

UNIFIED PLANNING WORK PROGRAM

FFY 2024





UNIFIED PLANNING WORK PROGRAM

FEDERAL FISCAL YEAR 2024

Boston Region MPO
ENDORSED BY THE MPO, JULY 20, 2023

Prepared by
The Central Transportation Planning Staff:
Staff to the Boston Region Metropolitan Planning Organization

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

Massachusetts Department of Transportation
Metropolitan Area Planning Council
Massachusetts Bay Transportation Authority
MBTA Advisory Board
Massachusetts Port Authority
Regional Transportation Advisory Council
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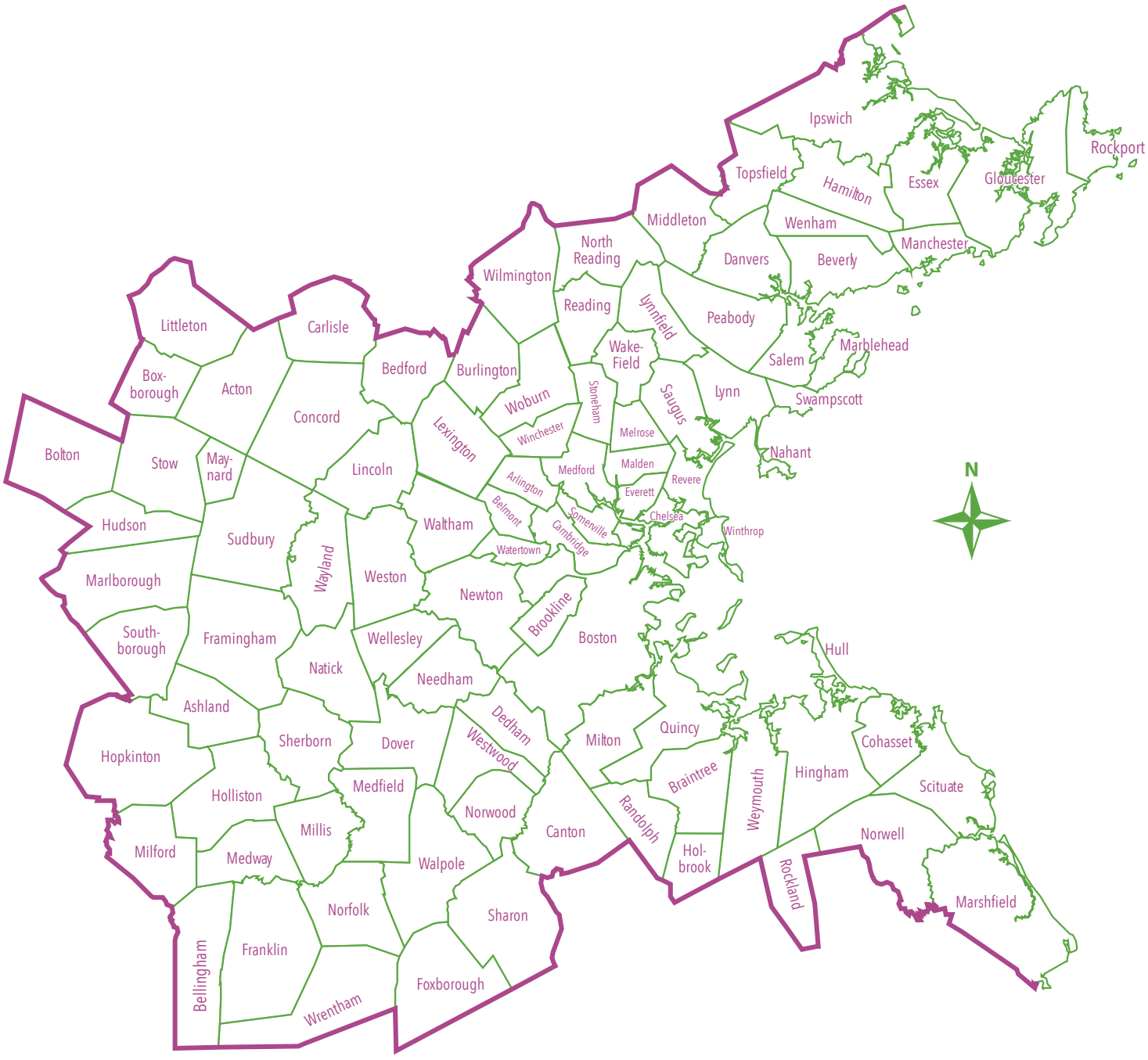

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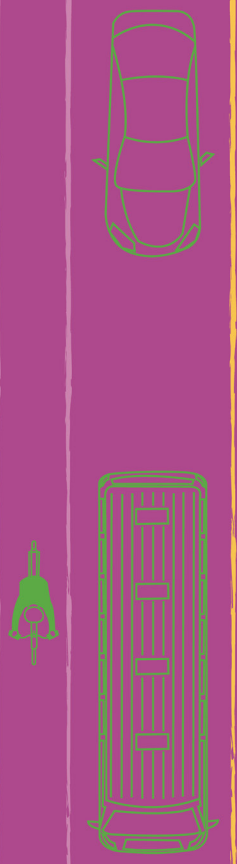

Certification of the Boston Region MPO Transportation Planning Process

The Boston Region Metropolitan Planning Organization certifies that its conduct of the metropolitan transportation planning process complies with all applicable requirements, which are listed below, and that this process includes activities to support the development and implementation of the Regional Long-Range Transportation Plan and Air Quality Conformity Determination, the Transportation Improvement Program and Air Quality Conformity Determination, and the Unified Planning Work Program.

1. 23 USC 134, 49 USC 5303, and this subpart.
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 USC 7504, 7506 (c) and (d) and 40 CFR part 93 and for applicable State Implementation Plan projects.
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5. Section 1101 (b) of the Fast Act (Pub. L. 114-357) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in U.S. DOT-funded projects.
6. 23 CFR part 230, regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts.
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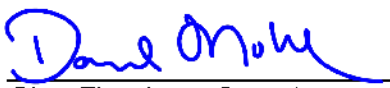
June 1, 2023

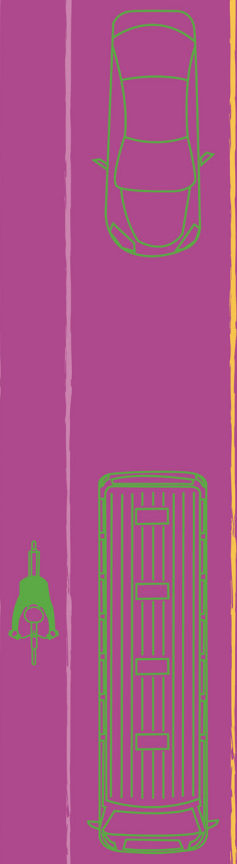


for

Gina Fiandaca, Secretary and Chief Executive Officer
Massachusetts Department of Transportation
Chair, Boston Region MPO

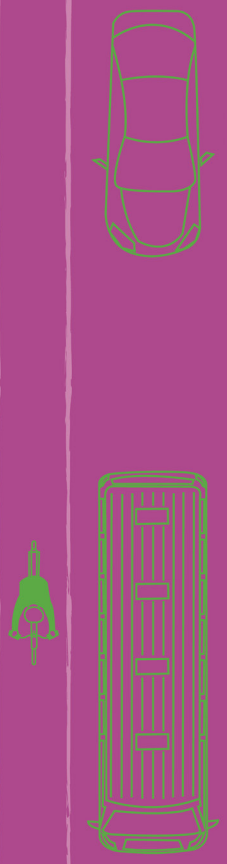
ABBREVIATIONS

Abbreviations	Definition
3C	continuous, comprehensive, cooperative [metropolitan transportation planning process]
A&F	Administration and Finance Committee [Boston Region MPO]
AADT	Annual Average Daily Traffic
ADA	Americans with Disabilities Act of 1990
Advisory Council	Regional Transportation Advisory Council
AFC	automated fare collection [system]
BIL	Bipartisan Infrastructure Law
BRMPO	Boston Region Metropolitan Planning Organization
CAAA	Clean Air Act Amendments of 1990
CATA	Cape Ann Transportation Authority
CBD	central business district
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Process
CO	carbon monoxide
CO2	carbon dioxide
CPT–HST	Coordinated Public Transit--Human Services Transportation
CTPS	Central Transportation Planning Staff
DBMS	Database Management System
DCR	Department of Conservation and Recreation



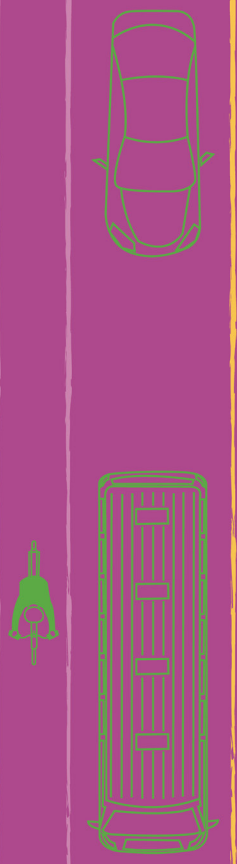
Abbreviations	Definition
DEP	Massachusetts Department of Environmental Protection
DI/DB	Disparate Impact and Disproportionate Burden
DOT	Department of Transportation
EEA	Energy and Environmental Affairs
EJ	Environmental Justice
EMU	electric multiple unit
EO	Executive order
EPA	Environmental Protection Agency
ESG	Environmental, Social, and Governance
eSTIP	electronic State Transportation Improvement Programs
EV	Electric Vehicles
FFY	federal fiscal year
FHWA	Federal Highway Administration
FMCB	MBTA Fiscal and Management Control Board
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	Geographic Information System
GTFS	General Transit Feed Specification
GWSA	Global Warming Solutions Act of 2008 [Massachusetts]
ICC	Inner Core Committee
ITI	Institute of Transportation Engineers
LAP	Language Assistance Plan

Abbreviations	Definition
LBS	Location-based Services
LEP	limited English proficiency
LRTP	Long-Range Transportation Plan [MPO certification document]
MAGIC	Minuteman Advisory Group on Interlocal Coordination
MAPC	Metropolitan Area Planning Council
MARPA	Massachusetts Association of Regional Planning Agencies
MassDOT	Massachusetts Department of Transportation
MassGIS	Massachusetts Bureau of Geographic Information
Massport	Massachusetts Port Authority
MBTA	Massachusetts Bay Transportation Authority
MCFRM	Massachusetts Coastal Flood Risk Model
MEPA	Massachusetts Environmental Policy Act
MOU	Memorandum of Understanding
MOVES	Motor Vehicle Emission Simulator
MPO	metropolitan planning organization
MWRC	MetroWest Regional Collaborative
MWRTA	MetroWest Regional Transit Authority
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHS	National Highway System
NOx	nitrogen oxides
NSPC	North Suburban Planning Council



Abbreviations	Definition
NSTF	North Shore Task Force
NTD	National Transit Database
OTP	MassDOT Office of Transportation Planning
PBPP	performance-based planning and programming
PEP	Public Engagement Plan
PEV	Pedestrian Environmental Variable
PL	metropolitan planning funds or public law funds [FHWA]
PPP	Public Participation Plan
PRCA	Pedestrian Report Card Assessment
ROC	Rider Oversight Committee [MBTA]
ROW	right-of-way
RPA	Regional Planning Agency
RSA	Roadway Safety Audits
RTA	Regional Transit Authority
S	Safety
SFY	state fiscal year
SHSP	Strategic Highway Safety Plan
SIP	State Implementation Plan
SOV	single-occupancy vehicle
SPR	Statewide Planning and Research [FHWA]
SS4A	Safe Streets for All
SSC	South Shore Coalition

Abbreviations	Definition
SWAP	Southwest Advisory Planning Committee
TAZ	transportation analysis zone
TDM	travel demand management or travel demand model
TE	transportation equity
TIP	Transportation Improvement Program [MPO certification document]
TMA	transportation management association
TNC	transportation network company
TOD	Transit-Oriented Development
TRIC	Three Rivers Interlocal Council
UPWP	Unified Planning Work Program [MPO certification document]
USDOT	United States Department of Transportation [oversees FHWA and FTA]
USGAO	United States Government Accountability Office
UTC	United States Department of Transportation's University Transportation Centers Program
VOC	volatile organic compounds
ZEV	zero emission vehicles



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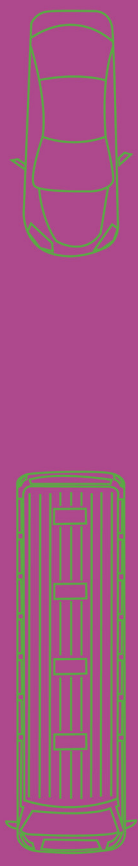

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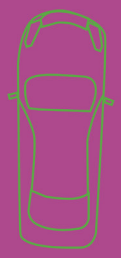
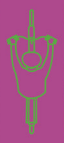
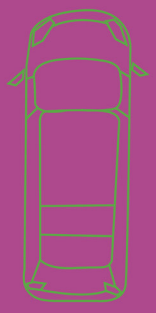
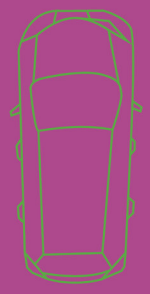

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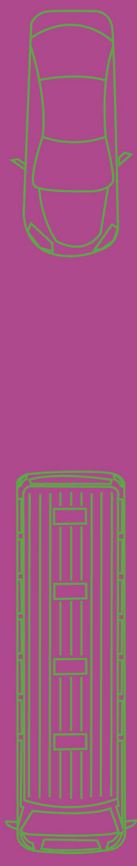

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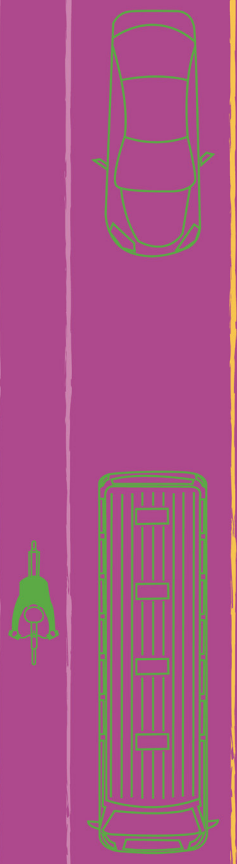



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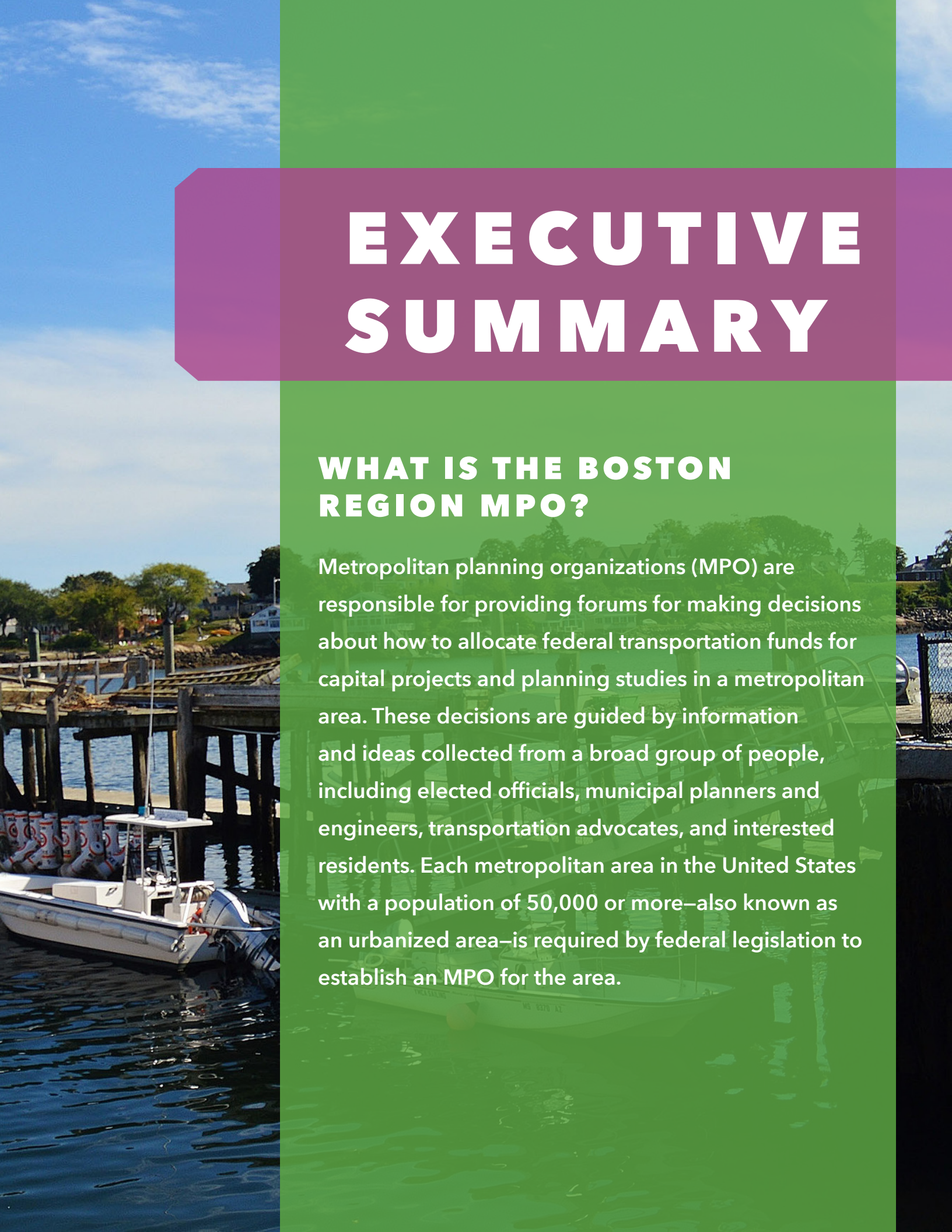


EXECUTIVE SUMMARY

WHAT IS THE BOSTON REGION MPO?

Metropolitan planning organizations (MPO) are responsible for providing forums for making decisions about how to allocate federal transportation funds for capital projects and planning studies in a metropolitan area. These decisions are guided by information and ideas collected from a broad group of people, including elected officials, municipal planners and engineers, transportation advocates, and interested residents. Each metropolitan area in the United States with a population of 50,000 or more—also known as an urbanized area—is required by federal legislation to establish an MPO for the area.

Photo courtesy of Bluebikes



BOSTON REGION MPO JURISDICTION AND MEMBERSHIP

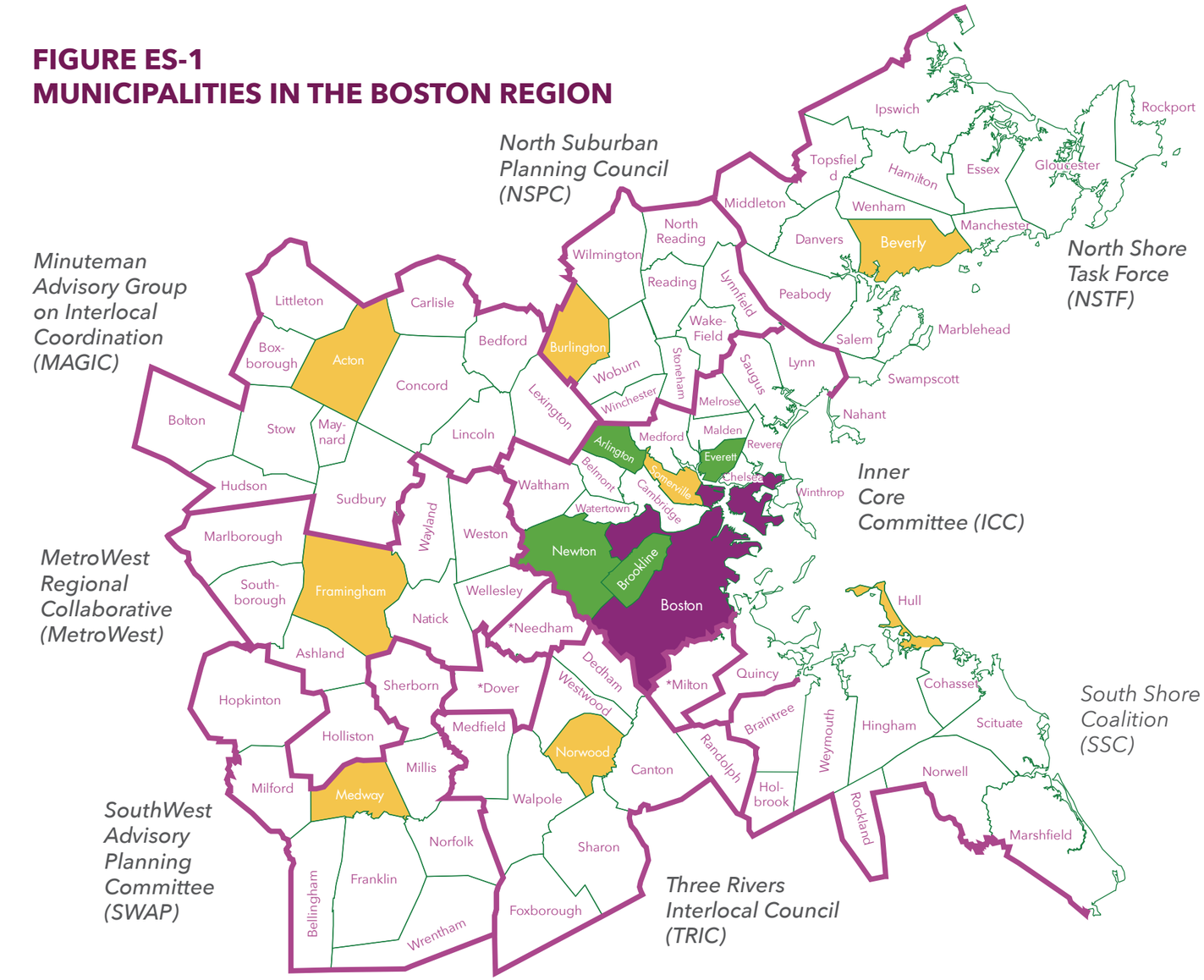
The Boston Region MPO's planning area extends across 97 cities and towns from Boston north to Ipswich, south to Marshfield, and west to Interstate 495.

Figure ES-1 shows the map of the Boston Region MPO's member municipalities.

The MPO's board has 22 voting members. Several state agencies, regional organizations, and the City of Boston are permanent voting members, while 12 municipalities are elected as voting members for three-year terms. Eight municipal members represent each of the eight subregions of the Boston region, and four represent at-large municipal seats. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) participate on the MPO board as advisory, or nonvoting, members. More details about the MPO's permanent members can be found in Appendix F.

Figure ES-2 details MPO membership and the organization of the Central Transportation Planning Staff (CTPS), which serves as staff to the MPO.

FIGURE ES-1
MUNICIPALITIES IN THE BOSTON REGION



*Community is in more than one subregion: Dover is in TRIC and SWAP; Milton and Needham are in ICC and TRIC.

97 Cities and towns

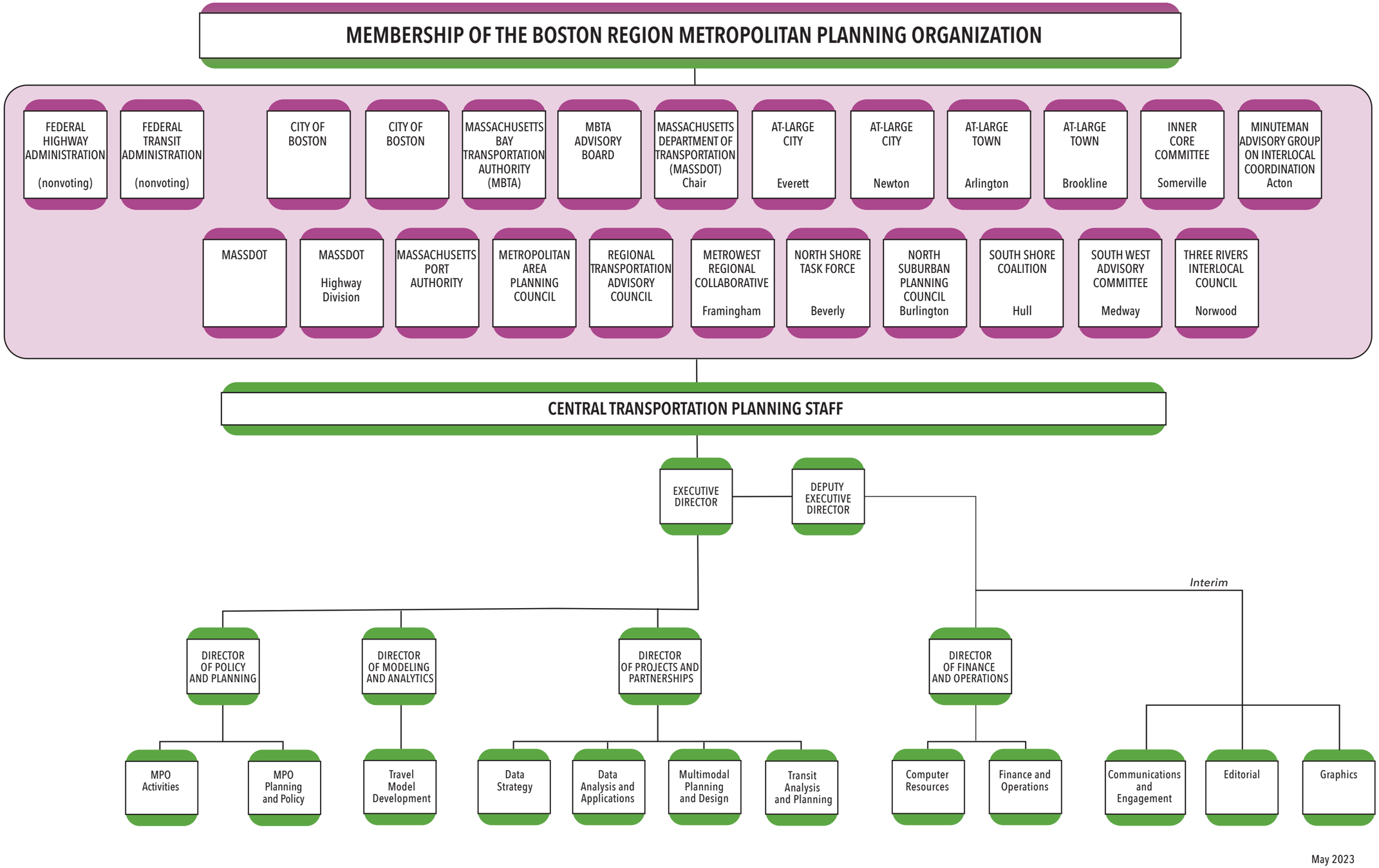
Subregion boundary

MPO representative from subregion

MPO city or town at-large representative

Boston has two permanent MPO representatives

FIGURE ES-2
BOSTON REGION MPO ORGANIZATIONAL CHART



May 2023



Photo courtesy of Susana Hey



THE TRANSPORTATION PLANNING PROCESS

The federal government regulates the funding, planning, and operation of the transportation system through the federal transportation program, which was enacted into law through Titles 23 and 49 of the United States Code. The Federal-Aid Highway Act and the Federal Transit Act require that urbanized areas conduct a transportation planning process to be eligible for federal funds, resulting in plans and programs consistent with the planning goals of the metropolitan area.

The most recent reauthorization of the transportation law is the Bipartisan Infrastructure Law, which sets policies related to metropolitan transportation planning. The law requires all MPOs to carry out a continuing, comprehensive, and cooperative (3C) transportation planning process. As part of its 3C planning process, the Boston Region MPO annually produces the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP). These documents, along with the quadrennial Long-Range Transportation Plan (LRTP), are required for the MPO to be certified as meeting federal requirements. This certification is a prerequisite for receiving federal transportation funds. In addition to this requirement, the MPO must establish and conduct an inclusive public engagement process, as well as maintain travel models and data resources to support air quality conformity determinations, transportation equity analyses, and long- and short-range planning work and initiatives.

Appendix E explains the regulatory and legislative context in which the MPO operates in greater detail.



Photo courtesy of MOTT, by Holly Perry

THE 3C PLANNING PROCESS

The 3C planning process is an approach for conducting meaningful transportation planning:

- Continuing: Transportation planning should plan for the short- and long-range horizons, emphasizing the evolving progression from systems planning to project planning, programming, and implementation. It should recognize the necessity for continuously reevaluating data and plans.
- Comprehensive: Transportation planning should integrate all stages and levels of the process and examine all modes to ensure a balanced planning and programming approach. The planning process should include analysis of related non-transportation elements such as land use, economics, environmental resources, and population.
- Cooperative: Transportation planning should be a process designed to encourage involvement by all users of the system, including community groups, environmental organizations, freight operators, businesses, and members of the public.

Chapter 1 explains the 3C process in greater detail.

WHAT IS THE UPWP?

The UPWP is a one-year planning document and financial plan that explains how the Boston region's federal transportation planning funds will be spent in a given federal fiscal year (FFY).

The development of the UPWP involves the prioritization of all potential transportation planning programs, studies, and technical analyses that could be undertaken to benefit the region in a given year. The scopes and budgets of the prioritized work are documented in the UPWP. The aim is to ensure that the work undertaken by the MPO supports the region's transportation goals, as established through the 3C process.



Photo courtesy of Susana Hey

The UPWP serves as a source for the following information:

- Information for government officials, municipal officials, and the public about transportation planning projects and programs expected to be conducted in the Boston region
- Budget information for federal and state officials about how the Boston Region MPO plans to spend federal metropolitan planning funds on programs and studies performed on behalf of the MPO

HOW DOES THE UPWP RELATE TO THE GOALS OF THE BOSTON REGION MPO?

The Boston Region MPO plans for the transportation future of the Boston region. The MPO is guided by a 20-year vision for a modern, safe, equitable, sustainable, and technologically advanced transportation system for the region. This vision is described in the MPO's current LRTP, *Destination 2040*. The transportation planning work funded through the UPWP is an integral part of achieving this regional vision.

The transportation goals of the Boston region, as defined in *Destination 2040*, are as follows:

1. Safety: Transportation by all modes will be safe.
2. System Preservation: Maintain and modernize the transportation system and plan for its resiliency.
3. Clean Air/Clean Communities: Create an environmentally friendly transportation system.
4. Capacity Management/Mobility: Use existing facility capacity more efficiently and increase transportation options.
5. Transportation Equity: Ensure that all people receive comparable benefits from, and are not disproportionately burdened by, MPO investments, regardless of race, color, national origin, age, income, ability, or sex.
6. Economic Vitality: Ensure our transportation network provides a strong foundation for economic vitality.

The MPO is currently in the process of developing its next LRTP. The following paragraph is the MPO's vision statement as approved in February 2023; this UPWP was developed to be consistent with this vision.

> *The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.*

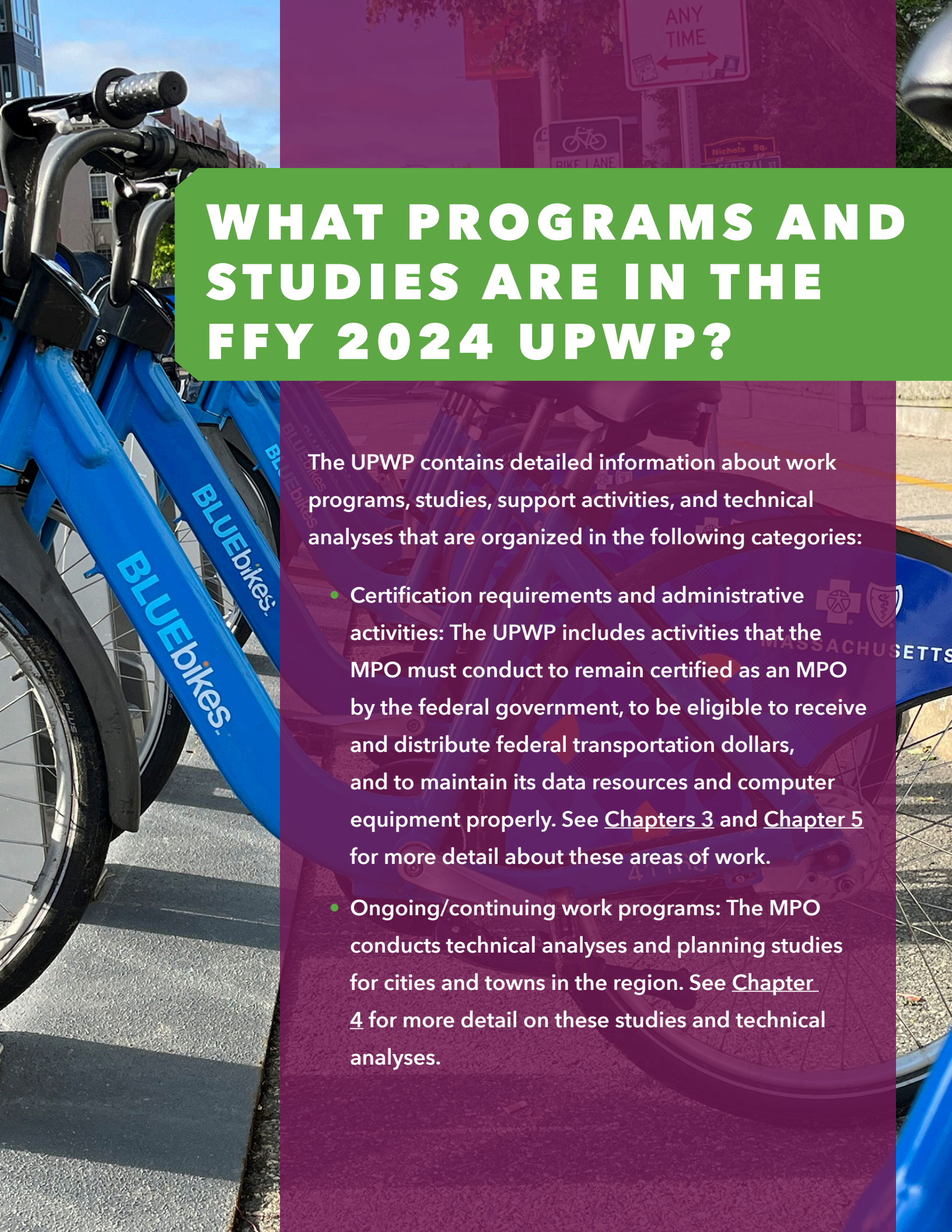
In addition to the LRTP and the UPWP, the MPO also produces the TIP for the Boston region. As the near-term capital investment plan of the MPO, the TIP describes and prioritizes transportation construction projects that are expected to be implemented during the upcoming five-year period. Figure ES-3 illustrates the relationship between the LRTP vision and goals; the planning foundation for the MPO's work, the UPWP; the TIP; and the process for monitoring and evaluating progress towards achieving the region's goals.

WHAT ARE FEDERAL METROPOLITAN PLANNING FUNDS?

The total federal funding programmed in this UPWP is $7,116,954. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) as FHWA 3C Planning (PL) funds. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) using its apportionment of the core federal formula funding source known as Metropolitan Planning Funds. There are two categories of funds. Federal funds originating from FHWA, known as FHWA 3C Planning funds, are distributed across MPO regions using a formula developed by the Massachusetts Association of Regional Planning Agencies. Federal funds originating from the FTA are known as FTA 3C Planning (Section 5303) funds. Both FHWA 3C Planning funds and FTA 3C Planning funds programmed in this UPWP include a state match. Since 2019, MassDOT has transferred Section 5303 funds from FTA to FHWA to be administered as a Consolidated Planning Grant. For more detailed information on funding sources and breakdowns, please see Chapter 2.

IS OTHER WORK DISCUSSED IN THE UPWP?

In addition to MPO-funded work, CTPS performs planning analyses and studies funded by state transportation agencies, including MassDOT, the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority (Massport). More detail about these agency-funded studies can be found in Appendix A.



WHAT PROGRAMS AND STUDIES ARE IN THE FFY 2024 UPWP?

The UPWP contains detailed information about work programs, studies, support activities, and technical analyses that are organized in the following categories:

- Certification requirements and administrative activities: The UPWP includes activities that the MPO must conduct to remain certified as an MPO by the federal government, to be eligible to receive and distribute federal transportation dollars, and to maintain its data resources and computer equipment properly. See Chapters 3 and Chapter 5 for more detail about these areas of work.
- Ongoing/continuing work programs: The MPO conducts technical analyses and planning studies for cities and towns in the region. See Chapter 4 for more detail on these studies and technical analyses.

