To allow individuals, organizations, and groups the opportunity to actively engage in the regional transportation planning process through a variety of methods. The Baltimore Regional Transportation Board (BRTB) has affirmed that active participation, by the public and partner agencies alike, is an essential part of a meaningful transportation planning process because it enables government agencies to understand and account for the concerns and needs of the public, particularly at times when key decisions regarding the region's transportation network are made.

In Fiscal Year (FY) 2023 staff informed and engaged the public in a variety of ways, including: soliciting public comments through comment periods and public meetings on a variety of plans including the Unified Planning Work Program (UPWP), Transportation Improvement Program (TIP), Public Participation Plan (PPP); and Resilience 2050 (white papers). Additional comment periods were held on local projects including: transportation issues in historic town centers; a concept plan for bike and pedestrian improvements in Harford County; and design for a section of the Patapsco Regional Greenway. Staff also launched the Transportation CORE (Community Outreach and Regional Engagement) which virtually brings together over 50 area residents to provide essential consultation and stakeholder comment on the planning process. Staff took efforts to improve communications and outreach efforts including utilizing social media to share information and grow audiences on Facebook and Twitter for BaltoMetroCo, B'more Involved, and Bike2WorkCentralMD. New ways to comment were offered including voicemail and text message; and a team of staff collaborated on a regional Bike to Work Week.

In FY 2024-2025, staff will continue to educate and engage the public early and often throughout the planning process. Ongoing activities include:

Support efforts to solicit public input throughout the planning process by promoting public comment opportunities, hosting public meetings, and conducting outreach and education efforts throughout the region. In particular, staff will promote public involvement opportunities for the next long-range transportation plan, TIP, UPWP, Air Quality Conformity Determination, locally focused projects, and other plans and projects released for public review by the BRTB.

Comments from the public will be shared with the BRTB members and incorporated into plans when feasible. Responses to public comments will be coordinated and monthly reports on comments will be provided to the BRTB.

Staff will utilize a variety of communications tools and techniques to reach the public including: outreach at local meetings and events; sending press releases and e-newsletters, maintaining a robust social media presence on B'more Involved (promoting civic engagement) and BaltoMetroCo (BMC/BRTB announcements, opportunities, and events); distributing surveys, place advertisements, etc. An internal communications team will meet regularly to coordinate and collaborate on outreach and education efforts. Staff will prepare an annual report on public involvement activities.

New guidance from USDOT on meaningful public involvement, Justice 40, and the Equity Action Plan will continue to be reviewed and incorporated into the BRTB's process. Staff will continue to increase

meaningful public involvement in transportation planning through a variety of methods, including integrating Virtual Public Involvement (VPI) tools into the overall public involvement approach while ensuring continued participation by individuals without access to computers and mobile devices.

Staff will, through public engagement, seek ways to identify and incorporate community vision and need in project selection and design. Staff will also conduct regular evaluations and identify ways to overcome barriers to involvement, especially in historically underserved communities.

PRODUCTS/MILESTONES	SCHEDULE
Solicit and address public comments as needed	Throughout Fiscal Year
Utilize the Transportation CORE to inform regional planning	Monthly (or as needed)
B'More Involved, notices to Interested Parties, press releases, and other e-news/social media marketing	Throughout Fiscal Year
Conduct outreach and promote initiatives	Throughout Fiscal Year

FY 2024 BUDGET: \$490,000

FY 2025 EST. BUDGET: \$490,000

TRANSPORTATION EQUITY PLANNING

PURPOSE: To encourage equitable outcomes and involvement in the regional transportation planning process.

During Fiscal Year (FY) 2022 and 2023, staff completed annual Title VI updates. In addition, staff updated the Vulnerable Population Index (VPI) datasets based on current American Community Survey (ACS) data and also updated the Limited English Proficiency Plan.

There has been a greater emphasis on integrating an equity lens throughout the regional planning process. Major national events have greatly influenced how all of us conduct our business to adjust for a full and fair approach to the work we undertake. Many training opportunities are being offered and will likely continue and be refined with local inputs. BMC will continue to monitor contracts for Disadvantaged Business Enterprise (DBE) participation and host the annual “Meet the Primes” event.

Activities involving BRTB committees or consultants that staff were engaged in during FY 2022-2023:

- * BMC undertook to develop a Pedestrian Infrastructure Tool and had multiple meetings to clarify how to incorporate equity measures such as the VPI into the prioritization process within the PIA tool.

- * Initiated a consultant task with an Equity Scan to review of national best practices to inform potential improvements to the BMC and BRTB policies, programs, analysis, methodologies, data and tools.

- * Initiated a consultant task with the goal to identify and document the impact of transportation fees, fines and fares on the residents of the Baltimore region, particularly on low income residents and [vulnerable populations](#). The project will also include identification of potential mitigation measures to reduce the impacts that transportation revenue collection may have on low income residents, and how such measures may in turn impact transportation revenue goals.

- * Work on project scoring for Resilience 2050 projects, equity and EJ issues have been woven throughout the highway and transit criteria.

- * Work on a new definition for low-income populations to be used for EJ analysis. Prior analyses defined low-income as households below the poverty level. BMC staff reviewed the definition of low-income households utilized by 23 other MPOs. BMC staff recommended 200% of the poverty level as the new definition for low-income populations which was accepted.

- * Multiple presentations from the Census Bureau: measuring racial and ethnic diversity (with Census data), Community Resilience Estimates Equity Supplement.

- * Part of review team on MDOT SHA Research project to develop Equity-Based Metrics for CAV Deployments. Developed an equity resources spreadsheet to share with members.

Internal activities that staff were engaged in during FY 2022-2023:

- * BMC staff participated in a series of FHWA webinars focused on EJ and equity screening tools, including: FHWA’s Infrastructure Voluntary Evaluation Sustainability Tool (INVEST), PlanWorks, and HEPGIS, EJ and equity screening tools.

- * Reviewed the new US DOT Transportation Disadvantaged Census Tracts for similarity to VPI work.

- * Using new ACS data covering 2016-2020, the VPI was updated and the interactive online product was launched.
- * The BMC Equity Working Group met and continues to deepen their understanding and application of this topic. * Staff attended Smart Growth America’s Equity Summit and shared notes.
- * Participated in a workshop called: Racial Justice at Work: Combating Antiracism and Racism in the Workplace. This workshop was sponsored by the MD Civil Rights Commission.
- * Attended a webinar on Fintech in Black-majority communities: Addressing racial gaps, strengthening financial health and wealth.
- * Attended a webinar on The State of Black America in 2022.
- * Attended a UWCM webinar on: Priorities and possibilities. Local leaders share their vision for the future.

In FY 2024 and 2025 BMC staff will continue work to advance racial equity and support for underserved and disadvantaged communities through implementation of recommendations from the Equity Scan that is nearing completion. Through the second task on Fares, Fees, and Fines – we expect to have an understanding of the impacts that these financial burdens have on members of the community. A number of documents have been and continue to be released related to Equity and Justice40. Most of the tasks in the UPWP will have some equity related component, such as infrastructure for non-motorized travel, safety for all users, reducing single-occupancy vehicles, looking at transit fares, and demand-response services.

PRODUCTS/MILESTONES	SCHEDULE
Review DBE Participation Goal	2 nd Quarter, FY 2024, 2025
Prepare Title VI Annual Report	3 rd Quarter, FY 2024, 2025
Implement Equity Scan recommendations	Ongoing
Review ADA Policies	2 nd Quarter, FY 2024

FY 2024 BUDGET: \$160,000

FY 2025 EST. BUDGET: \$160,000

GATHERING & ANALYZING DATA

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GIS ACTIVITIES

PURPOSE: To maintain the Geographic Information System (GIS) that allows for data to be spatially organized, updated, analyzed, and disseminated; and to perform spatial analysis and create visualizations of demographic, socioeconomic, and travel information.

In FY 2023 to date, staff completed the following activities:

Staff has supported the long-range transportation plan (LRTP) process by developing an interactive online map application for internal use by BMC staff which includes spatial datasets of submitted projects and associated buffers for project scoring. In addition, staff analyzed and reported on potential impacts of the Final Criteria for Census 2020 Urban Areas on the Baltimore metropolitan region. BMC provided critical GIS support in reviewing and providing feedback on the development process for the Pedestrian Infrastructure Assessment Toolkit. When completed, this powerful set of tools will assist our local jurisdictions in identifying sidewalk mileage and gaps, visualizing sidewalk data, and prioritizing sidewalk projects according to various criteria.

Staff also maintains a large enterprise geodatabase of transportation, planning, and demographic data for use in mapping and GIS analysis. Staff recently created a series of maps on the Patapsco Regional Greenway and on Top Regional Active Transportation Priorities in support of regional bicycle facilities and trail planning work. In addition, staff produced maps, charts, and data calculations for the 2020 Vulnerable Population Index white paper.

In FY 2024 and 2025, staff will complete the following activities:

BMC staff will provide ongoing geospatial analysis, mapping, GIS system and database maintenance, and technical support for transportation planning activities, including for the LRTP and the Transportation Improvement Program (TIP).

Staff will continue to support and expand BMC's web presence through our Open Data website, which allows users to download GIS data and incorporate it into their own applications. BMC will update or create new versions of several of our existing web mapping applications on an annual basis, including the Congestion Management Process Analysis Tool app, Regional Bicycle Facilities app, Traffic Count locations dashboard, and Vulnerable Population Index app. Staff will also create a new public comment mapping application and interpretive story map for the TIP each spring. Additional web mapping applications will be created to serve as planning, analysis, and public outreach tools as those needs are identified.

Work with the Baltimore Regional Geographic Information System Committee (BRGISC) will continue with ongoing coordination of regional projects, advocacy for regional interests at the state level, and creation of networking and training opportunities for GIS staff from our member jurisdictions.

BMC will continue its leadership role in GIS activities at the state level, including working with the Maryland State Geographic Information Committee (MSGIC) and coordinating with state GIS entities at MD iMap Technical Committee meetings.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
GIS mapping and geospatial analysis	Throughout Fiscal Year
Manage, update, and maintain an enterprise GIS system	Throughout Fiscal Year
Organize and participate in BRGISC and coordinate regional GIS projects	Throughout Fiscal Year
Participate in MSGIC and other GIS activities and trainings in the state and region	Throughout Fiscal Year
Develop, update, and maintain online GIS mapping applications and GIS web services	Throughout Fiscal Year

FY 2024 BUDGET: \$420,000

FY 2025 EST. BUDGET: \$420,000

DEMOGRAPHIC AND SOCIOECONOMIC FORECASTING

PURPOSE: To develop and maintain population, household, and employment forecasts for the Baltimore metropolitan region. The cooperative forecasts serve as a key input to the regional travel demand forecasting process and the development of the long-range transportation plan (LRTP). Staff of the local jurisdictions comprise the Cooperative Forecasting Group (CFG) and coordinate the development of their jurisdiction's estimates and forecasts. Jurisdictional staff utilize local comprehensive plans, adopted zoning maps and regulations, and an inventory of available residential holding capacity to inform their forecast process.

During Fiscal Years (FY) 2022 and 2023, the CFG continued to meet on a bi-monthly basis, evaluated the need for updating the forecasts, and developed updated forecasts as necessary. Much of the past two years were spent developing the Round 10 cooperative forecasts and a series of travel demand model inputs, both on a timeline to support development of the long-range transportation plan, *Resilience 2050*. The CFG utilizes a "bottom-up" approach, where members develops estimates and forecasts for their local jurisdictions, which sum to a regional total. The CFG is charged with generating forecasts for total population, group quarters population, households, and employment at the jurisdiction and Transportation Analysis Zone (TAZ) levels of geography.

The development of the Round 10 cooperative forecasts occurred during the COVID-19 pandemic, a time when economic conditions were uncertain and delays in the release of supportive datasets were common. While reconciling the Round 10 development schedule with data availability that supported the inclusion of pandemic impacts was a challenge, the CFG membership accomplished the task.

There were a number of considerations new to the development of the Round 10 cooperative forecasts including:

- The Pandemic: The CFG included pandemic impacts in the base-year jurisdiction level employment estimates;
- New Jurisdiction Base-year Employment Methodology: Timing of data availability required a modification to the wage and salary employment source data, and the CFG made a further adjustment in changing the source for the self-employment component of total employment (resulting in a more conservative estimate);
- 2020 Decennial Census: The August 2021 release of block-level redistricting data from the 2020 Census allowed time for CFG membership to include this data in Round 10 development. Decennial census data provided an opportunity for the CFG members to recalibrate their demographic data to a "known" base-year estimate – from which population and household data are forecast;
- New Base-year and Horizon-year: The previous forecasts (Round 9A) had a base of 2015 and a horizon year of 2045. Round 10 has a base-year of 2020 (due to the availability of decennial census data) and a horizon year of 2050 (to meet the requirements of the LRTP update);
- New TAZ Structure: BMC staff and CFG members collaborated to develop an updated TAZ structure based upon 2020 Census geography.

The Round 10 cooperative forecasts were endorsed by the BRTB on July 15, 2022.

In FY 2024 and FY 2025, the CFG will continue to meet on a bi-monthly basis, evaluate the need for updated forecasts on an annual basis, and update the forecasts as necessary. BMC staff will continue to monitor the release of Census data that pertains to population, households, and employment, document the proceedings of the CFG meetings, document comparisons between Round 10 and future long-range population, household, and employment forecasts, provide small area residential and employment estimates and forecasts to local jurisdictions on request, continue data compilation, data development, and technical assistance for BMC partners, and continue discussions on bi-regional growth assumptions with the Metropolitan Washington Council of Governments (MWCOG) and Wilmington Area Planning Commission (WILMAPCO).

PRODUCTS/MILESTONES	SCHEDULE
Evaluate need for update to forecasts	Throughout Fiscal Years
Update forecasts as necessary	Throughout Fiscal Years
Monitor and review relevant Census data releases	Throughout Fiscal Years
Document proceedings of the CFG	Throughout Fiscal Years
Provide data to local jurisdictions upon request	Throughout Fiscal Years
Provide data compilation, data development, and technical assistance	Throughout Fiscal Years

FY 2024 BUDGET: \$280,000

FY 2025 EST. BUDGET: \$280,000

DEVELOPMENT MONITORING

PURPOSE: To track new land development patterns in the region by type (residential, non-residential, mixed-use etc.), location, and timing. Tracking development activity is important to the transportation planning process as it recognizes the placement of household and employment growth across the region, and assists in the analysis of the associated demands upon the transportation network. Ongoing contact with state and local agencies provides data needed for this activity.

During Fiscal Years (FY) 2022 - 2023, Baltimore Metropolitan Council (BMC) staff continued to collect and process building permits from each of the local jurisdictions, bringing them into one common system. Throughout much of calendar year 2022, Anne Arundel County and Baltimore County have been in the process of migrating to new building permit software applications, during which time their permit reporting to BMC has been paused. BMC staff is working closely with local government personnel to ensure that reporting for these jurisdictions resumes as quickly as possible.

The Building Permit Data System (BPDS) at the BMC is the source for various products and services including reports and analyses of regional trends (supported by charts, tables, and maps highlighting notable development activity) and BPDS Online, which allows users to develop their own queries and search the building permit files online through subscription. In addition, staff continues to make available the BPDS Quick Viewer, which is a free online mapping product that allows the user to view the location of selected building permits on a map. Staff also contributed detailed building permit data to the Regional Recovery Dashboard and made multiple presentations on development monitoring activities to the Cooperative Forecasting Group and Technical Committee of the Baltimore Regional Transportation Board (BRTB).

In FY 2024-2025, staff will continue to prepare monthly and annual reports of plans for new residential and non-residential development. Staff will continue the production of annual reports on “green” construction activity. “Green” refers to the Addition/Alteration/Repair permit category that contains features directed toward energy conservation. Staff will continue to create an annual report on residential hot spots, detailing which residential developments in the region are permitting the most units. Additionally, there will be an annual analysis of building permit activity by sewer service areas and priority funding areas. Staff will also continue to support the work of local planning partners by fulfilling requests for customized building permit data extractions, reports, and analyses.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Reports on residential/non-residential development plans	Throughout Fiscal Years
Reports on “green” construction activity	1 st Quarter 2024 – 2025
Report on residential hot spots	2 nd Half FY 2024 – 2025
Analyses/Maps of residential building permit activity by sewer service areas and Priority Funding Areas	2 nd Half FY 2024 – 2025
Provide local planning partners with customized building permit data extractions and reports upon request	Throughout Fiscal Years

FY 2024 BUDGET: \$300,000

FY 2025 EST. BUDGET: \$300,000

ANALYSIS OF REGIONAL DATA AND TRENDS

PURPOSE: To identify regional travel trends and related policy issues, using existing Baltimore Metropolitan Council (BMC) datasets and outside resources where available. The results of the analysis will be communicated to local officials and the public. Also to review, analyze and develop relevant transportation planning products from data released by relevant agencies such as the U.S. Department of Commerce and the U.S. Census Bureau; and to continue analyzing the 2018-2019 Household Travel Survey results.