- New studies: The UPWP funds discrete studies to enhance the staff's knowledge of the practice, improve analytical methods, and evaluate strategies for policy implementation. See Chapter 4 for more detail on these new studies.
- Agency-funded studies, technical analyses, and regional planning work: CTPS conducts planning analyses and studies funded by state transportation agencies, including MassDOT, the MBTA, and Massport. These agency-funded studies are described in Appendix A. This appendix additionally outlines transportation planning work undertaken by other agencies or entities in the region, which may not be funded by the MPO.

Table ES-1 contains the budget allocated for the MPO's 3C planning activities in FFY 2024. The table reflects the FHWA metropolitan PL funds and FTA Section 5303 funds, which CTPS and Metropolitan Area Planning Council (MAPC) expect to spend in FFY 2024. The table also reflects the work that CTPS will conduct with funds provided by other transportation agencies.

Chapters 3 through 5 provide detailed information about the transportation-planning activities that will be performed by CTPS during FFY 2024. The new studies chosen for funding in FFY 2024 are summarized below in Table ES-2 and described in more detail in Chapter 4.

Photo courtesy of MOTT, by Kristina Smith



Table ES-1
Unified Planning Work Program Budget for FFY 2024

3C Studies and Programs by Budget Categories	Proposed FFY 2024 CTPS Budget
Resource Management and Support Activities	$395,500
MPO Certification Requirements	$4,575,486
Ongoing MPO-Funded Technical Analyses	$146,700
New MPO-Funded Discrete Studies	$150,000
MassDOT-Directed PL Funds*	$359,326
Direct Support	$175,000
Total FFY 2024 CTPS Budget	**$5,802,012**

3C Studies and Programs by MAPC Budget Categories	Proposed FFY 2024 MAPC Budget
MAPC Planning Studies and Technical Analyses	$769,942
MAPC Administration, Resource Management, and Support Activities	$545,000
Total MAPC FFY 2024 UPWP Programmed Funds	**$1,314,942**

Agency Supporting MPO/3C Work	Proposed FFY 2024 Budget
CTPS	$5,802,012
MAPC	$1,314,942
3C Budget Subtotal	**$7,116,954**
FFY 2024 UPWP Budget	**$7,116,954**

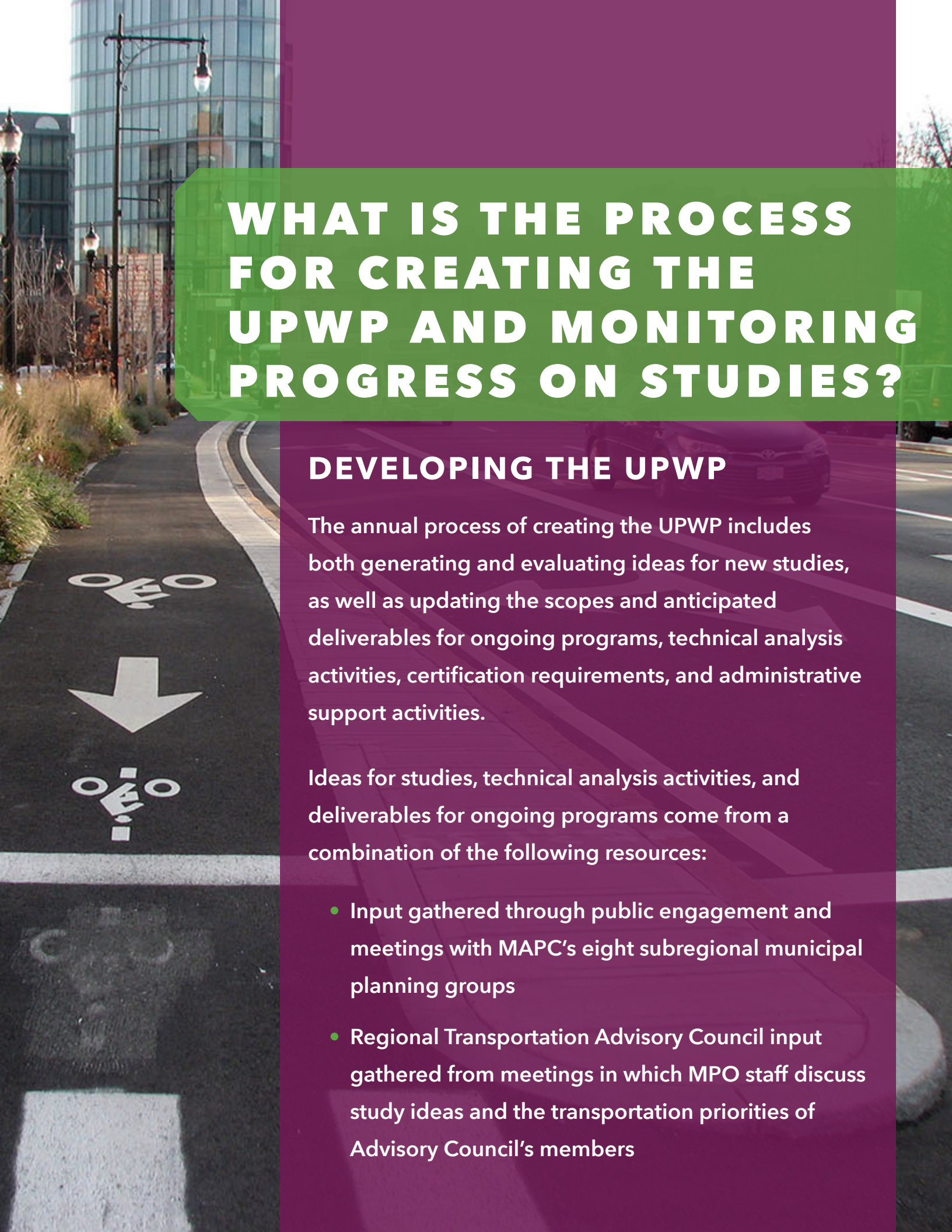
Note: This budget includes salary, overhead, and direct support costs.

* Projects in this category are conducted on behalf of MassDOT but funded through the MPO 3C contract.

Table ES-2
New Discrete Funded Studies in FFY 2024

Universe ID	Project ID	Study or Program	Proposed FFY 2024 CTPS Budget
M-1	14001	Lab and Municipal Parking Phase II	$45,000
A-1	14002	Parking in Bike Lanes: Strategies for Safety and Prevention	$20,000
R-2	14003	Strategies for Environmental Outreach and Engagement	$25,000
TE-1	14004	Applying Conveyal to TIP Project Scoring	$60,000
Total for New Discrete Studies			**$150,000**





WHAT IS THE PROCESS FOR CREATING THE UPWP AND MONITORING PROGRESS ON STUDIES?

DEVELOPING THE UPWP

The annual process of creating the UPWP includes both generating and evaluating ideas for new studies, as well as updating the scopes and anticipated deliverables for ongoing programs, technical analysis activities, certification requirements, and administrative support activities.

Ideas for studies, technical analysis activities, and deliverables for ongoing programs come from a combination of the following resources:

- Input gathered through public engagement and meetings with MAPC's eight subregional municipal planning groups
- Regional Transportation Advisory Council input gathered from meetings in which MPO staff discuss study ideas and the transportation priorities of Advisory Council's members

- Input gathered from the MPO's UPWP Committee, which oversees the development of the entire UPWP document and meets throughout the year
- Existing planning documents such as the MPO's Congestion Management Process and LRTP Needs Assessment; the MBTA's long-range capital plan; MetroCommon, MAPC's long-range plan for smart growth in the Boston region; and other recent studies
- Guidance issued by FHWA and FTA on studies that address the federal transportation planning emphasis areas (for more information on the federal emphasis areas, see Appendix E and Table E-1)
- Study proposals that MPO staff receive during outreach events, through a public-facing survey, and during the public comment period for the UPWP and other staff-produced reports
- Consultations with MassDOT, the MBTA, and MAPC that occur during document development and throughout the year as new ideas for transportation planning needs arise
- MPO staff-identified needs that emerge from continual interactions between the MPO staff, state and local agencies, organizations, and community groups

Ideas for new studies are compiled into the Universe of Proposed Studies. Each proposal is evaluated based on how it would help the region accomplish the LRTP goals. In selecting the final list of studies, the UPWP Committee also considers the utility of the projected study results to MPO stakeholders; whether sufficient staff resources are available to execute the needed work; and whether the work to be carried out is coordinated, rather than redundant, with work being done in other agencies.

The MPO continually seeks to improve its process through inclusive and collaborative decision-making. For this reason, the MPO seeks to involve a broad and diverse range of stakeholders throughout the UPWP development process.

MPO staff will continue to seek public input for ideas for the Universe of Proposed New Studies and engage participants in discussing, evaluating, and eventually prioritizing studies for inclusion in the UPWP. Staff will also continue to monitor and enhance the MPO's communication channels, such as those listed below:

- An engaging website, which serves as a resource for those seeking to influence transportation planning in the Boston region
- An active social media presence on Facebook, Twitter, and LinkedIn accounts (@BostonRegionMPO) covering transportation planning news and publicizing MPO events, and a YouTube channel featuring recordings of MPO meetings and virtual events
- A blog that publishes MPO research and data in an approachable format
- Targeted external outreach to advocacy and community groups, especially those representing populations that historically have been less involved in the MPO's processes

- Public outreach events, hosted by MPO staff or the MPO's partners, where staff present, facilitate activities, and listen to feedback and suggestions
- Open-house style events, where those seeking feedback and advice on TIP projects, UPWP proposals, or technical assistance applications can interact one-on-one with MPO staff

WHAT IS THE PUBLIC REVIEW PROCESS FOR THE UPWP?

Toward the end of the document development process, the MPO votes to release for public review a draft UPWP. MPO staff posts the document on the MPO's website (www.bostonmpo.org) and publicizes its release via an email distribution list that includes municipal contacts, interested members of the public, and other stakeholders in the region, and via social media. Email messages inform stakeholders about upcoming opportunities for public review and involvement in MPO decision-making. MPO staff also solicit public input during open houses, meetings with stakeholders, and at public events hosted by the MPO or its transportation partners (including MassDOT and the MBTA). MPO staff compile comments made during the public review period and present them to the MPO board. The public comment period for the FFY 2024 UPWP began on June 16th and ended on July 7th. Information about the public review process for the Draft FFY 2024 UPWP is provided in Appendix B.

HOW ARE PROGRESS AND OUTCOMES MONITORED?

The MPO monitors the progress of programs and studies funded through the UPWP by performing the following tasks:

- Approving detailed work programs and scopes
- Reviewing monthly progress reports
- Tracking program and study budgets and spending via quarterly reports
- Approving the release of deliverables based on whether the objectives stated in the work program or scope were met and whether the stated deliverables were produced

OVERVIEW OF THIS DOCUMENT

This UPWP document is structured as follows:

- Chapter 1 provides background on the metropolitan transportation planning process and Boston Region MPO member agencies.
- Chapter 2 provides detailed background and information on the purpose of the UPWP, the process of developing and monitoring UPWP work, and how the UPWP helps the MPO achieve its regional transportation goals.
- Chapter 3 includes descriptions of the certification activities to be completed that (1) support the core MPO planning and programming functions; (2) support the 3C planning process; and (3) support the MPO board and committee operations and their decision-making process, and the current budgets assigned to each program and activity.



Photo courtesy of Susana Hey

- Chapter 4 describes the following ongoing and discrete studies and technical analysis work:
    - Summary tables of FFYs 2022–23 UPWP studies that have been completed or are projected to be completed by the end of September 2023, in addition to work products, including reports and technical memoranda
    - MPO planning studies and technical analyses that will be carried over from FFY 2023 to FFY 2024, if any
    - Descriptions of the new planning studies chosen for funding in FFY 2024
    - Updated descriptions of the ongoing technical analysis and support work that the MPO staff conducts for municipalities and the region
- Chapter 5 provides detailed information and FFY 2023 budgets for the resource management and support activities conducted by the MPO staff.
- Chapter 6 provides details on MAPC programs funded through the UPWP, including administrative, support, liaison, and technical assistance, and study activities.
- Chapter 7 includes budget summary tables that present how federal metropolitan planning funds will be spent on the support activities, studies, and programs documented in this UPWP. This chapter provides federal and state officials with necessary information for approving the use of funds and for administering contracts.
- Appendix A includes descriptions of the agency-funded transportation planning studies and technical analyses that will be undertaken by CTPS in FFY 2023. These include recurring contracts such as the MassDOT Title VI Program and the MBTA's National Transit Database: Data Collection and Analysis, and new contracts.

  Appendix A additionally presents descriptions of non-MPO transportation-planning projects and studies that are being (or will be) conducted in the Boston region during FFY 2024 and that are funded using federal planning dollars and/or are of regional significance. These projects have a separate review and approval process outside of the MPO's purview. They are included in the UPWP to provide a comprehensive picture of plans and studies that are expected to take place in the Boston region and to ensure that MPO planning efforts are coordinated with other ongoing work.
- Appendix B describes the public participation process used for developing and reviewing the Draft UPWP. This appendix also includes written comments on the Draft UPWP that were received during the public review period.
- Appendix C includes the FFY 2024 Universe of Proposed New Studies and describes the evaluation process that was used by the UPWP Committee and the MPO as a guide for selecting new studies.

- Appendix D contains an updated analysis of the geographic distribution of location-specific studies programmed through the UPWP.
- Appendix E gives detailed information on the regulatory framework that guides the development of the UPWP, and the studies and activities programmed for funding, as well as the overall regulations and guidance that the MPO considers in all of its work.
- Appendix F documents the membership of the MPO in detail.



Photo courtesy of MOTT, by Julie Cooke



Photo courtesy of Susana Hey, MBTA

CHAPTER 1

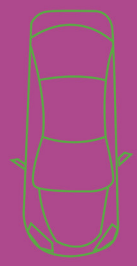
3C TRANSPORTATION PLANNING AND THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Decisions about how to allocate transportation funds in a metropolitan area are guided by information and ideas gathered from a broad group of people, including elected officials, municipal planners and engineers, transportation advocates, and interested residents. Metropolitan planning organizations (MPO) are the bodies responsible for providing a forum for this decision-making process. Each metropolitan area in the United States with a population of 50,000 or more, also known as an urbanized area, is required by federal legislation to establish an MPO, which decides how to spend federal transportation funds for capital projects and planning studies for the area.

THE TRANSPORTATION PLANNING PROCESS

The federal government regulates the funding, planning, and operation of the surface transportation system through the federal transportation program, which was enacted into law through Titles 23 and 49 of the United States Code. Section 134 of Title 23 of the Federal Aid Highway Act, as amended, and Section 5303 of Title 49 of the Federal Transit Act, as amended, require that urbanized areas conduct a transportation planning process, resulting in plans and programs consistent with the planning objectives of the metropolitan area, in order to be eligible for federal funds.

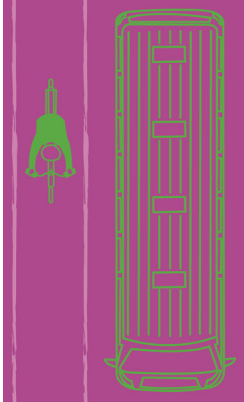
The most recent reauthorization of the federal surface transportation law is the Bipartisan Infrastructure Law (BIL), which has succeeded the Fixing America's Surface Transportation (FAST) Act. The BIL sets policies related to metropolitan transportation planning, and requires that all MPOs carry out a continuing, comprehensive, and cooperative (3C) transportation planning process.



3C TRANSPORTATION PLANNING

The Boston Region MPO is responsible for carrying out the 3C planning process in the Boston region. The MPO has established the following objectives for the process:

- Identify transportation problems and develop possible solutions
- Ensure that decision-making balances short- and long-range considerations and adequately reflects the range of possible future scenarios, options, and consequences
- Represent both regional and local considerations, and both transportation and non-transportation objectives and impacts, in the analysis of project issues
- Assist implementing agencies in effecting timely policy and project decisions with adequate consideration of environmental, social, fiscal, and economic impacts, and with adequate opportunity for participation by other agencies, local governments, and the public
- Help implementing agencies prioritize transportation activities in a manner consistent with the region's needs and resources
- Comply with the requirements of the BIL, the Americans with Disabilities Act of 1990, the Clean Air Act of 1990, the Civil Rights Act of 1964, Executive Order 12898 (regarding environmental justice), Executive Order 13166 (regarding outreach to populations with limited English-language proficiency), and Executive Order 13330 (regarding the coordination of human-services transportation)



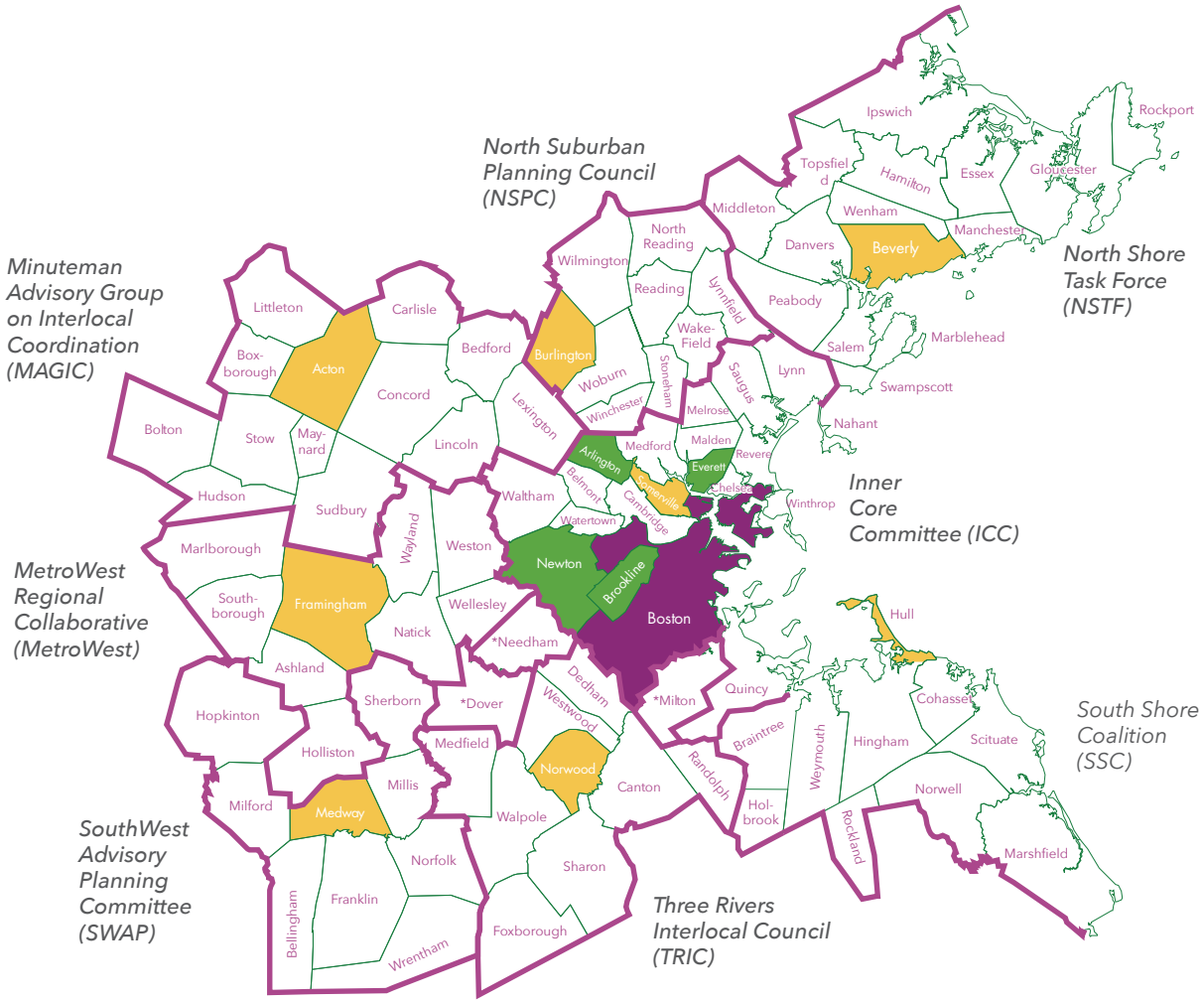
More information about the federal, state, and regional guidance governing the transportation planning process, and about the regulatory framework in which the MPO operates can be found in Appendix E.

THE BOSTON REGION MPO

The Boston Region MPO's planning area extends across 97 cities and towns from Boston north to Ipswich, south to Marshfield, and west to Interstate 495.

Figure 1-1 shows the map of the Boston Region MPO's member municipalities.

Figure 1-1
Municipalities in the Boston Region



*Community is in more than one subregion: Dover is in TRIC and SWAP; Milton and Needham are in ICC and TRIC.

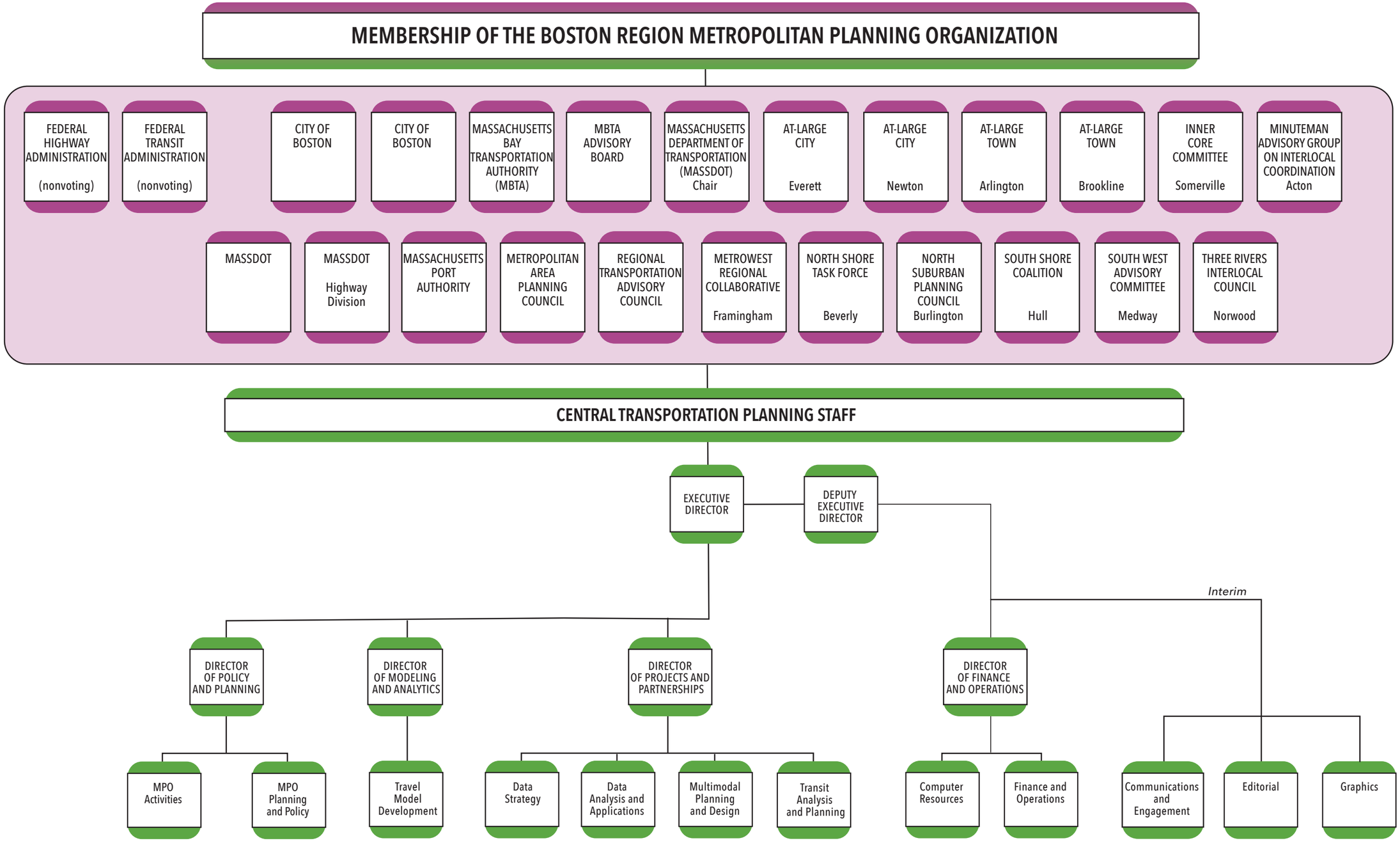
97 Cities and towns
Subregion boundary
MPO representative from subregion
MPO city or town at-large representative
Boston has two permanent MPO representatives

The MPO's board comprises 22 voting members. Several state agencies, regional organizations, and the City of Boston are permanent voting members, while 12 municipalities are elected as voting members for three-year terms. Eight municipal members represent each of the eight subregions of the Boston region, and there are four at-large municipal seats. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) participate on the MPO board as advisory (nonvoting) members. More details about the MPO's permanent members can be found in Appendix F.

Figure 1-2 shows MPO membership and the organization of the Central Transportation Planning Staff, which serves as staff to the MPO.



Figure 1-2
Boston Region MPO Organizational Chart



May 2023

MPO CENTRAL VISION STATEMENT

The following paragraph is the MPO's central vision statement, as adopted in *Destination 2040*, the MPO's current Long-Range Transportation Plan (LRTP), which was adopted in August 2019.

> *The Boston Region MPO envisions a modern, well-maintained transportation system that supports a sustainable, healthy, livable, and economically vibrant region. To achieve this vision, the transportation system must be safe and resilient; incorporate emerging technologies; and provide equitable access, excellent mobility, and varied transportation options.*

This vision statement takes into consideration the significant public input received during the drafting of the Needs Assessment for *Destination 2040*. This statement also reflects the MPO's desire to emphasize the maintenance and resilience of the transportation system while supporting the MPO's six core goals: Safety, System Preservation and Modernization, Capacity Management and Mobility, Clean Air and Sustainable Communities, Transportation Equity, and Economic Vitality. More information on the MPO's vision, goals, and objectives for the transportation system is available in Figure 1-3.

The Boston Region MPO is in the process of developing *Destination 2050*, its next LRTP, which is expected to be completed in the summer of 2023. The updated vision, goals, and objectives created as part of *Destination 2050* will not only guide the recommendations included in that plan, but also the development of future MPO Transportation Improvement Programs (TIP) and LRTPs. It was also considered when developing this UPWP. The following paragraph is the MPO's vision statement as approved in February 2023.

> *The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.*

CERTIFICATION DOCUMENTS

As part of its 3C process, the Boston Region MPO annually produces the TIP and the Unified Planning Work Program (UPWP). These documents, along with the quadrennial LRTP, are referred to as *certification documents* and are required for the federal government to certify the MPO's planning process. This federal certification is a prerequisite for the MPO to receive federal transportation funds. In addition to the requirement to produce the LRTP, TIP, and UPWP, the MPO must establish and conduct an inclusive public participation process, and maintain transportation models and data resources to support air quality conformity determinations and long- and short-range planning work and initiatives.

The following is a summary of each of the certification documents.

- The LRTP guides decision-making on investments that will be made in the Boston region's transportation system over the next two decades. It defines an overarching vision of the future of transportation in the region, establishes goals and objectives that will lead to achieving that vision, and allocates projected revenue to transportation projects and programs consistent with established goals and objectives. The Boston Region MPO produces an LRTP every four years. *Destination 2040*, the current LRTP, at the time this UPWP was drafted, was endorsed by the MPO board in August 2019 and went into effect on October 1, 2019. Figure 1-3 shows the MPO's goals and objectives as adopted by the MPO board in *Destination 2040*. As previously mentioned, the MPO is developing its next LRTP, *Destination 2050*. The new plan is expected to be endorsed by the MPO in summer 2023 and to go into effect October 1, 2023.
- The TIP is a multiyear, multimodal program of transportation improvements that is consistent with the LRTP. It describes and prioritizes transportation projects that are expected to be implemented during a five-year period. The types of transportation projects funded include major highway reconstruction and maintenance, arterial and intersection improvements, public transit expansion and maintenance, bicycle paths and facilities, improvements for pedestrians, and first- and last-mile connections to transit or other key destinations. The TIP contains a financial plan that shows the revenue sources, current or proposed, for each project. The TIP serves as the implementation arm of the MPO's LRTP, and the Boston Region MPO updates the TIP annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program (STIP) for submission to the FHWA, FTA, United States Environmental Protection Agency, and the Massachusetts Department of Environmental Protection for approval. The Capital Investment Plan is a Massachusetts Department of Transportation (MassDOT) document that reflects all capital expenditures over a five-year period, provides state matching funds for nearly all STIP investments, and includes STIP, and, by extension, TIP investments.
- The UPWP contains information about transportation planning studies that will be conducted by MPO staff during the course of a federal fiscal year, which runs from October 1 through September 30. The UPWP describes all of the supportive planning activities undertaken by the MPO staff, including data resources management, preparation of the federally required certification documents, and ongoing regional transportation planning assistance. The UPWP, produced annually, is often a means to study transportation projects and alternatives before advancing to further design, construction, and possible future programming through the TIP. The studies and work products programmed for funding through the UPWP are integrally related to other planning initiatives conducted by the Boston Region MPO, MassDOT, the Massachusetts Bay Transportation Authority, the Massachusetts Port Authority, the Metropolitan Area Planning Council, and municipalities in the Boston region.

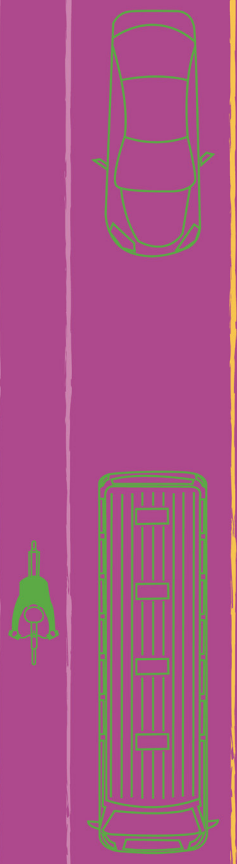


Figure 1-3
LRTP Goals and Objective

VISION STATEMENT

The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

GOALS	OBJECTIVES
EQUITY	
Facilitate an inclusive and transparent transportation-planning process and make investments that eliminate transportation-related disparities borne by people in disadvantaged communities.	• Facilitate an inclusive and transparent engagement process with a focus on involving people in disadvantaged communities.* • Ensure that people have meaningful opportunities to share needs and priorities in a way that influences MPO decisions. • Eliminate harmful environmental, health, and safety effects of the transportation system on people in disadvantaged communities. • Invest in high-quality transportation options in disadvantaged communities to fully meet residents' transportation needs.
SAFETY	
Achieve zero transportation-related fatalities and serious injuries and improve safety for all users of the transportation system.	• Eliminate fatalities, injuries, and safety incidents experienced by people who walk, bike, roll, use assistive mobility devices, travel by car, or take transit. • Prioritize investments that improve safety for the most vulnerable roadway users: people who walk, bike, roll, or use assistive mobility devices. • Prioritize investments that eliminate disparities in safety outcomes for people in disadvantaged communities.
MOBILITY AND RELIABILITY	
Support easy and reliable movement of people and freight.	• Enable people and goods to travel reliably on the region's transit and roadway networks. • Prioritize investments that address disparities in transit reliability and frequency for people in disadvantaged communities. • Reduce delay on the region's roadway network, emphasizing solutions that reduce single-occupancy-vehicle trips, such as travel demand management. • Prioritize investments that reduce delay on the region's transit network. • Support reliable, safe travel by keeping roadways, bridges, transit assets, and other infrastructure in a state of good repair, and prioritize these investments in disadvantaged communities. • Modernize transit systems and roadway facilities, including by incorporating new technology that supports the MPO's goals, such as electric-vehicle technologies.

*** Disadvantaged communities are those in which a significant portion of the population identifies as an MPO equity population—people who identify as minority, have limited English proficiency, are 75 years old or older or 17 years old or younger, or have a disability—or has low income.**

(Fig 1-3 cont.)

GOALS	OBJECTIVES
ACCESS AND CONNECTIVITY	
Provide transportation options and improve access to key destinations to support economic vitality and high quality of life.	• Improve multimodal access to jobs, affordable housing, essential services, education, logistics sites, open space, and other key destinations. • Prioritize transportation investments that support the region's and the Commonwealth's goals for housing production, land use, and economic growth. • Increase people's access to transit, biking, walking, and other non-single-occupancy-vehicle transportation options to expand their travel choices and opportunities. • Prioritize investments that improve access to high quality, frequent transportation options that enable people in disadvantaged communities to easily get where they want to go. • Close gaps in walking, biking, and transit networks and support interorganizational coordination for seamless travel. • Remove barriers to make it easy for people of all abilities to use the transportation system, regardless of whether they walk, bike, roll, use assistive mobility devices, or take transit.
RESILIENCY	
Provide transportation that supports sustainable environments and enables people to respond and adapt to climate change and other changing conditions.	• Prioritize investments to make the region's roadway and transit infrastructure more resilient and responsive to current and future climate hazards, particularly within areas vulnerable to increased heat and precipitation, extreme storms, winter weather, and sea level rise. • Prioritize resiliency investments in disadvantaged communities and in areas that bear disproportionate climate and environmental burdens. • Prioritize investments in transportation resiliency that improve emergency access and protect evacuation routes. • Prioritize investments that include nature-based strategies such as low-impact design, pavement reduction, and landscape buffers to reduce runoff and negative impacts to water resources, open space, and environmentally sensitive areas.
CLEAN AIR AND HEALTHY COMMUNITIES	
Provide transportation free of greenhouse gas emissions and air pollutants and that supports good health.	• Reduce transportation-related greenhouse gases, other air pollutants, and growth in vehicle-miles traveled by encouraging people and goods to move by non-single-occupancy-vehicle modes. • Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants. • Prioritize investments that address air pollution and environmental burdens experienced by disadvantaged and vulnerable communities. • Support public health through investments in transit and active transportation options and by improving access to outdoor space and healthcare.

Updated: February 2, 2023

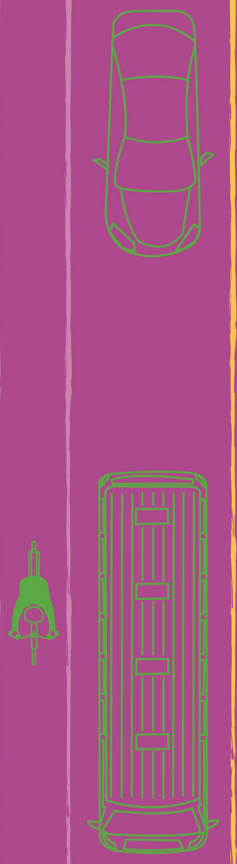


Figure 1-4 depicts the relationship between the three certification documents and the MPO's performance-based planning and programming process, which is a means to monitor progress towards the MPO's goals and to evaluate the MPO's approach to achieving those goals.