During FY 2022-2023, staff completed the following activities:

Regional Indicators – The scope of the Regional Indicators task reflects the broad social and economic forces that influence, and are influenced by, the policies and programs of the Baltimore Regional Transportation Board (BRTB). BRTB policy goals and program initiatives are articulated in documents such as *Resilience 2050*, the region’s upcoming long-range transportation plan.

With the release of the 2017-2021 ACS 5-year estimates and the 2020 Census results, staff updated all regional indicators to reflect the latest data.

Household Travel Survey – The Household Travel Survey is BMC’s primary source for demographic and travel data. Individual and Household demographics (e.g., gender, income, employment status, age, and number of children) have more influence over people’s travel activity and travel need than any other factors. Demographics are important for planning all transportation modes and are particularly important for planning transit service, where data on demand for transit service is aggregated by cohorts, e.g., young adults, elderly, etc.

Data collection began in May 2018 and ended in July 2019. Concurrently, the Metropolitan Washington Council of Governments (MWCOC) conducted its Regional Travel Survey. Post-processing of the survey data also began in July 2019. The MDOT supported a need to make these surveys statewide. Therefore, the BMC contract was responsible for all jurisdictions that were not members of MWCOC. Staff collaborated with the consultant and MWCOC to check and clean the survey data and calculate final sample weights. After post-processing, the products of these surveys were combined to provide a uniform dataset statewide.

Staff has continued to analyze and report on survey results for the Baltimore region, including a series of presentations to the Technical Committee throughout FY 2022-FY 2023.

In particular, staff has completed the following analyses: 1) Non-Motorized Travel in the Baltimore Region, 2) Demand for Public Transit and the Transit Experience, 3) Making the Transit Connection in the Baltimore Region, 4) Driving After Transit, 5) Transit Hot Spots, 6) Travel with Friends, and 7) Travel with Family.

In addition, staff has developed the following products: 1) Jurisdictional Data Books – working with local jurisdictions and state agency staff, BMC staff has continued to produce a series of standardized annual publications containing transportation and related data for each of the member

jurisdictions. 2) A regional compendium to assist in local and regional planning and decision-making. The data books have been revised in consultation with member governments and are available in print and online.

In FY 2024-2025, staff will complete the following activities:

Regional Indicators – Staff will continue to update all regional indicators as new data from the U.S. Census Bureau and other sources are released.

Household Travel Survey – Staff will continue to analyze and report on survey results for the Baltimore region. Major sub-tasks are Trend and Policy Analysis and Custom Data Products.

Trend and Policy Analysis – Staff will identify Baltimore region demographic and travel trends using data from the recent Household Travel Survey and the previous 2007-2008 Household Travel Survey. This analysis can track the progress of current BRTB policy goals and program initiatives, as well as inform the development of future regional long-range transportation plans. Analyses will include Daily Travel, Household Travel and Energy, Travel Differences by Age, Gender, and Lifecycle, and others to be determined.

Custom Data Products – Staff will continue to respond to requests for custom data products received from member governments.

PRODUCTS/MILESTONES	SCHEDULE
Demographic and Socioeconomic Horizon Year Scenario Planning	Throughout FY 2024-FY 2025
Update Regional Indicators	Throughout FY 2024-FY 2025
Analyze and Report on Survey Results	Throughout FY 2024-FY 2025

FY 2024 BUDGET: \$320,000

FY 2025 EST. BUDGET: \$320,000

MAINTENANCE OF CURRENT SIMULATION TOOLS

PURPOSE: Maintenance of the region's disaggregate demand and traffic simulation tools and enhancing modeling methods.

The region has transitioned and adopted an Activity Based Model, known locally as Initiative to Simulate Individual Travel Events (InSITE). The InSITE model consists of three components: 1) a synthetic household/population generator, 2) a freight modeling system simulating long-distance commodity flows and an urban truck/commercial vehicle touring model, and 3) a person's long-term choices and daily activity tour/trip roster. The InSITE model is used in mobile source emission estimation, long-range transportation plan development, environmental justice analysis, and corridor planning studies.

BMC and the InSITE model developer, coordinated model runtime enhancements, geographic expansion, and 2019 calibration and validation. The following activities were completed and will continue to be tested in the coming fiscal year:

Several population sampling tests were evaluated before determining that a 25% sample produced accurate results. The sampling was implemented in TourCast and decreased run time by 45%. TourCast multi-processing was introduced to split households and persons according to TAZs. Splitting TAZ demographic data allows the running of several independent TourCast processes with each tied to a unique subdirectory of input files and a matching database. Unique process TourCast output coalesces back into a single common trip matrix and a common database. The multi-processing decreased run time by 32%.

The Cooperative Forecasting Group was engaged to develop a new zone structure based on the 2020 Census tract, block group, and block boundaries. TAZ boundaries were created using 2020 Census blocks and block groups. Due to changes in demographics, 56 existing zones were split and 11 were combined. The adopted 2020 TAZ structure was incorporated within InSITE and adopted in the development of the Round10 Cooperative Forecasts. The InSITE model planning area was expanded to include Queen Anne's County, a recently added BRTB member jurisdiction, as well as the inclusion of Adams and York Counties to improve internal/external interaction along northern boundary of the planning area. The additional jurisdictions required BMC staff to expand the zone structure and representative transportation networks. BMC coordinated with MDOT SHA on Adams and York County zone structure and demographic data.

The region's 2008 household travel survey was used in the InSITE model components estimation and 2008 validation. The EPA air quality conformity guidance requires a model to be validated within 10 years of the mobile source emission analysis date. The 2019 Maryland Household Travel Survey (MHTS) was processed and tabulated in InSITE for an updated 2019 calibration and validation. MDOT provided highway traffic counts and route-level ridership estimates in validating transportation network loading. The 2019 validation included a LOCUS data purchase. The passively collected massive (5 to 10 percent of the population) data set was used to validate origin-destination flows by the time of day and aggregate tour/trip purpose.

Other recent staff activities will continue to be tested in the coming fiscal year, including:

Transportation Networks - InSITE transportation networks are developed within a custom ESRI GIS application. Transportation networks are created for short- and long-range transportation plans and alternatives analysis. Staff maintains the application and recently incorporated the new 2020 TAZ structure and expanded model planning area (Queen Anne's, Adams, and York Counties). A combination of CUBE and ESRI software scripts are applied in the development of transit walk access/egress and drive access links.

pOPTICS - The pOPTICS jurisdiction component of the change spreadsheet model was developed for the expanded model planning area (Queen Anne's, Adams, and York Counties). This required gathering vital statistics on births and deaths and Census gender and cohort population data for 2010 and 2015. Existing pOPTICS jurisdiction spreadsheets were revised incorporating the Round 10 demographic data and model estimates reviewed.

Staff revised the synthetic household and population generation method introducing race as a TAZ control variable. The pOPTICS spreadsheet model was revised to output jurisdiction population totals by gender, race (non-Hispanic white and other), and 18 age cohorts for jurisdiction population margins. Base year TAZ Census population data by race was tabulated estimating the total TAZ population by non-Hispanic white and other. A CUBE script was developed combining pOPTICS jurisdiction and TAZ Census population by race. Iterative proportional fitting is used to adjust TAZ population by race and TAZ estimates to align with pOPTICS jurisdiction estimates.

Planning Dashboards - Planning area dashboards were developed with consultant support covering transit, network performance, Transportation Improvement Program, air quality, demographics, freight, and InSITE. The dashboards are designed to be engaging, and informative, and allow users to download and print dashboard maps, charts, and tables. The InSITE dashboard consists of two tabs. One tab, allows users to explore a horizon year-generated tour/trip roster and another to compare generated tours/trips over two or more horizon years. Both tabs use demographic and tour/trip filters and segmentation variables to explore and visualize simulation results. The InSITE dashboard allows users to gather basic information about horizon year travel demand and trends.

In FY 2024 and 2025, staff will continue to update, enhance, and maintain the travel simulation tools used in regional and corridor alternative analysis. Staff and consultant work for the coming fiscal year(s) include:

Validation and Calibration Enhancement - The InSITE 2019 validation and calibration will be enhanced. The completed model validation was at the jurisdiction level and focused on the Baltimore region. The first cut InSITE validation was needed to perform Baltimore non-attainment area regional mobile source emission analysis. The enhancement phase will validate the expanded planning area jurisdictions and focus on sub-jurisdiction travel behavior and choices. The enhanced InSITE validation will improve corridor alternatives and small-area capability analysis. An InSITE validation document will be produced comparing simulation and observed travel behavior and choices.

Transit Corridor Analysis - The policy board is focusing on transit analysis and supporting transit corridor evaluation identified in the Regional Transit Plan. InSITE transit network coding will be

revised and improved. Transit network coding requires TAZ walk access/egress and drive access development. Walk and drive links are created connecting TAZs to the transit network. Staff working with a consultant will implement a procedure to generate walk-and-drive links consistently between alternative transit networks. The procedure will adopt recognized standards on walk distances and speeds.

Freight Modeling System - Staff will work on revising and updating the InSITE freight modeling system. This system consists of a long-distance supply chain model, a local freight touring model, and a goods and services commercial vehicle model. The freight modeling system long-distance supply chain was estimated using Freight Analysis Frame (FAF) work version 4 and several other federal data sets. Working with consultant support, the long-distance supply chain model will be revised using FAF version 5 and other updated administrative records. The local freight distribution and commercial vehicle touring model will be updated and calibrated/validated to 2019 observed classified traffic counts. The CUBE application manager InSITE control script will be reviewed and revised allowing users to select horizon year freight scenarios and other freight-dependent inputs. A process will be implemented to allow users to interpolate FAF 5 published horizon year data to InSITE needed horizon year.

pOPTICS - The BMC pOPTICS components of change jurisdiction demographic model was developed using Maryland Department of Health Vital Statistic records and Census Bureau 2010 and 2015 gender and age cohort population totals. The components of change spreadsheet model will be revised and updated using the latest vital statistic records and Census Bureau 2015 to 2020 gender and age cohort population totals. The vital statistic records are used in estimating female age-specific birth rates and gender and age cohort survival rates. The Census Bureau population data is used in estimating the indirect gender and age cohort migration rates. The pOPTICS model will be reviewed and adjusted removing extreme model calculations due to inconsistent data.

Transportation Networks - BMC staff will continue to refine and update model region transportation networks in supporting InSITE model corridor application analysis, TIP/LRTP development, and mobile source emission analysis using the agency's custom ESRI GIS application. Staff will continue to maintain, update, and refine the GIS application with changes in software and data. The GIS application highway master network is reviewed and updated during TIP/LRTP update cycles. Staff will incorporate Cooperative Forecast Group endorsed demographic and socio-economic data and maintain TAZ geographic system.

InSITE - The region's mobile source emission estimation process links simulated InSITE output with the EPA Motor Vehicle Emission Simulator (MOVES). Staff will continue to maintain and develop InSITE post-processing scripts used in MOVES input database development. The latest version of MOVES uses MariaDB for input and output databases. Staff will revise the previous MOVES version MySQL scripts needed to summarize and tabulate MOVES mobile source emission estimates to MariaDB.

InSITE micro simulation adoption allows for the region to investigate and revise the existing Environmental Justice (EJ) analysis from an aggregate to a disaggregate approach. The disaggregate approach would consider all EJ populations regardless of location. Staff will first

proceed to verify InSITE/PopGen base year EJ population distribution compared with 2020 Census estimates. Staff will verify and confirm destination activities used in accessibility calculation. A summarization process will be developed to communicate TIP and LRTP EJ analysis results.

PRODUCTS/MILESTONES	SCHEDULE
InSITE Calibration and Validation	FY 2024
InSITE Network Maintenance/Development	Ongoing FY 2024-2025
pOPTICS Maintenance	Ongoing FY 2024-2025
InSITE Model Visualization	Ongoing FY 2024-2025
Simulation Tools Script Maintenance and Method Development	Ongoing FY 2024-2025

FY 2024 BUDGET: \$380,000

FY 2025 EST. BUDGET: \$380,000

SIMULATION TOOLS: APPLICATIONS AND ANALYSIS

PURPOSE: Apply aggregate and disaggregate demand and traffic simulation tools supporting the development of short- and long-range transportation plans, the forecast of project corridor demand, and scenario analyses.

In previous fiscal years, simulation tools were used in *Resilience 2050* candidate project scoring, *Resilience 2050* demographic white paper, TIP/LRTP mobile source emissions analysis, and supporting project corridor demand and scenario analysis.

Staff revised and updated *Resilience 2050* candidate project scoring to adopt accessibility and mobility measures and replaced congestion and level of service measures. The adopted measures reflect the transportation system users' experience. Highway and transit accessibility and mobility measures were proposed and researched. Modeling scripts were developed, tested, and refined to be compatible with InSITE analysis capabilities. Staff coded highway and transit candidate projects into the InSITE master network ESRI GIS custom software and updated transit walk access/egress and drive access transit assumptions. InSITE 2050 demographic assumptions were developed and other InSITE model inputs were prepared. InSITE 2050 highway and transit simulation results were estimated and used as candidate project scoring inputs. Staff developed an accessibility and mobility script and the output was summarized, tabulated and used in candidate project ranking.

A staff applied pOPTICS demographic components of change spreadsheet model to the BRTB adopted Round 10 Cooperative Forecasts estimating jurisdiction gender and age cohort population groups. The pOPTICS estimates were summarized, tabulated, and analyzed in preparing the *Resilience 2050* demographic trend white paper. The pOPTICS analysis indicated that the natural population increase (births minus death) will continue to decrease and become negative. The nation, state, and region are all experiencing declining birth rates and a growing older population which is leading to a negative natural population increase.

The 2019 InSITE calibration and validation was finalized and used in the TIP and LRTP horizon year mobile source emission estimates. The 2019 InSITE simulation was summarized and tabulated, then compared with MDOT SHA 2019 highway performance monitoring system average annual vehicle miles of travel. The analysis calculates jurisdiction urban/rural facility type InSITE simulated volume adjustments. InSITE horizon-year transportation networks were prepared and combined with the Round 10 Cooperative Forecast estimating link level travel. Post-processed (HPMS and seasonal) InSITE travel demand is combined with EPA MOVES vehicle fleet and regulatory input assumptions in estimating mobile source emissions. MOVES MySQL database is tabulated and summarized reporting jurisdiction source type VOC and NOx mobile source emissions. Prior to TIP adoption, horizon year mobile source emissions are compared to established State Implementation Plan budgets.

In FY 2024 and FY 2025, staff will continue supporting the development of plans and programs and required technical analysis. Staff will provide *Resilience 2050* analysis support. Staff will prepare InSITE *Resilience 2050* preferred alternative horizon year transportation networks, Round 10

Cooperative Forecasts, and other model input assumptions. InSITE simulated travel behavior and choices will be summarized, tabulated, and analyzed in documenting *Resilience 2050* outcomes. When requested, additional analysis will be performed to understand travel trends and other model-simulated output.

Staff will conduct *Resilience 2050* mobile source emission and environmental justice analysis. InSITE horizon year simulated link mobile source emissions will be post-processed and combined with EPA MOVES3.0 fleet and regulatory assumptions. EPA MOVES emission MariaDB out databases will be queried to tabulate jurisdiction VOC and NOx source type emissions. Horizon-year VOC and NOx mobile source emissions will be compared to “Bump up” SIP budgets to determine federal transportation conformity. A disaggregate approach will be used in assessing *Resilience 2050* Environmental Justice. PopGEN enhancements allow accessibility and mobility calculations using population non-Hispanic white alone and other population races and households in poverty. The disaggregate approach uses all identified EJ populations within all TAZs while measuring *Resilience 2050* preferred alternative changes.

Working with state and local agencies, simulation tools and data analysis of public databases and/or purchased sensor data will be analyzed and applied in support of corridor market travel flow analysis, scenario planning, and horizon year demand and travel forecasts supporting project planning.

BMC staff has used various federal/state and purchased private sector databased, in support of planning studies. Census Bureau decennial and American Commuter Survey data sets provided person and household demographics and information on commuters used in developing/calibrating models and developing trends. Private sector datasets along with Maryland administrative records provide information on firms and worker characteristics used in employment estimates and commuter travel shed analysis. New emerging sensor data is providing unique cost effective opportunities to monitor travel movement with imputed characteristics on a frequent bases allowing seasonal variation monitoring and analysis of travel behavior choices/trends. Staff, partnering with MDOT SHA are working to identify and procure OD sensor data.

BMC modeling staff, supporting local and regional planner, will provide technical modeling support in corridor demographic analysis, travel trends, and travel forecasting. The InSITE model can provided base and horizon year corridor alternative travel market analysis.

PRODUCTS/MILESTONES	SCHEDULE
Plan Development Analysis Support	Ongoing FY 2024-2025
Program/Plan Mobile Source Emission and EJ Technical Analysis	Ongoing FY 2024-2025
Census/Sensor Data Analysis	Ongoing FY 2024-2025
Project Corridor Demand and Traffic Forecast	Ongoing FY 2024-2025

FY 2024 BUDGET: \$330,000

FY 2025 EST. BUDGET: \$330,000

SAFETY & SECURITY

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SAFETY PLANNING AND ANALYSIS

PURPOSE: Improve safety in the region by supporting State and local efforts to reduce crashes, injuries, and fatalities. Fully integrate Baltimore Regional Transportation Board (BRTB) activities with the Maryland Strategic Highway Safety Plan (SHSP) as well as local safety planning efforts.