Figure 1-4
Relationship between the LRTP, TIP, UPWP, and Performance-Based Planning Process

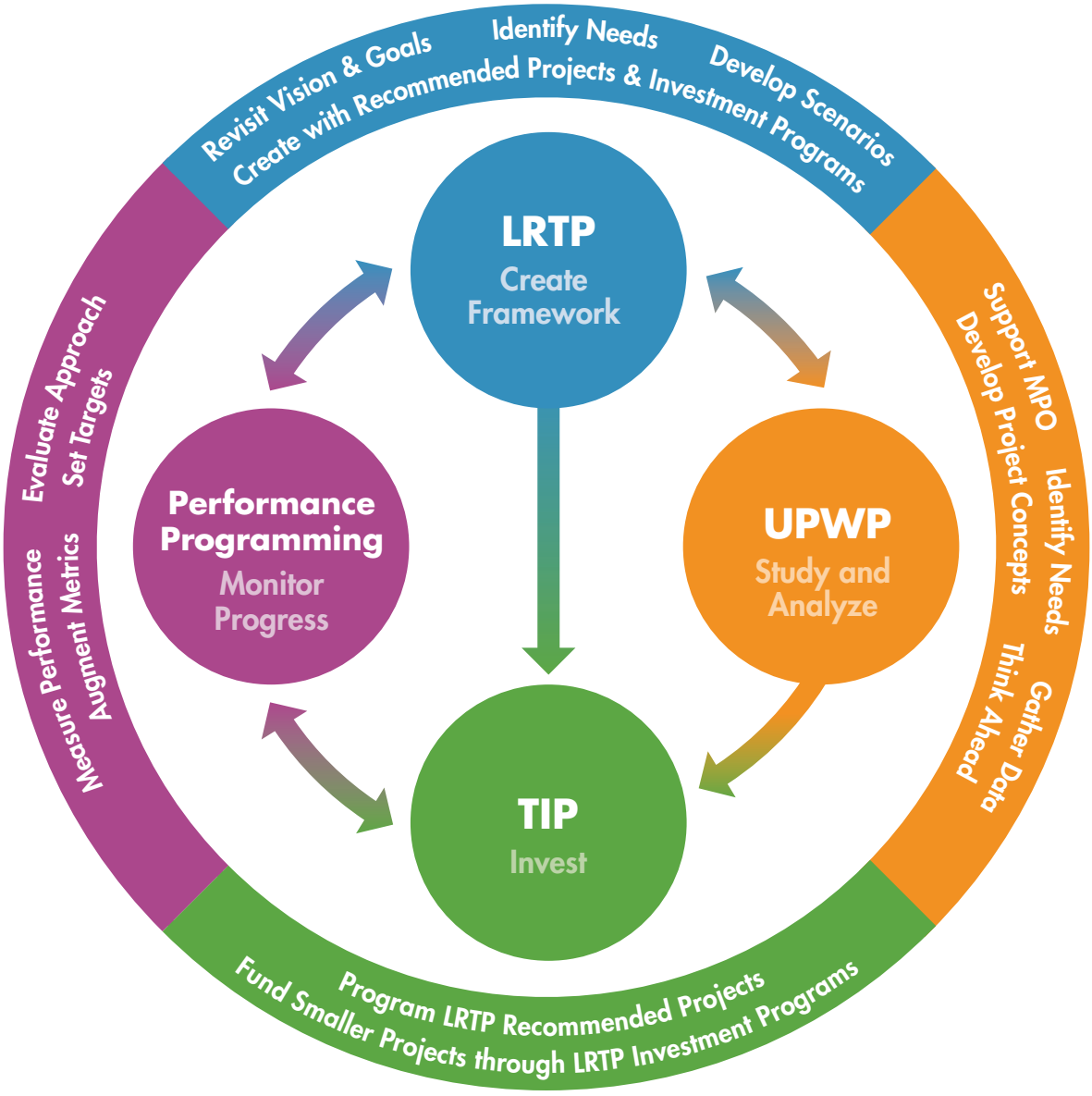




Photo courtesy of MOTT, by Tim Graft



Photo courtesy of MOTT, by Ali Stevenson

CHAPTER 2

ABOUT THE UNIFIED PLANNING WORK PROGRAM

BACKGROUND

This chapter explains the Unified Planning Work Program (UPWP) and its connection to the overall regional transportation vision developed in the Long-Range Transportation Plan (LRTP). As outlined in Chapter 1, the UPWP plays an integral part of achieving the Boston Region Metropolitan Planning Organization's (MPO) vision and mandate by documenting the federal funding that will be spent on surface transportation studies and work programs in the Boston region during a given federal fiscal year (FFY). This plan also serves as the basis for financing the ongoing work of the staff to the Boston Region MPO.

WHAT DOES THE UPWP DO?

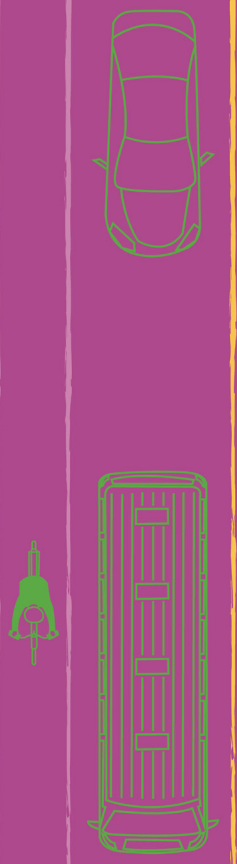
The UPWP is a planning document with preliminary scopes of work and budgets that the MPO produces annually in compliance with the federally mandated continuing, cooperative, and comprehensive (3C) metropolitan planning process described in Chapter 1.

As the basis for transportation planning at the Boston Region MPO, the UPWP prioritizes federal funding for transportation planning work that will be implemented in the 97-municipality area of the Boston region. The Central Transportation Planning Staff (CTPS) or the staff of the Metropolitan Area Planning Council (MAPC) conduct this work (CTPS is the staff of the MPO and MAPC is the Boston region's regional planning agency). This work primarily consists of the following four parts.

Certification Requirements and Other MPO Support Activities. The UPWP includes activities that the federal government requires the MPO to conduct to remain certified as an MPO and be eligible to receive and distribute federal transportation dollars. Work in this category includes preparing federally required plans such as the LRTP and the Transportation Improvement Program (TIP). The LRTP, which is updated every four years, allocates funding for transportation construction projects and programs over a 20-year period. The TIP, which is updated annually, allocates funding for the implementation of projects during the next five years. This section of the UPWP also includes air quality conformity and transportation equity-related compliance and other planning activities associated with the LRTP and TIP. In addition, the UPWP programs the MPO's public participation activities, including support to the Regional Transportation Advisory Council (Advisory Council) and support to meetings of the MPO and its committees.

The UPWP also funds other activities that support MPO planning and certification requirements, including graphics and editing support; managing data and computer resources; and maintaining the MPO's regional travel demand model, which is used to forecast the potential impacts that changes to the transportation system will have on traffic congestion and transit ridership. See Chapters 3 and 5 for more detail about these areas of work.

Ongoing/Continuing Work Programs. Ongoing and continuing work programs support technical analyses and planning studies for cities and towns in the region. Examples of these programs include Bicycle and Pedestrian Support Activities, Regional Transit Service Planning Technical Support, and Community Transportation Technical Assistance. See Chapter 4 for more detail about these programs.



New Studies. Every year, funds are available for the MPO staff to perform new studies. CTPS conducts these activities to enhance staff's and the MPO's knowledge of transportation planning practices, augment analytical methods, and evaluate transportation planning strategies. Examples of these studies in the FFY 2024 UPWP include Parking in Bike Lanes: Strategies for Safety and Prevention, and the Lab and Municipal Parking Phase II study. See Chapter 4 for more detail about these new studies.

Agency Studies and Technical Analyses. CTPS conducts planning analyses and studies funded by state transportation agencies, including the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the Massachusetts Port Authority. CTPS also occasionally conducts planning analyses and studies funded by municipalities. See Appendix A for more details on these agency-funded studies.



Photo courtesy of MOTT

THE PROCESS OF CREATING AND MONITORING THE UPWP

MPO staff produces the UPWP each year under the supervision and guidance of the MPO's UPWP Committee. The UPWP Committee, comprised of a subset of MPO board members and supported by MPO staff, convened six meetings in FFY 2023 to consider and provide input on the FFY 2024 UPWP development process. Discussion included the following topics:

- proposed budgets for ongoing and continuing activities
- new study ideas and how to prioritize them
- improvements to the UPWP outreach and development process

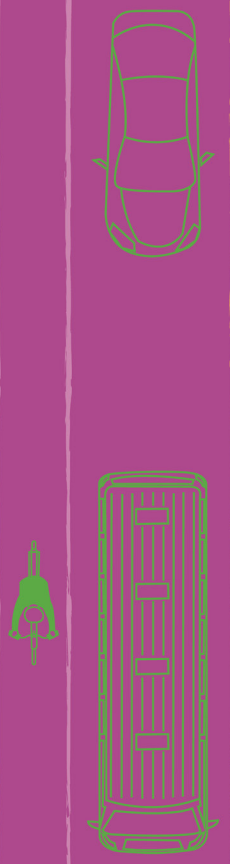
These meetings resulted in the committee's recommendation for the Draft FFY 2024 UPWP. The MPO approved the UPWP Committee's recommendations for public review of the Draft FFY 2024 UPWP on June 15, 2023.

Below are details about the process for selecting studies and programs for the FFY 2024 UPWP.

DEVELOPING THE NEW FFY UPWP

To develop new planning studies for the FFY 2024 UPWP, the MPO drew from the following sources to generate a listing known as the Universe of Proposed New Studies (see Appendix C) for evaluation by MPO staff and the MPO's UPWP Committee.

1. **Public outreach:** Staff held meetings to gain input from subregional planning groups and other stakeholders. Subregional groups—organized by MAPC—include municipal representatives who are focused on regional planning topics (Figure 1-1). Staff also visited meetings of community-based organizations and transportation advocacy groups during the fall outreach period, and provided opportunities for input at UPWP committee meetings. Furthermore, staff distributed a survey for members of the public to share study ideas and proposals.
2. **Advisory Council:** MPO staff met several times with the Advisory Council to present preliminary drafts of the FFY 2024 Universe of Proposed New Studies and gain ideas and input on transportation planning priorities. The Advisory Council is an independent body that brings public viewpoints and advice on transportation planning to the MPO.
3. **UPWP Committee:** MPO staff met with the UPWP Committee of the MPO throughout development of the UPWP. The committee oversaw the entire document development process and contributed to generating, analyzing, and prioritizing new study ideas.



4. **Existing planning documents:** Various plans and programs developed and conducted by the MPO and state agencies document transportation issues that require further study. These include the regional Congestion Management Process, which monitors the transportation network to identify locations and sources of congestion; *Focus40*, the MBTA's long-range capital plan; the MPO's long-range planning documents, including the current LRTP *Destination 2040* (a new LRTP, *Destination 2050*, is in development and is expected to be endorsed by the MPO during FFY 2023); MetroCommon, MAPC's long-range plan for the region; MassDOT's statewide modal plans; MassDOT's Statewide Long-Range Transportation Plan, *Beyond Mobility* (currently under development); and other recent studies.
5. **Past guidance:** The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) and MassDOT issue guidance on addressing the planning emphasis areas.
6. **FFY 2024 UPWP public comment letters and study proposals:** MPO staff received numerous emails and letters from the public regarding potential study ideas, which were integrated into the Universe of Proposed Studies.
7. **Consultations with MassDOT, the MBTA, and MAPC:** MPO staff consulted with its partner agencies to identify study ideas.
8. **MPO staff-identified needs:** MPO staff shared a survey with other CTPS staff to encourage discussion and sharing of study concepts.

MPO staff works continuously to enhance public participation in the UPWP and other MPO activities, and strives to achieve continued improvements in the volume, diversity, and quality of public input. More information about the MPO's public outreach process is available in Chapter 3, and at https://www.bostonmpo.org/public-engagement.

Evaluating and Selecting New Studies

MPO staff evaluated each new proposal in the Universe of Proposed New Studies based on how it helps the region accomplish the MPO's goals as laid out in the LRTP; whether staff has the capacity to carry it out; and a variety of other factors.

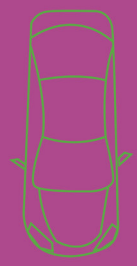
In addition to conducting the study evaluation process, MPO staff defined general scopes and estimated costs for proposed planning studies and considered potentially feasible issues to study. Staff considered these factors with input from the public, MPO members, and partner agencies, along with the availability of funds for new studies, when identifying a recommended set of new proposed planning studies for review by the UPWP committee.

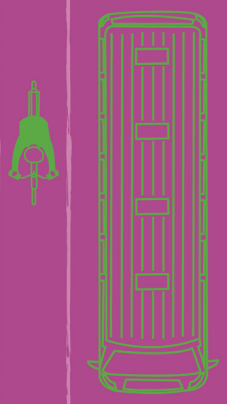
In the occasion that a proposed study was beyond the scope of a discrete study, but relevant to one of the MPO's ongoing programs (e.g. the Bicycle and Pedestrian Program, or the Multimodal Mobility and Infrastructure Program) staff ensured that information regarding that study and its proponent were communicated to relevant program managers.

Table 2-1 shows the studies in the FFY 2024 universe that were selected for funding in FFY 2024. Chapter 4 provides detailed descriptions of these studies.

Table 2-1
FFY 2024 New Discrete Funded Studies

Universe ID	Project ID	Study or Program	Proposed FFY 2024 CTPS Budget
M-1	14001	Lab and Municipal Parking Phase II	$45,000
A-1	14002	Parking in Bike Lanes: Strategies for Safety and Prevention	$20,000
R-2	14003	Strategies for Environmental Outreach and Engagement	$25,000
TE-1	14004	Applying Conveyal to TIP Project Scoring	$60,000
Total for New Discrete Studies			**$150,000**





Updates to Ongoing and Continuing Activities

In addition to the process of selecting new discrete transportation planning studies, the MPO reviews activities for ongoing programs and work. MPO staff identifies and develops budgets for these continuing programs that will be carried out in the upcoming FFY. Staff proposes changes to the budget of any program resulting from revisions to planned activities.

Examples of ongoing and continuing activities comprise work that is required of the MPO, including certification requirements (see Chapter 3), ongoing technical assistance to municipalities (see Chapter 4), and resource management and support activities (see Chapter 5).

The annual study program review and budget development process defines the amount of 3C funding (from federal grants that support the 3C process) that is available for new studies in the UPWP. After accounting for 3C-funded continuing and ongoing programs, the remaining funding is available for new studies.

Public Review of the Draft UPWP

MPO staff incorporates into the draft UPWP descriptive and financial information about ongoing and new UPWP studies, information about the UPWP development process, and other major transportation planning studies that will occur in the region during the relevant federal fiscal year. Appendix D provides an analysis of the distribution of UPWP-funded work products by subregion

and municipality. Once the MPO votes to release the draft for public review, MPO staff posts the document to the MPO website (www.bostonmpo.org) and provides notice of its availability through various communication outlets.

As previously noted, public outreach forms a major part of the input to the UPWP each FFY. After the MPO approves the draft UPWP, there is a public comment period. During this time, MPO staff members solicit public input via the MPO email list, the MPO website, and social media outlets. Staff compiles all public comments received during this period and presents them to the MPO.

Information about the public review process for the Draft FFY 2024 UPWP is available in Appendix B.

Other Regionally Significant Transportation Planning Studies

The UPWP also includes a list (Appendix A) of other federally funded and/or regionally significant transportation planning activities active in the region during the relevant FFY. These activities are not funded with the MPO's planning funds, but may be funded and implemented by individual transportation agencies, municipalities, or academic institutions. Often, these efforts make use of the expertise and tools that CTPS is uniquely able to provide.

Monitoring Progress of UPWP Studies

The MPO approved the following procedures for monitoring the studies in the FFY 2024 UPWP:

- Work programs for tasks that are not permanent (ongoing) MPO programs but are supported by federal 3C planning funds must be approved by the MPO prior to execution of work.
- CTPS work supported by other funding sources (for example, other governmental entities) should be approved by the MPO with the assurance that the new work will not interfere with other MPO-funded work.
- Monthly progress reports on all active studies and work programs must be submitted to the respective funding agency (FHWA or FTA) by the agency conducting the work (CTPS and/or MAPC). The reports must include the following information for each study or work program:
    - brief narrative describing the work accomplished
    - key personnel attendance at meeting(s) held during the reporting month
    - objectives and planned activities for the next month
    - percent of work completed

  - some measure of actual resources (for example, hours and funds) charged to the contract over the past month
  - comparison of actual cumulative resources expended compared to the contract budget
- MPO approval for release of a 3C-funded study's work products is based on whether the objectives stated in the work program were met and whether the stated deliverables were produced.

Amendments and Administrative Modifications to the UPWP

If necessary, MPO staff can make amendments and administrative modifications to the UPWP throughout the year. All 3C documents endorsed by MPOs, such as the TIP, LRTP, and the UPWP, must follow standardized procedures regarding amendments and/or administrative modifications. If an amendment is under consideration, MPO staff notifies the Advisory Council and other interested parties, including any affected communities. The MPO follows the procedures specified in the MPO's Public Engagement Plan.

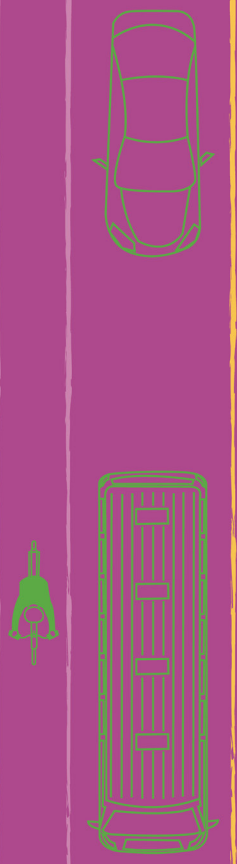
The following are the guidelines regarding the conditions that constitute an amendment to the UPWP, as received from FHWA by MassDOT and the MPO in FFY 2024 for future UPWPs.

Amendments to the UPWP, defined as significant changes to the overall UPWP that require federal approval, include the following:

- addition or deletion of a UPWP task or sub-task
- major changes to UPWP task descriptions, activities, and other information
- funding increase above the originally approved UPWP overall budget
- funding transfers between tasks equal to or greater than 25 percent of the UPWP task budget
- funding increase or decrease equal to or greater than 25 percent of the UPWP task budget

Administrative modifications to the UPWP, defined as minor adjustments to the overall UPWP that do not require federal approval, include the following:

- minor changes to UPWP task descriptions, activities, and other information
- funding transfers between UPWP tasks less than 25 percent of the UPWP task budget
- funding increase or decrease less than 25 percent of the UPWP task budget



Staff must present all proposed amendments and administrative modifications to the MPO for consultation prior to endorsement. The UPWP Committee will review both amendments and administrative modifications before forwarding them to the MPO. MPO members must vote to approve both amendments and administrative modifications. For amendments, the MPO will vote to either release the amendment for a 21-day public comment period or waive said comment period (upon recommendation from the UPWP Committee) prior to an endorsement vote. Members of the public may attend and provide comments at UPWP committee meetings and MPO meetings at which amendments and administrative modifications are discussed.

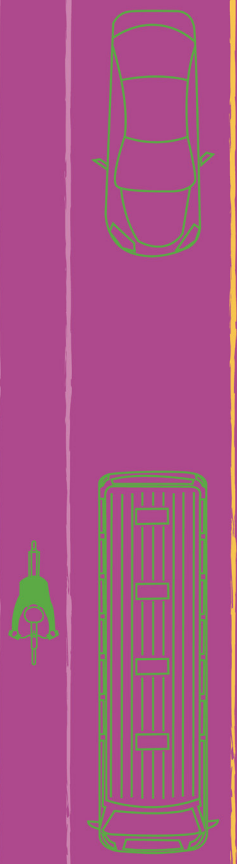
The MPO may make administrative modifications without a public review period at the MPO's discretion, although information will be shared with MassDOT's Office of Transportation Planning (OTP). When submitting the standard Budget Reallocation Request form to OTP, staff must fill out all fields with clear indication that the MPO was consulted prior to submission. Staff must submit back-up documentation, including the UPWP description of task(s) affected, original budget, revised budget, and justification for the request. Amendments will go into effect after approval by FHWA. These procedures are additionally documented in the MPO's Public Engagement Plan.



FUNDING THE UPWP

The total federal funding programmed in this UPWP is $7,116,954 . All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) as FHWA 3C Planning (PL) funds. However, these federal funds initially come from two sources: the FHWA and the FTA. The federal funds, which are supplemented by a state match provided by MassDOT, include the following initial sources:

- FHWA 3C Planning (PL): FHWA planning funds are distributed to the MassDOT Office of Transportation Planning (OTP), according to an allocation formula established by federal legislation, to carry out the 3C planning process. OTP distributes these funds to Massachusetts MPOs according to a formula that is primarily based on the region's road mileage and population. The formula was developed by the Massachusetts Association of Regional Planning Agencies (MARPA) and is known as the MARPA formula. The FFY 2024 3C PL funding allocation for the Boston region, including state matching funds, is $4,599,322. The total Boston region 3C PL allocation is split between CTPS, which receives $3,725,451, and MAPC, which receives $873,871.
- FTA 3C Planning (Section 5303): FTA provides 3C planning funds for transit projects to MPOs and Departments of Transportation under Section 5303 of the Federal Transit Act. These funds require a non-federal match and are distributed according to an allocation formula. In Massachusetts, these funds are administered by MassDOT, which transfers them from FTA to FHWA to be administered as a Consolidated Planning Grant before distribution. The FFY 2024 FTA allocation for the Boston region, including a total local match, is $2,517,632. This amount is split into two categories:
    - MPO and MassDOT FTA 3C Planning (Section 5303): The total amount of FTA funds, including a local match, programmed in this UPWP as PL for work conducted by the MPO staff is $2,076,561.
    - MAPC FTA 3C Planning (Section 5303): A portion of the Boston region's FTA allocation is provided to MAPC. MAPC uses these funds to conduct its transit-planning studies programmed through the UPWP. The total amount of FTA-derived funds, including a local match, allocated to MAPC as PL funds for FFY 2024 is $441,071.



CONTRACT WORK

In addition to MPO-funded work, CTPS performs planning analyses and studies funded by state transportation agencies, including MassDOT, the MBTA, and the Massachusetts Port Authority. More detail about these agency-funded studies can be found in Appendix A.



CHAPTER 3

MPO SUPPORT AND 3C PLANNING

INTRODUCTION

The activities described in this chapter broadly cover work that the Boston Region Metropolitan Planning Organization (MPO) completes to fulfill the continuous, comprehensive, and cooperative (3C) process and to maintain its certification by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Activities are grouped into three areas: (1) those that support the core MPO planning and programming functions, (2) those that support the 3C planning process, and (3) those that support the MPO board and committee operations and their decision-making processes.

Table 3-1 presents the funding in federal fiscal year (FFY) 2023 and FFY 2024 for each of these activities and includes a brief description of their work, progress, and products. Although many generally comprise the same tasks from year to year, often there are variations in budgets that reflect greater or lesser emphasis

in certain tasks. For example, MPO staff may undertake new analyses under specific line items; expand or change the form of public engagement; fold tasks undertaken in one year into an ongoing activity in a subsequent year; take on a new initiative of the MPO; or experience fluctuations in staffing levels that account for budget changes. Where appropriate, the table and individual descriptions explain these differences.

The budget tables that accompany each activity description include the associated salary and overhead costs. Direct costs associated with the activities are found in Chapter 5.

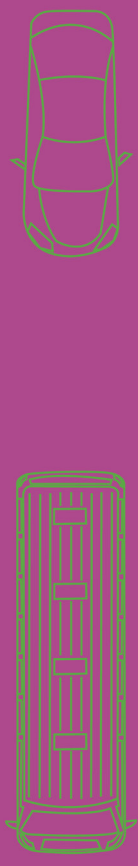


Table 3-1
FFYs 2023–24 MPO Support and 3C Planning

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Long-Range Transportation Plan	8124	$326,000	• Developed, sought public feedback on, and finalized the 2023 LRTP, *Destination 2050*. The plan is effective as of October 1, 2023, and will remain in effect for four years • Finalized the Needs Assessment for *Destination 2050*, shared results and materials, and developed processes for maintaining and updating information over time • Reviewed and updated the MPO's planning framework • Continued public outreach to support *Destination 2050* activities, including scenario planning, creating a planning framework, and selecting investment programs and projects • Identified, evaluated, and selected projects and programs for the recommended LRTP • Analyzed the recommended plan with respect to greenhouse gas emissions and equity outcomes • Addressed comments on *Destination 2050* from state and federal agencies • Continued implementation of *Destination 2040* (the 2019 LRTP) • Continued to monitor best practices in planning and communication, as well as developments in key issue areas • Responded to changes to the SIP	$266,500	• Begin implementing *Destination 2050*, including by carrying out and refining investment programs and initiatives outlined in the LRTP • Conduct public outreach on LRTP topics, including Needs Assessment updates and the MPO's vision, goals, and objectives • Continue to monitor current state-of-the-practice communications methods, planning tools, and approaches • Conduct research and analysis and continue developing materials for ongoing updates to the Needs Assessment • Update the web page for the *Destination 2050* • Begin processes to develop and analyze scenarios to support the MPO's next LRTP • Coordinate with MassDOT, the MBTA, the region's RTAs, other MPOs, and other stakeholders regarding LRTP development

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Transportation Improvement Program	8224	$323,000	• Developed the FFY 2024–28 TIP • Continued outreach to municipalities, subregions, regional transit authorities, MassDOT, and other partners to solicit ideas for inclusion in the FFY 2024–28 TIP and in the TIP Universe of Projects • Devised new investments for the TIP, including the deployment of a Bikeshare Support line item and Project Design Pilot in FFY 2025 • Created a scope of work for Transit Modernization Program for deployment in FFY 2025 along with a Shuttle Action Plan to inform the funding of shuttle pilot projects in subsequent TIPs • Held workshops and internal discussions to inform the development of the FFY 2025–29 and subsequent TIPs with an eye towards the project pipeline, discretionary grant applications, and evaluation criteria	$286,000	The TIP is updated annually, and in FFY 2024 will be updated to the FFYs 2025–29 TIP document. This update will entail the repetition of some of the tasks performed in column D, including the deployment of various new investment programs (Design Pilot, Bikeshare Support, Transit Modernization).
Unified Planning Work Program	8324	$101,500	• Developed the FFY 2024 UPWP • Conducted outreach to municipalities and other stakeholders in the region through MAPC subregional meetings, digital communications, and conversations with agencies to develop study ideas for the UPWP • Conducted outreach to advocacy and policy groups and interested citizens to gauge needs and collect study ideas for the FFY 2024 UPWP and beyond • Discussed UPWP matters with Regional Transportation Advisory Council, including development of study ideas for the UPWP and education about the UPWP products and process • Held internal discussions on potential future changes to the UPWP process and document	$122,500	Activities generally remain the same year to year, with staff supporting the MPO in producing its annual (FFY 2025) UPWP. A potential point of emphasis in FFY 2025 may be expanding the focus of engagement beyond the discrete studies program, as well as streamlining the document development process.

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Public Engagement Program	9624	$278,000	• Engaged municipalities, advocates, community groups, and the general public in the MPO's decision-making processes and planning work • Provided timely communications and accessible engagement opportunities via public meetings, open houses, surveys, email, and social media • Expanded the program to support additional engagement in MPO discrete studies and corridor and intersection studies • Evaluated and refined the Public Engagement Plan • Developed an annual memo summarizing and evaluating engagement activities per the Public Engagement Plan • Took over administration of the Regional Transportation Advisory Council	$296,000	Activities generally remain the same year to year, with staff supporting public engagement in the MPO's decision-making processes and planning work. In FFY 2024, engagement staff will support engagement activities related to the implementation of the *Destination 2050* LRTP, the start of the development of the next LRTP, the development of the FFY 2024 TIP and UPWP, and several transportation planning studies. Administration of the Regional Transportation Advisory Council will be fully brought under the Public Engagement Program. Staff will continue to expand the program to better reach constituencies underserved by the transportation system and those with limited English proficiency. The strategies and methods employed by engagement staff will continue to evolve with best practices to become more sophisticated. Changes to methodology will be included in updated versions of the MPO's Public Engagement Plan.
Regional Transportation Advisory Council Support	9323	$18,000		N/A	Activities will now be a part of the Public Engagement Program.
Performance-Based Planning and Programming	8824	$117,000	• Developed annual, two-year, and four-year performance targets for several areas of measurement • Incorporated performance targets and past performance into LRTP and TIP • Began developing process to replace the current online program dashboard • Explored areas for setting performance targets in addition to those mandated by FTA.	$140,000	Activities generally remain the same year to year. Establishing performance targets for required measures in safety, infrastructure condition, asset management, congestion management, and air quality. Incorporating performance targets into TIP and LRTP processes. Exploring areas of performance target setting beyond those mandated by FTA.

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Transportation Equity Program	8524	$177,000	• Completed a 2022 Title VI Triennial Report • Completed a 2023 Coordinated Public Transit–Human Services Transportation Plan • Began developing analyses that identify transportation inequities in preparation for building them into an online dashboard • Conducted DI/DB analysis for the LRTP • Supported the MPO's public engagement program in engagement with Title VI, EJ, and other nondiscrimination populations • Provided technical support to the LRTP Needs Assessment, TIP, and MPO-guided studies • Maintained equity Census data for the MPO • Supported project-related EJ analyses	$210,000	• Activities generally remain the same year to year. • Completing continued development of equity performance metrics and building a dashboard to display them • Developing an approach for identifying disparate impacts and disproportionate burdens in the TIP • Supporting Scenario Planning for the LRTP • Supporting scoring changes to the TIP project selection criteria • Updating the MPO's DI/DB application to reflect the DI/DB analysis results from the most recent LRTP, *Destination 2050*.
Air Quality Conformity Determinations and Support	8424	$21,500	• Coordinated with external partners such as MassDOT, FHWA, and EPA on topics related to air quality, greenhouse gas emissions, and CMAQ • Provided technical support for the air quality conformity and greenhouse gas sections of the TIP and LRTP • Assessed regional projects in eSTIP for greenhouse gas reporting requirements • Conducted project-level air quality analysis for projects in the TIP. • Prepared material and voted on behalf of the Boston Region for the annual CMAQ consultation committee meeting • Connected with USGAO and Volpe to answer questions about greenhouse gas emissions reporting • Attended webinars related to emissions, air quality, and federal funding sources	$35,000	Activities generally remain the same year to year, and will include coordination with external partners on air quality topics, performing project-level analyses to estimate emissions for the TIP and determine CMAQ eligibility, attending the annual CMAQ consultation committee meeting, supporting a regional greenhouse gas analysis for the LRTP, updating the air quality conformity language to reflect the most recent regulations, and other tasks as needed.

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Congestion Management Process	2124	$134,000	• Finished creating a corridor-based expressway network in GIS • Attended monthly MassDOT/INRIX meetings • Completed the 2019 arterial performance dashboard • Created a new expressway corridor CMP network • Defined the arterial corridor network (performance measures still need to be calculated) • Hosted a CMP committee meeting which provided a workshop for the roadway pricing study • Completed materials for the roadway pricing study workshop • Completed meeting minutes for both the 12/2/2021 and 3/23/2023 CMP committee meetings • Assisted with selecting projects for the roadway pricing study	$144,000	Several of these tasks remain the same year to year. Staff will continue to monitor the CMP for all modes. However, the main objective is to complete an online CMP dashboard, which will show a snapshot of congestion on the CMP network. In addition, the CMP committee will meet several times a year to help promote the Boston Region MPO's CMP.
Core MPO Functions		**$1,496,000**		**$1,500,000**	
Climate Resilience Program	8724	$44,000.00	• Provided technical support for the TIP and the LRTP's Needs Assessment • Discussed environmental engagement strategies and developed new partnerships with regional organizations • Processed the Massachusetts Coast Flood Risk Model (MC-FRM) and other climate data to support analyses of transportation infrastructure exposed to climate hazards • Coordinated internally to discuss resilience themes, data sources, engagement, and resilience in the MPO's certification documents. • Coordinated with external partners such as MAPC, the MBTA, and MassDOT on resilience topics • Attended an external event related to resilience and adaptation • Inventoried findings from Boston Region municipalities' vulnerability assessments • Attended informational webinars on resilience topics such as climate trends and PROTECT funds established by the Bipartisan Infrastructure Law • Presented resilience work and led a resilience discussion at a May Regional Transportation Advisory Council meeting	$76,000	• Maintain connections with external partners through regular check-ins • Continue collaboration among staff on resilience tasks • Participate in environmental events and build new connections with regional stakeholders • Develop text and material to create a resilience-focused page on the MPO's website • Review the components of a Resilience Improvement Plan as laid out in the Bipartisan Infrastructure Law, determine whether to develop an MPO-specific plan, research what other MPOs are doing, and start a framework for developing the plan if we decide to produce one • Review usability, data needs, outputs, and credibility of vulnerability assessment tools and develop a plan for assessment of Boston region transportation assets of interest to the MPO • Evaluate resilience and environmental TIP criteria and adjust as necessary to successfully invest in resilience-focused projects

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Freight Planning Support	2224	$93,000	• Completed research and produced technical memo on shared bus and truck priority lanes • Research on freight guidelines and exploration of freight data Began development of freight dashboard • Outreach and coordination with stakeholders • Concepts for coordinating freight and land use • Developed webpage for the freight program	$111,500	• Freight Planning Work Scope in coordination with *Destination 2050* that reflects input gathered from MPO stakeholders during FFY 2023 and implications of the Bipartisan Infrastructure Law • Freight planning roadmap • Develop a program to coordinate freight and land use in the Boston MPO region • Develop truck-counting and data-sharing protocols to extend the freight program's data-gathering reach • Develop a dashboard with freight infrastructure in the region Serve on interagency working groups • Provide data and analysis in support of advanced travel demand model implementation
Regional Model Enhancement	7124	$890,000	• Estimated parameters for secondary components (airport, truck, university, special generators, and externals) in TDM23 • Completed implementation of core and secondary components in TDM23 • Implemented process to track network changes requested and released network contents • Updated and released TDM19.2 network and code • Updated highway and transit networks to 2019 base year, developed 2050 LRTP scenario networks • Prepared calibration data including LBS data for trip flows, transit boarding data, pnr demand, highway count, and speed data • Developed validation reports for all model components and calibrated parameters to 2019 base year • Improved model runtime through simplification of input networks and benchmarking and refining code • Connected TDM23 with TMIP-EMAT to facilitate exploratory analysis • Designed and implemented integrated post processors for equity and air quality analysis • Completed development version of TDM23 for calibration with updated network and input data • Developed draft model summary and comparison reports • Developed model documentation	$762,500	• Develop model roadmap with input from stakeholders and responses to demonstrated tdm23 capabilities • Prepare application supporting documentation and features for tdm23 • Conduct exploratory analysis to demonstrate tdm23 capabilities and identify needs for enhancements • Develop a post-pandemic model base year calibrated to most recent roadway and transit data • Prepare network requirements and initiate process to rebuild roadway networks • Enhance model reports • Prioritize, maintain, and release updated versions of tdm23 reflecting reported issues, requested enhancements, and regular software improvements

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Data Program	5024	$572,000	• Developed a data vision • Developed standards for cataloguing data and documenting analysis processes • Evaluated options for data visualization • Responded to data requests from external stakeholders • Maintained the MPO website infrastructure	$590,000	• Develop guidelines for data request process for external stakeholders • Develop data publication standards and explore new methods for sharing data publicly • Ensure adoption of documentation standards within CTPS • Research new data sources and analytic techniques
Bicycle and Pedestrian Planning Program*	2524	$83,500	• Coordinated with state agencies, MAPC, other MPOs, MassDOT's Safe Routes to School Program, WalkBoston, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region • Provided ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with particular focus on promoting safety • Updated the bicycle gap analysis • Coordinated regional efforts to coincide with the vision and goals outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans	$129,400	• Provide technical assistance, data collection, analysis, review of materials, and attendance at state, regional, and local forums and committee meetings • Conduct analysis of regional bicycle and pedestrian counts • Update how gaps are identified in the Boston region bicycle network • Evaluate regional intersections and roadways using the Pedestrian Report Card Assessment and Bicycle Report Card tools • Research, engagement, and strategy for the Boston Region MPO's bicycle and pedestrian plan development
Multimodal Mobility Infrastructure Program*	2824	$323,000	• Updated project selection criteria for corridor and intersection studies • Evaluated corridors and intersections for project selection • Conducted study of Route 37 in Braintree to develop concepts with short-term and long-term recommendations for the corridor • Conducted study of Freeman Square in Lynn to develop concepts with short-term and long-term recommendations for the intersection • Conducted study of the Washington Street (Route 129) at Hanover Street/Beacon Hill Avenue intersection in Lynn to develop concepts with short-term and long-term recommendations for the intersection	$336,000	• Multimodal mobility infrastructure program roadmap • Recommendations for selected corridor improvements • Recommendations for selected intersection improvements • Curb management data collection, analysis and strategies • Transit service access, and priority assessments • Freight activity evaluations and recommendations • Guidebook(s) to support multimodal infrastructure studies
Programs Supporting the 3C Process		**$1,496,000**		**$2,005,400**	

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
Support to the MPO and its Committees	9124	$355,088	Continued support to the meetings and activities of the MPO board and its committees. Work entailed • Preparing meeting and information materials, including agendas, minutes, notices, document translations, memoranda, reports, correspondence, summaries, website content, maps, charts, illustrations, and other visual materials as needed to support MPO discussion and actions • Posting meeting materials in digital form on the MPO meeting calendar webpage and in hard copies that are provided at meetings • Hosting approximately 24 MPO meetings and 18 MPO subcommittee meetings, and performing the associated tasks and pre- and post-meeting logistics • Conducting activities to support compliance with federal requirements and guidance, including coordination with neighboring MPOs, MassDOT, and federal partners	$505,086	Tasks and work products generally remain the same from year to year, with variations to the level of effort based on the specific requests by the MPO and state and federal partners Generally, the expected effort includes • Hosting approximately 24 MPO meetings and 10 MPO subcommittee meetings, and performing the associated tasks and pre- and post-meeting logistics • Coordinating 3C planning and programming activities and programs • Coordinating with state and federal partners • Coordinating with neighboring MPOs • Supporting the Transportation Policy Task Force
General Graphics	9224	$243,500	Provide graphics support to the MPO and its member agencies. This includes • Designing and producing maps, charts, illustrations, report covers, brochures, slides, and photographs • Applying other visualization techniques • Creating standards and proof all MPO products both printed and online • Producing finished layouts of MPO Documents • Creating other products that improve communication within the agency and its member agencies • Produce accessible materials in PDF and HTML formats for posting on the Boston Region MPO website • Assist in producing materials, including meeting minutes, work scopes, memoranda, reports, and other public materials • Review accessibility requirements and current CTPS standards and processes • Implement standards within memorandum and report templates	$305,000	Tasks and work products generally remain the same from year to year.

(Table 3-1 cont.)

Name	Project ID	FFY 2023 CTPS UPWP Budget	FFY 2023 Work Progress and Products	Proposed FFY 2024 CTPS Budget	FFY 2024 Planned Work Progress and Products
General Editorial	9724	$174,000	Provide editorial support to the MPO staff. Review public-facing documents and make revisions to correct grammar and formatting, improve clarity and organization, and maintain consistent style. Products reviewed include certification plans, reports, memoranda, work scopes, meeting minutes, presentations, job advertisements, and other materials as required. Maintain and update document templates for use in the creation of accessible documents. Set editorial standards and maintain the CTPS Editorial Style Guide for staff's use.	$227,000	Tasks and work products generally remain the same year to year.
Transit Working Group Support	8924	$42,000	• Hosted four working group meetings and a series of small discussion groups ("coffee chats") and managed pre- and post-meeting communications and logistics • Updated the MPO about Transit Working Group development and activities • Updated the Transit Working Group web page • Summarized meeting discussions • Hosted a forum on microtransit in cooperation with MAPC and the MBTA Advisory Board • Researched topics and issues that may be relevant to future Transit Working Group meetings	$33,000	• Host quarterly working group meetings • Host one to two coffee chats per month • Host one-off additional events as proposed • Manage pre- and post-meeting logistics • Develop materials and resources to support working group meeting and activities, as needed • Provide updates to the MPO about the transit working group • Support communication for and about the group using email, social media, and the MPO website • Prepare documentation about pilot working group meetings, activities, and participant feedback for the MPO
Support to the MPO and its 3C Process		**$2,005,500**		**$2,005,400**	

*Indicates that program fulfills Federal Highway Administration Complete Streets requirement

Photo courtesy of MOTT

CORE MPO FUNCTIONS

The programs and activities included in this section include the core products required by the MPO's federal partners and related activities for carrying out the MPO's 3C planning and programming functions. Programs supporting the 3C planning process, such as the Data Program and the Bicycle and Pedestrian Program, can be found in the following section, Programs Supporting the 3C Process.

- Long-Range Transportation Plan (LRTP)
- Transportation Improvement Program (TIP)
- Unified Planning Work Program (UPWP)
- Public Engagement Program (which includes Public Engagement Plan)
- Performance-Based Planning and Programming (PBPP)
- Transportation Equity Program (TE)
- Air Quality Conformity Determinations and Support
- Congestion Management Process (CMP)

LONG-RANGE TRANSPORTATION PLAN

Project ID Number	8124
FFY 2024 Total Budget	$266,500
Schedule	Ongoing

Purpose

The LRTP guides transportation investments for the Boston region for at least the next 20 years and must be updated every four years per federal regulations. It serves as the MPO's guiding document: it establishes regional transportation goals, objectives, and investment approaches that the MPO operates under. The MPO adopted the current LRTP, *Destination 2040*, in August 2019, and expects to adopt the next LRTP, *Destination 2050,* in the summer of 2023, which will go into effect October 1, 2023.

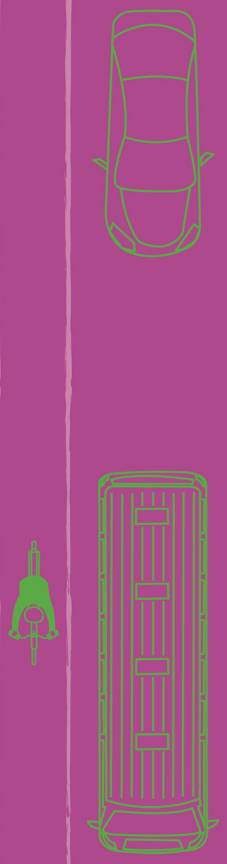
Approach

LRTP Needs Assessment

The Needs Assessment provides a holistic view of the transportation needs of the Boston region through data analysis and public engagement. It guides the development of the LRTP and informs project investment decisions in the TIP and study selection in the UPWP. It also shapes the development of MPO programs, such as in the selection of corridor study locations. In FFY 2024, staff will build on resources created as part of the *Destination 2050* Needs Assessment, with a focus on expanding the availability of data and findings to the public. This may involve integrating Needs Assessment information into other MPO applications and data resources. Staff will also develop a process for maintaining and updating the Needs Assessment over time.

Implement Destination 2050 and Managing Amendments

Staff will begin implementing *Destination 2050* in FFY 2024 through the development of the TIP and UPWP (see these respective program descriptions). This will include supporting initiatives to develop guidelines for MPO investment programs and updating TIP project selection criteria, where applicable. MPO staff will also support public engagement about the adopted *Destination 2050* plan and its implementation, as needed.



If changes are made to the projects funded in the FFYs 2024–28 TIP that meet criteria for being included in the LRTP, an amendment to *Destination 2050* may be required. Staff will prepare the informational materials for MPO decision-making and follow MPO procedures for informing and engaging the public.

Scenario Planning

In FFY 2022, MPO staff began exploratory scenario planning work to help the MPO envision multiple possible futures for the Boston region and assess how to best prepare for uncertainties while pursuing an overarching vision for the transportation network. Some findings from this process were incorporated into activities to develop *Destination 2050*. During FFY 2024, MPO staff will continue exploratory scenario work in partnership with Metropolitan Area Planning Council (MAPC) staff. This work is expected to make use of alternative socioeconomic and land use scenarios provided by MAPC, as well as tools such as the MPO's travel demand model. Staff will develop and analyze scenarios of interest to MPO members, staff, and Urban Sim and other stakeholders; develop materials to effectively communicate results; and engage MPO members and others in the process. This work will support MPO decision-making and lay the groundwork for future long-range transportation plans.

Monitoring Planning Best Practices

The LRTP program plays an important role in keeping the MPO abreast of current state-of-the-practice communications methods, transportation issue areas, and planning tools. This information also supports work in other MPO programs. In collaboration with MAPC, staff will continue to explore effective ways to assess and address the Boston region's needs, analyze transportation and land-use options, and apply best practices in long-range transportation planning.

FFY 2024 Anticipated Work Products

- Continue to develop Needs Assessment data and information resources and make them publicly available
- Support activities related to *Destination 2050* implementation
- Support public engagement activities related to the adopted *Destination 2050* plan, as needed
- Continue the MPO's exploratory scenario planning work, including analyzing scenarios, presenting results, and engaging stakeholders
- Continue to explore state-of-the-practice methods for long-range transportation planning

TRANSPORTATION IMPROVEMENT PROGRAM

Project ID Number	8224
FFY 2024 Total Budget	$286,000
Schedule	Ongoing

Purpose

The Boston Region MPO's TIP is a five-year, financially constrained program of planned investments in the metropolitan area's transportation system. Although federal regulations require that the TIP be updated every four years, Massachusetts MPOs produce annual updates.

Approach

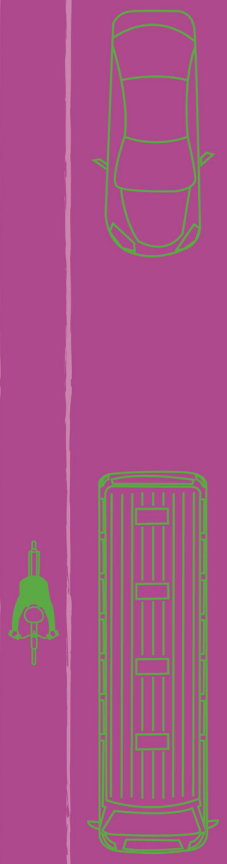
Municipal Engagement and Compilation of the Universe of Projects

Staff communicate with the MPO region's municipalities through online TIP informational sessions and workshops, MAPC subregional meetings, and correspondence with municipal TIP contacts, MassDOT staff, and elected officials to gather information on existing and new TIP project-funding requests. Staff then compile the projects into a Universe of Projects list for consideration by the MPO.

Project Evaluation

The MPO uses TIP project evaluation criteria to identify projects that help the region attain the vision, goals, and objectives established by the LRTP. The criteria support decision-making for the programming of transportation projects in the region by establishing a transparent, inclusive, and data-driven process through which funds are allocated.

When the next LRTP, *Destination 2050*, is endorsed in the summer of 2023, staff will review current criteria and make revisions as needed to reflect updated LRTP goals and objectives and changes to MPO investment programs. Staff expect that revisions will be targeted, rather than an overhaul of existing criteria.



Staff Recommendation

Staff develop a recommendation that proposes how to prioritize the MPO's Regional Target funding. Staff prepares a list of projects containing the evaluation scores and project-readiness information, then develops programming recommendations that include a selection of these projects taking into consideration the project scores, geographic distribution of investments across the region, project design status, LRTP-identified needs, and cost. Staff present the programming recommendations and work with board members to define the final program.

In addition to preparing the recommendation, staff prepare and present MassDOT state-prioritized projects and the capital programs for the Massachusetts Bay Transportation Authority (MBTA), the Cape Ann Transportation Authority, and the MetroWest Regional Transit Authority for the MPO's consideration.

TIP Document Preparation and Endorsement

Staff prepare a draft TIP that maintains compliance with federal regulations and requirements for a public review and comment period. During the public comment period, staff compile and summarize comments on the draft TIP and relay the comments to the MPO for consideration before endorsing the final TIP document.

Implementing Performance-Based Planning

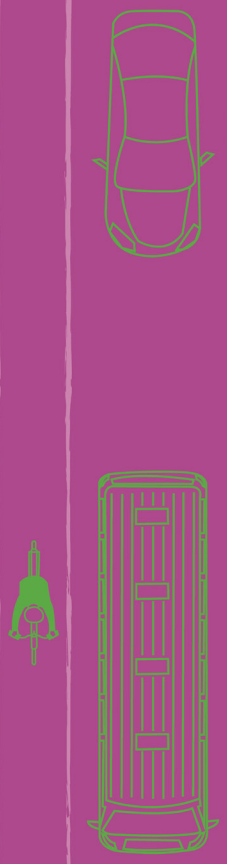
The TIP document reports on the MPO's implementation of its performance-based planning program. It highlights the results of monitoring trends in the region and notes any progress made toward established performance targets.

Amendments and Administrative Modifications

In a typical year, various projects experience cost or schedule changes that require an amendment or administrative modification to the TIP. Staff prepare for the possibility of several amendments and/or administrative modifications to the FFYs 2024–28 TIP and manage public review processes as needed, including posting TIP materials on the MPO website.

FFY 2024 Anticipated Outcomes

- Develop the FFYs 2025–29 TIP, amendments, and make administrative modifications to the FFYs 2024–28 TIP
- Explore enhancements to the TIP interactive database and other web-based TIP resources
- Document progress made on performance measures through the programming of TIP projects
- Refine and implement the MPO's new investment programs as described in *Destination 2050*
- Continue to implement the MPO's new project programming and cost-change policies, which were endorsed by the MPO in November 2021 and for which implementation began in FFY 2022
- Conduct additional analysis of the distribution of TIP funding and alignment with LRTP-identified needs to help pinpoint areas for targeted outreach to municipalities
- Use the equity analyses completed for the TIP to identify adjustments needed for the equity-related project evaluation criteria and any areas of focus for the TE program
- Make adjustments, as needed, to the project selection criteria to reflect the investment programs, goals, and objectives in *Destination 2050*



UNIFIED PLANNING WORK PROGRAM

Project ID Number	8324
FFY 2024 Total Budget	$122,500
Schedule	Ongoing

Purpose

The UPWP, a federally required document that supports the 3C transportation planning process, has two main purposes:

- provide budget information to federal and state officials about the expenditure of federal funds for transportation planning projects being carried out by the Boston Region MPO, and
- provide information to government officials, local communities, and the general public about surface transportation planning projects expected to take place in the Boston Region MPO area.

The UPWP document includes descriptions and budgets for work that MPO staff will conduct during the upcoming federal fiscal year, including 3C-funded work conducted by Central Transportation Planning Staff (CTPS) for the MPO; work conducted by CTPS and funded by state agencies or other entities; and 3C-funded work executed by MAPC, which receives approximately one-third of the Boston region's allotment of 3C funding. Appendix A provides supplementary information about transportation studies happening in the Boston region that are regionally significant, and work conducted by CTPS and funded by state agencies or other entities.

Approach

Work on the UPWP is ongoing throughout the year, with the twin goals of developing the coming year's UPWP and supporting staff, the MPO, and its UPWP Committee in monitoring implementation of the current UPWP. Staff coordinates and prepares materials for all phases of development of the upcoming UPWP, including

- coordinating public participation in the UPWP process, such as
    - engaging state transportation agencies, municipalities, and the public, in conjunction with the MPO's Public Engagement Plan;
    - soliciting, evaluating, and recommending ideas for planning studies and technical assistance programs;

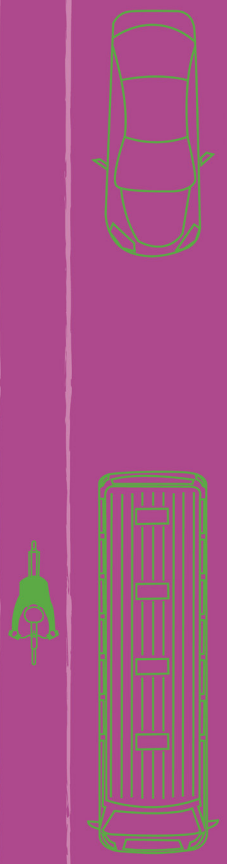
- conducting background research into planning needs;
- preparing budgets and project and program descriptions;
- coordinating document development with the MPO's UPWP Committee;
- responding to federal and state Department of Transportation guidance; and
- preparing, coordinating public review of, and distributing draft and final documents.

In support of the implementation of the current year's UPWP, staff

- support meetings of the MPO's UPWP Committee;
- prepare quarterly reports on the implementation of the UPWP; and
- make adjustments, administrative modifications, and amendments as needed, according to federal regulations and guidance.

FFY 2024 Anticipated Outcomes

- Engage the public in development of the FFY 2025 UPWP
- Implement planned changes to the UPWP document and process
- Plan for and support meetings of the MPO's UPWP committee
- Report quarterly on FFY 2024 UPWP implementation
- Complete amendments and administrative modifications to the FFY 2024 UPWP, as necessary
- Work to establish a database and interactive online interface documenting transportation planning studies active around the Boston region
- Provide other informational materials as needed



PUBLIC ENGAGEMENT PROGRAM

Project ID Number	9624
FFY 2024 Total Budget	$296,000
Schedule	Ongoing

Purpose

Public engagement is one of the core functions of an MPO. Engaging the public in the transportation planning process improves decision-making by helping to illuminate the social, economic, and environmental impacts of transportation planning decisions. Continuous engagement supports a communication loop that allows the MPO to build and maintain relationships with stakeholders, including advocates, community leaders, and members of the public. The MPO's vision for public engagement in the region is to hear, value, and consider, throughout all planning work the needs and views of the full spectrum of the public and incorporate this input into decision-making.

Staff coordinates public engagement efforts with the MPO's TE Program to ensure that all members of the public–including populations that have been traditionally underserved by the transportation system and have historically lacked access to the decision-making process–have meaningful opportunities to participate in the transportation planning process that shapes the Boston region. Staff additionally provide operations support to this body and its subcommittees.

Approach

Implementing the Public Engagement Program

Staff implement the MPO's Public Engagement Program according to the MPO's Public Engagement Plan by coordinating and implementing the MPO's public engagement activities via external communication and proactive engagement efforts. This process provides information to individuals, organizations, and community representatives and creates avenues for providing input in the MPO's planning and decision-making. Staff continually evaluate the Public Engagement Plan to ensure that it reflects current best practices and the MPO's engagement goals.

Methods

Staff provide convenient, timely, and meaningful opportunities for members of the public to participate in the MPO's transportation planning process. These opportunities include the following:

- MPO-organized in-person and virtual open houses, workshops, and forums
- Electronic surveys and solicitation of comments and input via email campaigns, social media, and website content
- Public comment periods for certification documents
- Regular meetings with organizations representing TE and other underrepresented populations to strengthen community relationships and provide opportunities to influence the MPO's planning decisions
- In-person and virtual events in partnership with other organizations
- Regional Transportation Advisory Council meetings
- MAPC subregional municipal group meetings

To ensure that opportunities to participate in the transportation planning process are accessible and transparent, staff create content and disseminate information that is concise, current, and accessible regardless of ability.

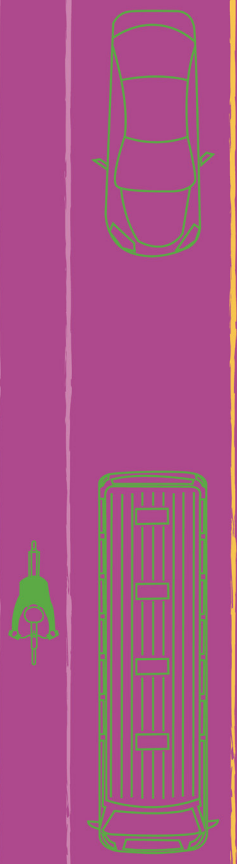
Program Administration

Staff continually evaluate and refine the Public Engagement Program to increase public understanding of the MPO's work and improve its efforts to break down barriers to participation. In consultation with the TE program, staff provide accommodations for people with disabilities at MPO-sponsored meetings as requested and all materials—both digital and paper—in accessible formats.

Staff provide language access (both interpreter and translation services) at MPO-sponsored meetings and engagement events, as requested. Staff also provide translations of engagement documents, surveys, emails, the MPO website, and other materials that allow for participation that is comparable to those with English language fluency. (These accommodations are funded as direct costs; see Chapter 6.)

Regional Transportation Advisory Council

In collaboration with the Regional Transportation Advisory Council chair and vice-chair, staff plan and facilitate monthly meetings. This includes handling meeting logistics, scheduling speakers, and preparing and distributing agendas, meeting notices, materials, and minutes. Staff also regularly provide information, updates, and briefings on MPO activities at meetings. Staff also



manage the administration of the Regional Transportation Advisory Council by soliciting new members, implementing and updating bylaws, coordinating Regional Transportation Advisory Council elections, and maintaining contact and attendance lists. During public comment periods on MPO documents, staff also request and coordinate comments and work with the Regional Transportation Advisory Council and its committees as they conduct and submit their reviews.

FFY 2024 Anticipated Outcomes

- Conduct engagement activities such as meetings, surveys, and public comment periods
- Build and expand relationships and partnerships with stakeholders, with a focus on organizations representing TE communities and populations with limited-English proficiency (LEP)
- Employ innovative strategies to expand and deepen engagement with stakeholders and the public
- Analyze the reach and effectiveness of engagement activities
- Update the Public Engagement Plan and Guidebook to incorporate best practices and new federal and state guidance
- Develop communication and engagement materials
- Increase understanding of and engagement with the MPO's work via communication campaigns
- Provide support and advice to MPO staff to improve engagement in all MPO processes
- Host approximately 12 Regional Transportation Advisory Council meetings and several subcommittee meetings and provide support for the associated tasks and pre- and post-meeting logistics
- Solicit and onboard new members with diverse perspectives
- Create meaningful opportunities for the Regional Transportation Advisory Council to provide input on the MPO's planning processes
- Collaborate with the Regional Transportation Advisory Council to update the Public Engagement Plan and implement public engagement initiatives

PERFORMANCE-BASED PLANNING AND PROGRAMMING

Project ID Number	8824
FFY 2024 Total Budget	$140,000
Schedule	Ongoing

Purpose

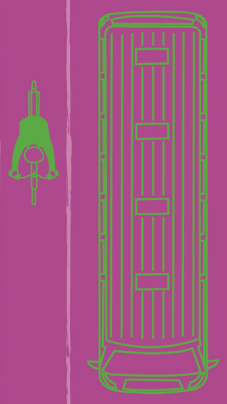
PBPP applies data to inform decisions aimed at helping to achieve desired outcomes for the region's transportation system. Federal legislation directs states, public transportation providers, and MPOs to use this performance-driven, outcome-based approach in their transportation planning processes. The Boston Region MPO can also use PBPP practices to help achieve its goals for improving the region's transportation system.



Approach

Develop Targets for Federally Required Performance Measures

Staff provides information and recommendations to MPO members as they set, revisit, or update targets for federally required performance measures. This includes annual updates to targets pertaining to roadway safety, transit asset management, and transit safety, as well as targets that have two-year or four-year time horizons, including those related to National Highway System infrastructure condition, travel time reliability, congestion, and transportation-related emissions. MPO staff review and respond to federal regulations and guidance; gather and analyze data; develop performance baselines; and explore ways to improve target-setting methodologies. Staff coordinate with MassDOT, federal agencies, other MPOs and states, the region's public transportation providers, and other stakeholders as part of this work.



Continue to Integrate PBPP Elements into MPO Planning

Building upon prior work to integrate PBPP into the TIP and LRTP, MPO staff examine the links between capital projects that the MPO funds and potential improvements in various performance areas. Activities include

- analyzing how MPO investments and other factors may influence changes in performance outcomes and what strategies could help the MPO achieve established targets;
- exploring ways to conduct ongoing evaluation of the impacts of MPO-funded TIP projects;
- identifying ways to refine project and program selection criteria and working with program managers to make desired changes in future LRTP and TIP development cycles;
- researching metrics that can be incorporated into the next LRTP;
- managing data to support performance analysis in MPO programs;
- coordinating performance-based planning and programming work with the MPO's CMP; and
- coordinating with the TE program in the development of equity performance measures that assess the MPO's progress in improving transportation outcomes for equity populations.

Monitor and Report on Performance

The MPO reports on performance in *Destination 2040* and TIP documents, through the CMP, and on its web-based Performance Dashboard. To do so, staff

- provide a performance report for the Transportation Improvement Program;
- develop Congestion Mitigation and Air Quality performance plans and reports, and other federally required reports, as needed;
- continue to update the MPO website with new PBPP targets; and
- explore new methods for sharing performance data via the web.

Staff enhance these existing reports and tools by adding and/or updating baseline and trend data and may create additional reports or tools. When developing these resources, staff incorporate information on performance targets and, to the extent practicable, describe the effect that MPO investments may have on performance.

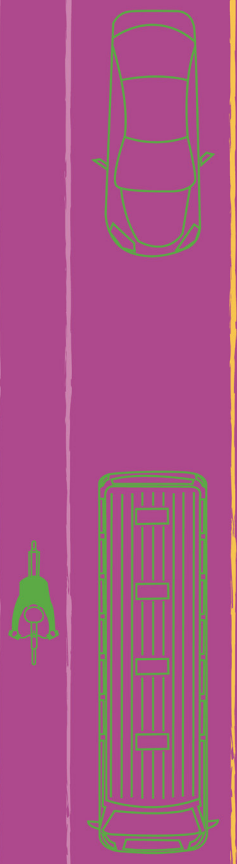
Enhance the MPO's PBPP Practice

The MPO's PBPP practice can expand beyond meeting federal requirements to address other aspects of the MPO's goals and objectives. These efforts include

- exploring the PBPP practices and measures used by other planning agencies and institutions, including attending conferences and participating in working groups;
- creating materials to describe the MPO's PBPP framework and to help guide the MPO board through its PBPP decision-making processes;
- exploring new tools available to analyze performance data and set targets; and
- supporting the MPO in setting additional performance targets, as desired.

FFY 2024 Anticipated Outcomes

- Support the MPO in setting targets for federally required measures and other measures, as desired
- Enhance activities to integrate performance management into MPO project and program evaluations, to manage data, and to anticipate and monitor the outcomes of MPO investments
- Produce or update performance reports, such as those required for the TIP
- Develop and or update MPO applications that include performance data
- Explore other measures and methods that the MPO could incorporate into its PBPP process, as well as tools the MPO can apply to PBPP work
- Develop or update materials to explain PBPP concepts and activities, including the MPO's PBPP web page
- Coordinate with MPO program managers, MPO board members, MassDOT, and public transportation providers to research measures, identify investment strategies, set targets, and implement PBPP practices
- Work with MPO staff, the MPO, and other stakeholders to link MPO investment decision-making processes more closely to performance outcomes and produce memoranda and presentations describing recommendations



TRANSPORTATION EQUITY PROGRAM

Project ID Number	8524
FFY 2024 Total Budget	$210,000
Schedule	Ongoing

Purpose

The TE program ensures that the transportation needs of populations underserved by the transportation system and underrepresented in the planning process are addressed throughout all of the MPO's activities. These populations—referred to as TE populations—include minority populations, low-income populations, people with LEP, older adults, youth, and people with disabilities. These populations are covered by the federal mandates below:

- Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including people with LEP, in programs and activities that receive federal financial assistance.
- Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," which directs recipients of federal financial assistance to identify and address disproportionate burdens on low-income and minority populations.
- The Americans with Disabilities Act, which prohibits discrimination against individuals with disabilities by recipients of federal financial assistance.
- United States Department of Transportation (USDOT) nondiscrimination regulations that prohibit discrimination on the basis of sex and age under other federal authorities.

In addition to these mandates, work in the TE Program also aligns with federal approaches to equity. This includes Justice40—which directs the federal government to work toward the goal for at least 40 percent of the benefits flow to disadvantaged communities. Under Justice40, USDOT has developed a definition of transportation disadvantaged Census tracts that can support the activities under the TE Program. The USDOT has also developed an Equity Action Plan that guides its equity priorities; again, activities in the TE Program align with the Action Plan where feasible.

The goal of the program is to not only ensure that the MPO complies with federal regulations, but also goes beyond compliance by supporting the development of a more equitable transportation system that serves all people, regardless of their background and disability status, while working toward eliminating harmful disparities in transportation impacts and access.

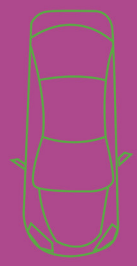
Approach

Implementing MPO Title VI Program

Through the TE program, staff implements the MPO's Title VI program and responds to MassDOT requests regarding program updates and submission of a Title VI report as requested. The report documents the MPO's compliance with FTA and FHWA's Title VI, EJ, and other nondiscrimination requirements, as well as MPO areas of focus of import to MassDOT.

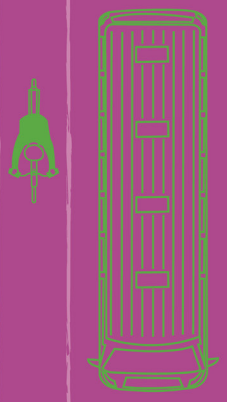
Providing Meaningful Opportunities for TE Populations to Participate in the Transportation Planning Process

In collaboration with the MPO's Public Engagement Program, staff ensure that TE populations remain central to the MPO's public engagement process. This includes a focus on expanding meaningful opportunities to people with LEP to participate in the MPO's processes. Staff continue to expand capacity for translating written and digital materials, engaging with organizations and individuals with LEP, and developing non-technical materials that are accessible and easily digestible. These engagement activities are described in more detail in the Public Engagement Program in this chapter.



Develop and Refine Equity-Related Analytical Techniques

To improve the effectiveness of the analyses that evaluate the impacts of the MPO's investments on TE populations, staff refine current analysis methods and develop new ones to further the MPO's TE goal. This includes analyses undertaken for the LRTP, TIP, and UPWP, although the actual analyses are funded under their respective programs. Anticipated work funded under the TE program includes but is not limited to



- analyses of new demographic data for MPO TE populations;
- development of new and refinement of existing analyses to support MPO programs, which could include updates to the metrics analyzed in the equity (disparate impact and disproportionate burden) analyses for the TIP and LRTP, approaches to identifying disparities in these plans, and updates to project evaluation criteria in the TIP;
- coordination with the Data Management Program to ensure demographic data analysis processes are consistent and well-documented, and to support consistent use of demographic data across CTPS; and
- Supporting staff across CTPS to address transportation equity in their projects, studies, and programs.

Equity Baseline Indicator Metrics Dashboard

Building off the FFY 2022 MPO study Identifying Transportation Inequities in the Boston Region, staff will develop a dashboard that tracks existing disparities in transportation outcomes among TE populations in the Boston region. The goal of the dashboard is to establish a baseline for outcomes and track progress over time to help the MPO prioritize investment decisions that address disparities as described in the LRTP TE goal. Metrics will initially focus on destination access metrics, and as resources allow, other metrics will be added, such as those related to air quality, travel time, climate change, and safety. Staff will coordinate with the FFY 2024 study Applying Conveyal to TIP Project Scoring to ensure consistency in the MPO's approach to conducting and reporting on destination access analyses. The dashboard will be developed in collaboration with the Data Management Program and support efforts to bring a streamlined, consistent approach to managing public-facing data dashboards to CTPS.

Project Support

Staff regularly coordinate with CTPS staff who conduct EJ analyses for client work to ensure consistency between those conducted for client projects and those conducted for the LRTP. In doing so, staff coordinate with CTPS's regional travel demand modeling staff in any metric or analysis updates needed to successfully conduct EJ analyses.

Coordinating with and Supporting Other Agencies

Staff coordinate with MassDOT's Office of Diversity and Civil Rights to ensure consistency of MPO Title VI-related processes, procedures, and activities with MassDOT's own practices. Staff also continue to support the MassDOT Rail and Transit Division in its evaluation of applications for funding from the Community Transit Grant Program.

FFY 2024 Anticipated Outcomes

- Submit a Title VI report to MassDOT
- Gather and analyze data related to equity from the United States Census Bureau and other sources, and explore new sources of data that support this program and inform the MPO's planning and programming decision-making
- Develop new metrics for the equity analyses in the TIP and an approach for identifying disparities
- Develop an online dashboard that documents existing inequities for TE populations in the Boston region
- Monitor developments at USDOT regarding civil rights, Title VI, and EJ; participate in workshops, conferences, and seminars, as appropriate; and use this knowledge to inform MPO activities
- Support MassDOT's evaluations of funding applications for the Community Transit Grant Program

AIR QUALITY CONFORMITY AND SUPPORT ACTIVITIES

Project ID Number	8424
FFY 2024 Total Budget	$35,000
Schedule	Ongoing

Purpose

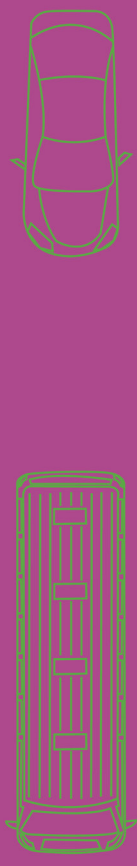
This program ensures that the MPO's plans, programs, and projects comply with the Clean Air Act Amendments (CAAA) of 1990 to secure federal funding for the Boston Region MPO's transportation system. It also provides ongoing support for the MPO regarding air quality matters and maintains technical expertise in air quality and climate change matters, including conformance with federal air quality requirements and the state's climate change policies.

Approach

Air Quality Conformity Determinations

Staff demonstrate that the MPO meets air quality conformity requirements for the TIP and for the LRTP (if an amendment is needed that includes the addition of a regionally significant project) for pollutants for which the MPO is not in attainment. Under the CAAA, states must monitor emissions from transportation vehicles and other sources to determine whether ambient emissions levels exceed allowable levels of air pollutants. Areas in which emissions exceed these levels are designated as nonattainment areas. For nonattainment areas, the Massachusetts Department of Environmental Protection (DEP) must develop a State Implementation Plan (SIP) that establishes emissions budgets and shows how the plan would reduce emissions in the area sufficiently to comply with national ambient air quality standards. MPOs with nonattainment areas must complete air quality conformity determinations to demonstrate the conformity of transportation plans, programs, and projects with the Massachusetts SIP. Even if the MPO is in attainment, it must still show that it is complying with transportation control measure requirements outlined in the SIP.

The Boston MPO area had been classified as a nonattainment area for ozone, but it was reclassified as an attainment area under the United States Environmental Protection Agency's (EPA) 2008 ozone standard. As an attainment area, the MPO has since not been required to demonstrate that the LRTP and TIP conform to national standards for the two pollutants that form ozone: volatile organic compounds and nitrogen oxides. However, in 2023 a new



ozone standard was proposed by the EPA, and the MPO region might again be classified as a nonattainment area if this standard is approved. If the MPO area is reclassified as a nonattainment area, conformity determinations for ozone would be required.

Other Air Quality Support

Staff also provide expertise in air quality and climate change matters so that the MPO can respond to changing requirements for air quality in its planning, analysis, and reporting. This includes initiatives known today, as well as the ability to participate in issues that might emerge during the year. Staff also support the implementation of air quality-related transportation programs and projects, and provide consultation, research, and coordination between the MPO and federal, state, local, and private entities.

FFY 2024 Anticipated Outcomes

- Prepare a systemwide conformity determination if there are changes to regionally significant projects in the LRTP (if needed) and the TIP
- Conduct a detailed project-level analysis for each project to receive Congestion Mitigation and Air Quality Program funding in the TIP and for any projects that will help meet the requirements of the Global Warming Solutions Act of 2008 (GWSA)
- Support MassDOT and Massport, as requested, in the analysis of transportation-control measures, park-and-ride facilities, and proposed high-occupancy-vehicle projects throughout the Boston Region MPO area, as well as evaluation of emerging and innovative highway and transit clean-air activities
- Integrate climate change concerns and opportunities for emissions reduction into the MPO's planning process
- Comply with the DEP's GWSA requirements
- Contribute as needed to the development of the Massachusetts SIP by supporting the development of MOVES3 emissions factors, among other activities

CONGESTION MANAGEMENT PROCESS

Project ID Number	2124
FFY 2024 Total Budget	$144,000
Schedule	Ongoing

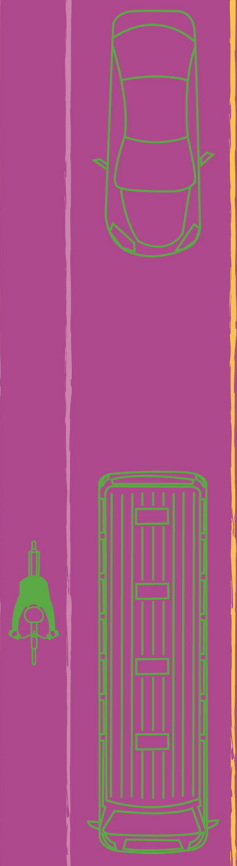
Purpose

The MPO's CMP is a federally mandated requirement to monitor congestion, mobility, and safety needs of the Boston region's transportation network. Within the program, staff recommend strategies for reducing congestion while accounting for equity, uncertainty, and resiliency of the MPO's multimodal transportation network. The CMP is developed in an integrated manner along with the MPO's certification documents (LRTP, TIP, and UPWP) to ensure cohesive strategy evaluation and implementation.

Approach

In the Boston Region MPO area, the CMP follows federal guidelines and recommendations from the MPO's CMP Committee to fulfill the following activities:

- set goals, objectives, and performance measures
- identify congested locations on the multimodal transportation network
- determine the causes of congestion
- develop alternative strategies to mitigate congestion
- evaluate the strategies' potential for efficacy
- recommend the strategies that best address the causes and impacts of congestion
- coordinate with and support development of the LRTP, TIP, and UPWP
- identify needs and priorities for planning studies



The current members of the CMP Committee are

- City of Everett (Chair)
- City of Boston
- Three Rivers Interlocal Council
- MBTA Advisory Board
- Regional Transportation Advisory Council
- MassDOT Highway
- Massport

Depending upon CMP Committee recommendations, staff monitor and analyze data for highways, arterial roads, transit, park-and-ride lots, freight movements, and bicycle and pedestrian facilities. CMP activities include using electronic travel-time and speed data to monitor roadways and transit, identify existing conditions, and recommend appropriate improvements in accordance with federal guidelines.