In Fiscal Years (FY) 2022-2023, Baltimore Metropolitan Council (BMC) continued to play an active role in the implementation of the state's five-year Strategic Highway Safety Plan (SHSP). The SHSP is a blueprint for reducing crashes, injuries, and fatalities across the state and the region. BMC continued to play an active role on the Pedestrian and Distracted Driving Emphasis Area Team (EAT) and the SHSP Executive Council. Staff continued to participate on safety task forces in each jurisdiction led by regional traffic safety partners. Staff worked with partners throughout the region and supported other safety efforts for the BRTB, including setting targets for traffic safety performance measures, facilitating the Baltimore Region Safety Subcommittee (BRSS), and supporting the development of regional pedestrian safety campaigns. Staff have also updated the safety project scoring methodology for the Long-Range Transportation Plan to apply a proactive, Safe System Approach lens.

The Baltimore Regional Safety Subcommittee (BRSS) met quarterly to work with safety stakeholders to identify regional safety issues and develop programs and resources to reduce the number of crashes, injuries, and fatalities in the region. The BRSS brings together state and local representatives from many disciplines including the 4 E's of traffic safety – Engineering, Education, Enforcement, and Emergency Medical Services. A focus of the subcommittee was pedestrian safety as crash-related injury and fatality trends continued to climb. Another focus of the subcommittee was fostering the development of local SHSPs throughout the region. Several partners have been identified as best practices for state-level meetings and workshops and continue to support other jurisdictions in planning efforts.

In FY 2024 and FY 2025, the BRSS will continue to play an advisory role to the BRTB. Staff will also continue to support MDOT, especially the MDOT Motor Vehicle Administration's Highway Safety Office (MHSO), and local jurisdictions in developing and implementing programs and projects that would help reduce the overall crashes, injuries, and fatalities. Local SHSPs will continue to be a priority in the region: Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties and Baltimore City will continue implementing plans and it is anticipated that Queen Anne's County and the Town of Bel Air will finalize plans and begin implementation in 2023. Continued development is a focus and subsequent implementation is critical for success on the local level. Additionally, as Highway Safety Improvement Program (HSIP) funds continue to be available to local agencies and federal funding opportunities are opened from the Bipartisan Infrastructure Law, more support will be provided by BMC staff.

The BRSS will meet continue to meet quarterly under the direction of a new chairperson to highlight progress being made around the Vision Zero goal adopted by Maryland. Staff members will work with the chairperson to identify themes for each meeting relevant to state crash trends and countermeasures. Staff will also work collaboratively with MHSO and MDOT SHA to develop and

monitor traffic safety performance targets for the Baltimore region as required by the Bipartisan Infrastructure Law. Updated targets were adopted by the BRTB in January 2023.

Staff will also continue to support the integration of the Safe System Approach at the local level. An FY 2023 UPWP project will provide guidelines and best practices for local implementation of this concept, which is a foundation for the National Roadway Safety Strategy and Bipartisan Infrastructure Law. Three jurisdictions, Baltimore City and Baltimore and Carroll Counties, served as resources for this project to ensure that the final products are relevant and applicable in the Baltimore region.

BMC is an active, non-voting member of the technical and executive committees of the Traffic Records Coordinating Committee (TRCC), as well as the state SHSP executive committee. The mission of the TRCC is to coordinate all traffic records system components (crash, roadway, citation/adjudication, driver, vehicle, injury surveillance) using data quality performance measures (timeliness, completeness, accuracy, accessibility, integration, uniformity) in an effort to advance the Maryland traffic safety community. Staff will continue to get crash data and analytical support from the MHSO, Washington College, and the National Study Center for Trauma & EMS at the University of Maryland, Baltimore (NSC). Staff will share data summary reports with the various subcommittees on a regular/as-needed basis. Relevant information gleaned from the TRCC will also be shared with local SHSP teams to broaden communication channels. Finally, staff will incorporate publicly available crash data from the Maryland State Police into an online dashboard for traffic safety data similar to the Baltimore Regional Recovery Dashboard. Those data are anticipated to become available in early 2023.

BMC staff will continue to support projects funded by the MHSO, including the Look Alive campaign. This pedestrian and bicycle safety outreach campaign was launched in 2019 with consultant support. Creative materials were previously revised to accommodate changes due to the COVID pandemic and associated safer-at-home orders. Those changes allow the campaign to strategically enhance the safety message with an adaptive platform. BMC is managing the consultant contract and supporting outreach efforts.

PRODUCTS/MILESTONES	SCHEDULE
Regional Safety Subcommittee Meetings	Quarterly
Track and prepare annual safety performance measures	2 nd Quarter
Collaborate with state and local agencies on safety	Ongoing

FY 2024 BUDGET: \$190,000

FY 2025 EST. BUDGET: \$190,000

CONGESTION MANAGEMENT, OPERATIONS AND TECHNOLOGY PLANNING

PURPOSE: To improve the movement of people and goods and to increase the safety and efficiency of the transportation system through enhanced coordination of existing transportation systems, use of technologies, and monitoring congestion. This work includes transportation systems management and operations (TSMO) activities.

This task includes a variety of tasks that support safe and efficient operations of the transportation system, including TSMO which is defined as “an integrated program to optimize the performance of existing infrastructure through the implementation of systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system.” During Fiscal Years (FY) 2022 - 2023, staff supported the ongoing activities of several TSMO-focused committees described below. Staff also continued to support TSMO efforts of the State, neighboring regions, and professional organizations such as the Intelligent Transportation Society of Maryland (ITSMD). Staff has also worked to monitor congestion through the regional Congestion Management Process (CMP) Committee and performance monitoring work. Work was also initiated to consider preparations for and impacts of connected and automated vehicles.

Supporting Regional Committees:

Traffic Signal Subcommittee: This group meets periodically to discuss signal operations and ways to improve mobility and safety for all road users, including pedestrians, bicyclists, and motorcycle riders. MDOT SHA and local jurisdictions continue to deploy adaptive and other signal control systems to improve operations and safety. In FY 2022-2023, the Signal Subcommittee organized the 10th regional Signal Forum and facilitated an FHWA workshop on Active Cycle Management.

Traffic Incident Management for the Baltimore Region (TIMBR) Committee: This group has continued to meet quarterly to improve communication, coordination and cooperation needed for safe and efficient traffic incident management in the region. Staff continued to support activities of the committee, such as conducting annual TIM Self-Assessments and working on action items from the self-assessments and updating the Funeral Procession Contact List each quarter. Over the last two years, the TIMBR Committee has had presentations and discussions about major incidents in the region as well as updates on agency TIM activities. Staff continued to work with MDOT SHA and Maryland State Police (MSP) representatives to schedule and promote the Strategic Highway Research Program (SHRP) 2 TIM Training. Staff also worked with committee members to plan and hold a virtual TIM conference.

Transportation & Public Works Committee: The Committee pursues daily operations and public works topics as well as supports homeland security / emergency preparedness planning. (Refer to Emergency Preparedness Planning section for emergency preparedness activities). In FY 2022 and FY 2023, the T&PW Committee continued to discuss issues of concern to department of public works and transportation, such as road closure tracking.

Congestion Management Process Committee: The CMP Committee was created in FY 2020 and has been meeting three times per year to identify common congestion issues across the region. In

FY 2022, the Committee developed regional text that local jurisdictions could include in their priority letters; many jurisdictions did. The CMP Committee also provides input to the Online CMP Tool developed by staff.

Connected and Automated Vehicles: Over the last several years, staff has been learning about connected and automated vehicles (CAVs) and involved in CAV committees at the state and national level, including Maryland CAV Work Group and its various subgroups, MDOT SHA CAV Work Group, and AMPO CAV Work Group. In FY 2023, work began on a consultant project, CAV Integration for Local Jurisdictions.

Coordination with TSMO Partners: In addition to supporting regional activities, committees, and initiatives, staff support local and state partners by participating in their operations and TSMO planning activities. Staff is a member of the State's Coordinated Highways Action Response Team (CHART) Board, Maryland CAV Work Group and several subgroups (Emergency Response, Freight, and Policy), MDOT SHA CAV Work Group, and District 4 Tri-Agency Committee. Staff also participates in state and local TSMO projects regularly.

Work in FY 2024 - 2025

In FY 2024-2025, staff will continue to focus on: supporting regional committees; coordinating with operations and TSMO partners; and coordinating with internal and external stakeholders on using archived operations data to support the regional CMP and measuring performance, as required by federal performance requirements. Work will also include implementing recommendations from the regional CAV project completed in early FY 2024.

Supporting Regional TSMO Committees:

Traffic Signal Subcommittee: This group will meet on an as-needed basis to focus on regional signal needs, issues, signal timing, equipment, maintenance and operations, etc. The Subcommittee will also coordinate with the CMP and corridor analysis teams to identify potential projects that could be eligible for Congestion Management and Air Quality (CMAQ) and/or other types of funding. Staff and committee members will also work with the MDOT SHA on TSMO Corridor Initiatives to identify local needs. The Signal Subcommittee will host another regional Signal Forum in late 2023.

Traffic Incident Management for the Baltimore Region Committee: The TIMBR Committee will continue to improve communication, coordination and cooperation needed for safe and efficient traffic incident management in the region and continue to meet quarterly. Staff will: continue to update and distribute the Funeral Procession Contact List quarterly; support MDOT SHA, as the lead organization, in scheduling SHRP2 TIM Training sessions for responders; work on items identified in the annual TIM self-assessments; and advance priority initiatives identified by the TIMBR Committee.

TIM Conference: Since FY 2000, the TIMBR Committee has held numerous TIM conferences funded with regional, state, and federal funds. These events have been very well-received and successful in spreading the message of the importance of TIM to field staff and managers. If funds are identified, the TIMBR Committee will hold another in-person TIM conference. Staff will also consider holding more virtual conferences. While virtual conferences provide a forum to share information

with responders, the most effective approach is in person where responders can easily talk informally with their peers from other disciplines.

Transportation & Public Works Committee: The Committee will continue to identify topics for discussion at regional information exchange forums, as topics are identified. The committee will also consider holding virtual forums.

Congestion Management Process Committee: The CMP Committee will continue to meet in FY 2024 – 2024 to provide a forum for local jurisdictions to discuss how to coordinate to address congestion, with a focus on identifying and addressing cross-jurisdictional congestion.

Connected and Automated Vehicles: Staff will continue to participate in state and national CAV committees and support local efforts as needed, including acting as a convener and champion. In FY 2024 – 2025, staff will work on implementing the recommendations from the CAV Integration project, which will be completed in early FY 2024.

Coordination with Operations and TSMO Partners:

Staff will continue to support activities of various partners, such as corridor operations projects in the region, CAV projects in the region, projects arising from the MDOT SHA TSMO Strategic Deployment Plan, and continued participation on the CHART Board.

PRODUCTS/MILESTONES	SCHEDULE
Support subcommittee meetings and prepare agendas and minutes	Throughout Fiscal Year
Support stakeholder Operations/TSMO activities	Throughout Fiscal Year
Implement recommendations from CAV Integration project	Throughout Fiscal Year
Incident management conference (if funding is available)	TBD
T&PW forum(s) (as topics are identified)	TBD
Hold Traffic Signal Forum	October 2023
Support local and state CAV efforts as needed	Throughout Fiscal Year

FY 2024 BUDGET: \$200,000

FY 2025 EST. BUDGET: \$200,000

EMERGENCY PREPAREDNESS PLANNING

PURPOSE: To identify risks and conditions that impact the security of the transportation system and its users and develop plans, programs, and projects that increase transportation security and emergency preparedness of system users and operators. This work supports the Baltimore Regional Transportation Board (BRTB) as well as the Baltimore Urban Area Homeland Security Work Group (UAWG).

During Fiscal Years (FY) 2022 - 2023, staff supported the ongoing activities of the Transportation & Public Works (T&PW) Committee, which provides input to both the BRTB as well as the UAWG. The T&PW Committee met quarterly and highlights over the last two years include recurring discussions about preparing for seasonal weather (i.e., hurricanes, snow) as well as ongoing events such as the pandemic; discussions about evacuation planning and coordination with regional emergency management evacuation planning efforts; updates on the Climate Change Resource Guide development and follow up work; and discussions about project ideas for funding from UASI or other federal programs. Staff also continued to support the Disaster Debris Planning Task Force that, over the last two years, had presentations by FEMA on debris recovery operations in Puerto Rico and Florida; procurement requirements; and how to incorporate equity in debris response. Staff also continued to support emergency preparedness planning efforts of the State and local jurisdictions.

In FY 2024-2025, staff efforts will continue to focus on supporting BMC/BRTB emergency preparedness committees and coordination with, and support of, emergency preparedness partners.

Supporting BMC/BRTB emergency preparedness committees:

Transportation & Public Works Committee – The T&PW Committee addresses daily operations and public works topics as well as supports homeland security/emergency preparedness planning. (Refer to Transportation Systems Management & Operations (TSMO) section for TSMO Planning activities). Staff will continue to support quarterly T&PW Committee meetings and projects. The committee will continue to follow up on the action items from the Evacuation Workshops held in FY 2020 through committee work and supporting the Regional Catastrophic Preparedness Grant Program Evacuation-focused Grant, awarded in FY 2023. This Committee submits project funding requests to the UAWG, if projects are identified. Staff will continue to take the lead in preparing the T&PW project proposal submissions to the UAWG. The Committee will also initiate projects that are funded through other sources or do not require funding. Committee projects will focus on evacuation planning and coordination as well as other aspects of emergency preparedness of public works/transportation departments. The committee will also work to identify DPW/DOT issues and projects related to the pandemic and climate change. Climate change projects will include work continuing to support awareness and use the *Climate Change Resource Guide* and follow up Guidelines work.

Disaster Debris Planning Task Force – The Disaster Debris Planning Task Force, which is a subcommittee of the T&PW Committee, meets quarterly to address coordination issues related to

disaster debris planning, handling, and removal. In FY 2024 - 2025, staff will continue to work with the Task Force to address items identified in past exercises and training sessions, as well as support new issues that arise during discussions at quarterly meetings. BMC staff will continue to provide support to this group and act as project manager for its projects. If additional Urban Area Security Initiative (UASI) funds are allocated to the Task Force, staff will continue in the role of grant administrator.

Coordination with and Support of Emergency Preparedness Partners: Staff also supports other regional emergency preparedness planning efforts through membership in the UAWG and several of its other subcommittees, including Emergency Management/Recovery/Training & Exercise. Staff regularly attends the UAWG and subcommittee meetings to provide a transportation perspective on emergency preparedness planning.

PRODUCTS/MILESTONES	SCHEDULE
Support committee meetings, prepare agendas and minutes	Throughout Fiscal Year
Work on projects and issues identified by the T&PW Committee	Throughout Fiscal Year
Work on projects and issues identified by the Disaster Debris Planning Task Force	Throughout Fiscal Year
Identify and work on projects that support climate resilience and adaptation for DPWs and DOTs	Throughout Fiscal Year
Support the UAWG and its subcommittees as needed	Throughout Fiscal Year

FY 2024 BUDGET: \$190,000

FY 2025 EST. BUDGET: \$190,000

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MOBILITY, ACCESSIBILITY & CONNECTIVITY

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SYSTEM PERFORMANCE: MONITORING AND ADAPTING

PURPOSE: Monitor performance of the system by collecting data to track travel conditions, reliability, and trends throughout the Baltimore region and using this data to analyze system performance. System performance data is used to support various planning needs including inputs to the regional travel demand model, air quality monitoring, and calculation of national system performance measures, Congestion Management Process (CMP), and the long-range transportation plan (LRTP) development. The ultimate goal of system performance monitoring is safe, efficient, and reliable mobility for people and goods.

Monitoring system performance is a critical task; this work supports a variety of other tasks in the UPWP as well as supporting the work of our partners. This task encompasses the following activities: traffic counts; speed and travel time collection; trip generation; asset management; documenting system performance; and monitoring measures for federal system performance requirements. Data from these activities directly supports the work of planning for and managing the system.

During FY 2022 through the first half of FY 2023, staff completed the following activities to support system performance monitoring:

Traffic Counts: Signed a multi-year renewable contract to perform all forms of traffic counts. In FY 2022, BMC conducted a pilot project of bicycle and pedestrian counts at eight locations throughout the region. These counts were 7-day, 13-hour counts recorded by video monitoring. The results were geocoded and uploaded to ArcGIS online for viewing. It is expected that the locations will be revisited for future data collection and comparison. By request, turning movement and volume counts were collected for a Harford County study on US 40 and several locations in Howard County. BMC's Traffic Count Dashboard featuring the latest count information in an attractive, intuitive and interactive web page continues to be a popular and useful tool for planners both inside and outside the agency as well as the general public.