FFY 2024 Anticipated Outcomes

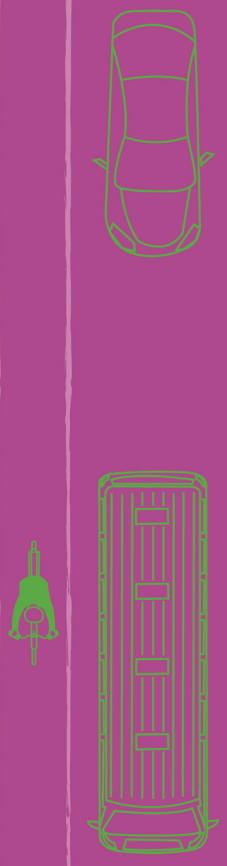
CMP activities include monitoring performance, assessing needs, and recommending strategies for multimodal facilities and services, including the following tasks:

- monitor the performance of MPO-region arterial roadways and freeways using electronic travel-time and speed data
- map and tabulate electronic data for analysis and performance evaluation
- coordinate with the MPO's certification activities (including the LRTP, TIP, PBPP, and UPWP programs and documents) to ensure that the MPO's transportation system is safe, equitable, resilient, and prepared for uncertainty
- support the CMP Committee of the MPO

PROGRAMS SUPPORTING THE 3C PROCESS

These programs are designed to supplement and enhance the MPO's core 3C planning and programming activities. The programs in this section include the following:

- Climate Resilience Program
- Freight Planning Program
- Regional Model Enhancement Program
- Data Program
- Bicycle and Pedestrian Planning Program
- Multimodal Mobility Infrastructure Program



CLIMATE RESILIENCE PROGRAM

Project ID Number	8724
FFY 2024 Total Budget	$76,000
Schedule	Ongoing

Purpose

Resilience describes an entity's, such as a transportation system, ability to anticipate extreme events under uncertainty, absorb impacts, recover in a timely and efficient manner, and adapt to better withstand future disturbances. The Climate Resilience Program assesses vulnerability and coordinates resilience improvements in the face of climate change and increasing risk to transportation assets in the Boston region posed by flooding, sea level rise, and rising temperatures. Investments in resilience can reinforce equity and safety goals by prioritizing improvements in disadvantaged areas and supporting a more reliable, safe system for transportation users.

The Climate Resilience Program was established in FFY 2022. Climate resilience will for the first time be one of the MPO's six goals for the Boston region's transportation system as part of the next LRTP, *Destination 2050*, indicating the increasing importance of ensuring the Boston region and its people are able to withstand the impacts of climate change.

Approach

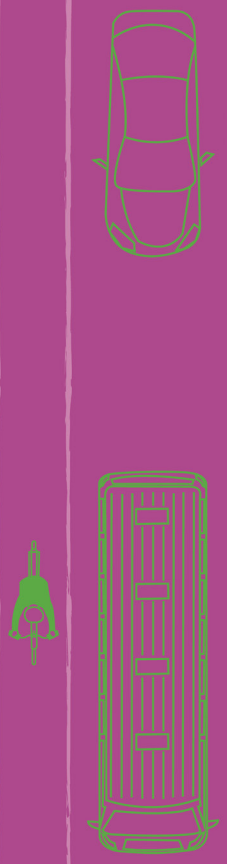
Staff perform work to strengthen the MPO's consideration of climate resilience in the transportation planning process, including

- inventorying climate resilience activities and concerns in the municipalities in the MPO region participating in the Commonwealth's Municipal Vulnerability Preparedness program;
- participating in the Commonwealth's Resilient Massachusetts Action Team committee to coordinate and collaborate on climate resilience activities at the state, local, and regional level;
- coordinating with state (including MassDOT, MBTA, and the Executive Office of Energy and Environmental Affairs) and regional agencies (including MAPC and its subregions and Resilient Mystic Collaborative) on climate resilience activities;
- presenting the MPO's work at local and national events;

- analyzing coastal flood risk data and other climate hazard data to assess the vulnerability of transportation assets in the Boston region;
- updating the climate hazard data and locations of transportation assets in the interactive, web-based All-Hazards Planning Application; and
- conducting monthly internal Climate Resilience Committee meetings.

FFY 2024 Anticipated Outcomes

- Coordinate and inventory climate resilience activities in the municipalities in the MPO region
- Collaborate on resilience activities at the state, local, and regional levels
- Pursue educational opportunities to gain subject-matter expertise
- Host monthly internal Climate Resilience Committee meetings
- Expand engagement with environmental agencies at the local, municipality, state, and federal level
- Maintain existing and add new climate resilience resources on the MPO's website
- Analyze and identify vulnerabilities in the Boston region's transportation system
- Increase consideration of safety, equity, and uncertainty themes as they relate to climate resilience
- Coordinate with municipalities on resilience needs and identify potential projects for TIP funding



FREIGHT PLANNING SUPPORT

Project ID Number	2224
FFY 2024 Total Budget	$111,500
Schedule	Ongoing

Purpose

Planning for the policies and infrastructure that enable the movement of freight and goods by road, rail, water, and air is a mandatory part of the federal 3C planning process. The goals for MPO freight planning are to

- fulfill the Boston Region MPO's freight-planning needs;
- complement state and other official planning efforts;
- study specific freight-related issues;
- fulfill analysis requirements of federal surface transportation legislation; and
- address the lack of freight data for the MPO region, including developing enhanced technical capabilities for MPO staff to use in estimating freight demand.

Approach

The MPO's freight planning activities are guided by the 2013 Freight Planning Action Plan and its 2019 update and is also conducted in coordination with the 2017 Massachusetts State Freight Plan with a planned update in 2023. CTPS will leverage the data and stakeholder input from the updated statewide plan in its regional freight planning efforts. The MPO's freight planning and analysis is ongoing and conducted on a multiyear basis. Typical activities include

- freight-specific studies,
- data collection,
- advising MPO staff and partner agencies on freight-related elements of other studies,
- participation in working groups and coordination efforts,
- research on new and evolving elements of freight planning practice, and
- advising on model development efforts relating to freight.

The freight program supports the MPO's freight planning needs. Freight planning at the MPO focuses on freight movement between metropolitan areas and, increasingly, with regional and local distribution of goods and packages (first- and last-mile delivery). Freight planning frequently includes investigation, analysis, and classification of truck movement, including commercial and service vehicles.

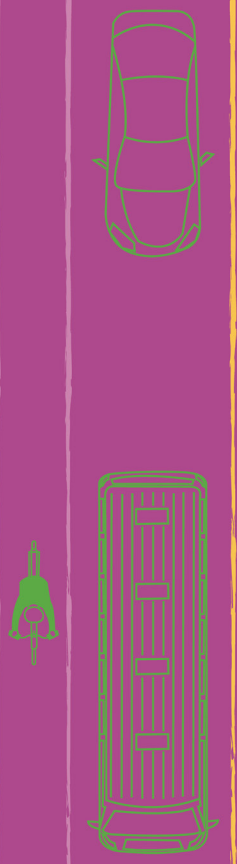
Specific study topics are chosen in consultation with MPO members and other stakeholders. The choice of topic sometimes hinges on complex regulatory and land use issues outside the direct scope of MPO activities, and freight planning activities often support planning efforts underway through other entities.

Public engagement and MPO support activities will continue as opportunities and needs are identified. Freight model development activities, generally funded under the Regional Model Enhancement task, take advantage of ongoing freight program findings and data.

FFY 2024 Anticipated Outcomes

Anticipated FFY 2024 efforts may include

- prepare Freight Planning Work Program in coordination with *Destination 2050* that reflects input gathered from MPO stakeholders during FFY 2023 and implications of the Bipartisan Infrastructure Law;
- develop a program to coordinate freight and land use in the Boston MPO region;
- develop truck-counting and data-sharing protocols to extend the freight program's data-gathering reach;
- develop a dashboard with freight infrastructure in the region;
- serve on interagency working groups; and
- provide data and analysis in support of advanced travel demand model implementation.



REGIONAL MODEL ENHANCEMENT

Project ID Number	7124
FFY 2024 Total Budget	$762,500
Schedule	Ongoing

Purpose

The long-term goal of the travel demand modeling practice at CTPS is to have a reliable, robust set of well-documented travel demand tools, data, and procedures that address a diverse set of needs for transportation planning in the Boston region and statewide with engaged and informed stakeholders and a coordinated team of modelers who have the skills, knowledge, and experience to effectively

- maintain the set of tools, data, and procedures;
- develop new components in the tool platforms;
- apply the tools and data appropriately on projects; and
- communicate all things related to travel demand modeling.

Through the Regional Model Enhancement Program, CTPS supports the research, maintenance and development aspects of the long-term goal. This has been realized through the development and maintenance of a regional travel demand model (TDM23) and support of other tools for assessing the area's transportation needs and evaluating alternatives to improve the transportation system.

The regional travel demand model estimates the millions of individual decisions that generate travel throughout the region and simulates the impact of those decisions on an abstracted representation of the region's roadway and transit networks. Through variations of the inputs and assumptions, the regional travel demand model provides planners with insights to current and future travel activity and conditions. Metrics produced by the model aid in developing policy, performing technical and equity analyses, and meeting federal reporting requirements, including the MPO's certification requirements. Regional travel demand models are also used by the MPO and state and regional agencies to support planning and policy analysis.

Approach

Model enhancement work is balanced across research of new model components, approaches, and data; development of new tools to enhance and complement the regional model; and maintenance of the regional model for MPO and application needs.

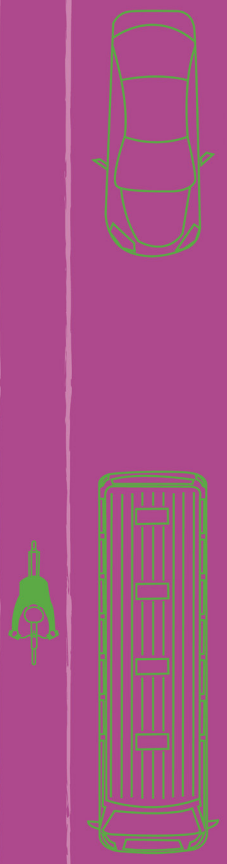
Moreover, FFY 2024 will see the development of a modeling roadmap. The first step of the roadmap is delivery and support of the newly developed travel demand model (TDM23). Input to the roadmap will be gathered from the current model steering committee, which is composed of stakeholders internal and external to the agency, as well as a broader group of stakeholders including other public agencies, researchers, and consultants.

Research

The TDM23 development process began with the identification of planning needs for model support. Not all of the identified needs will be met by TDM23 because of time and resource constraints as well as the limitations intrinsic in the model structure. CTPS will work to address those needs through complementary tools and data and endeavor to maintain a suite of next generation practices and tools that will serve regional transportation planning needs. The suite will define practice areas, procedures, and tools for common activities. The potential tools and data to be included in this suite include

- dynamic traffic assignment models that can provide a more detailed representation of the roadway and transit networks;
- activity-based models that can provide a more detailed representation of travel behavior;
- model platforms such as the Simplified Trips-on-Project Software model, developed by the FTA, and FHWA's VisionEval that can provide insight into specific aspects of travel behavior with less effort than a full regional travel demand model;
- big data products and platforms providing origin-destination tables, trip patterns, and travel times that can inform our understanding of the existing transportation system to improve the accuracy of the models and could directly support some near-term applications;
- focused sketch and post-processor tools that leverage the regional model outputs into more useful products; and
- cloud computing pipeline capable of transforming massive model outputs into a set of accessible, explorable deliverables, facilitating engagement with a wider range of stakeholders and model users.

CTPS Staff will also work to advance exploratory model applications, leveraging the integration of TMIP-EMAT with TDM23 to support testing scenarios across a range of potential inputs and evaluating programs in a robust manner.



Development

Development activities will include refinements and enhancements to TDM23 as identified through the development and calibration process and by stakeholders.

Some of the potential enhancements to TDM23 are

- roadway network classification and line work updates,
- enhancements to travel behavior related to universities, and
- enhancements to truck (freight and service) travel behavior.

To support the initial delivery and roadmap development, CTPS staff will develop reports and accessible presentations of TDM23 outputs as well as a portfolio of test applications.

Maintenance

The major maintenance activity will be to define, document, and release versions of TDM23 on a regular basis. Versions will include bug fixes, network updates, and enhancements.

As part of maintenance, CTPS staff will also continue to develop model documentation and training materials.

A potential maintenance activity will be to develop a post-pandemic model base year to complement the 2019 pre-pandemic calibration year. A post-pandemic model base year would be useful for growth rate calculations and project applications.

FFY 2024 Anticipated Outcomes

Staff will develop accessible materials to communicate the TDM23 capabilities to various stakeholders and develop a model roadmap for future enhancements and complementary model tools. Documented versions of TDM23 will be released throughout the year to deploy the latest enhancements, bug fixes, and new inputs. Staff will continue work to develop and define exploratory modeling approaches to enhance the MPO's ability to provide state-of-the-practice support for MPO staff, member agencies, and partner organizations.

DATA PROGRAM

Project ID Number	5024
FFY 2024 Total Budget	$590,000
Schedule	Ongoing

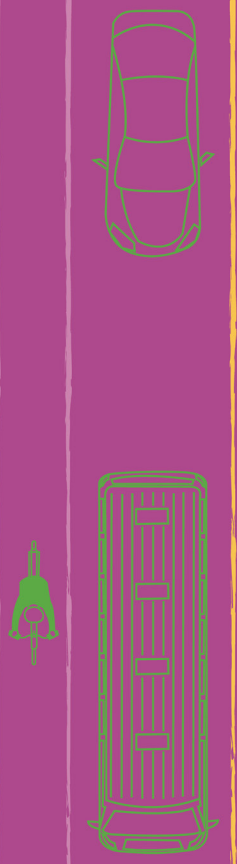
Purpose

The Data Program is a set of consolidated efforts to improve how data are used, developed, and shared at the agency. The purpose of the program is to support the data needs of the MPO and its stakeholders. There are four main areas of focus for this program:

- Data planning—identifying data needs and updating CTPS's data vision, strategy, and roadmap;
- Data pipeline—providing structural support for data practices including how CTPS obtains, manages, uses, and shares data, and documenting processes and procedures;
- Data exploration—exploring leading-edge data and analytical techniques and assessing their application and usefulness for the MPO; and
- Data partnerships—collaborating internally with staff, the MPO, partner agencies, and other stakeholders on data-related topics.

This program allows MPO staff to effectively

- maintain existing data, infrastructure, and documentation;
- explore new data and consider how they apply to our work;
- develop best practices around the management and use of data; and
- apply data in a comprehensive and strategic way that will benefit the MPO, regional stakeholders, and partner agencies.



Approach

Data Vision, Strategy, and Roadmap

Staff review the program's data vision, strategy, and roadmap for CTPS and assess where changes are needed. These guiding documents are updated each year to ensure the Data Program meets the current needs of the MPO and its stakeholders and keeps up with the evolution of data and analysis in the industry.

Manage and Respond to Data Requests

Data requests are one of the services CTPS provides to municipalities, peer agencies, private sector consultants, research institutions, and the broader public. While CTPS has made more data publicly available, there is still a need to respond to ad hoc, quick-response data gathering, processing, and analysis requests throughout the year. Staff continue to review its established policies and structures in this area.

Data Exploration

The goal of this ongoing effort is to conduct coordinated, strategic assessments of continuously evolving data sources and analytical techniques to address current and future needs. These assessments inform CTPS's long-term investments in the staff skills that are required to meet the evolving needs of the MPO and its stakeholders. This work allows MPO staff to explore new data and analysis methods, consider how they apply to MPO work, document findings, and develop best practices around the management and use of these data.

Data Management, Coordination, and Support

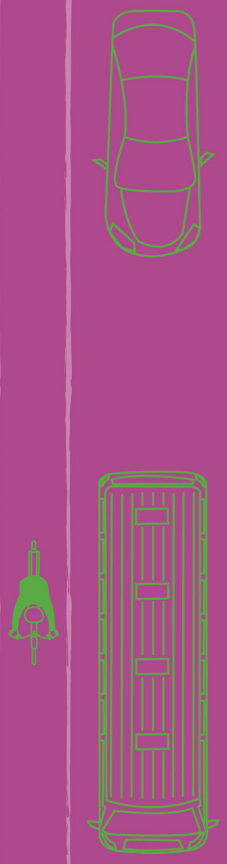
Staff conduct foundational work that supports data users across CTPS. Consolidating this effort under this program ensures that staff is making decisions about key datasets in a thoughtful, collaborative manner. Datasets and work activities managed under this program include the following:

- Socioeconomic Data and Products—support for staff members to maintain foundational work associated with the US Census Bureau's Decennial Census and American Community Survey, and products derived from these sources.
- Geographic Information System/Database Management System (GIS/DBMS)—develop, curate, and enhance stores of spatial and tabular reference data, along with associated tools.

- Requirements for Processes, Services, and Platforms—review CTPS's processes, services, and platforms to determine whether they serve the ongoing needs of the organization. Staff create requirements, investigate alternatives, and evaluate whether and how the platforms should be adopted.
- Collaboration with Partners and Other Agencies—work with CTPS partner agencies to share ideas, datasets, and techniques.

FFY 2024 Anticipated Outcomes

- Update CTPS's guiding vision for data and related processes
- Update CTPS's data strategy plan to attain progress towards the vision
- Update CTPS's Data Roadmap
- Update CTPS process and guidelines for serving data requests
- Respond to requests for data and small-scale data processing studies
- Assess existing and emerging datasets and analytical techniques
- Create a framework for selecting, assessing, and documenting findings from new analytical techniques and data sets
- Recommend data for planning application
- Continue foundational work on socioeconomic datasets
- Maintain, curate, and enhance spatial and tabular reference data, tools, and distribution channels
- Create design requirement specifications for new processes, services, and platforms
- Finalize and adopt documentation platforms along with standards and procedures for use
- Finalize and adopt a data publication platform and data publication standards
- Identify data infrastructure needs to streamline data access and use



BICYCLE AND PEDESTRIAN PLANNING PROGRAM

Project ID Number	2524
FFY 2024 Total Budget	$129,400
Schedule	Ongoing

Purpose

The Bicycle and Pedestrian Planning Program works to improve safety and comfort for people walking and bicycling in the Boston MPO region through a variety of efforts. MPO staff supports the MPO's and the region's need for bicycle and pedestrian planning through ongoing data collection, analysis, and technical assistance in this program.

Approach

In FFY 2024, the program will officially establish the Boston Region MPO's Bicycle and Pedestrian Committee and convene the first full year of committee meetings. The membership of this committee will be determined in FFY 2024. The Bicycle and Pedestrian Committee will help MPO staff determine how the Bicycle and Pedestrian Support Activities program will focus its future efforts. These endeavors might include bicycle and pedestrian studies and larger regional analyses related to walking and bicycle travel.

While the direction of future bicycle and pedestrian work will be influenced by conversations with the Bicycle and Pedestrian Committee, MPO staff plans to complete the following work as part of the Bicycle and Pedestrian Support Activities program during FFY 2024:

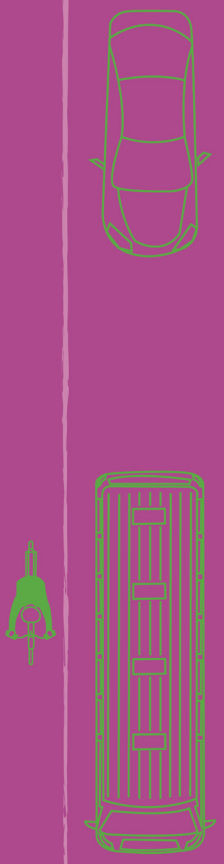
- Coordinate with state agencies, MAPC, other MPOs, MassDOT's Safe Routes to School Program, WalkBoston, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region.
- Collect data on bicycle and pedestrian volumes at on-road and off-road facilities in the Boston region, and post collected count data to the Boston Region MPO's Bicycle and Pedestrian Count Database for public use.
- Provide ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with a particular focus on promoting safety.

- Begin developing a regional bicycle and pedestrian plan for the Boston MPO region that combines the vision and goals of the Boston MPO with the priorities outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans.
- Maintain the Pedestrian Report Card Assessment Interactive Database.
- Redefine the MPO area's bicycle network gaps and update the locations where bicycle facilities are needed in the Boston region.

FFY 2024 Anticipated Outcomes

Anticipated outcomes include

- technical assistance, data collection, analysis, review of materials, and attendance at state, regional, and local forums and committee meetings;
- analysis of regional bicycle and pedestrian counts;
- update of how gaps are identified in the Boston region bicycle network;
- evaluation of regional intersections and roadways using the Pedestrian Report Card Assessment and Bicycle Report Card tools;
- research, engagement, and strategy for the Boston Region MPO's bicycle and pedestrian plan development; and
- coordination with municipalities to identify bicycle and pedestrian project candidates that could be eligible for TIP funding.



MULTIMODAL MOBILITY INFRASTRUCTURE PROGRAM

Project ID Number	2824
FFY 2024 Total Budget	$336,000
Schedule	Ongoing

Purpose

The purpose of this program is to conduct studies that will address both regional and community multimodal transportation needs. During MPO engagement, communities often identify transportation problems and issues relating to safety, congestion, bottlenecks, and lack of access to multimodal transportation facilities in their areas. A major focus of this program will be on the development of conceptual design recommendations that address regional multimodal transportation needs with an emphasis on the most vulnerable roadway users.

Approach

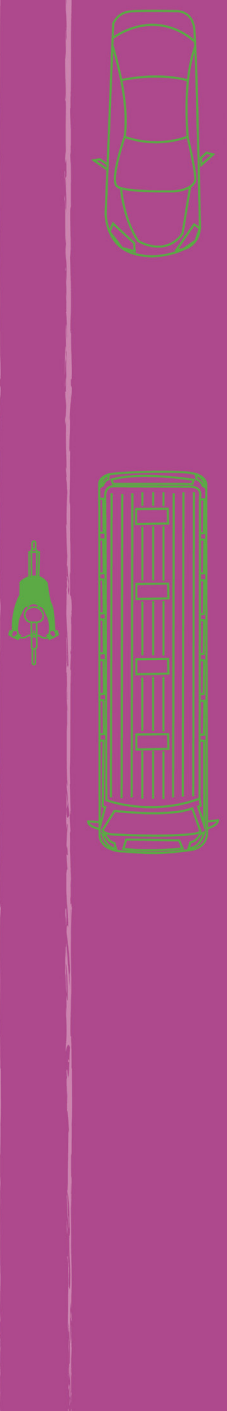
For study selection, MPO staff will reach out to MAPC subregions, municipalities, and other groups to identify corridors, intersections, curbs, and other areas of interest. MPO staff will refer to the LRTP Needs Assessment, the CMP, MassDOT's IMPACT portal, transit and freight data and other tools to identify further candidates. Study locations will be screened by staff using criteria consistent with the TIP selection criteria with emphasis on safety and equity considerations. Final study selections will be made in cooperation with the MPO's UPWP Committee. In addition to Complete Streets, operational, and safety considerations, analysis will concentrate on transit services, nonmotorized modes of transportation, curb usage, and truck activity along roadway segments.

The improvement recommendations and strategies will help develop a guide for designing and implementing a Complete Streets corridor, improved intersection, curb management, and other multimodal infrastructure projects. This guide will be provided to communities and implementing agencies, which may choose to fund improvements through various federal, state, and local sources, either separately or in combination.

The studies will provide communities with the opportunity to review the requirements of a specific study area, starting at the conceptual level, before committing design and engineering funds to a project. If the project qualifies for federal funds for construction of the recommended upgrades, the study's documentation will be useful to MassDOT and the community.

FFY 2024 Anticipated Outcomes

- Multimodal mobility infrastructure program roadmap
- Recommendations for selected corridor improvements
- Recommendations for selected intersection improvements
- Curb management data collection, analysis, and strategies
- Transit service, access, and priority assessments
- Freight activity evaluations and recommendations
- Guidebook(s) to support multimodal infrastructure studies



SUPPORT TO THE MPO AND ITS 3C PROCESS

The activities described in this section support core MPO programs as well as those supporting the 3C planning process in general, collaboration with other agencies, and compliance with federal requirements. These activities include technical and administrative support to the MPO and its committees, as well as the development of materials supporting all MPO work.

- Support to the MPO and its Committees
- General Graphics
- General Editorial
- Transit Working Group (TWG) Support

Project ID Number	9124 (Support to the MPO and its Committees) 9224 (General Graphics) 9724 (General Editorial) 8924 (Transit Working Group Support)
FFY 2024 Total Budget	$1,070,086
Schedule	Ongoing

Purpose

Under this program, staff implement MPO policies, plan and coordinate the delivery of information for MPO decision-making, and support the operation of the MPO and its committees. It also involves providing support for MPO meeting management and agenda planning.

Approach

Support to the MPO and its Committees

MPO staff perform the following tasks related to MPO board and committee meetings.

- Develop meeting agendas
- Prepare and distribute informational materials via email and the MPO's website

- Conduct in-person meeting site selection and logistics planning if needed
- Set up digital arrangements for virtual meetings and audio/visual equipment for in-person meetings
- Attend and record meetings
- Complete meeting follow-up activities, such as maintaining the information flow for members of the MPO and the public, processing approved work scopes, preparing audio-recording files, and documenting meeting minutes

Technical and process support is provided to the MPO's UPWP Committee, Administration and Finance (A&F) Committee, CMP Committee, and other ad hoc committees. These committees conduct their work as follows:

- The UPWP Committee meets as needed to develop a UPWP for the upcoming FFY and to monitor expenditures and the progress of studies and programs in the current fiscal year.
- The A&F Committee meets periodically to make recommendations to the MPO on the staff's operating budget, legal matters, and other administrative functions.
- The CMP Committee meets as needed to discuss the federally required CMP. Activities include developing and reviewing its TIP Intersection Improvement Program and making recommendations to the MPO.

Staff also provide administrative activities that ensure the MPO's compliance with federal requirements. This includes researching, analyzing, and reporting information on 3C planning topics and responding to federal recommendations from the MPO's Certification Review, among others. Staff also implement federal and state legislation, such as the Bipartisan Infrastructure Law requirements (see Chapter 2 and Appendix E).

This work also includes collaboration with other agencies involved in 3C planning activities, other Massachusetts MPOs (particularly those in the Boston region urbanized area), and MAPC subregional municipal groups. To support this collaboration, staff support updates to governing Memoranda of Understanding between the Boston MPO and partner agencies when necessary.

Other activities include overseeing 3C program-related activities, collecting and fielding comments and inquiries, and responding to requests for information and support.



General Graphics

The MPO conducts its transportation planning activities and public engagement process in accordance with federal regulations governing accessibility standards. Staff produce materials that adhere to these regulations as appropriate to ensure all people have access to MPO materials and therefore can meaningfully engage with the transportation planning process, regardless of background or ability.

To do so, staff produce written and electronic materials in accessible formats and maintain a library of document templates that incorporate accessibility guidelines and standards. To ensure web access for people with low or no vision who use screen readers, all documents are posted to the MPO website and meeting calendar in both PDF and HTML formats. In addition, staff make every effort to make data presented in tables fully navigable by a screen reader and provide alternative text to describe tables, figures, and images that cannot be read by a screen reader.

General Editorial

This work includes reviewing and editing reports, memoranda, guidebooks, presentations, and other public-facing materials, as well as documents internal to CTPS. The editorial process focuses on ensuring content is clear and understandable, making improvements to document structure, correcting grammar, ensuring proper word usage, and adhering to accessibility requirements.

Transit Working Group Support

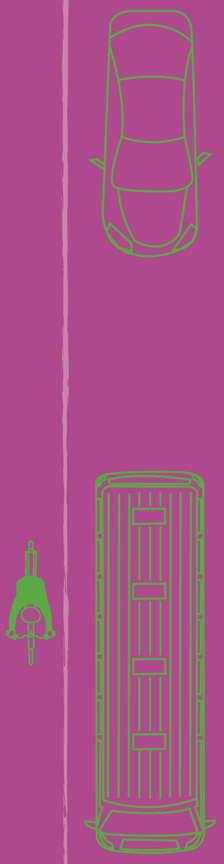
The TWG meets quarterly, in addition to holding informal "coffee chats" and cosponsoring or supporting other one-off events on occasion. MPO staff support includes the following activities:

- planning programs and meetings,
- scheduling speakers and developing presentations,
- preparing and distributing agendas, meeting notices, informational packets, and meeting summaries,
- facilitating and presenting at meetings,
- soliciting new members and maintaining contact lists,
- implementing and updating transit working group procedures, as necessary,
- gathering feedback from the TWG participants to inform MPO activities and decision-making,

- assessing the success and direction of transit working group activities, and
- updating the MPO on TWG activities.

FFY 2024 Anticipated Outcomes

- Host approximately 24 MPO meetings and 10 MPO subcommittee meetings, and perform the associated tasks and pre- and post-meeting logistics
- Coordinate 3C planning and programming activities and programs
- Coordinate with state and federal partners
- Coordinate with neighboring MPOs, including attendance at monthly Transportation Managers' Group meetings
- Produce maps, charts, illustrations, report covers, brochures, slides, StoryMaps, guidebooks, presentations, photographs, and other products that enhance the communication of MPO work to the public
- Produce materials in accessible formats for public meetings and website postings
- Maintain accessible document templates
- Maintain and update accessibility guidelines and standards for MPO products as needed
- Provide quality control for written materials
- Maintain standards for accessibility in written materials
- Maintain editorial guidelines and update as necessary
- Host quarterly TWG meetings and manage pre- and post-meeting logistics
- Host "coffee chats" on transit-related topics
- Develop resources to support working group meetings and activities
- Update the MPO about the TWG activities
- Support communication for and about the group using email, social media, and the MPO website
- Prepare documentation for the MPO about TWG meetings, activities, participant feedback, and recommendations for the TWG
- Explore the possibility of the TWG acting as a problem-solving forum for specific complex transit coordination issues





CHAPTER 4

BOSTON REGION MPO PLANNING STUDIES AND TECHNICAL ANALYSES

INTRODUCTION

As described in Chapter 1, each federal fiscal year (FFY), the Boston Region Metropolitan Planning Organization (MPO) receives federal transportation planning funds from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). Combined with the local Massachusetts Department of Transportation (MassDOT) matching amount, these funds form the budget that allows the MPO staff—Central Transportation Planning Staff (CTPS)—to accomplish the certification requirement activities described in Chapter 3; the planning studies and technical analyses described in this chapter; and the administrative tasks and data management described in Chapter 5.

To prepare each Unified Planning Work Program (UPWP) accurately, the Boston Region MPO must understand the status of the previous year's studies and work activities. In general, throughout the UPWP's development, the MPO tracks a study's progress according to the four categories cited below.

- Completed Studies: Completed studies are either already complete or expected to be completed by October 1, 2023, when the FFY 2024 UPWP document goes into effect. Table 4-1 (MPO-funded studies) provides a summary of these studies, their funding sources and amounts, and their work products or activities.
- Ongoing Programs, Studies, and Activities: Ongoing programs support the transportation planning process from year to year, and often serve to provide technical assistance to communities or transportation agencies throughout the region. These programs include those that directly support the MPO and the 3C planning process (Chapter 3), planning studies and technical analyses (Chapter 4), agency-funded contracts (Appendix A), and administration, resource management, and support activities (Chapter 5). Tables containing summaries of the funding and progress for these ongoing programs, studies, and activities are included at the beginning of the relevant chapters. Table 4-2 summarizes the salary and overhead costs in FFY 2023 and FFY 2024, as well as the completed and planned work products, for ongoing MPO technical assistance and transportation planning support work to municipalities throughout the region (also see Technical Analysis and Support section).
- New Discrete Studies: New discrete studies are selected through the MPO's UPWP committee and public outreach process for funding as one-time studies in a given FFY. Table 4-3 contains a summary of the new discrete studies for FFY 2024.

In addition, the Metropolitan Area Planning Council (MAPC), an MPO member agency, conducts planning studies and technical assistance throughout the region (see Chapter 6, Metropolitan Area Planning Council Activities).

The project descriptions throughout this chapter describe new transportation planning studies chosen for funding in FFY 2024. They also provide detailed updates for the FFY 2024 funding and work products for the MPO's and MAPC's ongoing programs.

Some titles of these products and activities may change as they are finalized. All certification documents and many other work products are, or will be, available for download from the MPO website (www.bostonmpo.org). Work products not found on the MPO website may be requested by contacting CTPS at 857.702.3700 (voice), 711 (MassRelay), or ctps@ctps.org (email).

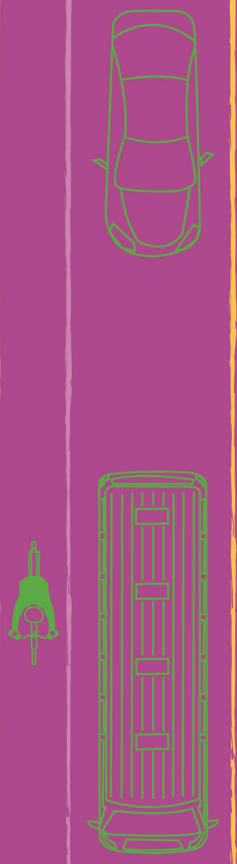


Table 4-1
Completed MPO Funded Transportation Planning Studies, FFYs 2022–23

Project Name	ID	FFY 2023 Budgeted Total Funding	Work Products (reports, technical memoranda, and other work products or activities)
FFY 2023 Studies			
Learning from Roadway Pricing Experiences	13807	$45,000	The anticipated deliverable is a memorandum summarizing the results of the interviews, workshops, MPO's intended goals for roadway pricing, and ways to incorporate roadway pricing into the various MPO planning processes.
Sustainability and Decarbonization in the Freight and Logistics Sector in the North Suffolk Region	13808	$67,500	StoryMap or technical memo with stakeholder identified needs, data gaps, and recommendations for next steps
Bicycle and Pedestrian Count Database Update	13803	$80,000	An updated web application for bicycle and pedestrian counts and recommendations for updating current counting practices
Lab and Municipal Parking Study	13806	$80,000	A technical memorandum that recommends a methodology for conducting parking utilization studies at lab and life science facilities
FFY 2022 Studies			
Trip Generation Follow-Up	13310	$20,000	A technical memo that includes a literature review on the relationship between parking policy and auto ownership and use, detailing available datasets that can be used to inform research on the impact of parking policy in the Boston region
Travel Demand Management Follow-Up	13311	$10,000	A memorandum and presentation to the MPO on Travel Demand Management and options for MPO involvement in the field
Addressing Equity and Access in the Blue Hills	13314	$40,000	A StoryMap and presentation to the MPO on equity of access to the Blue Hills and proposed possible solutions
Identifying Transportation Inequities in the Boston Region	13315	$70,000	This study resulted in a report, interactive application, and data online repository to report on existing transportation inequities for environmental justice populations and zero-vehicle households
Staff Generated Research and Technical Assistance	20906	$20,000	This research project resulted in an interactive web app that allows users to investigate durable transit ridership corridors since the start of the pandemic

Table 4-2
Discrete Boston Region MPO Planning Studies and Technical Analyses Continued into FFY 2024

Project Name	ID	FFY 2023 Funding	FFY 2022 Work Products and Progress	FFY 2024 Funding	FFY 2023 Planned Work Products and Progress
CTPS Activities					
Community Transportation Technical Assistance Program*	2424	$68,000	Responded to various communities' inquiries related to transportation issues: • Quincy–Provided assistance analyzing safety at the Skyline Trail crossing of Route 28 in the Blue Hills Reservation • Concord–Provided assistance analyzing safety at the intersections of Route 2 at Route 62 and Route 2 at Old Road to Nine Acre Corner	$115,700	Provided technical support to the Friends of the Blue Hills and the City of Quincy on the Skyline Trail crossing of Route 28 to improve pedestrian safety, visibility, and comfort. Provided technical assistance and recommendation to the Town of Concord for improvements to address existing pedestrian crossing safety concerns at two crossings on Route 2 in Concord.
Bicycle/Pedestrian Support Activities	2523	$83,500	Coordinate with state agencies, MAPC, other MPOs, MassDOT's Safe Routes to School Program, WalkBoston, MassBike, LivableStreets, municipalities, and other groups regarding bicycle and pedestrian planning for the region. Collect data on bicycle and pedestrian volumes at on-road and off-road facilities in the Boston region, and post collected count data to the Boston Region MPO's Bicycle and Pedestrian Count Database for public use. Provide ongoing technical support to communities for current tools and practices regarding bicycle and pedestrian issues, with particular focus on promoting safety. Examine potential routes, both on-road and off-road, to increase the connectivity of the existing transportation system, including trails, on-road facilities, and public transit, emphasizing connections on the Bay State Greenway, LandLine Network, and Emerald Network, where applicable; consider development of future possible strategic bicycle and pedestrian safety plans. Coordinate regional efforts to coincide with the vision and goals outlined in the Massachusetts Bicycle and Pedestrian Statewide Transportation Plans.		This program has been moved to Chapter 3 as of FFY 2024.
Regional Transit Service Planning Technical Support	4124	$50,000	Supported City of Peabody and North Shore TMA with a survey on potential public transit in Peabody. Analyzed survey results and presented them to the City of Peabody and the North Shore TMA.	$64,000	Supported the Town of Sudbury with analysis and mapping of current trip patterns, which could be used to support grant applications for new transit service.
Roadway Safety Audits	2324	$14,500	Provided support to MassDOT and communities for safety audits conducted in the Boston Region MPO area.	$17,000	Provide support to MassDOT and communities for safety audits conducted in the Boston Region MPO area.