Speed and Travel Time Collection: Recently staff has been able to significantly expand data collection activities due to the availability of travel data accessible through the Eastern Transportation Coalition (ETC) Probe Data Analytics (PDA) Suite. Staff has been very active on the ETC's PDA User Group, which has helped enhance how the PDA Suite has been leveraged for use in the Baltimore region. Projects have been completed by request for multiple jurisdictions.

Asset Management: MAP-21 includes requirements pertaining to the process for development of Risk Based Transportation Asset Management Plans (TAMP) that includes strategies leading to a program of projects that would make progress toward achievement of the State targets for asset condition and performance of the National Highway System (NHS). MDOT SHA is responsible for creating a TAMP based on data and analysis including consideration of engineering, life-cycle cost, and risk analysis with investment strategies being developed to best manage the physical assets with the limited funding available and anticipated in the future. The BRTB is responsible for incorporating asset management into the LRTP.

Documenting System Performance: Since FY 2014, staff has been preparing quarterly bottleneck

reports that identify the top ten bottlenecks in the region. In FY 2022 and 2023 staff completely redesigned the Quarterly Congestion Analysis Reports based on new templates developed in coordination with the University of Maryland CATT Lab. The previously developed CMP Analysis Tool is an interactive map that visually displays congestion data. This tool continues to help the CMP Committee to identify corridors for more in-depth analysis and serves as input into the project prioritization process. In FY 2023 staff worked with a consultant to develop a System Performance Dashboard to augment the CMP tools available to stakeholders and the public.

Monitoring Federal System Performance Requirements: Developed a process for the First Full Performance Period to integrate Bridge and Pavement (PM2), and System Performance, Asset Management, Freight Movement and Air Quality (PM3) into the planning process.

In FY 2023 and FY 2024, staff will work in the same areas:

Traffic Counts: With the help of consultant, a targeted approach to data collection supporting regional corridor studies and the travel demand model will continue through the length of the contract. Staff will update and improve BMC's online interactive maps and dashboards. Staff will also continue exploring its non-vehicular count program in coordination with the Bicycle and Pedestrian Advisory Group (BPAG) and MDOT State Highway Administration (MDOT SHA). BMC will provide any bicycle, pedestrian or turning movement counts it collects to MDOT SHA, they will house and share the data received as well as factoring the raw data.

Speed and Travel Time Collection: Staff will expand CMP activities to incorporate the new applications and data available through the Eastern Transportation Coalition PDA Suite. Staff will continue to be active on the ETC's Probe Data Analytics User Group. INRIX XD data is now available through the PDA Suite allowing analysis of Speed and Travel Time Data at a more granular level.

Trip Generation: BMC will continue to research new Origin Destination Survey Data technologies to support future travel survey initiatives.

Documenting System Performance: Staff will continue preparing Quarterly Congestion Analysis Reports that identify the top ten bottlenecks in the region. Staff will also continue to prepare, as relevant, congestion brochures and press releases about holiday, work zone, or other special event conditions. In addition, staff will work with a consultant to perform a CMP corridor study. Staff will work through the CMP Steering Committee to further develop the CMP Analysis Tool. Staff will also participate in the CATT Lab's Performance Measures Focus group. Activities include testing sample templates designed to automate many of the steps required in generating various reports such as corridor studies, bottleneck reports, and before and after studies.

Monitoring Federal System Performance Requirements: Staff will continue to work closely with state and local partners to monitor status toward meeting regional performance targets and to develop regional performance targets for Bridge and Pavement (PM2), and Asset Management, System Performance, Freight Movement and Air Quality (PM3). Staff will continue to work with state and local stakeholders to incorporate asset management into the LRTP and other planning efforts as appropriate.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Highway and arterial traffic counts, turning movement counts with bicycle and pedestrian data to support travel demand model and CMP	Throughout FY 2024-FY 2025
Travel data products to support the CMP, including CMP Corridor studies	Throughout FY 2024-FY 2025
Update Online Traffic Count Map and Dashboards	Throughout FY 2024-FY 2025
Presentation and documentation materials, including Quarterly Congestion Analysis Reports	Throughout FY 2024-FY 2025
Documentation of Asset Management Integration into the LRTP	First Quarter FY 2024
Monitor regional performance and calculate measures for 2-year target period for PM2 and PM3 System Performance	Second Half of FY 2025

FY 2024 BUDGET: \$420,000

FY 2025 EST. BUDGET: \$420,000

FREIGHT MOBILITY PLANNING

PURPOSE: To incorporate freight movement into the regional transportation planning process by bringing together public and private sector freight stakeholders and providing data and analytical tools that help prioritize freight investments.

The Freight Movement Task Force (FMTF) serves as an advisory committee to the Baltimore Regional Transportation Board (BRTB). Its function is to provide a voice for public and private freight transportation stakeholders in the metropolitan planning process. The Task Force includes representatives from: rail - CSX and Norfolk Southern, highway - Maryland Department of Transportation (MDOT), State Highway Administration (MDOT SHA), Maryland Transportation Authority (MDTA), water - Maryland Port Administration (MDOT MPA), trucking - Maryland Motor Truck Association (MMTA) as well as local economic development, traffic and planning representatives.

In Fiscal Years (FY) 2022-2023, the FMTF met several times under the leadership of Tom Madrecki, VP Supply Chain, Consumer Brands Association (CBA), to discuss topics of regional, local and national significance. Topics included the Baltimore County Residential Truck Traffic Working Group, post-panamax cranes at Seagirt Marine Terminal, the supply chain crisis in late 2021, MDOT statewide freight plan, Howard Street Tunnel, impacts to the rail industry, and others.

During FY 2024-2025, the FMTF will continue to meet quarterly to work on projects of local and regional significance and continue to develop partnerships with the private sector. Staff and the FMTF will focus on some of these topic areas over the next two Fiscal Years:

- Bipartisan Infrastructure Law Implementation – State Freight Plan Updates and National Highway Freight Program Funding
- Critical Urban Freight Corridors (CUFC) – work with MDOT SHA to increase mileage from 25 to 50 miles, and then assess bottlenecks or other impediments
- Truck Parking – collaborate with state and local jurisdictions to study potential overnight truck parking needs/locations
- Develop regional freight locator tool – to include major freight generators, rail and roadway connections, bottlenecks, and other freight related data
- Develop regional freight profile of commodities and flows using Freight Analysis Framework (FAF) in collaboration with MDOT Statewide Freight Plan updates
- Scan of MPO freight committees/working groups to identify best practices
- Collaborate with MDOT CAV freight working group to develop regional policies/priorities
- Monitor air cargo flows at Baltimore Washington International Thurgood Marshall (BWI) Airport by participating in the Transportation Planning Board (TPB) Continuous Airport Systems Planning program

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Support Freight Movement Task Force Meetings	Quarterly
Collaborate with state and local agencies	Throughout Fiscal Year
Monitor Critical Urban Freight Corridor's	First and Third Quarters
Research freight programs and applications	Second and Fourth Quarters

FY 2024 BUDGET: \$190,000

FY 2025 EST. BUDGET: \$190,000

BICYCLE AND PEDESTRIAN PLANNING

PURPOSE: To strategically develop and support implementation of regional and local plans which promote opportunities for an integrated multi-modal transportation system. Development of various plans should be related to regional goals in an effort to improve mobility and air quality as well as promote mode shift.

During Fiscal Years (FY) 2022 and 2023, the Baltimore Metropolitan Council (BMC) facilitated and supported a number of plans, projects and activities on a regional level to improve bicycle and pedestrian connectivity, mobility, air quality and mode shift.

In FY 2022 and FY 2023, the Bicycle and Pedestrian Advisory Group (BPAG) heard presentations and held discussion on topics including information on the planning and implementation of Complete Streets policies by jurisdictions, state and local electric bicycle and electric scooter legislation and regulation, maintenance responsibilities and costs for shared-use paths, safety initiatives such as the MDOT SHA Pedestrian Safety Action Plan and safety and active transportation project funding opportunities.

BPAG members contributed to BMC's update to the Regional Bicycle Facility Inventory. BPAG members also initiated the development of a list of top regional active transportation priorities which was developed in collaboration with over 20 representatives from each jurisdiction in the region and MDOT. The priorities included in the list are grounded in adopted bicycle, pedestrian, Complete Streets and park and recreation plans.

BMC continued to organize Bike to Work for the region. In FY 2022 Bike to Work was celebrated as a weeklong virtual event in response to the pandemic and to improve equitable access to the event. BMC partnered with 24 bike shops throughout the region to distribute event t-shirts and safety gear provided by MDOT SHA. The virtual event drew approximately 1,200 registrants. The weeklong Bike to Work week event was complimented by a month-long workplace and community biking challenge throughout May and run through the Love to Ride platform. In FY 2023 Bike to Work was returned to an in person event and BMC and partners decided not to renew the Love to Ride platform contract due to cost and limited community reach by the platform. Also in FY 2023 the Baltimore region celebrated its 25th anniversary of Bike to Work. The event included almost 1,800 registered participants, an increase from 2021 and a return to pre-pandemic participation levels. Community members joined in-person events from Annapolis to Bel Air to Columbia to Westminster. Approximately 650 registrants were taking part for the first time.

BMC continues to support planning services for the Patapsco Regional Greenway. In FY 2022 BMC continued preliminary design of an 8.3 mile segment of the Patapsco Regional Greenway (PRG) connecting the City of Sykesville to Patapsco Valley State Park. Work included stakeholder engagement with a Steering Committee including representatives from Carroll County, City of Sykesville, Maryland Park Service and MDOT SHA. The project also included a local public advisory group and input from the interested public. Public outreach included two virtual meetings and comment periods, an interactive StoryMap, a project page where the public could leave comments,

a survey and a recording of the virtual public meetings on the project page. Preliminary design concluded in 2022. In FY 2023 BMC managed the preliminary design of an approximately 6.4 mile segment of the PRG connecting another segment of the greenway currently under design, the Guinness Open Gate Brewery, Southwest Area Park and the Patapsco Light Rail Station. The project is currently underway. Steps associated with this task will mirror the steps for Sykesville to McKeldin.

BMC managed a project to develop a Pedestrian Infrastructure Assessment Tool. The ArcGIS-based desktop tool will assist member jurisdictions in prioritizing sidewalk projects, identifying sidewalk mileage and gaps, visualizing sidewalk data and facilitating pedestrian planning in general. The project also consists of the acquisition of a regional pedestrian facility inventory which can be used with the tool, however, other sidewalk inventories are compatible with the tool. A user manual and training materials are being developed to assist users with use of the tool. To be complete by the end of FY 2023.

BMC managed a concept plan for bicycle and pedestrian improvements along an approximately five mile segment of US 40 in Harford County between the City of Aberdeen and the City of Havre de Grace. The project is to be complete by the end of FY 2023. Similar steps to other corridor/trail segments is being followed.

In FY 2022 and 2023, BMC supported MDOT's Annual Walktober program by promoting the event and hosting a walk near our Baltimore office.

For FY 2024 and 2025 BMC staff look forward to additional tasks and ongoing planning activities. BPAG and jurisdiction members will continue to support efforts such as periodic safety programs, emerging Complete Streets and Shared Mobility projects, Walktober and other active transportation opportunities. BPAG will also support efforts surrounding the collection of and reporting on data related to alternative transportation options. BMC will continue to organize presentation and discussion on topics identified by BPAG members including Complete Streets, micromobility, safety and funding opportunities. Additionally, BMC will continue to organize Bike to Work Week in response to member jurisdiction interest in active transportation outreach and engagement to complement other initiatives in the region.

Tasks getting underway include a major effort to establish a vision for a regional bicycle network. Key tasks will be to develop criteria/key characteristics to define the regional bicycle network, extensive public outreach, understanding current conditions, utilize the inventory of planned segments and result in a product with implementation steps. Additionally one of the last PRG planning segments will also be getting underway along with a task to develop a branding scheme as well as an implementation strategy for operations and maintenance of PRG segments. While the Maryland Park Service has the lead role, member jurisdictions will play a role alongside the Park Service.

Along with the Safety Committee and local transit agencies, BPAG will continue to review current Complete Streets policies, rules and procedures to determine their impact on safety for all road users. Safe pedestrian facilities and transit stops are critical to comfortable, accessible travel networks for those without access to single-occupancy vehicles.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Staff Bicycle and Pedestrian Advisory Group	Bi-Monthly
Coordinate Active Transportation Programs/Events	Ongoing
Review Complete Streets Policies with various committees	Periodically
Continue a bike and pedestrian count program	Ongoing

FY 2024 BUDGET: \$200,000

FY 2025 EST. BUDGET: \$200,000

TRANSIT AND HUMAN SERVICE TRANSPORTATION PLANNING

PURPOSE: Support planning activities on behalf of the Baltimore Regional Transportation Board (BRTB) related to transit access and mobility. The purpose is to improve transit service in the Baltimore region generally, with an emphasis on transit access to employment and services. This task will also seek to address transportation needs of the elderly and individuals with disabilities in conjunction with ongoing transit, paratransit, and community-based transportation planning activities.

During Fiscal Years (FY) 2022 and 2023, staff supported a range of activities. A significant task related to MDOT MTA's Regional Transit Plan. BMC staff worked closely with MDOT MTA in the completion of a report and recommendations resulting from a LOTS/MTA Bus mode technology and skills survey. Recommendations included the following categories: Technical Assistance; Data Management; Training; Regional Policies, Guiding Docs and Research; Procurement; Tools & Software. From this BMC staff formed a quarterly transit working group to exchange information, prioritize regional action items. Staff attended Eno Center's Transit Cost and Project Delivery Symposium to collaborate on implementation or pilots. Requested funds to use towards training in FY 2023. Attend TAM Training Committee to discuss opportunities that could be funded via UPWP LOTS Tech and Skills Assessment Focus Area. Attended Transit Center panel discussion - Operators in Crisis: How Did We Get Here to help inform the UPWP task for LOTS tech and skills needs. Data Management: Informed by the Transit Work Group, requested and received approval on a FY 2023 task to make recommendations for the standardization of data collection, technology and use. BMC launched a pilot feasibility study of one of the 30 regional priority corridors identified in the RTP. The pilot will inform future BMC staff-led RTP corridor studies. Continued to work closely with MDOT MTA on current and future RTP Implementation through quarterly RTP Implementation Team and Jurisdictional Team meetings to share information and provide UPWP and work planning updates. Completed RTP Corridor #25 - BWI Marshall to Columbia Pilot Feasibility Study consultant task. This included Steering Committee and Stakeholder Committee meetings. Coordinated with MDOT MTA on RTP Corridor and modeling needs for the North-South/East-West studies.

Requested and received approval to initiate a Coordinated Human Services task to identify resources, routes and schedule coordination among 5310 grant recipients. Staff reviewed the Baltimore Area Coordinated Public Transit- Human Services Transportation Plan and prepared an update for Chapter 3, including a demographic analysis of Baltimore region population characteristics and population projections. Supported MDOT MTA grant programs: 5310, MD JARC, and Senior Rides. Coordinated with staff at MDOT MTA on schedules for the next grant cycles. Staff reviewed and scored ten (10) applications for the FY 2023 Maryland Senior Rides Program and participated in a meeting with other members of the selection committee. BRTB endorsed fifteen (15) 5310 applications and submitted endorsement letters to applicants and MDOT MTA.

Staff supported a range of related planning activities. Supported consultant for meetings on the Transit Governance and Funding Study, assisted with report and presented to various groups. Coordinated Travel Demand Model updates with MDOT MTA. Prepared to review and discuss draft Transit Dashboard, which is part of the larger Transportation Dashboard task in the UPWP. Prepared

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

a transit white paper for Resilience 2050. Staff used MTS data to perform an analysis of paratransit, specifically the Trip Purposes it serves in the Baltimore region, for the transit white paper. Attended the TAM annual conference from 9/20-9/22. Workshops included the LOTS annual NTD and Safety updates. Also joined the TAM Membership committee. Gathered TAMP and PTASP data for MDOT MTA and the LOTS to include in upcoming resolutions to adopt statewide and regional targets for the next LRTP. An assessment of the remaining 1600 LOTS bus stops was completed with data hosted by the consultant.

During FY 2024 and FY 2025, BMC staff will continue to participate in MDOT MTA activities related to all RTP Implementation tasks. Staff will initiate additional RTP corridor studies, and will continue work on tasks to support Human Service Transportation Providers and LOTS technology and data management. Staff will begin work on Transit Oriented Development and Microtransit tasks to pursue integrating targeted programs suited to the members. Staff will also begin work on a task to grow transit ridership in a post-pandemic environment.

Staff will continue to follow progress on Transit Governance and Funding tasks and provide support as needed. There are numerous meetings with a range of a non-profit transit advocacy groups which will continue.

PRODUCTS/MILESTONES	SCHEDULE
Support implementation efforts from the MDOT MTA Regional Transit Plan, including Corridor Studies	Throughout Fiscal Year
Review applications for funding for programs such as: 5310, MD JARC, and Senior Rides	FY 2024 2 nd & 3 rd Quarters FY 2025 2 nd & 3 rd Quarters
Look to implement strategies in the Coordinated Human Services Transportation Plan	Throughout Fiscal Year

FY 2024 BUDGET: \$550,000

FY 2025 EST. BUDGET: \$550,000

PROTECTING CURRENT & FUTURE RESOURCES

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ENVIRONMENTAL PLANNING

PURPOSE: To coordinate and facilitate the continuing relationship between planning for mobile emissions and transportation planning in the Baltimore region. To coordinate with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation as part of the long-range transportation planning process.

In FY 2022 and FY 2023, staff gathered and summarized information on air quality monitoring data and other emission reduction information in the Baltimore region, to share with staff and others as requested. Some information that was gathered was about new federal funding opportunities through the Infrastructure Investment and Jobs Act (IIJA), such as the National Electric Vehicle (EV) Infrastructure (NEVI) dedicated funding program to help Maryland and other states deploy EV charging infrastructure. Staff also tracked information about proposed federal regulations, including a greenhouse gas emissions measure, which would require MPOs to set carbon dioxide (CO₂) emissions targets and establish a method for reporting greenhouse gas emissions associated with transportation. Staff also tracked information about a new program, the Carbon Reduction Program, which was also established under the IIJA to provide funds for transportation projects that reduce CO₂-specific emissions from on-road mobile sources. Staff will continue to gather and summarize information on air quality monitoring data and greenhouse gas emission data in FY 2024 and FY 2025 for informational purposes.

During FY 2024 and FY 2025, staff will chair the Interagency Consultation Group (ICG) meetings approximately six times per year and will address major steps in the air quality conformity process for the long-range transportation plan and Transportation Improvement Program (TIP). Staff will also assist with any discussion of the ICG or its working groups regarding changes in the motor vehicle emission budget (MVEB) in the state implementation plan (SIP). Staff will work with the ICG Technical Working Group to coordinate on the development of any future SIP budgets, in addition to updates to the emissions model, and inputs to conformity determination modeling. Staff will also prioritize efforts to transition to a clean energy, resilient future by encouraging the advancement of EV charging infrastructure and supporting State climate change and greenhouse gas mitigation goals.

Staff will continue to work with local jurisdictions to explore implementation potential for emission reduction projects and projects that help achieve the national greenhouse gas reduction goals of net-zero emissions by 2050. In FY 2022 and FY 2023, staff worked with local jurisdictions to gather information about local emission reduction projects, or other projects that would likely reduce emissions from transportation. This data was added to a MS Access database, and was reported in the Conformity Document appendices, along with information on state agency emission reducing projects. This work will continue in FY 2024 and 2025.

Staff will coordinate with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation, as part of the development of the long range plan. Staff will perform an assessment of submitted long range transportation plan projects to determine their impact on environmental and cultural resources.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

Staff will also gather data from FHWA and other federal partners about sustainable transportation alternatives, and initiate planning processes to support the Carbon Reduction Program, and goals of the Climate Solutions Now Act of 2022.

Air Quality Outreach: Staff will continue to support the Clean Air Partners (CAP) Program, and the associated committees, including the education and finance committees. Staff will continue to support the work activities associated with Air Quality Awareness Week.

PRODUCTS/MILESTONES	SCHEDULE
Support ICG meetings	Approx. Bi-Monthly
Monitor new air quality initiatives, policies, and guidance. Research changes to environmental requirements.	Throughout Fiscal Year
Conduct air quality outreach for the metropolitan area.	Throughout Fiscal Year
Continue coordinating environmental and long range planning.	Throughout Fiscal Year
Update/educate committees and their members on significant changes to environmental requirements in transportation, or opportunities for funding environmentally-beneficial projects.	Throughout Fiscal Year

FY 2024 BUDGET: \$380,000

FY 2025 EST. BUDGET: \$380,000

AIR QUALITY CONFORMITY ANALYSIS

PURPOSE: To conduct a technical and public policy analysis of emissions associated with the Transportation Improvement Program (TIP) and long-range transportation plan (LRTP). To work with state agencies, local jurisdictions, and private stakeholders to develop a coordinated program of emission reduction strategies as an effective means of meeting the National Ambient Air Quality Standards (NAAQS) and reducing traffic congestion.

Transportation plans and programs are required by the federal Clean Air Act (CAA) to demonstrate that mobile source emissions generated in designated horizon years are less than or equal to the motor vehicle emission budgets established in the State Implementation Plan (SIP). These emission budgets are set for criteria air pollutants for which the region is designated “nonattainment” or “maintenance”. The Baltimore Regional Transportation Board (BRTB) is required to show that implementation of the LRTP or TIP will not delay timely attainment of the NAAQS in the Baltimore region.

During Fiscal Year (FY) 2022 and 2023, staff, in coordination with the Maryland Departments of Environment (MDE) and Transportation (MDOT), developed and evaluated horizon year emissions estimates using the U.S. Environmental Protection Agency (EPA) Motor Vehicle Emissions Simulator (MOVES) model. These emissions estimates were developed separately for both the Conformity Determination of the FY 2022-2025 TIP and *Maximize 2045* and the Conformity Determination of the 2023-2026 TIP and *Maximize 2045*. The 2023-2026 TIP, Long Range Plan and Conformity Determination were approved by the BRTB by Resolution #23-2 on August 23, 2022.

In FY 2023, the Baltimore Region was designated as a moderate nonattainment area for Ozone by the EPA because it did not meet the marginal attainment goal on time. MDE staff worked on a new SIP with new conformity budgets in FY 2023. The EPA also released the MOVES3 model, which staff were trained in and began to use for the 2024-2027 TIP and *Resilience2050*, the long range plan. *Resilience2050* is the long range plan for 2028-2050, and staff subsequently released a series of whitepapers on planning topics. Staff released the Air Quality White Paper to explain about the regional air quality conformity determination process to the public.

In FY 2024, staff, in coordination with MDOT and MDE will continue to conduct the conformity determination of the 2024-2027 TIP and *Resilience2050*. Working through the Interagency Consultation Group (ICG) process and its members, staff will conduct this conformity determination using methodologies for 8-hour ozone which have been approved by EPA. In the last two quarters of FY 2024, staff will begin work on the conformity determination of the FY 2025-2028 TIP and Plan. In FY 2025, staff will work on the conformity determination of the FY 2026-2029 TIP and Plan.

Through the ICG Working Group, staff will continue to coordinate with MDE mobile source modeling staff and MDOT to share and verify model inputs and parameters, and to evaluate the interface between the region’s travel demand model and the EPA MOVES model to ensure conformity determinations can be conducted and verified by both Baltimore Metropolitan Council (BMC) and MDE staff. Staff will also continue to research and review strategies that provide congestion management and improve air quality throughout the region.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

PRODUCTS/MILESTONES	SCHEDULE
Complete conformity analysis of the 2024-2027 TIP and <i>Resilience2050</i>	1st Quarter FY 2024
Conduct conformity analysis of the 2025-2028 TIP and Plan	3 rd & 4 th Quarters FY 2024, 1 st Quarter FY 2025
Conduct conformity analysis of the 2026-2029 TIP and Plan	3 rd & 4 th Quarters FY 2025
Prepare memorandums on Plan and TIP amendments	Throughout Fiscal Year

FY 2024 BUDGET: \$150,000

FY 2025 EST. BUDGET: \$150,000

APPENDIX A
FY 2024-2025 BUDGET DETAILS

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FY 2024 UPWP BUDGET

SOURCES

	FHWA	FTA	MDOT	LOCAL	TOTAL
FY 2024 Appropriations	\$4,544,109	\$1,421,656	\$1,023,000	\$1,119,000	\$8,107,766
FY 2023 Carryover	\$2,148,572	\$469,757			\$2,618,330
FY 2024 Funds Available	\$6,692,682	\$1,891,414	\$1,023,000	\$1,119,000	\$10,726,095

USES

BMC Staff	\$6,700,000
Consultants	\$3,530,000
 BMC Total	 \$10,230,000
 City of Annapolis	 \$60,000
Anne Arundel County	\$60,000
Baltimore City	\$60,000
Baltimore County	\$60,000
Carroll County	\$60,000
Harford County	\$60,000
Howard County	\$60,000
Queen Anne's County	\$60,000
 Local Total	 \$480,000
 TOTAL USES	 \$10,710,000

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

FY 2024 WORK PROGRAM BY TASK & FUND SOURCE
(\$)

	FHWA	FTA	MDOT	LOCAL	TOTAL
UPWP Management	611,520	172,480	98,000	98,000	980,000
Professional Consultant Services	2,202,720	621,280	353,000	353,000	3,530,000
Support for State and Local Initiatives	418,080	117,920	19,000	115,000	670,000
Long-Range Transportation Planning	118,560	33,440	19,000	19,000	190,000
Transportation Improvement Program	118,560	33,440	19,000	19,000	190,000
Public Participation & Community Outreach	305,760	86,240	49,000	49,000	490,000
Transportation Equity Planning	99,840	28,160	16,000	16,000	160,000
GIS Activities	262,080	73,920	42,000	42,000	420,000
Demographic & Socioeconomic Forecasting	174,720	49,280	28,000	28,000	280,000
Development Monitoring	187,200	52,800	30,000	30,000	300,000
Analysis of Regional Data and Trends	199,680	56,320	32,000	32,000	320,000
Maintenance of Current Simulation Tools	237,120	66,880	38,000	38,000	380,000
Simulation Tools: Applications and Analysis	205,920	58,080	33,000	33,000	330,000
Safety Planning and Analysis	118,560	33,440	19,000	19,000	190,000
Congestion Management, Operations & Technology Planning	124,800	35,200	20,000	20,000	200,000
Emergency Preparedness Planning	118,560	33,440	19,000	19,000	190,000
System Performance: Monitoring and Adapting	262,080	73,920	42,000	42,000	420,000
Freight Mobility Planning	118,560	33,440	19,000	19,000	190,000
Bicycle and Pedestrian Planning	124,800	35,200	20,000	20,000	200,000
Transit and Human Service Planning	343,200	96,800	55,000	55,000	550,000
Environmental Planning	237,120	66,880	38,000	38,000	380,000
Air Quality Conformity Analysis	93,600	26,400	15,000	15,000	150,000
Total	6,683,040	1,884,960	1,023,000	1,119,000	10,710,000

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

FY 2024 FUNDING BY TASK AND PROJECT SPONSOR

WORK TASKS	BMC SHARE	ANNAPOLIS SHARE	ANNE ARUNDEL COUNTY SHARE	BALTIMORE CITY SHARE	BALTIMORE COUNTY SHARE	CARROLL COUNTY SHARE	HARFORD COUNTY SHARE	HOWARD COUNTY SHARE	QUEEN ANNE'S COUNTY SHARE	TOTAL
UPWP Management	980,000									\$980,000
Professional Consultant Services	3,530,000									\$3,530,000
Support for State and Local Initiatives	190,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	\$670,000
Long-Range Transportation Planning	190,000									\$190,000
Transportation Improvement Program	190,000									\$190,000
Public Participation and Community Outreach	490,000									\$490,000
Transportation Equity Planning	160,000									\$160,000
GIS Activities	420,000									\$420,000
Demographic and Socioeconomic Forecasting	280,000									\$280,000
Development Monitoring	300,000									\$300,000
Analysis of Regional Data and Trends	320,000									\$320,000
Maintenance of Current Simulation Tools	380,000									\$380,000
Simulation Tools: Applications and Analysis	330,000									\$330,000
Safety Planning and Analysis	190,000									\$190,000
Congestion Mgt, Ops & Technology Planning	200,000									\$200,000
Emergency Preparedness Planning	190,000									\$190,000
System Performance: Monitoring and Adapting	420,000									\$420,000
Freight Mobility Planning	190,000									\$190,000
Bicycle and Pedestrian Planning	200,000									\$200,000
Transit and Human Service Planning	550,000									\$550,000
Environmental Planning	380,000									\$380,000
Air Quality Conformity Analysis	150,000									\$150,000
TOTAL	10,230,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	10,710,000

**FY 2024 FOCUS AREA PROJECTS
PROJECTS & FUND SOURCE**

WORK TASKS	FHWA	FTA	MDOT	LOCAL	TOTAL
Baltimore Regional Freight Profile	\$145,152	\$46,848	\$24,000	\$24,000	\$ 240,000
Coordinating Affordable Housing and Transportation Planning	\$96,768	\$31,232	\$16,000	\$16,000	\$ 160,000
Future Trends: Employment, Commercial Real Estate & Housing	\$181,440	\$58,560	\$30,000	\$30,000	\$ 300,000
Local Signal Infrastructure Assessment	\$120,960	\$39,040	\$20,000	\$20,000	\$ 200,000
LOTS Skills Training and Support	\$90,720	\$29,280	\$15,000	\$15,000	\$ 150,000
Making TOD Viable in the Baltimore Region	\$133,056	\$42,944	\$22,000	\$22,000	\$ 220,000
Micro-Transit Solutions	\$133,056	\$42,944	\$22,000	\$22,000	\$ 220,000
Patapsco Regional Greenway: Operations, Maintenance & Branding	\$151,200	\$48,800	\$25,000	\$25,000	\$ 250,000
Regional Worker's Travel Choices	\$90,720	\$29,280	\$15,000	\$15,000	\$ 150,000
RTP Corridors	\$151,200	\$48,800	\$25,000	\$25,000	\$ 250,000
Transportation Land Use Connection Grants	\$181,440	\$58,560	\$30,000	\$30,000	\$ 300,000
Transportation Planning Institute	\$72,576	\$23,424	\$12,000	\$12,000	\$ 120,000
FOCUS AREA TOTALS	\$1,548,288	\$499,712	\$256,000	\$256,000	\$2,560,000

FY 2025 UPWP BUDGET

SOURCES

	FHWA	FTA	MDOT	LOCAL	TOTAL
FY 2025 Appropriations	\$4,544,109	\$1,421,656	\$697,000	\$793,000	\$7,455,766
FY 2024 Carryover					\$0
FY 2025 Funds Available	\$4,544,109	\$1,421,656	\$697,000	\$793,000	\$7,455,766

USES

BMC Staff	\$6,700,000
Consultants	\$270,000
 BMC Total	 \$6,970,000
 City of Annapolis	 \$60,000
Anne Arundel County	\$60,000
Baltimore City	\$60,000
Baltimore County	\$60,000
Carroll County	\$60,000
Harford County	\$60,000
Howard County	\$60,000
Queen Anne's County	\$60,000
 Local Total	 \$480,000
 TOTAL USES	 \$7,450,000

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

FY 2025 WORK PROGRAM BY TASK & FUND SOURCE
(\$)

	FHWA	FTA	MDOT	LOCAL	TOTAL
UPWP Management	597,408	186,592	98,000	98,000	980,000
Professional Consultant Services	164,592	51,408	27,000	27,000	270,000
Support for State and Local Initiatives	408,432	127,568	19,000	115,000	670,000
Long-Range Transportation Planning	115,824	36,176	19,000	19,000	190,000
Transportation Improvement Program	115,824	36,176	19,000	19,000	190,000
Public Participation and Community Outreach	298,704	93,296	49,000	49,000	490,000
Transportation Equity Planning	97,536	30,464	16,000	16,000	160,000
GIS Activities	256,032	79,968	42,000	42,000	420,000
Demographic and Socioeconomic Forecasting	170,688	53,312	28,000	28,000	280,000
Development Monitoring	182,880	57,120	30,000	30,000	300,000
Analysis of Regional Data and Trends	195,072	60,928	32,000	32,000	320,000
Maintenance of Current Simulation Tools	231,648	72,352	38,000	38,000	380,000
Simulation Tools: Applications and Analysis	201,168	62,832	33,000	33,000	330,000
Safety Planning and Analysis	115,824	36,176	19,000	19,000	190,000
Congestion Mgt, Ops & Technology Planning	121,920	38,080	20,000	20,000	200,000
Emergency Preparedness Planning	115,824	36,176	19,000	19,000	190,000
System Performance: Monitoring & Adapting	256,032	79,968	42,000	42,000	420,000
Freight Mobility Planning	115,824	36,176	19,000	19,000	190,000
Bicycle and Pedestrian Planning	121,920	38,080	20,000	20,000	200,000
Transit and Human Service Planning	335,280	104,720	55,000	55,000	550,000
Environmental Planning	231,648	72,352	38,000	38,000	380,000
Air Quality Conformity Analysis	91,440	28,560	15,000	15,000	150,000
Total	4,541,520	1,418,480	697,000	793,000	7,450,000

The total budget column reflects a combination of funds for BMC tasks as described throughout the main body of the document, as well as funds for local jurisdictions as described in Appendix B.