*This program is shared between MAPC and CTPS. The description for this work can be found in Chapter 4, while the funding amount shown here reflects the combined funding from MAPC and CTPS.

Table 4-3
FFY 2024 New Discrete Funded Studies

Universe ID	Project ID	Study or Program	Proposed FFY 2024 CTPS Budget
M-1	14001	Lab and Municipal Parking Phase II	$45,000
A-1	14002	Parking in Bike Lanes: Strategies for Safety and Prevention	$20,000
R-2	14003	Strategies for Environmental Outreach and Engagement	$25,000
TE-1	14004	Applying Conveyal to TIP Project Scoring	$60,000
Total for New Discrete Studies			**$150,000**



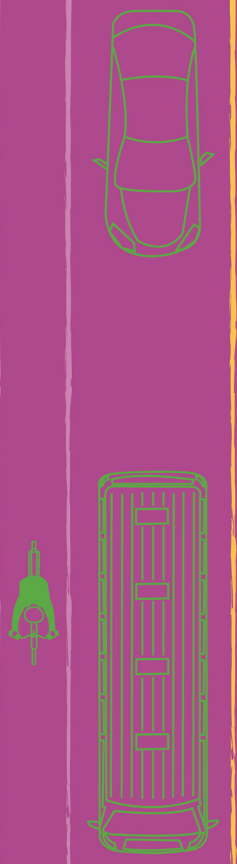
Photo courtesy of MBTA

PLANNING STUDIES

The project descriptions in this section describe the new studies chosen by the MPO for funding in FFY 2024. As described in Chapter 2 and Appendix B, CTPS gathers new study ideas each year and classifies them into the following categories: active transportation; land use, environment, and economy; multimodal mobility; transit; other technical work; resiliency; and transportation equity. Each of the project descriptions on the following pages begins with a funding table that shows the project identification number, category, funding sources, and total budget.

LAB AND MUNICIPAL PARKING PHASE II

Project ID Number	14001
Category	Multimodal Mobility
FFY 2024 Total Budget	$45,000
Schedule	10/2023 through 9/2024



Purpose

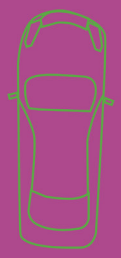
The first phase of this study (funded originally in the FFY 2023 UPWP) aimed to develop a methodology to assess parking utilization at lab and life science facilities. Phase II will employ that methodology to support data collection at facilities across the Boston region to better understand travel behavior. The goal of this study is to provide rigorous research to help guide parking regulation at lab and life science facilities. This research will support municipal planners and developers in their approach to parking provision at these sites.

Approach

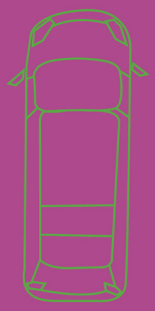
This research will proceed from the basis of MAPC's Perfect Fit Parking research (https://perfectfitparking.mapc.org), which assessed regional parking demand and use at multifamily housing developments. The study will pilot data collection at two to three sites to evaluate the proposed methodology. CTPS will then make any necessary adjustments and complete data collection at lab and life science facilities in municipalities throughout the region. The selected sites will vary in terms of scale, accessibility via different modes of transportation, and parking regulations. The study will calculate parking demand at each site and model how facility characteristics, parking characteristics, and the built environment influence this demand.

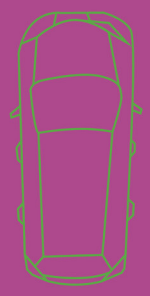
FFY 2024 Anticipated Outcomes

The study will produce a database and a model of parking supply and demand at lab and life science facilities.









PARKING IN BIKE LANES: STRATEGIES FOR SAFETY AND PREVENTION

Project ID Number	14002
Category	Active Transportation
FFY 2024 Total Budget	$20,000
Schedule	10/2023 through 9/2024

Purpose

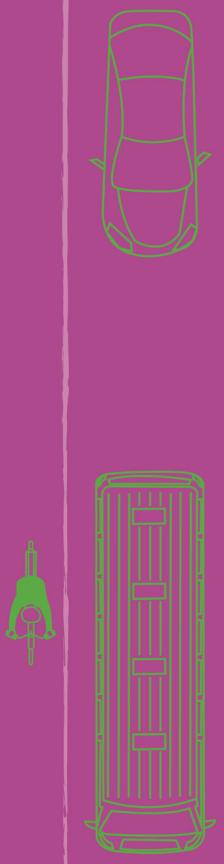
The purpose of this study is to address the issue of vehicles parking in bike lanes in the Boston region. This behavior poses a safety hazard for cyclists and forces people traveling by bicycle to switch lanes. This study will research successful strategies and practices employed in other municipalities to prevent vehicles from parking in bike lanes and recommend strategies that can be implemented in the Boston region to reduce the number of vehicles parked in bike lanes.

Approach

This study will research approaches to prevent vehicles from parking in bike lanes adopted by cities outside of the Boston region. The research will include a review of existing policies and programs and may feature interviews with peers to better understand their techniques and challenges. MPO staff may also engage with municipalities in the Boston region to understand the existing policies they have in place to reduce incidences of vehicles parked in bike lanes.

FFY 2024 Anticipated Outcomes

The anticipated outcome of the study is a report that summarizes the research findings, which would ideally include successful strategies employed by cities to prevent vehicles from parking in bike lanes. The report will also ideally feature recommendations for potential techniques that could be piloted in the Boston region to reduce the incidence of vehicles parked in bike lanes.



STRATEGIES FOR ENVIRONMENTAL OUTREACH AND ENGAGEMENT

Project ID Number	14003
Category	Resiliency
FFY 2024 Total Budget	$25,000
Schedule	10/2023 through 9/2024

Purpose

The MPO is well-positioned to connect regional stakeholders around shared interests and facilitate collaboration on the environmental aspects of transportation planning, including the key goal areas of climate resilience and equity. To improve representation of environmental, resilience, and environmental justice voices in MPO work, it is important to understand the range of efforts and interests currently operating in this space, and to build relationships with environmental practitioners in the Boston region. This study seeks to establish connections with environmental groups, understand how other MPOs approach environmental engagement, and determine the most effective engagement strategies for the MPO to pursue in order to better understand and meaningfully contribute to environmental and climate action in the region.

Approach

This study will employ outreach strategies to connect with environmental advocacy groups, environmental justice groups, and municipal-level environmental departments, and will conduct a survey to gather information on how these groups would like to be engaged in MPO work. Staff will use research and interview methodology to evaluate environmental engagement strategies employed by other MPOs in Massachusetts and elsewhere. Environmental stakeholders will be invited to existing MPO events such as Regional Transportation Advisory Council or Transit Working Group Meetings to assess their responses to different engagement platforms. Equitable engagement approaches such as compensation will be considered in order to reach a more diverse range of stakeholders.

FFY 2024 Anticipated Outcomes

Staff will prepare a report summarizing lessons learned from conversations, research, and survey results. These findings will provide a foundation for more meaningful, intentional engagement with environmental practitioners and will provide a better understanding of the MPO's role in regional environmental action.

APPLYING CONVEYAL TO TIP PROJECT SCORING

Project ID Number	14004
Category	Transportation Equity
FFY 2024 Total Budget	$60,000
Schedule	10/2023 through 9/2024

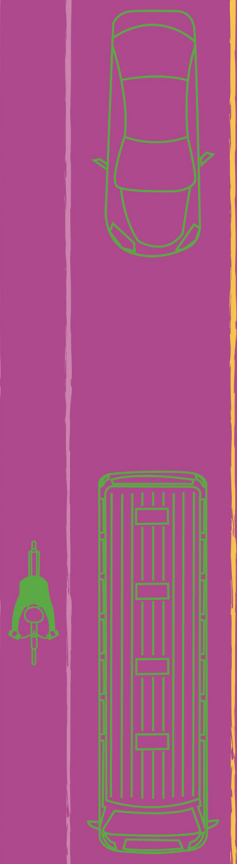
Purpose

This study aims to develop a process that can be used to score Transportation Improvement Program (TIP) projects using the Conveyal destination access analysis application.

Approach

Staff will build on experiences using Conveyal for the study funded in the FFY 2022 UPWP, "Identifying Transportation Inequities in the Boston Region," while exploring new ways to use this tool, particularly to represent projects and how they might affect the ability for people to access destinations across the region. Throughout the study, staff will coordinate with staff at the MassDOT Office of Transportation Planning to gain guidance and direction on the use of Conveyal in the context of this study, as well as ideas from other MPO regions. Staff will set up a Conveyal deployment that reflects assumptions about the roadway and transit network for a specific timeframe (for example, a five-year TIP period). Next, staff will explore ways to reflect projects of various types (such as Complete Streets, intersection improvements, and Community Connections shuttle pilots) in Conveyal and run analyses to show how destination access outcomes would change if a project or a group of projects were implemented. Destinations could include but are not limited to

- affordable housing,
- jobs,
- healthcare,
- education, and
- essential places.

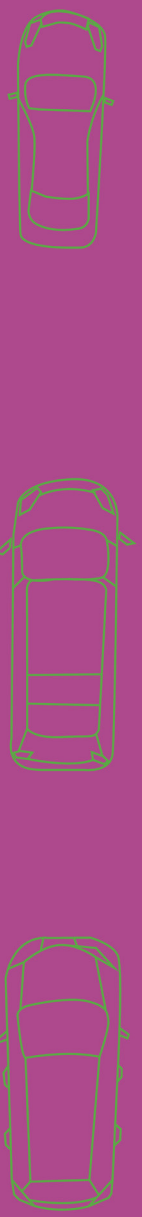


Staff will document approaches for representing projects in Conveyal and identify destination access metrics and parameters that could be helpful to incorporate into updates to the MPO's TIP project evaluation criteria and scoring processes. Staff will also develop methodology adapted from the Identifying Transportation Inequities in the Boston Region study that will allow access to be analyzed for different demographic groups.

FFY 2024 Anticipated Outcomes

Outcomes will include the following:

- Illustrative results from Conveyal analyses that reflect representative TIP projects
- A methodology to analyze proposed TIP projects in Conveyal
- Documentation of opportunities, issues, and recommendations for using Conveyal as part of TIP project scoring



TECHNICAL ANALYSIS AND SUPPORT

The project descriptions in this section consist of ongoing MPO programs that provide technical planning assistance, support, and analyses to cities, towns, and other entities throughout the region. The major areas of technical analyses include data provision and analysis, bicycle and pedestrian support, transit service planning, and community-level transportation planning and technical assistance.

ROADWAY SAFETY AUDITS

Project ID Number	2324
FFY 2024 Total Budget	$17,000
Schedule	Ongoing

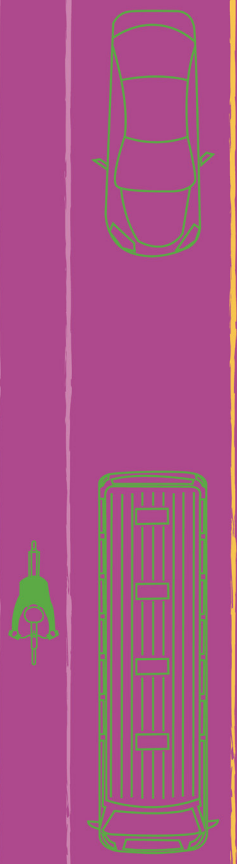
Purpose

This program supports CTPS participation in roadway safety audits (RSA).

Approach

An RSA, as defined by FHWA, is a formal safety performance examination of an existing or future road or intersection by an independent audit team. MassDOT guidelines require an RSA to be conducted where Highway Safety Improvement Program-eligible crash clusters are present. The program has expanded to cover additional high-crash locations and individual crash types, such as pedestrian and bicycle hot spots. The RSA examines the location to develop both short- and long-term recommendations to improve safety for vehicles, for people walking and for people biking. These recommendations help communities identify safety improvements that can be implemented in the short term, and determine if more substantial improvements are needed as part of a larger, long-term improvement process.

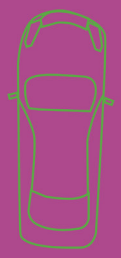
Audit teams include MassDOT headquarters and district office staff, MassDOT consultants, municipal planners and engineers, local and state police, local emergency response personnel, and CTPS personnel, as requested. In the RSA process, the audit team (1) reviews available crash data; (2) meets and communicates with local officials, planners, engineers, and other stakeholders; (3) visits the site to observe traffic operations and identify safety issues; and (4) develops and documents recommendations.



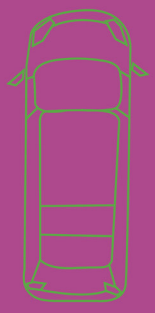
FFY 2024 Anticipated Outcomes

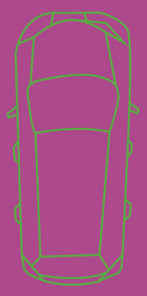
Anticipated outcomes include the following:

- Participate in RSAs as requested by MassDOT
- Document RSA recommendations









COMMUNITY TRANSPORTATION TECHNICAL ASSISTANCE PROGRAM

Project ID Number	2424, MAPC5
FFY 2024 Total Budget	$65,700
Schedule	Ongoing

Purpose

Through this ongoing program, MPO staff and MAPC staff provide technical advice to municipalities throughout the region on local transportation issues of concern.

Approach

In this program, a team of CTPS and MAPC engineers and planners will meet with community officials to learn more about the transportation problems that the community identified, such as those related to parking, traffic calming, walking, bicycling, and transit locations.

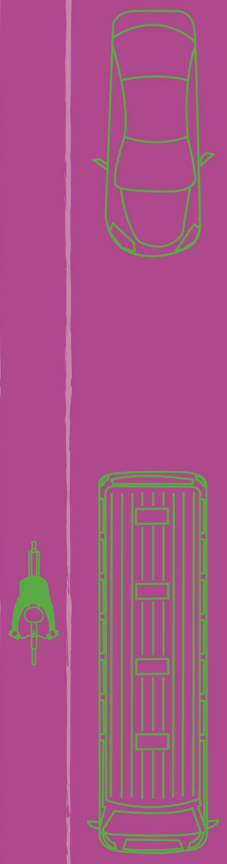
Technical assistance activities may include the following:

- A site visit with local officials to understand the potential problem, review existing data, and make suggestions for additional data that may be needed
- Analysis of the problem and identification of potential solutions including conceptual designs for some project locations
- Support with the various planning processes at MassDOT, the Massachusetts Bay Transportation Authority (MBTA), the MPO, and MAPC, as well as guidance on how communities can get involved.

The number of technical assistance cases will depend on the funding amount and the complexity of the specific technical assistance requests from municipalities. MAPC and CTPS will coordinate and collaborate on a case-by-case basis.

FFY 2024 Anticipated Outcomes

MPO staff will provide technical assistance to municipalities as described above and will document the work, recommendations, and outcomes of these consultations in the form of technical memoranda.



REGIONAL TRANSIT SERVICE PLANNING TECHNICAL SUPPORT

Project ID Number	4124
FFY 2024 Total Budget	$64,000
Schedule	Ongoing

Purpose

Through this ongoing program, the MPO provides technical support to regional transit authorities, municipalities, MAPC subregions, and transportation management associations. This work is focused on improving or expanding transit service and reducing single-occupancy-vehicle (SOV) travel in the region.

Approach

The MPO's policy is to support transit services and reduce SOV travel in the region. As such, MPO staff provide technical support to regional transit authorities (RTA) to promote best practices and address issues of ridership, cost-effectiveness, route planning, first- and last-mile strategies, and other service characteristics. The MPO also extends support to transportation management associations (TMA), MAPC subregions, and municipalities seeking to improve the transit services that they operate or fund. Past technical assistance work has resulted in memoranda such as Bicycle and Pedestrian Connections to West Concord Station (FFY 2018) and Bus Priority Feasibility near Alewife Station (FFY 2020).

FFY 2024 Anticipated Outcomes

MPO staff will provide technical assistance to RTAs, municipalities, MAPC subregions, and TMAs as described above and will document the work, recommendations, and outcomes of these consultations in the form of technical memoranda.

Photo courtesy of MOTT, by Holly Perry





CHAPTER 5

RESOURCE MANAGEMENT AND SUPPORT ACTIVITIES

INTRODUCTION

To support core Metropolitan Planning Organization (MPO) activities and studies, staff conduct various ongoing computer and other support activities.

For each activity described in this chapter, we cite the purpose of the work, describe how the work is accomplished, and provide a summary of the anticipated federal fiscal year (FFY) 2024 work products. The budget tables at the head of each project description give salary and overhead costs associated with the projects. Any direct costs associated with the projects are included in the Direct Support section beginning on page 5-6.

Table 5-1 summarizes the funding assigned to each of the activities in this chapter that were also assigned in FFY 2023, a summary of the work products and/or progress made in FFY 2023, the funding proposed for each of these activities in FFY 2024, and the anticipated work products and/or progress in FFY 2024.

Although many of the activities in this chapter generally comprise similar tasks from year to year, often there are variations in budgets that reflect greater or lesser emphasis on certain efforts. For example, MPO staff may undertake new or additional work under specific line items; the tasks undertaken as part of one line item in one year might be folded into an ongoing activity in a subsequent year; or there simply could be fluctuations in staffing levels. Where appropriate, these differences are explained in Table 5-1.

Table 5-1
CTPS Ongoing Resource Management and Support Activities, FFY 2024

Project Name	ID	FFY 2023 Funding	FFY 2023 Work Products and Progress	FFY 2024 Funding	FFY 2024 Planned Work Progress and Products
CTPS Activities					
Computer Resource Management	6024	$280,000	Provided maintenance and enhancements to CTPS's desktop and server computer systems; computer network back-up system; and peripheral devices, such as printers, plotters, and mass storage devices.	$300,000	Tasks and work products generally remain the same from year to year.
Professional Development	9524	$80,000	Cover the labor expenses of staff attending conferences and seminars related to MPO work.	$95,500	Cover the labor expenses of staff attending conferences and seminars related to MPO work.

CTPS ACTIVITIES

The following sections contain details on the administration, resource management, and support activities undertaken by Central Transportation Planning Staff (CTPS) each FFY.

COMPUTER RESOURCE MANAGEMENT

Project ID Number	See Individual Tasks Below
FFY 2024 Total Budget	$300,000

Purpose

In order to fulfill the Boston Region MPO functions, CTPS maintains state-of-the-practice computer resources.

Approach

CTPS performs the following subtasks as part of computer resource management.

6024 Computer Resource Management

01 System Administration and Server Room Management

This subtask includes managing and maintaining hardware and software for all CTPS computer systems to ensure that staff has maximum access to the computing resources required for its work, including an intranet site; continuing to ensure the security and integrity of all hardware, software, and data resources; and planning, monitoring, and maintaining CTPS IT infrastructure.

02 Staff Assistance and Training

This subtask includes assisting staff in using computer resources, and, where appropriate, providing written and online user guides for particular resources. It also includes attending various application-specific training and various cybersecurity training opportunities.

03 IT Related Purchasing and Maintenance

Computer Resources staff purchase and maintain CTPS's IT resources. These include internal assets such as servers, desktop and laptop computers, tablets, mass-storage devices, networking and communications hardware, printers and plotters, system and application software, and consumable supplies. These also include cloud resources, such as software and hardware purchased as a service, cloud-based storage, and other cloud-based computing resources. Computer Resources staff also purchase and maintain various cyber security applications and hardware.

04 Computer Resource Planning

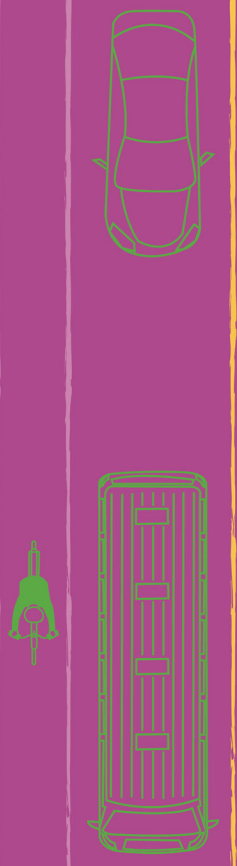
This subtask includes updating the CTPS short- and long-term plans for the agency's IT infrastructure in conjunction with developing the CTPS state fiscal year operating budget.

05 Website Development and Maintenance

CTPS will continue to maintain and update the existing MPO website and external data catalog while alternatives for a new web platform are being evaluated. Other distribution channels for information delivery may also be considered as part of this task.

FFY 2024 Anticipated Outcomes

Work on these tasks will continue as described above.



PROFESSIONAL DEVELOPMENT

Project ID	9524
FFY 2024 Total Budget	$95,500
Schedule	Ongoing

Purpose and Approach

MPO staff maintains its technical expertise in part by participating in courses, programs, and workshops offered by the Federal Highway Administration, the Federal Transit Administration, the Transportation Research Board, the Association of Metropolitan Planning Organizations (AMPO), the Institute of Transportation Engineers, and other public, private, and nonprofit organizations. Previous professional development endeavors have been related to topics such as performance-based planning, traffic engineering issues and applications, regional modeling, bicycle/pedestrian issues, transit planning, public involvement, environmental justice, air quality, computer operations and maintenance, database applications, and other areas related to the provision of technical support services.

FFY 2024 Anticipated Outcomes

Staff will attend conferences, peer exchanges, trainings, and other enrichment and professional advancement opportunities.

DIRECT SUPPORT

Project ID Number	Varies
MPO 3C Planning Funds	$120,000
3C-Funded Work Direct Support Total	**$120,000**
SPR Funds	$0
MassDOT Other Funds	$0
MBTA Funds	$600
Other Funds	$0
Agency-Funded Work Direct Support Total	**$600**

Purpose

Through this activity, CTPS provides integral direct support for all CTPS projects and functions.

Approach

Computer Equipment

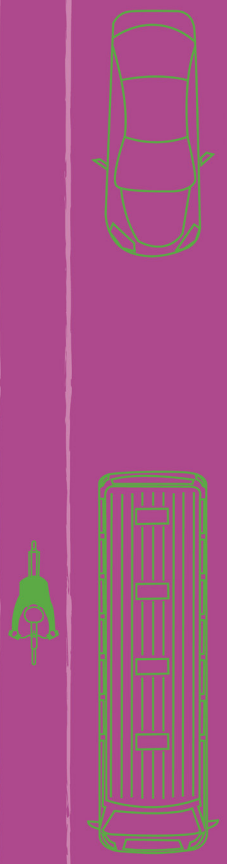
CTPS computer needs are programmed in the CTPS Five-Year Plan for Computer Resource Development, as amended.

Consultants

Consultants are hired periodically to perform specialized, time-specific tasks as project work demands.

Membership Dues

Annual dues are paid to some organizations of which the MPO is a member. These organizations provide coordination opportunities with other MPOs and transportation planning resources.



Printing

Project-specific printing costs, such as those for surveys, maps, reports, presentation boards, and other informational materials, are included in this budget.

Travel

Periodically, the US Department of Transportation and other organizations sponsor courses and seminars that enhance staff's ability to do project work; the costs of registration, travel, and lodging associated with attending such programs are direct-support expenditures. Mileage, tolls, and parking expenses associated with project work are also charged as direct-support expenditures.

Translation and Interpretation Services

To meet the needs of people with limited-English proficiency, the MPO translates vital documents into the six most widely spoken non-English languages in the MPO region, currently Chinese (both traditional and simplified), Haitian Creole, Portuguese, Spanish, and Vietnamese. Translation expenses are considered a direct cost. The MPO also provides real-time interpretation of meetings and events upon request with one week of advance notice, which is also considered a direct cost.

Other

Various other expenditures may become necessary during the term of this Unified Planning Work Program, such as postage for return mail or services for preparing and processing data for specific projects. Other nonrecurring costs, such as software for specific project work, equipment for conducting passenger surveys, or traffic-counting equipment, also may be funded through this line item.

FFY 2024 Anticipated Outcomes

Direct costs include computer and general office equipment, AMPO membership dues, in-state project-related travel, out-of-state travel associated with staff attendance at professional and training conferences, and other costs deemed appropriate.





CHAPTER 6

METROPOLITAN AREA PLANNING COUNCIL ACTIVITIES

INTRODUCTION

The Metropolitan Area Planning Council (MAPC) receives approximately 20 percent of the Boston region's annual combined 3C PL and §5303 funding. With this funding, MAPC staff conduct various studies, technical analyses, and outreach and support activities to help fulfill the Metropolitan Planning Organization's (MPO) functions as a regional planning body. The Massachusetts Department of Transportation (MassDOT) provides the match to both the Federal Transit Administration and Federal Highway Administration funds described in this chapter.



Photo courtesy of MOTT

Table 6-1
UPWP-Funded MAPC Activities, FFY 2024

Project Name	ID	FFY 2023 Funding	FFY 2023 Work Products and Progress	FFY 2024 Funding	FFY 2024 Planned Work Products and Progress
MAPC Planning Studies and Technical Analyses					
Corridor/Subarea Planning Studies	MAPC1	$253,518	Local parking management plans; data collection and analysis to repurpose on-street parking spaces for dedicated bus and bike lanes; planning products and engagement support for MBTA Better Bus Project; multimodal transportation plans for select corridors or subregions.	$260,000	Local parking management plans in selected communities; planning projects and engagement support for MBTA Better Bus Project; multimodal transportation planning for selected corridors or subareas; coordinated housing and transportation plan.
Active and Carbon-Free Planning and Coordination	MAPC2	$238,509	Planning to support the advancement of zero emission vehicles with a focus on charging station siting and incentives for vehicle purchases; expansion and strategic planning of the Blue Bikes bikeshare system; advancement of the LandLine regional greenway system with conceptual planning to connect key gaps and continued updating of region-wide mapping tools; completed municipal bicycle and pedestrian plans in Milton and Wakefield.	$245,000	Planning to support the advancement of zero-emission vehicles; bicycle- and pedestrian-planning support; expansion of the LandLine regional greenway system through planning and mapping efforts.
MetroCommon 2050	MAPC3	$115,000	Final updated plan with policy recommendations and identification of planning needs to mitigate impacts of scenarios.	$120,000	Support implementation and coordination of plan through outreach and engagement; expand outreach to municipalities and members of the public through regionwide discussion with partner organizations to expand knowledge and understanding of equitable transit-oriented development planning, transportation opportunities, and greenhouse gas emissions reduction; continued research and evaluation of planning practices.
Land Use Development Project Reviews	MAPC4	$95,696	Technical memos with transportation recommendations for development projects and large transportation infrastructure projects with a land use component.	$94,942	Technical memos reviewing development projects with a significant land use component using the Massachusetts Environmental Policy Act.
Community Transportation Technical Assistance Program*	MAPC5	$48,156	Responded to various communities' inquiries related to transportation issues: • Salem—Provided assistance analyzing potential impacts associated with changing residential streets to one-way streets to prevent diversions from a congested main street • Concord—Provided guidance regarding a possible bicycle count program that Concord would like to conduct associated with the Bruce Freeman Rail Trail and the West Concord MBTA station. Coordinated with MAPC about various technical assistance outreach needs and possible study locations.	$50,000	Responded to various communities' inquiries related to transportation issues: • Salem—Revised previous work to post-pandemic conditions analyzing impacts associated with diversions from Route 114 • Quincy—Provided assistance analyzing safety at the Skyline Trail crossing of Route 28 in the Blue Hills Reservation • Medway—Provided assistance analyzing potential impacts associated with change in land use and redevelopment of town-owned land.

(Table 6-1 cont.)

Project Name	ID	FFY 2023 Funding	FFY 2023 Work Products and Progress	FFY 2024 Funding	FFY 2024 Planned Work Products and Progress
MAPC Administration and Support Activities					
MPO/MAPC Liaison and Support Activities	MAPC6	$185,000	Continue to support the MPO process to develop the TIP, UPWP, and LRTP with robust public engagement, as well as participate in related regional planning efforts conducted by MassDOT, MBTA, municipalities, or federal partners.	$190,000	Continue to support the MPO process to develop the TIP, UPWP, and LRTP with robust public engagement, as well as participate in related regional planning efforts conducted by MassDOT, MBTA, municipalities, or federal partners.
UPWP Support	MAPC7	$14,000	Support the UPWP development process and attend relevant meetings.	$15,000	Tasks and work products generally remain the same from year to year.
Land Use Data and Forecasts for Transportation Modeling	MAPC8	$115,000	Improved land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling year to year.	$120,000	Continued improvement of land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling year to year.
Subregional Support Activities	MAPC9	$220,000	Support subregional groups. Includes preparing agendas, coordinating with transportation agencies, reviewing transportation studies in subregions, and helping to set subregional transportation priorities.	$220,000	Tasks and work products generally remain the same from year to year.

* Asterisk denotes that this section is additionally included in Chapter 5.

MAPC PLANNING STUDIES AND TECHNICAL ANALYSES

MAPC conducts transportation planning studies through four ongoing programs: Corridor/Subarea Planning Studies, Alternative Mode Planning and Coordination, MetroCommon 2050 Implementation, and Land Use Development Project Reviews. MAPC and Central Transportation Planning Staff (CTPS) also collaborate on the Community Transportation Technical Assistance Program (MAPC5), which is described in Chapter 4.

CORRIDOR/SUBAREA PLANNING STUDIES

Project ID Number	MAPC1
FFY 2024 Total Budget	$260,000

Purpose

These studies include funding to support MAPC's work on several corridor and subarea studies in the region. Some of these projects will be funded jointly through the UPWP and other funding that MAPC receives through its assessment on municipalities, state contracts, and other planning grants.

Approach

This task is accomplished through the following subtasks.

Local Parking Management Plans in Selected Communities ($55,000)

The goal is to address the challenges that municipalities face from not managing their parking supply in commercial and mixed-used areas, and to identify whether space that is currently dedicated for parked cars could be used more efficiently for other transportation or land use purposes. MAPC will work with selected municipalities to develop local parking management plans to provide optimal parking supply to stimulate local economic prosperity, reduce congestion caused by circling vehicles, help municipalities plan for greater land use density by decreasing parking requirements, and encourage mode shift away from single-occupant vehicle trips. This work will involve on- and off-street parking, as well as understanding trade-offs associated with repurposing on-

street parking for dedicated bus lanes, bike lanes, or wider sidewalks. This work would benefit local air quality and congestion by managing parking supply and demand and creating places where people can park once and then walk to multiple destinations. In locations where parking requirements can be reduced, the number of households with one or more vehicles could decline, which could result in higher percentages of walking, biking, and transit ridership.

Supporting MBTA Bus Network Redesign Implementation ($55,000)

MAPC will support the Massachusetts Bay Transit Authority's (MBTA) Bus Network Redesign, a multifaceted planning effort to improve the bus system through bus priority infrastructure, a redesigned bus network with changed and new routes, an increase in bus vehicles through planning for fleets and facilities, and improved bus stops with better shelters, street furniture, and electronic information signs. MAPC will help convene municipal officials and other stakeholders to coordinate planning. MAPC will provide technical assistance at the corridor level to understand the trade-off of repurposing parking or travel lanes for more dedicated bus space. MAPC will support community engagement and related planning at the corridor level.



Corridor/Subarea Multimodal Transportation Planning ($75,000)

MAPC will work in a selected subregion or roadway corridor to coordinate multimodal transportation planning, safety improvements, and transit service operations to be implemented by MassDOT, MBTA, Regional Transit Authorities, Transportation Management Agencies, the Department of Conservation and Recreation (DCR), employers, and/or municipalities with local land use planning to achieve livability and smart growth goals. This work will also include identification of areas in the region that face "transportation insecurity" with low auto ownership rates, lack of convenient public transit, poor pedestrian infrastructure. The goal is to provide more mobility options for a variety of different users and trip types, as well as safer conditions for all users.

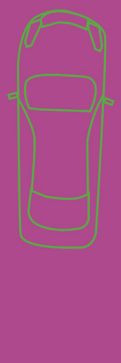
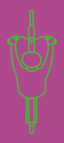
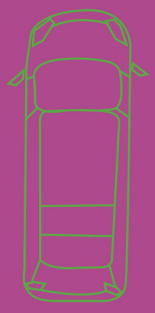
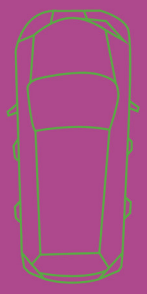


Coordinated Housing and Transportation Planning ($75,000)

MAPC will work with selected municipalities to help them comply with the new state requirement to allow for multifamily residential development near MBTA transit stations. MAPC will support zoning, transportation planning, transportation demand management, and other activities to establish transit-oriented housing as required by Section 3A of M.G.L. Chapter 40A. MAPC will also conduct regional research on topics related to this new state law to support more cities and towns to comply with the requirement.

FFY 2024 Anticipated Outcomes

- Activities and expected work products related to Local Parking Management Plans include parking use data collection, analysis of data, and recommendations to municipalities in the form of a report with pricing and parking management solutions, or recommendations to repurpose on-street parking for other uses.
- Activities and expected work products related to Supporting MBTA Bus Network Redesign include coordination meetings, corridor level data collection and technical memos, community engagement meetings, survey information, and data visualization.
- Activities and expected work products related to Corridor/Subarea Multimodal Transportation Planning include identifying mobility solutions, conceptual designs, pilot projects, data and analysis to inform recommendations, and a technical report summarizing findings.
- Activities and expected work products related to Coordinated Housing and Transportation Planning include new zoning and transportation plans that enable transit-oriented housing.

ACTIVE AND CARBON-FREE PLANNING AND COORDINATION

Project ID Number	MAPC2
FFY 2024 Total Budget	$245,000

Purpose

MAPC provides alternative-mode transportation-planning support to the Boston Region MPO and municipalities that focuses on non-single-occupancy vehicle modes and promoting zero emission vehicles (ZEV). This work benefits bicycle and pedestrian transportation, encourages transit in areas that currently are underserved by existing regional transit authorities, improves the region's understanding of transportation network companies, advances ZEVs, and identifies and supports transportation demand management strategies.

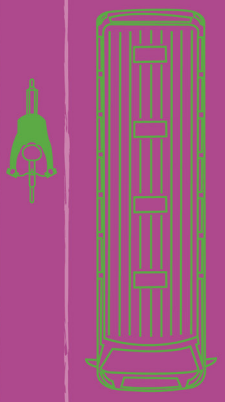


Approach

This area of work is accomplished through the following subtasks.

Zero Emission Vehicle Support ($75,000)

MAPC will support municipalities in planning for ZEVs, such as electric vehicle charging infrastructure, transitioning or retrofitting municipal fleets, advancing electric school buses, electric cargo bikes, promoting zero emission car sharing and ride-hailing, and other initiatives. This work will increase the number of ZEVs in the region, thereby helping the state meet greenhouse gas (GHG) emission reduction goals.



Bicycle and Pedestrian Planning ($30,000)

MAPC will work with municipalities to identify local bicycle and pedestrian improvements with a focus on closing sidewalk gaps, implementing separated bicycle facilities, supporting bike and pedestrian safety plans, complete streets prioritization plans, and other improvements at the local level. This work will lead to safer infrastructure, increase the rate of cycling and walking in the region, and decrease bicycle and pedestrian injuries.