BALTIMORE REGION UPWP
FY 2024-2025 UNIFIED PLANNING WORK PROGRAM

FY 2025 FUNDING BY TASK AND PROJECT SPONSOR

WORK TASKS	BMC SHARE	ANNAPOLIS SHARE	ANNE ARUNDEL COUNTY SHARE	BALTIMORE CITY SHARE	BALTIMORE COUNTY SHARE	CARROLL COUNTY SHARE	HARFORD COUNTY SHARE	HOWARD COUNTY SHARE	QUEEN ANNE'S COUNTY SHARE	TOTAL
UPWP Management	980,000									\$980,000
Professional Consultant Services	270,000									\$270,000
Support for State and Local Initiatives	190,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	\$670,000
Long-Range Transportation Planning	190,000									\$190,000
Transportation Improvement Program	190,000									\$190,000
Public Participation and Community Outreach	490,000									\$490,000
Transportation Equity Planning	160,000									\$160,000
GIS Activities	420,000									\$420,000
Demographic and Socioeconomic Forecasting	280,000									\$280,000
Development Monitoring	300,000									\$300,000
Analysis of Regional Data and Trends	320,000									\$320,000
Maintenance of Current Simulation Tools	380,000									\$380,000
Simulation Tools: Applications and Analysis	330,000									\$330,000
Safety Planning and Analysis	190,000									\$190,000
Congestion Management, Operations & Technology Planning	200,000									\$200,000
Emergency Preparedness Planning	190,000									\$190,000
System Performance: Monitoring and Adapting	420,000									\$420,000
Freight Mobility Planning	190,000									\$190,000
Bicycle and Pedestrian Planning	200,000									\$200,000
Transit and Human Service Planning	550,000									\$550,000
Environmental Planning	380,000									\$380,000
Air Quality Conformity Analysis	150,000									\$150,000
TOTAL	6,970,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	7,450,000

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APPENDIX B
FOCUS AREAS

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BALTIMORE REGIONAL FREIGHT PROFILE

PURPOSE: The purpose of the Baltimore Regional Freight Profile (BRFP) is to develop a comprehensive database of major freight generators (port, airport, distribution and warehousing), major freight corridors, intermodal connectors, Strategic Highway Network (STRAHNET), truck rest stops, state inspection stations, rail lines, etc. This effort will coordinate and collaborate with the Maryland State Freight Plan to avoid any duplication of effort.

The Baltimore Regional Transportation Board (BRTB) and the Freight Movement Task Force (FMTF) recognize the importance of a safe and efficient freight transportation network in the region. The Howard Street Tunnel project (double stacking) will be completed by 2025 and with the continued growth at the Port of Baltimore and the buildout of TradePoint Atlantic, it is expected that there will be a significant increase in freight movement in the region.

The Baltimore Regional Freight Profile will include the following key areas:

- Bipartisan Infrastructure Law Implementation – State Freight Plan Updates and National Highway Freight Program Funding
- Critical Urban Freight Corridors (CUFC)
- Truck Parking – collaborate with state and local jurisdictions to study potential overnight truck parking needs/locations
- Develop regional freight locator tool – to include major freight generators, rail and roadway connections, bottlenecks, and other freight related data
- Develop regional freight profile of commodities and flows using Freight Analysis Framework (FAF) in collaboration with MDOT Statewide Freight Plan updates
- Collaborate with MDOT CAV freight working group to develop regional policies/priorities
- Update the BMC travel demand freight model and develop updated freight forecasts
- Monitor air cargo flows at Baltimore Washington International Thurgood Marshall (BWI) Airport

PARTICIPANTS: BMC, BRTB Members, MDOT and Modes, Consultant

FY 2024 BUDGET: \$240,000

COORDINATING AFFORDABLE HOUSING & TRANSPORTATION PLANNING

PURPOSE: Identify ways to engage the public on new homes for the region, including affordable homes, and how they could potentially improve our transportation network and overall economy.

Real estate experts increasingly believe that, as in many metropolitan areas across the country, a constrained supply of habitable homes to buy and rent here in the Baltimore region is constraining our economy and job growth. It also leads to additional traffic from workers commuting from outside our metropolitan area and from places without commuting alternatives, such as transit, walking, and biking.

One reason for this is that a constrained supply of homes has contributed to dramatic price increases – up 27% from June 2020 to June 2022 – making it more and more difficult for first-time homebuyers. This dynamic has also reinforced stubborn racial homeownership gaps in the region and forced would-be homebuyers to continue to rent, inflating demand in the rental market. This high rental demand has combined with a limited supply of rental homes to push rents up as well – in some jurisdictions more than 15% from 2020 to 2022. Here in our region and across the country, rising housing prices are a major contributor to inflation.

As across the country, however, proposed efforts to increase the supply of rental and for-sale homes, including affordable homes, often meet strong opposition from nearby residents. This can result in a public policy stalemate that only exacerbates these challenges. New research, however, can offer insight into public viewpoints and how to engage with community residents constructively.

Deliverables for this task may include:

- Focus groups of residents around the metropolitan area
- Additional research into how the location of homes might affect the transportation network
- Suggestions for how public policy makers can constructively engage with current community residents on possible solutions.

PARTICIPANTS: BMC, local jurisdictions and housing agencies, MDOT, MDOT MTA, Consultant

FY 2024 BUDGET: \$160,000

FUTURE TRENDS: EMPLOYMENT, COMMERCIAL REAL ESTATE AND HOUSING

PURPOSE: The COVID-19 pandemic and related public health measures caused or accelerated shifts in how and where people work, with direct impacts upon the region’s population and economy. The pandemic sparked a large-scale work from home experiment, causing many to reconsider their work arrangements and residential location preferences, it expedited changes in the commercial real estate markets, and it affected commuting patterns (both in frequency and mode selection). This task will include analyses of these trends, and quantify their potential longer-term implications – thereby informing land-use assumptions for future forecast rounds and travel demand modeling efforts.

The study will include a literature review, data acquisition, trend analyses, projections, and interviews with subject matter experts, particularly those in the areas of the economy, commercial real estate, housing, and transportation. The study will document:

- Employment – Trends and Projections
 - Work From Home (WFH) adoption rates
 - Full remote vs hybrid; average days/week for hybrid
 - Labor force participation rates (LFPR) - The flexibility of WFH has the potential to expand LFPRs. By how much and for who?
 - Employment by industry – Trends and post-pandemic projections
- Commercial Real Estate – Trends and Projections
 - Shifts in office space utilization and the associated demand for space and supportive services
 - Shifts in the retail industry including changes to the share of retail business conducted at physical locations vs e-commerce
- Housing location and unit mix – Trends and Projections
 - Will the rise in WFH further decentralize housing/increase sprawl? To what extent?
- Implications of the above trends and projections upon the region’s economy (job growth and labor force), downtowns (traditional job centers), housing demand (location and unit mix), and transportation (commuting patterns - auto vs transit, and freight)
- Input from a futurist. An unconstrained perspective on the potential future of the region – focusing on the topic areas in the project.

Potential products include a written report describing methods, findings and implications, and presentations to CFG/TC/BRTB.

PARTICIPANTS: BRTB and Subcommittee members, Consultant

FY 2024 BUDGET: \$300,000

LOCAL SIGNAL INFRASTRUCTURE ASSESSMENT

PURPOSE: Preventative maintenance of traffic signals is a key component of a traffic signal management plan, helping to meet an agency's goal of providing safe and efficient movement of people and goods. Routine inspections of traffic signals should be performed on a regular cycle (for example once every two to three years). Recent inspections conducted in some jurisdictions showed significant deterioration in signal equipment over the course of a 5-year period.

This pilot program will assess inspection programs in the region (state and local), best practices from around the US, and field inspections of 40-50 intersections in the region as a baseline condition. Based on the results of this pilot program and future funding availability, similar inspections will be conducted on a 3-5 year cycle.

Signals to be inspected will be determined using age of the signal, traffic and crash history, and in consultation with local signal and maintenance staff.

The following are some of the items to be inspected:

- Signal poles and/or mast arms – foundation, bolts, etc.
- Span wire installations
- Cabinet fan and filter
- Controller
- Junction boxes and conduit systems
- Cables
- Detection systems
- Pedestrian push buttons
- Detection systems

PARTICIPANTS: BMC, Local Jurisdiction Members, Consultant

FY 2024 BUDGET: \$200,000

LOTS SKILLS AND TECHNOLOGY SUPPORT

PURPOSE: This task will support the improvement and expansion of skills and access to technology for the Locally Operated Transit Systems (LOTS) in Central Maryland as well as MDOT MTA's core bus, commuter bus, and mobility divisions. Based on an assessment of the existing skills and technological resources within the region, MDOT MTA prepared a summary of findings and recommendations to help the Central Maryland Regional Transit Plan (Central MD RTP) Implementation Team focus its efforts in meeting current and future needs.

To inform the regional assessment, MDOT MTA first conducted a literature review to understand what efforts transit agencies across the country have already undertaken to assess the technology and skills available at their agencies. Staff then developed a survey to understand the existing conditions within each LOTS agency, addressing several key questions:

- What are the technological needs of the LOTS?
- Are there opportunities to unify technology solutions across the region?
- How can training be improved?
- How can advances in technology be applied to the LOTS?
- How can other transit agency best practices be applied to LOTS use of technology?

After receiving 21 responses, MDOT MTA conducted staff interviews with the LOTS and prepared a report summarizing findings and providing recommendations for the region. Based on the surveys and interviews with the LOTS and MDOT MTA bus mode staff, the needs of the region fell into the following categories: capacity issues, procurement, technology underutilization, data management and processing, real-time information, microtransit/transportation network companies (TNCs), training, regional fares, regional coordination and provider communication.

Funding for this task could include support tasks for implementing improved and expanded skills and access to technology for the LOTS and MDOT MTA bus mode staff in one or more of six category groups identified in the recommendations: Technical Assistance, Data Management, Training, Regional Policies, Guiding Documents, and Research, Procurement and Tools & Software.

PARTICIPANTS: Baltimore region LOTS, MDOT MTA, Consultant

FY 2024 BUDGET: \$150,000

MAKING TRANSIT ORIENTED DEVELOPMENT VIABLE IN THE BALTIMORE REGION

PURPOSE: Develop customized recommendations for improving the viability of transit-oriented development in the Baltimore region and local jurisdictions.

Transit-oriented development (TOD) is development that is near rapid, high-capacity transit, such as heavy rail, light rail, or bus rapid transit. TOD related development is relatively higher density development that includes a mix of residential, employment, commercial, and other uses, leading to livable, walkable communities. Nationwide, evidence suggests that TOD can grow transit ridership and increase economic development. However, in the Baltimore region, these benefits are less apparent.

The MDOT Office of Planning and Capital Programming has worked with the Maryland Department of Planning (MDP) to develop resources for TOD that will be expanded upon as part of this effort including:

- The Maryland Transit Station Area Profile Tool is an interactive map that compiles key socio-economic, demographic, land-use and transit-access information for all of Maryland's current and planned fixed rail stations. and
- The Maryland TOD Models and Guidelines Resources (Both developed and supported by MDP).

To support TOD in the Baltimore region, this project will develop a guide or toolkit including recommendations specific to the Baltimore region for improving the viability of TOD. Topics to be addressed in the guide would include best practices for planning, incentives, and improved transit.

Deliverables for this task may include:

- Literature review of TOD and case studies
- Summary of current TOD policies and conditions in the Baltimore region
- Identification of opportunities for TOD in the Baltimore region
- Guidelines for improving viability of TOD in the Baltimore region, including recommendations and real world examples for encouraging developers to engage in TOD and fostering community support for TOD

PARTICIPANTS: BMC, local jurisdictions, MDOT MTA, Development Organization(s), Consultant

FY 2024 BUDGET: \$220,000

MICROTRANSIT SOLUTIONS

PURPOSE: To develop best practices for implementing, operating, and funding microtransit, including coordination between jurisdictions in the Baltimore region.

Microtransit is a broad term that describes a shared transportation service that sits between traditional fixed-route transit and ride-hailing services. Microtransit systems are technology-enabled, and capitalize on widespread mobile GPS and internet connectivity to offer demand-responsive services, generally using dynamically generated routes. Microtransit can be used in an urban context to supplement fixed-route transit and provide first-and-last mile solutions, and it can be used in less dense suburban or rural areas, where fixed-route transit is more difficult to operate effectively. By filling in the gaps in traditional fixed-route transit, micro-transit can help reduce traffic congestion and vehicle emissions.

The Baltimore region is a diverse region made up of urban, suburban, and rural areas, and is served by multiple transit agencies and modes. In this environment, microtransit could be a valuable tool to improve transit ridership and help connect different transit systems and modes.

This task will support micro-transit in the Baltimore region by developing best practices for implementing, operating, and funding microtransit, including coordination between jurisdictions and agencies.

Potential deliverables for this task may include:

- Review of microtransit case studies
- Summary of current microtransit conditions in the Baltimore region
- Identification of opportunities for expansion of microtransit in the Baltimore region
- Identification of funding mechanisms for microtransit
- Guidelines for improving regional coordination of microtransit.

PARTICIPANTS: BMC, local jurisdictions, MDOT MTA, Consultant

FY 2024 BUDGET: \$220,000

PATAPSCO REGIONAL GREENWAY: OPERATIONS, MAINTENANCE AND BRANDING PLAN

PURPOSE: The Patapsco Regional Greenway Plan was approved by the Baltimore Regional Transportation Board in 2017. The Plan maps the envisioned main alignment of a 40-mile greenway stretching from Sykesville in Carroll County to the Baltimore Inner Harbor. The BRTB has funded preliminary design of several segments of the planned greenway over the past few years. This task will develop an operations, maintenance and branding plan for the Greenway.

Work with interested parties, including BMC member jurisdictions and the Maryland Park Service to:

- In cooperation with responsible agencies and jurisdictions, develop an operations and maintenance plan with standards for short, mid and long-term activities for the Patapsco Regional Greenway (PRG). The standards will be based on facility type (asphalt, boardwalk, on-road, etc.) and take into account the existing policies of the jurisdiction or agency responsible for maintenance and operations of a given trail segment.
- Identify the jurisdictions and agencies responsible for maintenance and operations of each existing and planned segment of the PRG.
- Engage a steering committee to support development of a branding plan for the PRG. Identify existing branding if any. Design branding for signage, trail markings, educational and interpretive displays, a PRG web based map and website and a printable map. Ensuring branding is compatible with state and local standards. Provide all design files to serve as templates and allow for future edits.
- Identify potential funding opportunities such as sponsorships for educational and interpretive displays.

PARTICIPANTS: BMC, BRTB Members, MDOT and Modes, Consultant

FY 2024 BUDGET: \$250,000

REGIONAL WORKERS' TRAVEL CHOICES

PURPOSE: Establish a monitoring data collection program to understand regional workers' travel choices and patterns. BMC in partnership with transportation data experts will design a survey distributed to regional households collecting basic characteristics and detailed household labor force travel and location choices.

The Baltimore region, over many years, has maintained a comprehensive data collection program relying on surveys, counts, observations, and other methods in monitoring personal travel behavior, choices, and trends.

Collected data is both aggregate, such as highway traffic counts and transit automatic passenger counts, and disaggregate, such as a household travel survey. Aggregate travel data is passively and frequently collected suitable for system trend monitoring. Disaggregate travel survey data, due to higher costs collected less frequently, contains revealed personal travel choices and behavior. However, survey data provides a richer data set to understand travelers' choices and behaviors from trends identified in aggregate data. Evaluation of the who, where, why, when, and how can lead to more effective policy decisions.

The analysis of various aggregate data sources has resulted in COVID-induced accelerated and emerging travel changes.

- In 2020, the Census Bureau American Community Survey reported 19.9% of workers worked from home. A sharp increase from 5.6% in 2019.
- Regional transit ridership had a pandemic-level low of 2.5 million riders in April 2020. Transit ridership has increased steadily to 4.4 million riders in August 2022, but ridership has not fully recovered from the February 2020 level of 5.1 million riders.
- The Bureau of Labor Statistics recently reported prime working-age labor force participation of 62.1%. Labor force participation has increased from the COVID low (60.2%), but continues an observed downward trend.

In partnership with local data experts, the project will implement a cost-effective way to distribute a survey instrument collecting basic household and member characteristics and details on all working members' commute travel. At a minimum, the survey should collect work location (home versus office) and location (home and office) day of the week flexibility. Information about the commute will also be captured such as the mode, time of departure, and total travel time. In addition to providing current location and commuting, participants will be asked to provide this data pre-COVID.

In addition to capturing revealed travel, participants should be asked opinion/preference questions. The commute mode of transit is a policy board focus. Understanding commuter views on available modes that can be cross-tabbed with commuter demographics and household characteristics could lead to transit market identification and the designing and implementation of effective non-auto travel options.

Comprehensive commuter travel collected data would support the UPWP activity Future Trends:

Work from Home, Commercial Real Estate, and housing location choice. The study requires commuter travel data in the analysis of changes in commercial real estate and home location choices and the impact of changes on future land-use assumptions used in short and long-range transportation planning.

Sample size and margin of error will be an important considerations in survey design. It will be important to consider the various occupations that are conducive to optional work location choices and their physical address. A proper sample size would allow for robust analysis at the sub-county level and minimum at jurisdiction activity centers.

Deliverables for this task may include:

- Survey instrument design
- Revealed and preference data on travel choices and location
- A statistical cross-tab analysis on travel choices and locations with person/household demographic characteristics
- Presentations and Documentation on survey findings

PARTICIPANTS: BMC, Consultant

FY 2024 BUDGET: \$150,000

REGIONAL TRANSIT PLAN CORRIDORS

PURPOSE: The purpose of this task is to continue the feasibility studies of 30 Regional Transit Corridors as identified in the Central Maryland Regional Transit Plan (Central MD RTP). This task will evaluate transit needs and identify mode, alignment and routing, and may include an early screenings of selected corridors against potential state and federal funding sources to determine future project viability.

The Maryland Metro/Transit Funding Act, passed by the Maryland State Legislature in 2018, required the Maryland Department of Transportation, Maryland Transit Administration (MDOT MTA) to initiate a Regional Transit Plan for Central Maryland that defined public transportation goals over a 25-year period. MDOT MTA completed *Connecting Our Future, A Regional Transit Plan for Central Maryland* (Central MD RTP) in October 2020.

The Central MD RTP includes strategies for transit improvements throughout the region, and identifies 30 Regional Transit Corridors that may work together to achieve the Plan’s regional network goals and objectives. The corridors were identified as having a need for new or additional transit assets because they demonstrate transit demand that may justify infrastructure expenditures, service and/or technology improvements. The corridors also have regional significance to improve or provide connectivity between jurisdictions. The 30 corridors identified in the RTP were categorized into one of three types: early, mid-term and late-term “opportunity” corridors. Each of these types of corridors contain varying levels of existing transit infrastructure, service and demand.

The corridors identified in the Central MD RTP did not include definition of specific routes, service patterns, alignments, levels of service, potential stations or transit mode of travel. Therefore it was indicated in the Central MD RTP that further refinement of the 30 Regional Transit Corridors would be required through implementation of corridor feasibility studies. These studies will inform future interventions based on final mode and alignment selection, cost-benefit analysis, and jurisdictional and public support.

This task will evaluate transit needs and identify mode, alignment, routing and potential stops/station areas along the corridor. As warranted, the task will include an early screening of the corridor against potential state and federal funding sources, including the Federal Transit Administration (FTA) Capital Investment Grant (CIG) program criteria, to determine a future project’s viability.

PARTICIPANTS: Selected Jurisdictions(s), MDOT MTA, Consultant

FY 2024 BUDGET: \$250,000

TRANSPORTATION AND LAND USE CONNECTION GRANTS

PURPOSE: To provide short-term technical assistance to local governments in the Baltimore region to help them implement changes to the built environment that reduce traffic on roads and enable more people to easily walk, bike, and use transit.

Local jurisdictions that are voting members of the BRTB are eligible to apply for short-term consultant services (6-8 months) to complete planning or preliminary design projects that address one or more of these regional land-use/transportation priorities in established communities and economic activity centers.

- Multimodal Transportation Options: bicycle and pedestrian facilities; transit alternatives; facilities for people with disabilities; micromobility; Safe Routes to School enhancements, freight mobility improvements, and transit stop/station or service improvements.
- Transit Oriented Development: Feasibility, market analysis or site assessments to determine the viability of mixed use transit-oriented development projects or first/last mile strategies; outdoor public amenities; and improved bicycle and pedestrian facilities to and within Transit Oriented Developments as alternatives to automobile travel. Projects that enhance economic and community development, respect the area's cultural history, and strengthen connections between transit and surrounding neighborhoods.
- Land Use Enhancements in Activity Centers: align uses and as appropriate, increase employment or housing (especially affordable housing), support improved access to essential destinations, or identify improvements in multi-modal and freight mobility.
- Access to Transit: small area or station area planning, pedestrian, bicycle and micro-mobility connections, and other first-mile/last mile strategies.
- Regional Trail Connections: advance the development of the Patapsco Regional Greenway and local trail connections to activity centers.
- Climate Change Adaptation: climate change adaptation strategies as identified in the *Climate Change Resource Guide*.
- Equitable Access for Vulnerable Populations: projects that are located within or serve improving access to populations identified in the Vulnerable Population Index (VPI).

Planning and design projects may include but not necessarily be limited to the following activities.

- Development or implementation of local visions and plans
- Site-specific studies, assessments or plans
- Plans for implementing climate adaptation strategies
- Preliminary or schematic drawings and cost estimates
- Engineering systems description and analysis
- Renderings of site massing, elevation, or facility interior/exterior spaces
- Site survey

Projects selected for annual funding will be completed by a pre-qualified consultant serving a three-year term and managed by BMC staff in close coordination with the local lead.

PARTICIPANTS: BMC, local jurisdictions (TBD), consultants

FY 2024 BUDGET: \$300,000

TRANSPORTATION PLANNING INSTITUTE

PURPOSE: This task will support the knowledge base and skill set of BRTB member transportation planning staff through a series of training programs focusing on metropolitan and statewide transportation planning processes.

The Baltimore Regional Transportation and its subcommittees are comprised of federal, state and local jurisdictional staff whose primary jobs span many different transportation planning and policy arenas. This task aims to broaden the knowledge base of these BRTB members in the areas of Metropolitan Planning and all of its associated planning factors, thereby enhancing the processes and products of the BRTB.

BMC staff will work with the Technical Committee and the BRTB subcommittees to define a proposed set of training programs spanning Fiscal Year 2024. These training programs could include BMC led training and/or consultant led training. These programs could potentially follow the model of, or be run through, the Maryland Transportation Technology Transfer Center (MD LTAP/T2 Center). This program could also potentially be used to sponsor agency staff attendance at approved training conferences.

PARTICIPANTS: BRTB and Subcommittee members, Consultant

FY 2024 BUDGET: \$120,000

APPENDIX C
PUBLIC REVIEW PROCESS

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BRTB SEEKING COMMENTS ON FY 2024 UNIFIED PLANNING WORK PROGRAM (UPWP)

BALTIMORE, MD (Wednesday, February 8, 2023) – The Baltimore Regional Transportation Board (BRTB) is seeking comments on a \$10.7 million draft work plan and budget for fiscal year 2024 through March 9, 2023.

The BRTB, a federally mandated planning agency for the Baltimore region staffed and supported by Baltimore Metropolitan Council (BMC), adopts a new work plan and budget for each fiscal year with a list of ongoing and upcoming projects. The draft work plan, known as the Unified Planning Work Program (UPWP), budgets \$10,710,000 for fiscal year 2024.

Projects proposed for the fiscal year 2024 UPWP include:

- Analyzing changing trends in employment, commercial real estate and housing, with an eye on potential long-term implications for land-use, travel demand and other aspects of development in the Baltimore region.
- Creating recommendations for improving viability of transit-oriented development in the Baltimore region.
- Developing best practices for implementing, operating and funding micro-transit in the Baltimore region.
- Identifying ways to coordinate development of affordable housing and improved transportation networks in the Baltimore region.
- Assessing various inspection programs for traffic signal infrastructure and conducting field inspections to establish baseline conditions of traffic signal infrastructure in the Baltimore region.

Learn more about the project and view the draft fiscal year 2024 UPWP at publicinput.com/2024UPWP.

Members of the public are encouraged to share comments on the UPWP by Thursday, March 9. BRTB members will vote on adoption of the fiscal year 2024 UPWP at meeting on Friday, April 21, and will consider all comments before voting. Comments will also inform ongoing reporting on stakeholder sentiment toward the BRTB's projects and processes.

Ways to comment include:

- Online: publicinput.com/2024UPWP
- Email: 2024UPWP@publicinput.com
- Text: keyword '2024upwp' to 73224
- Voicemail: 855-925-2801 x 3664
- Social media: @BaltoMetroCo with #BRTBListens
- Mail: Baltimore Regional Transportation Board, 1500 Whetstone Way, Suite 300, Baltimore MD 21230

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Baltimore Metropolitan Council (BMC) works collaboratively with the chief elected officials in the region to create initiatives to improve quality of life and economic vitality. As the Baltimore region's council of governments, BMC hosts the Baltimore Regional Transportation Board (BRTB) and supports local government by coordinating efforts in a range of policy areas including emergency preparedness, housing, cooperative purchasing, environmental planning and workforce development.

BMC operates its programs and services without regard to race, color or national origin in accordance with Title VI of the Civil Rights Act of 1964 and other applicable laws. Appropriate services can be provided to qualified individuals with disabilities or those in need of language assistance who submit a request at least seven days prior to a meeting. Call 410- 732-0500. Dial 7-1-1 or 800-735-2258 to initiate a TTY call through Maryland Relay. Si se necesita información de Título VI en español, llame al 410-732-0500.

SAMPLE SOCIAL MEDIA POSTS

 **Baltimore Metropolitan Council** @BaltoMetroCo · Mar 6

We currently lack complete data on the conditions of the region's traffic signals. Our draft budget for the upcoming fiscal year has funding for transportation planning projects identified as priorities by local jurisdictions. Learn more and weigh in at publicinput.com/2024upwp



Conducting field inspections to assess the conditions of traffic signal infrastructure in the Baltimore region.

FUNDING FOR FISCAL YEAR 2024

1 2 65

 **Baltimore Metropolitan Council** @BaltoMetroCo · Feb 24

We can address more issues more effectively together with a collaborative approach. Our draft budget for the upcoming fiscal year has funding for transportation planning projects identified as priorities by local jurisdictions. Learn more and weigh in at publicinput.com/2024upwp



Identifying ways to coordinate development of affordable housing and improved transportation in the Baltimore region.

FUNDING FOR FISCAL YEAR 2024

1 3 76



Baltimore Metropolitan Council @BaltoMetroCo · Feb 22

Trends are shifting. What does this mean for users on our roads and rails? Our draft budget for the upcoming fiscal year has funding for transportation planning projects identified as priorities by local jurisdictions. Learn more and weigh in at publicinput.com/2024upwp



1 2 66



Baltimore Metropolitan Council @BaltoMetroCo · Feb 15

Microtransit, transit "on demand," allows greater route and schedule flexibility. Our draft budget for the upcoming fiscal year has funding for transportation planning projects identified as priorities by local jurisdictions. Learn more and weigh in at publicinput.com/2024upwp



1 2 93

PUBLIC COMMENTS

Do you have any comments about the FY 2024 work program and budget that you would like to share on the public record? Please list below.

On page 76 of the draft report is the following:

“BMC managed a project to develop a Pedestrian Infrastructure Assessment Tool. The ArcGIS-based desktop tool will assist member jurisdictions in prioritizing sidewalk projects, identifying sidewalk mileage and gaps, visualizing sidewalk data and facilitating pedestrian planning in general. The project also consists of the acquisition of a regional pedestrian facility inventory which can be used with the tool, however, other sidewalk inventories are compatible with the tool. A user manual and training materials are being developed to assist users with use of the tool. To be complete by the end of FY 2023.” I would like this Tool to be developed in a manner that it is accessible to the general public. I believe the public being able to identify sidewalk needs in individual communities will accelerate BMC member jurisdiction focus on improving sidewalk conditions throughout the region. This in turn will assist the BMC in meeting the first four goals of the Unified Work plan.

1. BMC's development of a Pedestrian Infrastructure Assessment Tool has the promise of being a key tool for local jurisdictions in developing strong active transportation networks. However, I see no plans within this UPWP to maintain or, importantly, make this tool available to the public. This would be a key tool for BMC's GIS team to make available to the public through their Open Data website (reference pg. 44 of the Draft UPWP).

2. Calibration of the InSITE tool is correctly prioritized as this sort of trip analysis tool underpins much of the transportation planning. I suggest that this calibration include calibration/validation of modeled changes based on infrastructure changes, including changes that could influence mode share to transit or active transportation (cycling, walking, micro-mobility). Although it is not stated, the I would like to see the model calibrated across travel times and seasonal variation (e.g. school-induced congestion in the 3pm hour during the school year). Calibration should also be performed across mode share, including active transportation trips.

3. Under "Analysis of Regional Data and Trends" (pg 50-51), BMC plans to understand a Household Travel Survey and perform Trend and Policy Analysis. BMC should ensure that this analysis goes beyond surface level reviews of current mode share and evaluates desired mode share and transportation options. Given the under-investment in Baltimore-area transit networks through recent years, current modes of transportation are not necessarily reflective of residents desired future investment planning.

BRTB Response to Public Comments

UPWP Comment: Calibration of the InSITE tool is correctly prioritized as this sort of trip analysis tool underpins much of the transportation planning. I suggest that this calibration include calibration/validation of modeled changes based on infrastructure changes, including changes that could influence mode share to transit or active transportation (cycling, walking, micro-mobility). Although it is not stated, I would like to see the model calibrated across travel times and seasonal variation (e.g. school-induced congestion in the 3pm hour during the school year). Calibration should also be performed across mode share, including active transportation trips. (Henry Cook)

BRTB Response: The most recent effort calibrates/validates the InSITE travel demand model using the 2019 Maryland Household Travel Survey (MHTS) along with highway traffic counts and transit route ridership. The InSITE model component structure remains unchanged. At this time, there is no planned model sensitivity activity. We do value sensitivity testing as an important exercise to learn about InSITE forecasting capabilities.

The InSITE model Time of Day (TOD) choice, using ½ hour resolution (48 periods), is an existing model component that is currently being calibrated/validated using the 2019 MHTS. This work will be completed by the end of 2023. Calibration TOD choice is completed by purpose (Mandatory, Non-Mandatory, Work Based, and Fully Joint). In addition, the validation spreadsheet compares InSITE and MHTS results stratified by person type (child, worker, non-working adult, and retired) and household income group.

The MHTS recruited 7,500 households over 12 months with each household member recording all trips during the assigned travel day. The MHTS represents the average 2019 weekday travel. A larger sample size would be needed for an average seasonal weekday.

The InSITE tour and trip mode choice model is an existing model component that is also currently being calibrated/validated using the 2019 MHTS and will be complete by the end of 2023. The tour and trip mode choice model contains the following modes: auto (drive alone, share ride 2, share ride 3), transit (walk and drive access), walk, and bike. Mode choice is completed by purpose (Mandatory, Non-Mandatory, Work Based, and Fully Joint). The validation spreadsheets compare InSITE and MHTS results stratified by person type (child, worker, non-working adult, and retired) and several household segmentations – income group, vehicle availability, household size, and others. There are sufficient observations to reasonably validate the mode of walking.

The 2019 MHTS contains a few tour/trip bike trip observations, thus limiting calibration efforts.

Although not technically a mode, InSITE for part/full-time workers with a usual place of work estimates the share that works from home. COVID has significantly changed this choice from the 2019 observation. The UPWP is funding a data collection effort to capture the work-from-home choice providing a data source for policy analysis and future model calibration.

UPWP Comment: Under "Analysis of Regional Data and Trends" (pg 50-51), BMC plans to understand a Household Travel Survey and perform Trend and Policy Analysis. BMC should ensure that this analysis goes beyond surface level reviews of current mode share and evaluates desired mode share and transportation options. Given the under-investment in Baltimore-area transit networks through

recent years, current modes of transportation on not necessarily reflective of residents desired future investment planning. (Henry Cook)

BRTB Response: The Maryland Household Travel Survey was undertaken in 2019 and gathered data on current travel behavior only. Desired Travel is certainly a valid and important question, but that's a different type of survey. Efforts in the UPWP relate to a continuing series of analyses based on the data collected in 2019.

UPWP Comment: BMC's development of a Pedestrian Infrastructure Assessment Tool has the promise of being a key tool for local jurisdictions in developing strong active transportation networks. However, I see no plans within this UPWP to maintain or, importantly, make this tool available to the public. This would be a key tool for BMC's GIS team to make available to the public through their Open Data website (reference pg. 44 of the Draft UPWP). (Henry Cook)

BRTB Response: The Pedestrian Infrastructure Assessment Tool (PIAToolkit) and sources for sidewalk data will be available publicly on the BMC website within the next month or two. BMC staff will update the PIAToolkit manual based on feedback from member jurisdictions and the public. Modifications to the PIAToolkit will require a consultant contract which may be a good candidate for a future UPWP project.

UPWP Comment: On page 76 of the draft report is the following: "BMC managed a project to develop a Pedestrian Infrastructure Assessment Tool. The ArcGIS-based desktop tool will assist member jurisdictions in prioritizing sidewalk projects, identifying sidewalk mileage and gaps, visualizing sidewalk data and facilitating pedestrian planning in general. The project also consists of the acquisition of a regional pedestrian facility inventory which can be used with the tool, however, other sidewalk inventories are compatible with the tool. A user manual and training materials are being developed to assist users with use of the tool. To be complete by the end of FY 2023."

I would like this Tool to be developed in a manner that it is accessible to the general public. I believe the public being able to identify sidewalk needs in individual communities will accelerate BMC member jurisdiction focus on improving sidewalk conditions throughout the region. This in turn will assist the BMC in meeting the first four goals of the Unified Work plan. (Patrick Roddy)

BRTB Response: The Pedestrian Infrastructure Assessment Tool (PIAToolkit) and possible sources for sidewalk data will be available publicly on the BMC website within a few months.