Regional Bike Share Planning ($40,000)

MAPC will continue to support municipalities in the region to plan for the implementation and expansion of the Bluebikes bicycle sharing program. This work will include analyzing trip data, supporting station siting, coordinating funding opportunities, planning for electric bikes, and supporting the next procurement process for a system operator.

Regional Greenway Planning and Mapping ($100,000)

MAPC will continue to work with MassDOT, CTPS, DCR, Executive Office of Energy and Environmental Affairs, municipalities, and trail organizations to plan, map, design, and implement portions of a regional bicycle and pedestrian network of off-road and on-road connections (a greenway) that form a contiguous system around greater Boston. In 2015, MAPC worked with the above-cited partners to develop the branding of this system named the LandLine. The trails consist of shared-use paths along former railroad rights-of-way, hiking trails through conservation land, and historic corridors that connect points of interest. The binding theme of the proposed and completed corridors is creating attractive places to walk, bike, or otherwise travel through low-traffic or no-traffic green areas.

FFY 2024 Anticipated Outcomes

- Planning to support deployment of ZEVs and related infrastructure.
- Data collection, research, and analysis to support completed bicycle and pedestrian plans in selected municipalities.
- Technical support for bicycle and pedestrian improvements.
- Support for regional trail and greenway development.
- Support, technical analysis, coordination, and research in support of the Bluebikes bikeshare system.

METROCOMMON 2050: GREATER BOSTON'S NEXT REGIONAL VISION

Project ID Number	MAPC3
FFY 2024 Total Budget	$120,000

Purpose

This task continues to support the ongoing coordination and implementation of the new regional plan, MetroCommon 2050, the Boston region's 30-year comprehensive plan (through the year 2050) for sustainable, equitable growth and development. The new plan establishes goals for topics including mobility, climate mitigation, and resiliency, as well as actionable recommendations needed to accomplish these goals. The agency is aligning its annual workplan and technical assistance priorities to implement the recommendations of MetroCommon.

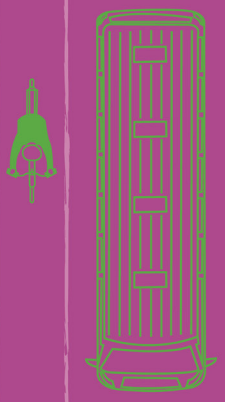


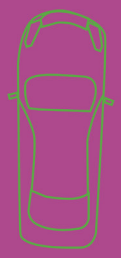
Approach

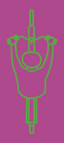
This work is accomplished through the following subtasks.

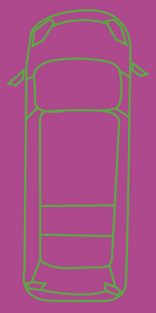
MetroCommon 2050 Implementation and Education ($40,000)

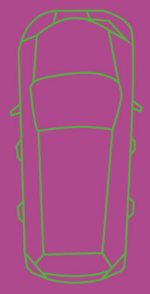
Changing demographics and location preferences, planned investments in public transportation, and emerging transportation technologies will have a profound influence on the Boston region in the decades ahead. The regional plan includes recommendations for improving mobility, reducing GHG emissions from the transportation sector, and expanding the access, capacity, and affordability of public and active transportation. This task will include outreach and education to municipal leaders about the mobility-focused recommendations, seeking commitments to work towards implementing specific action items. It will also include tracking implementation progress across the region.











Building Constituencies for Local, Regional, and State Decisions that Enable Livable Communities and Sustainable Transportation ($40,000)

MAPC will continue to work with municipal and state officials and residents to seek changes in land use that will support livable communities and sustainable transportation. This will include engaging the public in planning and dialogue that enhances equitable transit-oriented development planning, and influences other decision-making to improve development outcomes, transportation opportunities, and reduction of GHG emissions. As part of the plan update, MAPC will hold regional discussions regarding challenges and opportunities in making long-term improvements to the Boston region's transportation system, including restoring and expanding service to equitable transit-oriented development locations. This is especially critical with the new state law that requires cities and towns to zone for multifamily districts around transit stations. Task outputs are expected to include engaging at least 500 people with a focus on diverse and underserved communities and partnering with organizations that serve those communities. Outputs also include hosting at least 10 different events or activities as part of the engagement.

Research and Evaluation that Support Livable Communities and Sustainable Transportation ($40,000)

Incorporation of best practices and evaluation is important to improving MAPC's work and for advancing implementation at the local and state levels. Transportation and integrated land use planning practices will be evaluated to determine if improvements can be made to our practices, with a particular emphasis on evaluating the equity outcomes and processes of these plans. Best practices from other regions will also be evaluated for their applicability in Greater Boston.

FFY 2024 Anticipated Outcomes

Anticipated outcomes include a stronger constituency for sustainable land use and transportation investments and programs; case studies or best practices for regional and local mobility; and local commitments to implement the regional plan's recommendations.

LAND USE DEVELOPMENT PROJECT REVIEWS

Project ID Number	MAPC4
FFY 2024 Total Budget	$94,942

Purpose

This task supports MAPC's review of potential development projects in the region. In particular, MAPC will review projects for consistency with its sustainable land use and transportation goals, impacts on the transportation network and projects identified in the Transportation Improvement Program (TIP) and Long-Range Transportation Plan (LRTP), and consistency with the MPO's Economic Vitality goals.

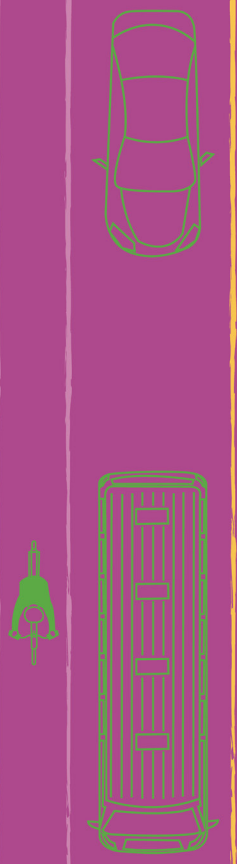
Approach

MAPC tracks all projects reviewed in the region under the Massachusetts Environmental Policy Act (MEPA) and provides a regional-planning analysis to MassDOT and the Secretary of Energy and Environmental Affairs for all developments considered to have significant impact. Special attention is given to mitigation and planning requirements that serve to reduce auto travel by encouraging carpooling, transit, parking regulations, and other travel demand management techniques. MAPC coordinates these reviews with MassDOT and the municipalities, and works with MassDOT to identify updated requirements to be included in the transportation impact assessments that must be conducted by developers.

MAPC also reviews notices of offered railroad property from MassDOT, consults with municipalities as necessary, and provides appropriate input. Often, these notices involve rail trails, but they also may involve other types of proposed developments.

FFY 2024 Anticipated Outcomes

Anticipated outcomes include analyses and reports of MEPA reviews, development of mitigation recommendations, coordination with municipalities and transportation agencies, maintenance and updates of MAPC's development database, and input into the project evaluations for the TIP and LRTP. In addition, MAPC will continue to review and respond to notices of offered railroad property.



MAPC ADMINISTRATION AND SUPPORT ACTIVITIES

The following section contains details on the administration, resource management, and support activities undertaken by MAPC every federal fiscal year.

MPO/MAPC LIAISON AND SUPPORT ACTIVITIES

Project ID Number	MAPC6
FFY 2024 Total Budget	$190,000

Purpose

This task includes working with MPO members and staff to establish work priorities and meeting agendas. It also includes implementing the continuous, comprehensive, and cooperative (3C) transportation planning process and engagement in regional transportation planning led by MassDOT, the MBTA, or municipalities in the region. It also includes reporting to the MAPC executive committee, MAPC council members, MAPC subregions, and MAPC staff on MPO activities to ensure strong coordination of land use and transportation planning across the region.

Approach

Statewide and Regional Planning Committees and Processes ($100,000)

In addition to participating in the Boston MPO process, MAPC actively participates in and attends statewide and regional planning committees, task forces, working groups, and commissions to represent the interests of the region, with a particular focus on the critical links between land use and transportation. These committees include the Massachusetts Association of Regional Planning Agencies; Regional Coordinating Councils; MassDOT and MBTA board meetings; and various MassDOT, MBTA, or municipally led transportation working groups or study advisory committees. MAPC will also be actively involved in regional transportation plans and programs related to land use and transportation. Advisory committees may change from year to year as studies are started or completed, but participation in various advisory committees is an ongoing task.

Support the Public Participation Process for Metropolitan Planning Documents ($10,000)

MAPC provides education and outreach for a wide variety of transportation-related and land use-related topics in the region, with emphasis on outreach through the subregions to municipal officials. MAPC also supports CTPS in its outreach to environmental justice communities, older adults, and people with disabilities.

MPO Elections ($10,000)

Working with the MBTA Advisory Board, MAPC will coordinate and implement annual elections for municipal representatives in the MPO.

Performance-Based Planning and Programming (PBPP) ($10,000)

MAPC will review PBPP targets and follow progress toward meeting targets and objectives, with a focus on coordinating state, local, and regional safety planning and goal setting.

TIP Evaluation and Criteria ($35,000)

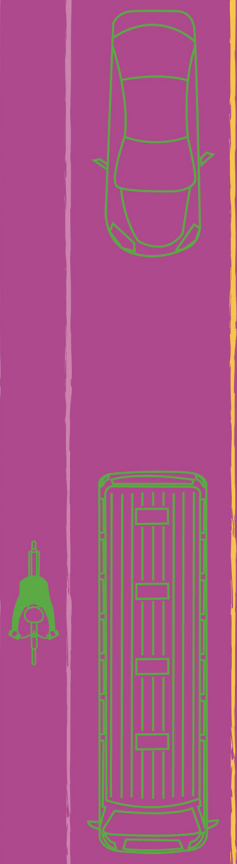
MAPC will work with CTPS to update the TIP scoring criteria as necessary and to advise CTPS about the land use and economic-development aspects of the TIP evaluations. MAPC will provide updated TIP criteria and help implement the comprehensive regional growth plan, MetroCommon. MAPC will evaluate TIP projects and work with municipalities to advance TIP projects.

MPO Agenda Setting, Meetings, and Coordination ($25,000)

MAPC will work with CTPS and MassDOT to develop MPO meeting agendas and presentations and participate in MPO processes.

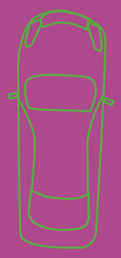
FFY 2024 Anticipated Outcomes

Outcomes of this program will result in interagency coordination; work scopes and agendas; participation in advisory and corridor committees; public participation and outreach; reports to the MAPC executive committee, MAPC Council members, MAPC subregions, and MAPC staff; MPO elections; PBPP targets and data; LRTP scenarios; TIP criteria update and project evaluations; and attendance at relevant meetings.

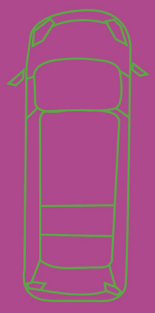


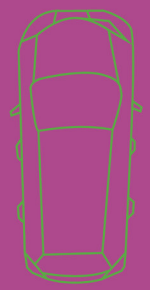
UPWP SUPPORT

Project ID Number	MAPC7
FFY 2024 Total Budget	$15,000









Purpose

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

Approach

MAPC assists with the annual development of the UPWP and coordinates with MassDOT and CTPS to support development of UPWP project ideas and specific work scopes. Through community liaison and subregional support activities, MAPC staff also help communities identify and develop studies for inclusion in the UPWP.

FFY 2024 Anticipated Outcomes

MAPC staff will prepare UPWP project listings and monthly reports on UPWP activities. MAPC will assist with annual development of the UPWP and support development of specific project proposals and work scopes. MAPC staff will also assist communities in identifying and developing studies to be included in the UPWP through community liaison and subregional support activities.

LAND USE DATA AND FORECASTS FOR TRANSPORTATION MODELING

Project ID Number	MAPC8
FFY 2024 Total Budget	$120,000

Purpose

This task allows MAPC to support the MPO's planning and decision-making by providing CTPS with detailed population, household, employment, and land use data (current conditions and scenarios of future growth) for transportation modeling and project evaluation.

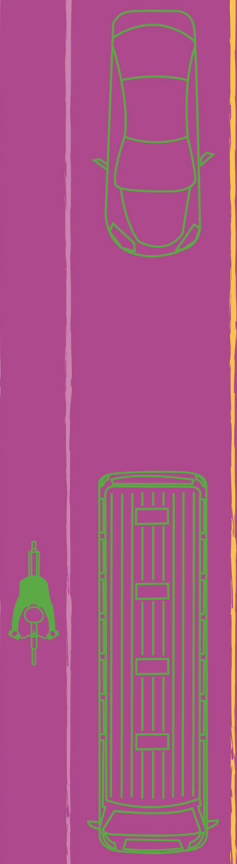
Approach

MAPC will continue to investigate, acquire, and improve additional sources of employment and built environment data to inform land use allocation modeling. MAPC will continue to refine and improve Zoning Atlas data and corresponding development capacity estimates that serve as key inputs to the land use allocation model. A major focus this year will be on collecting information about new zoning districts adopted pursuant to the MBTA Communities Multifamily mandate.

MAPC will continue to monitor development projects that are being planned across the region and will maintain an up-to-date development database in an online portal at www.massbuilds.com. MAPC will support CTPS and MassDOT in applying these data for project evaluation or updates to the regional travel demand model.

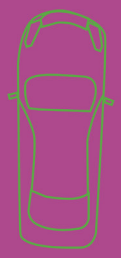
MAPC will maintain the UrbanSim land use allocation model and will make incremental improvements as necessary. MAPC develops methods to prepare updated land use forecasts on an as-needed basis for transportation project analysis, environmental permitting (MEPA modeling), or scenario modeling.

MAPC will continue frequent and regular communication and coordination with the CTPS modeling staff to support travel model improvements and integration of the land use allocation and travel demand models. MAPC will also help to plan and participate in webinars and other peer exchange opportunities involving other regional agencies to improve our understanding of the state of the practice regarding demographic and land use forecasting.

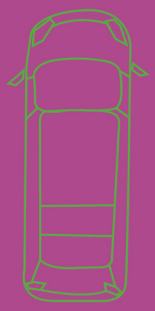


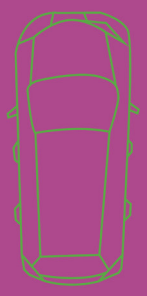
FFY 2024 Anticipated Outcomes

Anticipated outcomes include new data sources; an improved land use allocation model; multiple demographic and land use scenarios for transportation modeling; updated development data and analysis; documentation; and mapping products to support advanced transportation modeling.









SUBREGIONAL SUPPORT ACTIVITIES (MAPC)

Project ID Number	MAPC9
FFY 2024 Total Budget	$220,000

Purpose

The Boston MPO region consists of 97 cities and towns. The region is subdivided into eight geographic areas that are represented by subregional councils comprising municipal officials, business leaders, community-based organizations, and other local participants. MAPC staff planners are assigned as coordinators to each of the subregional groups to help members develop an understanding of subregional and regional transportation and land use issues. This project supports community involvement in the development of transportation planning documents.

Approach

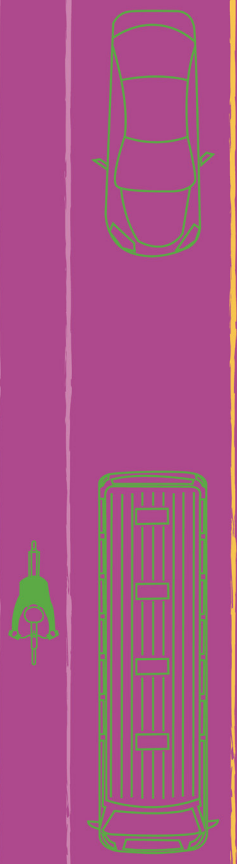
Subregions jointly identify and review the transportation priorities in their areas and recommend subregional projects and priorities for the TIP, LRTP, UPWP, and the MassDOT and MBTA capital investment plans.

Subregional coordinators and MAPC transportation staff report to the MPO through formal and informal communications. MAPC subregional groups will continue to participate in local corridor advisory committees whenever these committees are appropriate vehicles for working on projects in their areas. The subregions will continue to identify priority transportation needs, plan for first- and last-mile connections to transit, identify regional trail connections, pilot new technology to support increased mobility, and support planning for transit-oriented housing around MBTA stations.

MAPC staff ensures timely discussions of transportation-related issues by placing the topics on meeting agendas, leading and participating in the discussions, and distributing appropriate documents and notices relating to region and statewide transportation meetings.

FFY 2024 Anticipated Outcomes

Outcomes of this program include preparing monthly meeting agendas for transportation topics at subregional meetings; coordinating with transportation agencies; reviewing transportation studies in subregions; supporting subregional and corridor advisory committee meetings; generating public input on MPO processes and certification documents; and helping to set subregional transportation priorities.





CHAPTER 7

BOSTON REGION MPO BUDGET AND OPERATING SUMMARIES

This chapter contains overall budget information for the Boston Region Metropolitan Planning Organization's (MPO) federal fiscal year (FFY) 2024 activities. The information is organized according to the Unified Planning Work Program (UPWP) categories described in Chapters 3 through 6. Recipient agencies and funding sources are indicated.

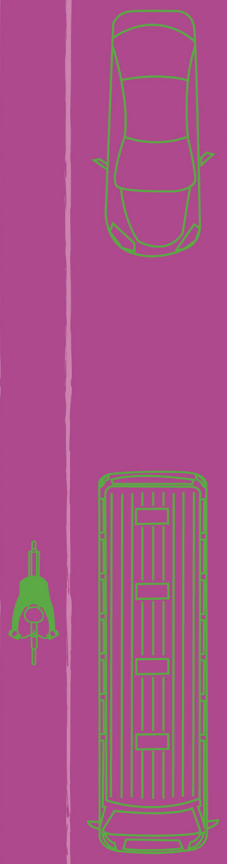
The funding for the projects, programs, and activities listed in Chapters 3 through 6 comes from the following sources, which are described in Chapter 2.

UPWP Work Areas	Total Budget
MPO Support and 3C Planning	$4,575,486
MassDOT-Directed PL Projects	$359,326
Ongoing MPO-Funded Technical Analyses	$146,700
MAPC Planning Studies and Technical Analyses	$769,942
New MPO-Funded Discrete Studies	$150,000
Resource Management and Support Activities	$395,500
MAPC Resource Management and Support Activities	$545,000
Direct Costs (3C)	$175,000
Total	**$7,116,954**

Funding Source	Total Programmed Funds
FHWA 3C PL/MassDOT Local Match	$4,599,322
FTA 3C PL (Section 5303)/MassDOT Local Match	$2,517,632
Total	**$7,116,954**

The nine tables on the following pages summarize the funding information presented in the preceding chapters. There is one table for each UPWP category of work conducted by Central Transportation Planning Staff (CTPS), and one for each UPWP category of work conducted by Metropolitan Area Planning Council (MAPC).

The total federal funding programmed in this UPWP is $7,116,954. All federal funds programmed in the UPWP are allocated to the Boston Region MPO by the Massachusetts Department of Transportation (MassDOT) as Federal Highway Administration (FHWA) 3C Planning (PL) funds. However, these federal funds initially come from two sources: the FHWA and the Federal Transportation Authority (FTA). The federal funds, which are supplemented by a non-federal match provided by MassDOT, include the following initial sources:



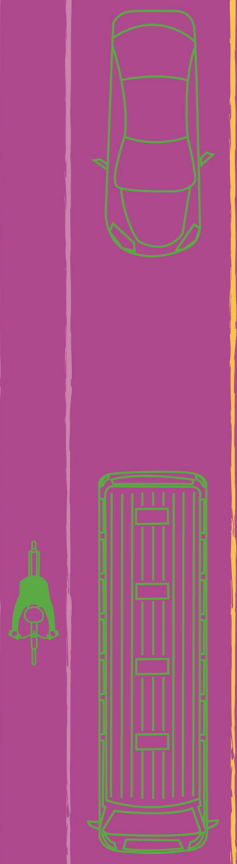
- FHWA 3C PL: FHWA planning funds are distributed to the MassDOT Office of Transportation Planning (OTP), according to an allocation formula established by federal legislation, to carry out the 3C planning process. OTP distributes these funds to Massachusetts MPOs according to a formula that is primarily based on the region's road mileage and population. The formula was developed by the Massachusetts Association of Regional Planning Agencies (MARPA) and is known as the MARPA formula. The FFY 2023 3C PL funding allocation for the Boston region, including state matching funds, is $4,599,322. The total Boston region 3C PL allocation is split between CTPS, which receives $3,725,451, and MAPC, which receives $873,871.
- FTA 3C Planning (§5303): FTA provides 3C planning funds for transit projects to MPOs and state departments of transportation under Section 5303 of the Federal Transit Act. These funds require a state match, are distributed according to an allocation formula, and are administered by MassDOT. These funds are converted to PL planning funds by MassDOT before distribution. The FFY 2023 FTA allocation for the Boston region, including a total local match, is $2,517,632 and, like the 3C PL funds, is split into two categories:
    - MPO and MassDOT FTA 3C Planning (§5303): The total amount of FTA funds, including a local match, programmed in this UPWP as PL for work conducted by the MPO staff is $2,076,561.
    - MAPC FTA 3C Planning (§5303): A portion of the Boston region's FTA allocation also goes to MAPC. MAPC uses these funds to conduct its transit-planning studies programmed through the UPWP. The total amount of FTA-derived funds, including a local match, allocated to MAPC as PL for FFY 2023 is $441,071.

This budget also reflects projects funded with Statewide Planning and Research and other funds from MassDOT; projects funded with Massachusetts Bay Transportation Authority funds; and projects funded from other sources. These projects are listed in Table 7-4.

Project status and financial data reported in the following tables are subject to change.

Table 7-1
UPWP Budget–MPO Support and 3C Planning for FFY 2024

Project ID	Name	FFY 2023 CTPS UPWP Budget	Expected Project Status as of 10/1/2023	Proposed FFY 2024 CTPS Budget
8124	Long-Range Transportation Plan	$326,000	Ongoing	$266,500
8224	Transportation Improvement Program	$323,000	Ongoing	$286,000
8324	Unified Planning Work Program	$101,500	Ongoing	$122,500
9624	Public Engagement Program	$278,000	Ongoing	$296,000
9324	Regional Transportation Advisory Council Support	$18,000	Ongoing	N/A
8824	Performance-Based Planning and Programming	$117,000	Ongoing	$140,000
8524	Transportation Equity Program	$177,000	Ongoing	$210,000
8424	Air Quality Conformity Determinations and Support	$21,500	Ongoing	$35,000
2124	Congestion Management Process	$134,000	Ongoing	$144,000
Core MPO Functions Subtotal		**$1,496,000**		**$1,500,000**
8724	Climate Resilience Program	$44,000.00	Ongoing	$76,000
2224	Freight Planning Support	$93,000	Ongoing	$111,500
7124	Regional Model Enhancement	$890,000	Ongoing	$762,500



(Table 7-1 cont.)

Project ID	Name	FFY 2023 CTPS UPWP Budget	Expected Project Status as of 10/1/2023	Proposed FFY 2024 CTPS Budget
5024	Data Program	$572,000	Ongoing	$590,000
2524	Bicycle and Pedestrian Planning Program	$83,500	Ongoing	$129,400
2824	Multimodal Mobility Infrastructure Program	$323,000	Ongoing	$336,000
Programs Supporting the 3C Process Subtotal		**$2,005,500**		**$2,005,400**
9124	Support to the MPO and its Committees (Includes General Graphics, General Editorial, and Transit Working Group Support Subtasks)	$355,088	Ongoing	$1,070,086
9224	General Graphics	$243,500	Ongoing	N/A
9724	General Editorial	$174,000	Ongoing	N/A
8924	Transit Working Group Support	$42,000	Ongoing	N/A
Support to the MPO and its 3C Process Subtotal		**$814,588**		**$1,070,086**
MPO Support and 3C Planning Total		**$2,820,088**		**$4,575,486**

Table 7-2
UPWP Budget—Ongoing Technical Analyses for FFY 2024

Project ID	Name	FFY 2023 CTPS UPWP Budget	Expected Project Status/ Completion as of 10/1/2023	Proposed FFY 2024 CTPS Budget
2324	Roadway Safety Audits	$14,500	Ongoing	$17,000
2424	Community Transportation Technical Assistance	$68,000	Ongoing	$65,700
4124	Regional Transit Service Planning Technical Support	$50,000	Ongoing	$64,000
MPO-Funded Ongoing Technical Analyses Subtotal		**$132,500**		**$146,700**



Table 7-3
UPWP Budget—MPO New Discrete Studies for FFY 2024

Universe ID	Project ID	Study or Program	Proposed FFY 2024 CTPS Budget
M-1	14001	Lab and Municipal Parking Phase II	$45,000
A-1	14002	Parking in Bike Lanes: Strategies for Safety and Prevention	$20,000
R-2	14003	Strategies for Environmental Outreach and Engagement	$25,000
TE-1	14004	Applying Conveyal to TIP Project Scoring	$60,000
Total for New Discrete Studies			**$150,000**

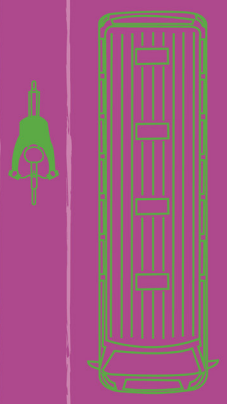


Table 7-4
UPWP Budget—Resource Management and Support Activities for FFY 2024

Project ID	Name	FFY 2023 CTPS UPWP Budget	Expected Project Status as of 10/1/2023	Proposed FFY 2024 CTPS Budget
6024	Computer Resource Management	$280,000	Ongoing	$300,000
9524	Professional Development	$80,000	Ongoing	$95,500
Resource Management and Support Activities Subtotal*		**$360,000**		**$395,500**

*Does not include Direct Support.

Table 7-5
UPWP Budget—MAPC Planning Studies and Technical Analyses for FFY 2024

Project ID	Name	FFY 2023 MAPC UPWP Budget	Proposed FFY 2024 MAPC Budget
MAPC1	Corridor/Subarea Planning Studies	$253,518.00	$260,000.00
MAPC2	Active and Carbon-Free Planning and Coordination	$238,509.00	$245,000.00
MAPC3	MetroCommon 2050	$115,000.00	$120,000.00
MAPC4	Land Use Development Project Reviews	$95,696.00	$94,942.00
MAPC5, 2424*	Community Transportation Technical Assistance Program*	$48,156.00	$50,000.00
MAPC Planning Studies and Technical Analyses Subtotal		**$750,879**	**$769,942**

* This project is shared with MAPC.

Table 7-6
UPWP Budget—MAPC Resource Management and Support Activities for FFY 2024

Project ID	Name	FFY 2023 MAPC UPWP Budget	Proposed FFY 2024 MAPC Budget
MAPC6	MPO/MAPC Liaison and Support Activities	$175,000	$190,000.00
MAPC7	UPWP Support	$12,000	$15,000.00
MAPC8	Land Use Data and Forecasts for Transportation Modeling	$105,000	$120,000.00
MAPC9	Subregional Support Activities	$214,000	$220,000.00
MAPC Resource Management and Support Activities		**$506,000**	**$545,000**

Table 7-7
UPWP Budget—Summary of FFY 2024 Budgets for CTPS

3C Studies and Programs by Budget Categories	Proposed FFY 2024 CTPS Budget
Resource Management and Support Activities	$395,500
MPO Certification Requirements	$4,575,486
Ongoing MPO-Funded Technical Analyses	$146,700
New MPO-Funded Discrete Studies	$150,000
MassDOT-Directed PL Funds*	$359,326
Direct Support	$175,000
Total FFY 2024 CTPS Budget	**$5,802,012**

Note: Budget figures include salary, overhead, and direct support.

* This project is conducted on behalf of MassDOT but funded through the MPO 3C contract.



Table 7-8
UPWP Budget–Summary of FFY 2024 Budgets for MAPC

3C Studies and Programs by MAPC Budget Categories	Proposed FFY 2024 MAPC Budget
MAPC Planning Studies and Technical Analyses	$769,942
MAPC Administration, Resource Management, and Support Activities	$545,000
Total MAPC FFY 2024 UPWP Programmed Funds	**$1,314,942**

Table 7-9
UPWP Budget–3C Budget and Overall Budget for FFY

Agency Supporting MPO/3C Work	Proposed FFY 2024 Budget
CTPS	$5,802,012
MAPC	$1,314,942
3C Budget Subtotal	**$7,116,954**
FFY 2024 UPWP Budget	**$7,116,954**



Photo courtesy of MOTT, by Tim Grafft



Photo courtesy of MBTA

APPENDIX A

OTHER BOSTON REGION TRANSPORTATION PLANNING STUDIES

This appendix consists of transportation studies and technical analysis work that MPO staff will conduct to support the work of various transportation agencies in the Boston Region Metropolitan Planning Organization (MPO) area, as well as brief descriptions of planning studies that will be conducted in the Boston Region MPO area by individual agencies, such as the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA), during federal fiscal year (FFY) 2024. This appendix is divided into two sections. The first describes contract-based work that MPO staff will undertake to support the planning work of other agencies, while the second describes studies supported by federal planning (but not MPO) funds and/or studies that MPO and partner agency staff have determined to be of regional significance.

The project listings in Section 1 are organized by funding agency and include studies and technical analyses for MassDOT, the MBTA, and other agencies in the Boston region. The project listings in Section 2 indicate whether components of the projects will be conducted by CTPS, and are organized hierarchically: first by type of study, then by geography, then by the entity organizing or leading the study effort.



SECTION 1: AGENCY AND CLIENT-FUNDED TRANSPORTATION STUDIES

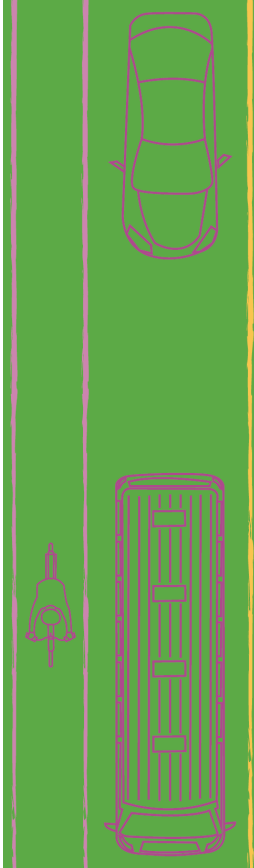
The transportation studies and technical analysis work described in this section will be conducted to support the work of various transportation agencies in the Boston Region Metropolitan Planning Organization (MPO) area.

Some of the contracts described in this section are issued to the Central Transportation Planning Staff (CTPS) every year and generally coincide with either the federal fiscal year (FFY) or the state fiscal year (SFY). Examples include MassDOT PL and MassDOT Statewide Planning and Research (SPR) contracts. Other contracts are issued for tasks and technical support to be conducted over a multiyear period, and they might be renewed with the agencies after several years. A third contract type covers the work for discrete studies or technical analyses intended to be completed within a specified timeframe. These may either be one-time contracts in which CTPS conducts analysis or technical support to further a specific agency project, such as MassDOT's Interstate 90 (I-90) Allston Multimodal Modeling Support project, or they can be contracts in which CTPS provides technical support to an agency for data collection and analysis that is undertaken annually, such as the MBTA National Transit Database (NTD): Data Collection and Analysis contract.

The work conducted on behalf of the agencies includes data collection and analyses covering a broad range of topics, including travel demand modeling, air quality, traffic engineering, Title VI, and environmental justice. The products of this work are vital to support compliance with federal and state regulations such as the Massachusetts Environmental Policy Act (MEPA) and Title VI of the Civil Rights Act of 1964. CTPS also enhances regional understanding of critical transportation issues through the preparation of graphics, maps, and other materials for agency studies and presentations. The work described in this section is organized by agency and includes studies and technical analyses for MassDOT, the MBTA, and other agencies in the Boston region.

Table A-1
Unified Planning Work Program Budget—New and Continuing Agency Transportation Planning Studies and Technical Analyses for FFY 2024

Project ID	Name	Total Contract	Funding Source
Varies by project	MassDOT SPR Program Support	$500,000	SPR
13155	MassDOT Title VI Program	$95,000	MassDOT
Varies by project	MassDOT-Directed Planning Assistance	n/a	MassDOT 3C PL
TBD	Allston	$400,000	MassDOT
TBD	McCormack	$60,000	MassDOT
MassDOT Projects		**$995,000**	
11415	AFC 2.0 Equity Analysis	$76,972	MBTA
11497	MBTA 2023 Triennial Title VI Report	$145,800	MBTA
11429	MBTA 2022 Title VI Program Monitoring	$79,700	MBTA
11496	MBTA Mapping Support	$18,000	MBTA
11500	MBTA Map and Signage Support to Bus Network Redesign	$31,755	MBTA
14376	MBTA Rider Oversight Committee Support IV	$31,342	MBTA
14374	MBTA SFY 2022 National Transit Database (NTD) Support	$127,288	MBTA
14375	MBTA SFY 2023 National Transit Database (NTD) Support	$165,145	MBTA
TBD	MBTA North Shore Busway	$108,819	MBTA
TBD	MBTA Bus Tool Ongoing Support	$60,000	MBTA



(Table A-1 cont.)

Project ID	Name	Total Contract	Funding Source
14378	MBTA SFY 2024 National Transit Database (NTD) Support		MBTA
11422	MBTA Transit Service Data Collection X	$540,000	MBTA
11430	MBTA Transit Service Data Collection XI	$590,000	MBTA
14358	Service Equity Analysis Support to the MBTA	$115,000	MBTA
MBTA Projects		**$2,098,821**	
	Other (SS4A, Municipalities, etc.)	$95,000	Other
Other Projects		**$95,000**	
Agency-Funded and Client-Funded Subtotal		**$3,239,821**	

MASSDOT

The contracts and technical analyses in this section are being undertaken for MassDOT.

MassDOT Statewide Planning and Research Program Support

Project ID Number	Varies
Funding Source	MassDOT SPR
FFY 2024 Total Budget	$490,000

Purpose

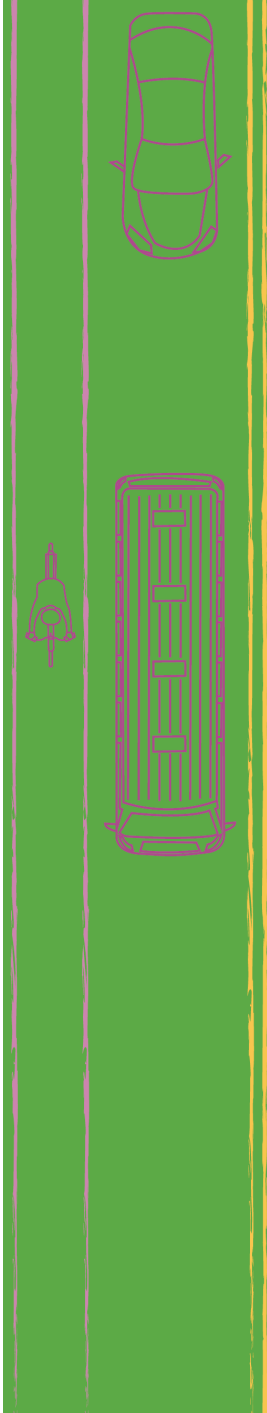
CTPS provides support to MassDOT's SPR program as requested. These contracts will include multiple individual projects or tasks throughout the federal fiscal year.

Approach

CTPS will conduct studies and analyses and provide technical assistance upon request. Two projects that are either underway or expected to begin in FFY 2024 are the Roadway Inventory and Related Support Maintenance and the Statewide Model Assistance Project. Other projects may be added throughout FFY 2024.

FFY 2024 Anticipated Outcomes

Activities and work products will depend on tasks requested by MassDOT's Office of Transportation Planning.



MassDOT Title VI Program

Project ID Number	13155
Funding Source	MassDOT Other
Total Contract Amount	$95,000
FFY 2024 Total Budget	$10,000

Purpose

Under this contract, CTPS will continue to provide technical support to MassDOT for developing and implementing its Title VI Program for both the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Approach

MassDOT, as a recipient of federal funds from both FHWA and the FTA, is required to comply with Title VI of the Civil Rights Act of 1964, and with protections enacted through several other laws and executive orders that prohibit discrimination based on gender, age, income, and disability. Through this technical support work, CTPS will assist MassDOT in complying with these nondiscrimination laws.