UPWP Comment: Build the Short Line Trail connecting Catonsville, UMBC, Spring Grove, Western Tech, Paradise, Baltimore National Cemetery, Irvington, Loudon Park, and St. Agnes to the Gwynns Falls Trail. (Robert Krasnansky)

BRTB Response: Catonsville Rails-to-Trails has been spearheading the development of the 2.2-mile long Catonsville South Shore Trail. More information about this work can be found at <https://crtt.org/>. In spring/summer 2023, Baltimore County is constructing an at-grade crossing at Bloomsbury Avenue and Asylum Lane, which will allow bicyclists to continue to the Catonsville South Shore trail without dismounting.

UPWP Comment: Continued funding and support for planning for multi-use trails and a regional trail network. This is described in the text of the Bicycle and Pedestrian Planning section, but not listed

as an anticipated product within the FY 2024-2025 planning horizon. (Henry Cook)

BRTB Response: BMC staff are currently advancing multiple UPWP projects which support planning multi-use trails and the regional active transportation network. These include preliminary design of the Guinness to Southwest Area Park segment of the Patapsco Regional Greenway (PRG) and the development of a concept plan for bicycle and pedestrian improvements along US 40 in Harford County (Aberdeen to Havre de Grace). Projects that are expected to launch soon, and continue into FY 2024, include preliminary design of a segment of the PRG in Anne Arundel and Howard counties and a project to create a vision for a regional active transportation network. BMC also supports projects selected under the Transportation and Land Use Connection grant program. Currently we are assisting the City of Annapolis on the Bay Ridge Bicycle Concepts project and the City of Baltimore on their Wabash Avenue Separated Bicycle Lanes project. Support for upcoming awards for this grant will also occur in FY 2024. It is anticipated that additional tasks will be approved as staff time allows.

UPWP Comment: You should fix the roads before your traffic signals. (Ryan Weitzel)

BRTB Response: The UPWP is supported with federal funds for planning activities. Other agencies (local or state) that own and maintain roadways receive funding for fixing those roads.

As a planning activity, the Traffic Signal Subcommittee of the BRTB proposed this task to conduct an assessment of traffic signal infrastructure (poles, controllers, wiring etc.) to determine if there is deterioration that could cause safety hazards. This activity does not take funds away from maintenance.

UPWP Comment: As a preservationist I seek better access to historic sites in and around Ellicott City, Maryland. Some type of centralized parking allowing visitors to ride a Hop On/Hop Off bus or trolley would be welcome especially on weekends and during high traffic events such as festivals and Midnight Madness. Stops can be made at historic sites and engage more visitors to visit Ellicott City. (Connie Siegel)

BRTB Response: BMC, in partnership with Baltimore and Howard Counties have developed a set of recommendations for parking, wayfinding and multimodal access in and around Ellicott City and Oella. These recommendations will be detailed in a final report which is anticipated to be completed in May 2023. These recommendations are not necessarily all inclusive and are meant to be a guideline for improvements the counties can make in the future.

These recommendations do include a suggested shuttle service that would run on weekends and during special events. If demand for a shuttle service is high, the hours of use for the shuttle service could be expanded or the shuttle could be expanded to weekdays.

In addition to the shuttle service, the study recommends new wayfinding signage that would act as a directory to fixed attractions such as the B&O museum or trail locations. This signage could also support advertisement for special events. In addition to the shuttle and the wayfinding signs, the study also recommends creating a "Healthy Walk" or "Historic Walk" trail that would direct users to pass by the many attractions within Historic Ellicott City and could feature trailblazing markers along the trail that provide information regarding the historic nature of the site.

APPENDIX D
ADDITIONAL PLANNING STUDIES

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MDOT

2050 Maryland Transportation Plan (2050 MTP): MDOT is updating the long-range transportation plan, guiding the state's transportation investments. The MTP was last updated in January 2019, and in order to meet both federal and state requirements must be updated by January of 2024.

The update of the plan includes a review and assessment of existing MDOT modal plans, metropolitan planning organization plans, peer state plans, federal priorities, Maryland state priorities, and public input from the recent MDOT surveys on transportation priorities. The draft vision, guiding principles, and goals will be modified and adapted through the plan process through useful feedback from our stakeholders, Maryland's residents and visitors. We thank everyone who continues to take time to provide input.

Statewide Bicycle and Pedestrian Master Plan: MDOT is updating the 2019 Bicycle and Pedestrian Statewide Master Plan. MDOT's vision is to produce a concise, data driven bicycle, pedestrian and micromobility master plan to update policies and provide infrastructure recommendations to increase mode shift and improve safety. The Plan will highlight accomplishments since the last plan was adopted while recommending initiatives to be taken over the next 5 years with considerations towards: 1) Updating and strengthening MDOT's bicycle, micromobility and pedestrian policies, practices and tools, 2) Identify gaps on Maryland's Low Stress networks of shared use paths, protected bikeways and sidewalks, 3) Recommend infrastructure that support MDOT's mission to improve walking, biking & rolling, and 4) Develop an implementation plan to guide infrastructure investments & policy changes.

The Plan kicked off in January 2023 and is expected to be completed by the end of 2023.

ANNE ARUNDEL COUNTY

Transit Development Plan: The TDP is anticipated to be completed by the end of calendar year 2023. The TDP is a short-term review of transit services in Anne Arundel County and will provide a roadmap for implementing service and organizational improvements, including potential service expansion, during the next five years. The plan will explore options and strategies to reduce transit fleet emissions.

Brooklyn Park Mobility Study: This study is anticipated to be complete by the end of 2023. The goals of the study are to 1) identify and prioritize planning-level transportation system improvements that address community mobility needs for residents and stakeholders to reach key services, focusing primarily on non-motorized travel and transit service; 2) identify barriers to providing circulator or shuttle service that crosses between the County and Baltimore City; and 3) develop a Brooklyn Park Mobility Plan that identifies, evaluates and prioritizes safety and mobility improvement by mode incorporating input from local residents, property owners, workers and other key stakeholders.

EV planning study: This study will develop a plan for the County to transition its Transit fleet to a greener, less-polluting form of propulsion. The plan will include a summary of existing EV technologies and manufacturers, potential locations for EV chargers and the infrastructure that would be required for the transition, policy implications for a future switch to EVs, and estimated costs. This includes a review of any operational modifications that may need to be made to the Transit system to make the

transition. Also included will be an implementation plan as to how the transition could be phased over time.

BALTIMORE COUNTY

Bicycle Pedestrian Master Plan Update: The Baltimore County Bicycle and Pedestrian Master Plan will provide important updates to the County's existing Eastern and Western Pedestrian and Bicycle Access Plans, which were developed nearly 15 years ago. The key elements of the County's new master planning process include identifying the policy and physical barriers to complete streets and active transportation circulation, analyzing and developing policy and physical alternatives, and prioritizing improvements.

Circulator Feasibility Studies in Owings Mills and Catonsville: Baltimore County launched the Towson Circulator in October of 2021. Owings Mills and Catonsville are two additional areas targeted for expansion of similar transportation services. A study is currently underway to assess the routing options and costs of establishing a circulator in these areas.

Red Run Trail Study: (Red Run Trail to Owings Mills Metro Center) The Red Run Trail Feasibility Study will evaluate options for the extension of the existing Red Run Trail near the Metro Center in Owings Mills, MD. These options will be evaluated to determine feasible options that could move into a design project. Final Feasibility Report due in April 2023.

Six Bridges Trail Study: (Radebaugh Neighborhood Park to County-owned land at Stevenson Lane) The Six Bridges Trail Feasibility Study will evaluate options for construction / reconstruction of a trail between Stoneleigh Elementary School and Maryland Avenue in Towson, MD. This Feasibility Study will evaluate the proposed trail alignment provided by Baltimore County and identify any potential constructability and community concerns along the proposed alignment. Final Feasibility Report due in April 2023.

West-East Trail Study: (Double Rock Park to Linover Park) The West East Destination Trail Feasibility Study will evaluate options for connecting communities and residents on Harford Road and Belair Road to the North East Trail to White Marsh. This trail will also have the potential to connect into different established recreational areas such as the Double Rock Park and Linover Park. Options will be evaluated to determine a feasible option that could move into a design project. Final Feasibility Report due in April 2023.

HOWARD COUNTY

Transit Development Plan: The TDP will be completed by the end of calendar year 2023. The TDP will serve as a guide for transit services in the Central Maryland region and will provide a roadmap for implementing service and organizational improvements, including potential service expansion, during the next five years. The plan will explore options and strategies to reduce transit fleet emissions.

HoCo by Design: The County's master plan is under development. The plan is being developed for a 20 year time horizon and will guide land use, transportation, open space, agriculture, community facilities, community character, historic preservation, housing, economic development, and quality of life. The project is expected to be completed and approved by the end of 2023.

Countywide Transportation Master Plan: The project will develop a unified transportation master plan to align existing and proposed transportation projects with County policies. The project is proposed for the FY 2024 Howard County Operating budget with an expected delivery in FY 2026.

Gateway Master Plan Transportation Component: The Gateway Master Plan Transportation Component is a companion plan to the proposed gateway master plan which reflects a proposed action in HoCo by Design to develop a master plan to accommodate forecasted commercial and residential growth in Gateway. The transportation component will be developed in coordination with the area master plan to ensure access and mobility goals are met, including the use of the CSX ROW between Oakland Mills Road and US 1. The project is funded. Delivery is contingent on HoCo by Design's adoption schedule.

Downtown Columbia Transit Center: This project will update a current study for the site selection, design and construction of a transit center. The center will serve as a hub for existing and planned, local and regional transit, services including Regional Transit Agency (RTA) and Maryland Transit Administration (MDOT MTA) services, a future downtown circulator and bus rapid transit services. The potential site identified in the completed study is unlikely to be available by needed year of operations. Funding is proposed in the draft FY 2024 CIP and delivery is expected by the summer of 2024.

Bicycle Master Plan Update: This project will update Bike Howard, Howard County's Bicycle Master Plan. The Howard County Bicycle Master Plan, adopted in 2016, provides a comprehensive plan and ongoing process for prioritizing the use of capital funds directed at improving bicycle safety, mobility, and access to transit, schools, parks, retail and employment centers. The update will look at existing conditions and align recommendations with the County's complete streets policy, the County's new design manual and current best practices. Funding is proposed in the draft FY 2024 CIP and delivery is expected by the summer of 2024.

Pedestrian Transportation Prioritization System Study: This project will develop a system to rationalize the prioritization of pedestrian related capital projects in the county. The project is funded in the county's CIP and delivery is expected in 2024.

Cradlerock Way Planning Study: The planning study will evaluate complete streets improvements on the Cradlerock Way corridor with an emphasis on mitigating speeding and improving safety for pedestrians and cyclists. The project is funded in the county CIP and delivery is expected in 2024.

Bus Rapid Transit: The project will plan and develop preliminary plans for three Flash Service bus stops on the US 29 Corridor between Maple Lawn and Downtown Columbia. The county is working towards a cooperative regional transit service expansion with Montgomery County in 2026. The study is funded in the county operating budget and delivery is expected in 2024.

US 1 Safe Streets for All: This project will develop and implement a US 1 Project Delivery and Management plan to deliver improvements funded by the Safe Streets for All Grant within the grant time horizon. This project is partially funded by county funds but overall delivery is dependent on grant award. If funded, project delivery is forecast for 2025.

Climate Action Plan: The County is in the process of developing the *Howard County Climate Forward: Climate Action and Resiliency Plan* which will guide response to climate change by developing a series

of Mitigation and Resiliency Strategies, including guidance on reducing emissions from the transportation sector.

QUEEN ANNE'S COUNTY

24 Bicycle and Pedestrian Master Plan: Queen Anne's County is starting a Countywide Bicycle and Pedestrian Master Plan that can be used as a basis for connecting gaps between existing trails, shared-use paths, on-road bicycle routes, and sidewalks as well as developing plans for future facilities. The plan will build and refine the concepts outlined in the 2022 Comprehensive plan to establish adequate level of detail to pursue capital funding, grant funding and State participation to move projects forward.

Connecting Kent Island - Pedestrian Overpass & Trail Connections Planning Study: Queen Anne's County, in particular Kent Island, is in a unique position due to its geography, the Chesapeake Bay Bridge, and the fact that the entire island is bisected by US 50/301. This interstate facility creates significant challenges in connecting the bike and pedestrian network north and south of US 50/301. Currently there are no pedestrian and bicycle facilities crossing US 50/301.

The bike and pedestrian overpass and trail extension project will plan, design concepts and look at preliminary engineering challenges with creating a new pedestrian bridge and trail system to connect the existing pedestrian and bicycle trail network north of US 50/301 with the existing trail network south of US 50/301.

Thompson Creek Connector Road Engineering and Permitting: MD 8 is a key North-South transportation route on Kent Island which has an overpass interchange that crosses over US 50/301 with exit ramps for local traffic to access US 50 /301. The interchange is located approximately 0.5 miles east of the Chesapeake Bay Bridge, therefore, congestion related to the Bridge directly impacts the function of the overpass and travelers moving north and south on MD 8.

The Thompson Creek Connector Road would create a multimodal connection from MD 8 to Thompson Creek Service Road and provide an alternative route for residents to access services and eastbound US 50/301. The connector road starts south of the US 50/MD 8 interchange and will allow residents to bypass traffic lights and delays at the interchange. This alternative route will reduce the number of trips through the interchange and provide much needed capacity to extend the life of the existing interchange.

Strategic Highway Safety Plan: This 5-year plan to be created by QAC represents our local commitment to reducing fatalities and saving lives, reducing injuries, and protecting property by focusing on six emphasis areas. To do this the County will promote and use Education, Engineering, Enforcement, and Emergency Medical Services to establish successful strategies and work with our partners in State and local Government to reduce fatalities and serious injuries on State, County and Municipal roadways.

APPENDIX E
LIST OF ACRONYMS

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LIST OF ACRONYMS

ACRONYMS / ABBREVIATIONS	
3-C	Continuing, Cooperative and Comprehensive
ABM	Activity Based Model
ACS	American Community Survey
ADA	Americans With Disabilities Act
APFO	Adequate Public Facilities Ordinance
BIL	Bipartisan Infrastructure Law
BRTBMC	Baltimore Metropolitan Council
BPAG	Bicycle & Pedestrian Advisory Group
BPDS	Building Permit Data System
BRGISC	Baltimore Region Geographic Information Systems Committee
BRSS	Baltimore Region Safety Subcommittee
BRTB	Baltimore Regional Transportation Board
CAA	Clean Air Act
CATT	Center for Advanced Transportation Technology
CFG	Cooperative Forecasting Group
CFR	Code of Federal Regulations
CHART	Coordinated Highways Action Response Team
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Process
DBE	Disadvantaged Business Enterprise
DOT	Department of Transportation
DTS	Data Transfer Solutions LLC
EAT	Emphasis Area Team
EPA	Environmental Protection Agency
EJ	Environmental Justice
EMS	Emergency Medical Services
FAST Act	Fixing America's Surface Transportation
FHWA	Federal Highway Administration
FMTF	Freight Movement Task Force
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information System
ICG	Interagency Consultation Group
IIJA	Infrastructure Investment and Jobs Act
InSITE	Initiative to Simulate Individual Travel Events (BMC's travel model)
ITS	Intelligent Transportation Systems

BALTIMORE REGION UPWP
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JARC	Job Access and Reverse Commute
LOS	Level of Service
LOTS	Locally Operated Transit Service
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century
MDE	Maryland Department of the Environment
MDOT	Maryland Department of Transportation
MDP	Maryland Department of Planning
MDTA	Maryland Transportation Authority
MHSO	Maryland Highway Safety Office
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MOVES	Motor Vehicle Emission Simulator
MDOT MPA	Maryland Port Administration
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MSGIC	Maryland State Geographic Information Committee
MSTM	Maryland Statewide Travel Model
MDOT MTA	Maryland Transit Administration
MSP	Maryland State Police
MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHS	National Highway System
NHTS	National Household Travel Survey
OD	Origin Destination
PAC	Public Advisory Committee
PDA	Probe Data Analytics
PM1	Performance Measures for highway safety
PM2	Performance Measures for bridge and pavement condition
PM3	Performance Measures for system performance, freight, and air quality
PopGen	(Synthetic) Population Generator
PM _{2.5}	Fine Particulate Matter
RFP	Request for Proposals
MDOT SHA	State Highway Administration
SHRP	Strategic Highway Research Program
SHSP	Strategic Highway Safety Plan
SIP	State Implementation Plan
TAMP	Transportation or Transit Asset Management Plan

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TAZ	Transportation Analysis Zone
TBM	Travel Based Model
TC	Technical Committee
TIM	Traffic Incident Management
TIMBR	Traffic Incident Management (Committee) for the Baltimore Region
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TOD	Time of Day
TPA	TradePoint Atlantic
T&PW	Transportation & Public Works Committee
TRCC	Traffic Records Coordinating Committee
TSMO	Transportation Systems Management & Operations
UASI	Urban Area Security Initiative
UAWG	Urban Area Work Group
UPWP	Unified Planning Work Program
U.S. DOT	United States Department of Transportation
VMT	Vehicle Miles Traveled
VPI	Vulnerable Population Index
WILMAPCO	Wilmington Area Planning Council



The BRTB is staffed by the:
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