FFY 2024 Anticipated Outcomes

Staff will provide technical support to MassDOT as described above.

MassDOT-Directed Planning

Project ID Number	Varies
Funding Source	MassDOT-Direct PL
FFY 2024 Total Budget	$359,326

Purpose

CTPS will provide transit-planning assistance to MassDOT and the MBTA by conducting various studies under MassDOT's FHWA-funded PL Program. This task will include multiple individual projects or tasks throughout the federal fiscal year.

Approach

In FFY 2024, CTPS will continue to assist the MBTA with the MBTA Sources of Community Value study. The focus of this study is to identify, quantify, and propose mechanisms to accrue incremental sources of value and revenue for the MBTA outside of the existing developer mitigation framework. The results of the study would inform state leadership about funding options to support transit. Other projects may be added throughout FFY 2024 to support transit-related research, planning, data collection, and analysis.

FFY 2024 Anticipated Outcomes

For the MBTA Sources of Community Value Study, staff will provide estimates of revenues and other value from potential sources of revenue and a technical memo documenting study findings. Additional activities and work products will depend on tasks requested by MassDOT and the MBTA.



I-90 Allston Multimodal Modeling

Project ID Number	13809
Funding Source	MassDOT
Total Contract	$200,000
FFY 2024 Total Budget	$100,000

Purpose

MassDOT and its project team are currently developing a Supplemental Draft Environmental Impact Report for the Allston Multimodal project. CTPS will produce travel-demand forecasts in support of this environmental filing.

Approach

CTPS will support MassDOT by using the CTPS regional travel demand model set to estimate highway volumes, transit volumes, and mode splits for opening-year (2030) and horizon-year (2040) scenarios of the Allston Multimodal project. In addition, CTPS will assist the project team with an economic impact analysis.

FFY 2024 Anticipated Outcomes

In FFY 2024 staff will finalize the analysis and study documentation and support the environmental filing preparation and engagement as needed.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

The contracts and technical analyses in this section are being undertaken for the MBTA.

MBTA National Transit Database: Data Collection and Analysis

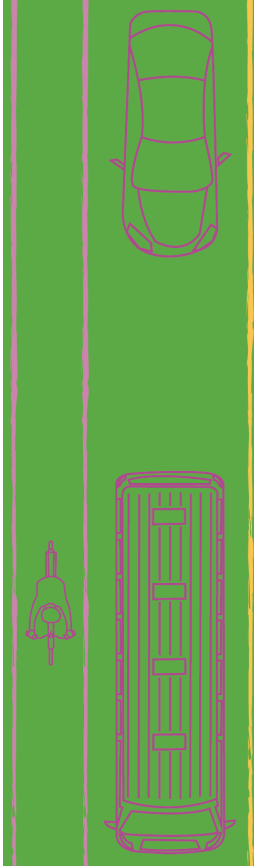
Project ID Number	14375 (SFY 2023) 14378 (SFY 2024) TBD (SFY 2025)
Funding Source	MBTA
Total Contract*	$584,949
FFY 2024 Total Budget	$7,649 (SFY 2023) $147,340 (SFY 2024) $50,276 (SFY 2025)

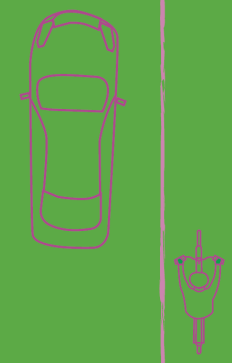
*Multiple contract years are represented.

Purpose

For many years, in support of the MBTA's NTD submittals to the FTA, CTPS has produced passenger-miles traveled and unlinked trip estimates for MBTA services. This project will develop these estimates for the following modes:

- directly operated MBTA transportation (including motor bus, heavy and light rail, and bus rapid transit)
- purchased-service bus routes (that is, local routes for which the MBTA contracts with a private carrier)
- commuter rail





Approach

CTPS will use the following methods to collect the data on which these estimates will be based:

- ridechecks on a sample of automatic passenger counter-equipped buses on the directly operated bus, rapid bus, and purchased service bus modes
- full-route ridechecks, including farebox fare-mix surveys, on the purchased service bus mode for the routes without automatic passenger counter-equipped buses
- transit trip surveys on heavy rail, light rail, and rapid-bus modes to determine origin-destination information (transfer rates and average trip lengths)
- faregate noninteraction, farebox noninteraction, and rear-door entry surveys from stations or Green Line and Mattapan Line vehicles equipped with automated fare collection (AFC) technology
- inferred origin-destination information from AFC data, if available from the MBTA or its partners, to determine origin-destination information (transfer rates and average trip lengths)
- commuter rail ridership data from passenger counts conducted by the MBTA or its contractors or from the MBTA's mobile ticketing vendor
- counts of temporary bus bridge passengers during sample periods when portions of rail service are temporarily suspended for maintenance and replaced with bus service

The MBTA will submit its SFY 2023 NTD passenger-miles traveled and unlinked trip estimates for various transit modes to the FTA with the aid of CTPS during FFY 2024. The final technical memoranda for SFY 2024 NTD will be completed in FFY 2025.

FFY 2024 Anticipated Outcomes

CTPS will complete the final technical memoranda and auditing process for SFY 2023 NTD reporting and will complete data collection begun in FFY 2023 for SFY 2024. Field staff will begin collecting data for SFY 2025 NTD reporting.

MBTA Title VI Program Monitoring

Project ID Number	11497
Funding Source	MBTA
Total Contract	$145,800
FFY 2024 Total Budget	$90,700

Purpose

Under this contract, CTPS provides the MBTA with technical assistance by collecting and analyzing MBTA service data to compare service provided to minority riders with service provided to nonminority riders. This work supports the MBTA's compliance with Title VI requirements.

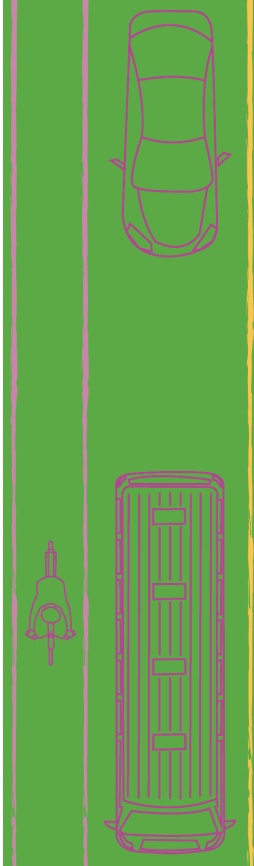
Approach

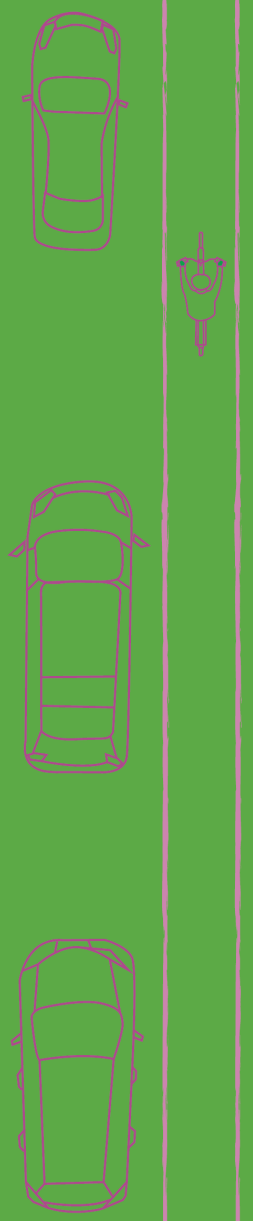
Staff will collect and analyze data on the following service indicators:

- service coverage
- vehicle load
- vehicle headway
- on-time performance
- station conditions and amenities
- distribution and operability of AFC faregates and fare vending machines
- distribution of AFC retail sales terminals
- station elevator and escalator locations and operability
- vehicle age and condition

The data-collection and analysis activities will help to fulfill monitoring required as part of the MBTA's ongoing Title VI Program. The results of the data collection efforts and analyses will be reported in a memorandum to the MBTA for internal review and follow up and will be included in the next triennial program.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.





FFY 2024 Anticipated Outcomes

CTPS will provide documentation about selected service monitoring evaluations for SFY 2023 MBTA service and amenities.

MBTA Transit Service Data Collection

Project ID Number	11422
Funding Source	MBTA
Total Contract	$1,130,000
FFY 2024 Total Budget	$198,000

Purpose

The work conducted under this contract will help the MBTA to assess bus and rapid transit service changes.

Approach

The MBTA requires ongoing data collection regarding its transit system to assess service changes. As part of this project, CTPS collects ridership and performance data to support future MBTA service changes. Work may also include support for improving the ridecheck database so that it will be compatible with new software and data sources. CTPS also may provide analytical assistance to the MBTA as requested.

FFY 2024 Anticipated Outcomes

- Point checks (observations of the arrival times, departure times, and passenger loads of a transit service at a single location) and other data collection as requested by the MBTA for planning purposes
- Improvements to the ridecheck database
- Analytical assistance as requested



MBTA Rider Oversight Committee Support

Project ID Number	14376 (SFY 2022–25)
Funding Source	MBTA
Total Contract	$31,342
FFY 2024 Total Budget	$7,000

Purpose

The MBTA established a Rider Oversight Committee (ROC) in 2004 to provide ongoing public input on a number of different issues, including strategies for increasing ridership, developing new fare structures, and prioritizing capital improvements. Through this contract, CTPS supports the MBTA by providing ongoing technical assistance to the ROC.

Approach

Assistance provided by CTPS has included offering insights into the MBTA's planning processes, providing data analysis, and attending committee meetings, at which staff may respond directly to ROC members' questions.

FFY 2024 Anticipated Outcomes

CTPS will continue to provide technical assistance to the MBTA ROC and attend committee and subcommittee meetings.

Service Equity Analysis Support to the MBTA II

Project ID Number	TBD
Funding Source	MBTA
Total Contract	$120,000
FFY 2024 Total Budget	$40,000

Purpose

CTPS will support the MBTA in conducting the required Title VI service equity analyses for major service changes that take place during the duration of this contract.

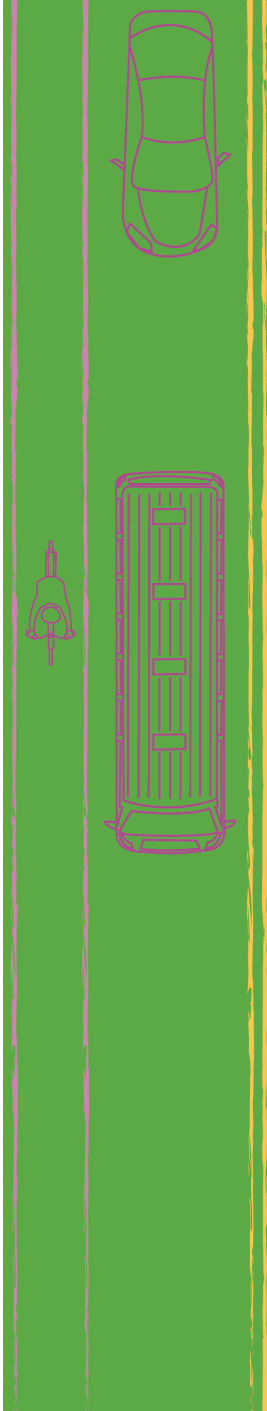
Approach

CTPS will conduct service equity analyses for MBTA major service changes. CTPS will follow the new Service and Fare Equity policy in conducting its analyses.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.

FFY 2024 Anticipated Outcomes

CTPS will prepare technical memoranda documenting service equity analyses for each major service change.



MBTA Mapping Support

Project ID Number	11496
Funding Source	MBTA
Total Contract	$18,000
FFY 2024 Total Budget	$3,000

Purpose

The objective of this work is to provide map-making support upon request from the MBTA. At the time of each request, CTPS will provide the MBTA with an estimate of the specific cost and schedule for completing the map(s).

Approach

CTPS will update MBTA maps, upon request from the MBTA, within the budget provided for this project.

FFY 2024 Anticipated Outcomes

Updated district maps to reflect changes in bus routes and bus route garage assignments. Upon request from the MBTA, CTPS staff will update other existing CTPS-created MBTA maps within the budget provided for this project.

Map and Signage Support to the MBTA Bus Network Redesign

Project ID Number	11500
Funding Source	MBTA
Total Contract	$25,000
FFY 2024 Total Budget	$25,000

Purpose

The objective of this work is to provide map-making support, upon request from the MBTA.

Approach

CTPS will update MBTA maps, upon request from the MBTA, within the budget provided for this project.

FFY 2024 Anticipated Outcomes

Updated rapid transit system, bus, and neighborhood maps to reflect changes to bus routes in accordance with the MBTA Bus Network Redesign. Upon request from the MBTA, CTPS staff will update other existing CTPS-created MBTA maps within the budget provided for this project.



Red Blue Connector Study

Project ID Number	22217
Funding Source	MBTA
Total Contract	$213,000
FFY 2024 Total Budget	$25,000

Purpose

CTPS is supporting the MBTA in preparation for environmental filings for the proposed connection between the Red and Blue Lines at the Charles/MGH Station. CTPS will continue to be engaged in developing traffic and transit projections for this work in FFY 2024.

Approach

CTPS will use the Boston Region MPO's travel demand model to analyze the traffic and transit impact of the proposed connection between the Red and Blue Lines and the closure of Bowdoin Station.

FFY 2024 Anticipated Outcomes

Some of the analysis for this study will be completed in FFY 2023. In FFY 2024, staff will finalize the analysis, prepare study documentation, and support the environmental filing preparation and engagement as needed.

North Shore Busway Study

Project ID Number	11498
Funding Source	MBTA
Total Contract	$108,819
FFY 2024 Total Budget	$80,000

Purpose

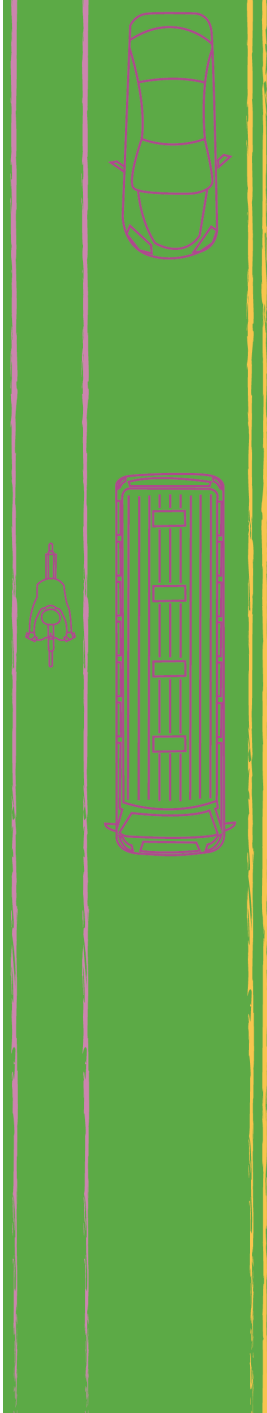
The MBTA has proposed a center-running bus lane facility linking Wonderland Station in Revere to Lynn (at the intersection of Broad and Chestnut Street/ Atlantic Street) via North Shore Road, General Edwards Bridge, the Lynnway, and Broad Street. This bus rapid transit facility would produce a two-seat rapid-transit service between downtown Lynn and Boston.

Approach

Using the Boston Region MPO's regional travel demand model set and other tools, CTPS will support MBTA and its project team by assessing the existing traffic conditions and travel patterns, and by providing modeling results and analyses for use in the evaluation of the proposed reconstruction scenario.

FFY 2024 Anticipated Outcomes

A technical memorandum summarizing the general modeling methodology and the results of the analysis will be provided to the MBTA and the project team.



AFC 2.0 Equity Analysis

Project ID Number	11415
Funding Source	MBTA
Total Contract	$91,972
FFY 2024 Total Budget	$19,000

Purpose

As part of the Fare Transformation initiative, the MBTA is developing a new AFC system, known as AFC 2.0, to supplant its existing fare payment system. In late 2017, the contract for the design, integration, and implementation of AFC 2.0 was awarded to Cubic | John Laing. This change in the MBTA's fare payment system will also lead to changes that may negatively affect some riders. The MBTA has requested that CTPS analyze the equity of the impacts of the following components of AFC 2.0: elimination of cash on board, fee for specific fare media, and potential changes in fare structure.

Approach

CTPS will evaluate the distribution of fare vending machines and other fare media sales locations, the equity impacts of charging for a fare card, and a package of various fare structure changes that may be implemented with AFC 2.0. Tasks in this project include

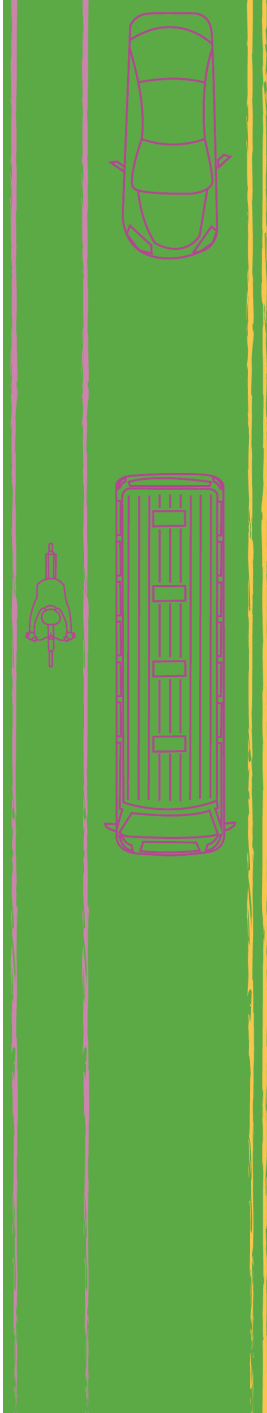
- participating in meetings and providing technical support;
- analyzing the distribution of fare vending machines and/or sales locations;
- analyzing the impacts of charging for fare media; and
- analyzing other fare structure changes.

CTPS will follow the new Service and Fare Equity policy in conducting its analyses.

CTPS will incorporate relevant demographic data from the MBTA's 2022 passenger survey and subsequent updates where appropriate as they become available.

FFY 2024 Anticipated Outcomes

CTPS will produce technical memoranda documenting the equity analysis of the proposed fare structure changes, the equity analysis of the fare card fee, and the equity analysis of proposed fare sales locations.



MBTA Fare Equity Analysis For Low-Income Fares and Ancillary Changes

Project ID Number	11501
Funding Source	MBTA
Total Contract	$95,000
FFY 2024 Total Budget	$15,000

Purpose

The MBTA requested that CTPS analyze the equity impacts of potential changes in fare structure and tariffs, including a low-income fare program and other potential changes. CTPS has provided technical assistance to the MBTA related to fare structure and tariff changes for more than 25 years, most recently in SFY 2021–23. This project will analyze equity impacts of a low-income fare program and other potential changes in the MBTA's fare structure and tariffs.

Approach

CTPS will assess how to incorporate new 2022 MBTA passenger survey data into its agent-based model. CTPS will also update the base-year fare revenue and ridership to the most recent available and appropriate year. CTPS will use a model to analyze the potential effects of changes in fare structure, tariffs, and policy on different socioeconomic groups in accordance with the requirements of FTA Circular 4702.1B *Title VI Requirements and Guidelines for FTA Recipients* and the MBTA's Service and Fare Change Equity Policy. This work will be closely related to ongoing Title VI work conducted by CTPS.

CTPS will follow the new Service and Fare Equity policy in conducting its analyses.

FFY 2024 Anticipated Outcomes

CTPS will produce a memorandum documenting the equity analysis of the set of proposed fare structure changes.

OTHER AGENCIES IN THE BOSTON REGION

The contracts and technical analyses in this section are being undertaken for other agencies in the Boston region.

Bluebikes Fare Equity Analysis

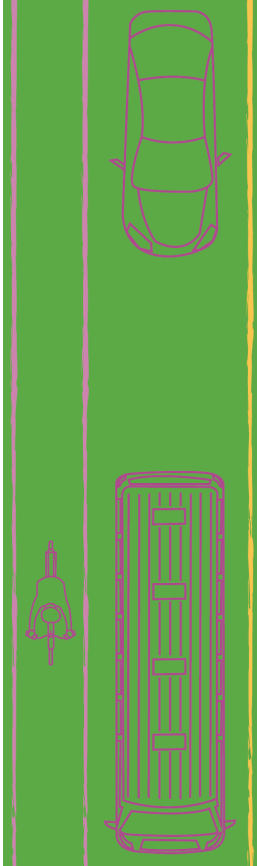
Project ID Number	22222
Funding Source	City of Boston City of Cambridge City of Somerville
Total Contract	$96,310
FFY 2024 Total Budget	$18,000

Purpose

The Cities of Boston, Somerville, and Cambridge are contracting with CTPS to examine the equity implications of potential changes to the Bluebikes fare structure including fare product changes and the impacts of adding e-bikes to the Bluebikes fleet. The Bluebikes bikeshare system currently charges riders using a pass-based or a per-ride based fee, where users pay a set cost to access the bikeshare system regardless of travel distance. Many bikeshare systems across the United States, including Washington, DC's Capital Bikeshare, Philadelphia's Indego, and Chicago's Divvy, incorporate a per-minute fee structure for electric bike (e-bike) trips. This study will identify how potential fare changes could affect riders of underserved population groups, including people of color, people with low incomes, and people with limited English proficiency.

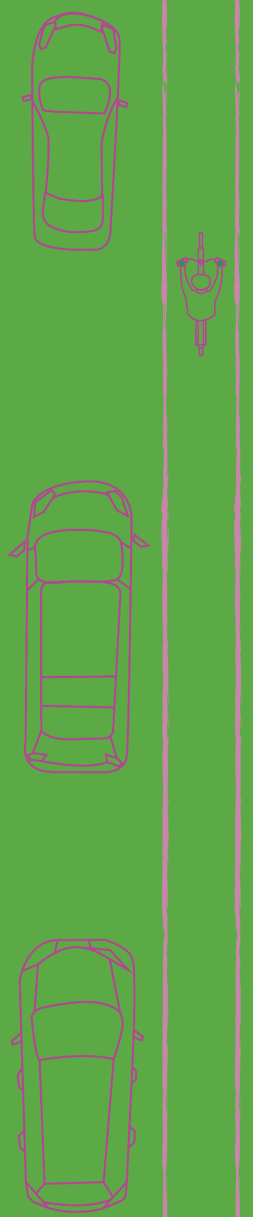
Approach

CTPS will coordinate with the Cities of Boston, Somerville, and Cambridge to analyze how potential changes to the Bluebikes fare structure and bike fleet composition will impact riders of underserved population groups. Tasks in this project include estimating demographics of riders, conducting a demographic survey, estimating fare elasticity impacts, modeling equity impacts from e-bikes, modeling fare change scenarios, developing an interactive report, and documenting results.



FFY 2024 Anticipated Outcomes

CTPS will produce a memorandum documenting the equity analysis of the set of fare change scenarios and an interactive report that recalculates metrics based on updated ridership inputs and potential fare price changes.



SECTION 2: OTHER BOSTON REGIONAL TRANSPORTATION PLANNING STUDIES

This section consists of brief descriptions of planning studies that will be conducted in the Boston Region MPO area by individual agencies, such MassDOT and the MBTA, during FFY 2024. This section describes studies supported by federal planning (but not MPO) funds, and/or studies that MPO and partner agency staff have determined to be of regional significance. The project listings in this indicate whether components of the projects will be conducted by CTPS, and are organized hierarchically: first by type of study, then by geography, then by the entity organizing or leading the study effort.

The projects in this section are not subject to the MPO's public participation process. Rather, they follow their own public processes, parts of which may be required by the Massachusetts Environmental Policy Act. They are included here to provide a more complete picture of the surface-transportation-planning projects occurring in the region. The listings contained in this section were provided to CTPS prior to July 1, 2023.



SAFE STREETS AND ROADS FOR ALL DISCRETIONARY GRANT PROGRAM (SS4A)

In 2023, the Boston Region MPO received funding through the Safe Streets and Roads for All Grant Program in the amount of $2,160,435 to develop a Safety Action Plan. MassDOT is providing the required 20 percent match of $540,109, which brings the total budget for this work to $2,700,544. The MPO will adopt the Safe System approach in developing the Action Plan. Recommendations will focus on high-risk corridors and include low-cost, high-impact countermeasures that can be widely implemented, new processes and policies, continuous monitoring of crash data, innovative technologies, and collaborative conceptual plans for multi-jurisdictional corridors. A Task Force responsible for Action Plan oversight will be established and include diverse representation from municipalities, advocacy and community groups, underserved communities, public health organizations, and vulnerable roadway users. The MPO will work with a variety of stakeholders to develop a Safety Action Plan for the region and facilitate collaboration across jurisdictions to meet the region's Vision Zero goal.

Other municipalities that received this grant in the Boston region are listed below:

- City of Salem (Action Plan Grant), $200,000
- City of Somerville (Supplemental Action Plan Grant), $116,800
- Town of Dedham (Action Plan) , $207,841.44
- Weymouth (Action Plan Grant), $336,000
- City of Boston (Implementation Grant), $9,000,000

MULTIMODAL OR ROADWAY STUDIES

Statewide Studies

MassDOT

Beyond Mobility: Massachusetts 2050 Statewide Long-Range Transportation Plan

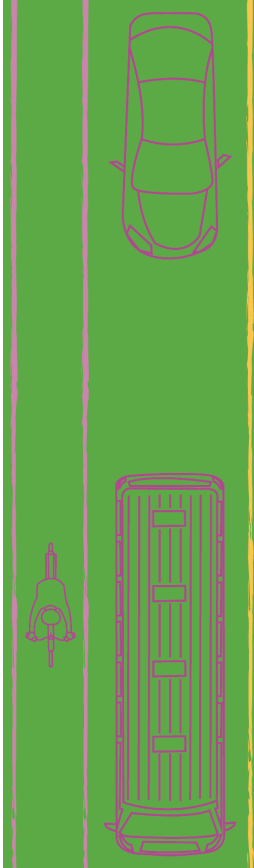
Beyond Mobility, the Massachusetts 2050 Long-Range Transportation Plan, is a planning process that will result in a blueprint for guiding transportation decision-making and investments in Massachusetts in a way that advances MassDOT's goals and maximizes the equity and resiliency of the transportation system. The Plan will serve as a strategic plan for MassDOT and document the most pressing transportation priorities for MassDOT to address between now and 2050, relying heavily on input from the public.

Impact of Teleworking

The Impact of Teleworking Study is developing plausible future scenarios for teleworking in Massachusetts and will use a modeling approach to understand the effects that teleworking changes may have on the Commonwealth's transportation system. This study will examine how anticipated increases and/or decreases in teleworking could change household and aggregate travel behavior through measures that include overall vehicle-miles traveled, trip attributes, and mode share. The potential macroeconomics impact of these changes in travel behavior will also be analyzed. The modeled projections for each scenario could assist MassDOT in future decision-making by providing information about how the demands on the transportation system will change and how the mix of transportation investment may need to respond.

MassDOT National Electric Vehicle Infrastructure (NEVI) Plan

MassDOT has developed an Electric Vehicle (EV) Infrastructure Deployment Plan for Massachusetts as required by the NEVI Program. Key activities during the initial plan development process included modeling EV charging demand on highway corridors in Massachusetts, analyzing economic factors associated with direct current fast charging technology, prioritizing highway corridor segments for investment of NEVI funds, and seeking stakeholder input on key questions. The MassDOT NEVI Plan has been approved. MassDOT is now proceeding with a planning process to determine the role of MassDOT-owned sites in the NEVI network buildout and to develop a model solicitation and contracting approach for partnering with a private entity to install fast charging infrastructure on EV Alternative Fuel Corridors in Massachusetts, which may help to ease range anxiety for drivers on long-distance trips.



Regional or Subregional Studies

MassDOT

Newton Corner Long-Term Planning Study

MassDOT's Office of Transportation Planning is conducting a study to determine long-term multimodal transportation and safety improvements to the Newton Corner I-90: Exit 127 (formerly Exit 17) Interchange in Newton, Massachusetts, bordering Brighton and Watertown.

This conceptual planning study will examine ways to improve mobility, system reliability, safety, connectivity, equity, economic opportunity, accessibility, efficiency, and climate resiliency in the study area.

Morrissey Boulevard/Kosciuszko Circle Study

MassDOT, the Executive Office of Environmental Affairs/Department of Conservation and Recreation, and the City of Boston have partnered to conduct a multimodal transportation study, and engage a recently created legislative (Morrissey) commission dedicated to long-term comprehensive planning for Morrissey Boulevard and the surrounding area in Dorchester, Massachusetts. This effort will build on past designs for the study area and contribute to preliminary, conceptual designs to improve the public realm, mobility, connectivity, safety, and climate resiliency in the corridor. This effort will also incorporate ongoing and future developments in the area to balance these projects with the local community. The resulting transportation alternatives will be presented as part of a public involvement process.

TRANSIT STUDIES

MBTA Transit Analysis Methodology and Mitigation Strategies Study

MassDOT's Office of Transportation Planning is conducting a study to develop a framework, methodology, and web-based tool for estimating the impacts of land use developments, including public and private developments, on the delivery and performance of transit services in Massachusetts. The deliverables from this project will inform MassDOT, MBTA, and regional transit authority decision-making and help these agencies take a more proactive approach to development mitigation.

Program for Mass Transportation

The Program for Mass Transportation (PMT) is the MBTA's long-range capital planning document; it defines a 25-year vision for public transportation in eastern Massachusetts. The MBTA's enabling legislation requires the MBTA to update the PMT every five years and to implement the policies and priorities outlined in it through the annual Capital Investment Program. MassDOT's Office of Transportation Planning will lead the process for updating the 2024 PMT.

Regional or Subregional Studies

MassDOT

Gilmore Bridge Mobility Improvements Study

MassDOT's Office of Transportation Planning is conducting a study regarding opportunities to implement and improve transit priority and multimodal travel over the Gilmore Bridge in Boston and Cambridge, as well as explore the feasibility of building a new bridge between Charlestown and Cambridge to serve transit, walking, and biking trips.

The Gilmore Bridge Mobility Improvements Study will establish existing mobility and other travel conditions within the study area and evaluate short-, medium-, and long-term recommendations intended to address the needs of current and anticipated future travelers along the corridor, with a particular emphasis on providing dedicated bus lanes. In addition to exploring opportunities for transit priority measures and active transportation improvements on the Gilmore Bridge, the study will assess the feasibility of constructing a new bridge between Charlestown and Cambridge to serve transit, walking, and biking trips.

CORRIDOR, AREA, OR GENERAL STUDIES

Regional or Subregional Studies

Municipal Studies

City of Boston

Rutherford Avenue—Sullivan Square Design Project

The City of Boston is progressing with the redesign of the Rutherford Avenue corridor in Charlestown, which extends approximately 1.5 miles from the North Washington Street Bridge to Sullivan Square and provides a critical connection between Everett, Somerville, suburbs north and east of Boston, and Boston's downtown business area. Reconstruction of this corridor is currently programmed in the Transportation Improvement Program beginning in 2022. The corridor's highway-like design is inconsistent with present-day design preferences and local circumstances, and the function and design of the Sullivan Square rotary is problematic. Pedestrian mobility is limited, and bicycle travel is not compatible with the high-speed road. The corridor is eight- to 10-lanes wide (120 to 140 feet), presenting a significant barrier between areas on either side of the roadway, such as the Bunker Hill Community College, Paul Revere Park, the Hood Business Park employment area, and MBTA rapid transit stations.

There are significant transit-oriented development opportunities along the corridor, and public investment in new infrastructure will support development of commercial and residential uses, whose tenants otherwise probably would not, or could not, locate to the area. A number of major structural elements in the corridor were constructed more than 60 years ago; they are approaching the end of their life cycle and will need to be replaced. With the Central Artery/Tunnel project now complete, more traffic remains on facilities such as Interstate 93 and US Route 1; therefore, reduced traffic volumes along Rutherford Avenue present a unique opportunity to transform the corridor's character from a 1950s-era, automobile-oriented facility to a twenty-first century, multimodal, urban boulevard corridor that will accommodate private development.

City of Boston

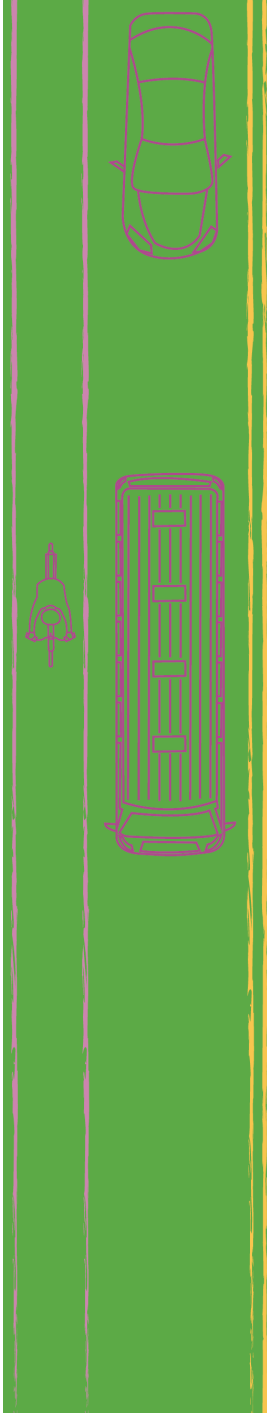
Reconnecting Chinatown

Planning

RCP Award: $1,800,000

The project will develop a plan to connect across the open-cut highway by building an open space for the community and prepare design guidelines to reconnect the Chinatown neighborhood separated by the construction of Interstate 90 in the 1960s. Construction of I-90 displaced hundreds of Chinese American families through land seizure and demolition, including removal of the thriving Hudson Street neighborhood, for the installation of a ramp and retaining wall. In the Leather District, another thriving and historically Chinese American community, roughly 20 percent of Chinese-American family homes were impacted by the construction. As a result, Boston's Chinatown now lacks access to safe and open greenspace, affordable housing, and is disproportionately impacted by traffic and unclean air.

This project is intended to directly address the longstanding physical division in Boston's historic Chinatown and to repair and enrich the area located between Shawmut Avenue and Washington Street, a disadvantaged community that has been marginalized, underserved, and overburdened by pollution. This project would also increase greenery and safe and accessible walking routes, improve safety, and decrease the use of motorized vehicles. The City of Boston proposes to create a steering committee of city and community members in the planning process. The application suggests that the air rights created by the connection could be used to create housing and job opportunities for the neighborhood.



MISCELLANEOUS STUDIES AND PLANNING ACTIVITIES

Statewide Studies

MassDOT

Flood Risk Assessment

The Climate Adaptation Vulnerability Assessment is a planning-level analysis of which transportation assets are at risk of flooding over the coming century. This study identifies flood exposure for in-state National Highway System roads, bridges, and large culverts; MassDOT- and MBTA-owned rail; MassDOT facilities; and many public-use airports. It assesses damage and repair costs, time estimates for repairs, and considers the consequences from loss of service. Specifically, this study will estimate "do nothing" costs and qualitative consequences of at-risk transportation assets under future conditions assuming no intervention. This information can be used during the capital planning process to prioritize investments that avoid or reduce long-term climatic impacts associated with flooding.

Shared Travel Network

This study will develop recommendations about where and how to leverage existing facilities and resources that could contribute to the development of a shared travel network, as well as where these existing facilities could be expanded and where new facilities and assets could be introduced.

Regional or Subregional Studies

Colleges and Universities

New England University Transportation Center (Region One)

The New England University Transportation Center (Region One) is a research consortium that includes the Massachusetts Institute of Technology (lead university), Harvard University, and the state universities of Massachusetts, Connecticut, and Maine. It is funded by the US Department of Transportation's University Transportation Centers (UTC) Program. The New England UTC conducts multiyear research programs that seek to assess and make improvements for transportation safety as well as develop a systems-level understanding of livable communities. For more information, visit the New England University Transportation Center's website at http://utc.mit.edu/.



APPENDIX B

PUBLIC ENGAGEMENT AND PUBLIC COMMENTS

The Boston Region Metropolitan Planning Organization (MPO) staff followed the procedures set forth in the MPO's adopted Public Engagement Plan while developing the Unified Planning Work Program (UPWP). These procedures are designed to ensure early, active, and continuous public involvement in the transportation-planning process.

The Federal Fiscal Year (FFY) 2024 UPWP development process began in October 2022. Staff solicited topics for study through the following engagement activities:

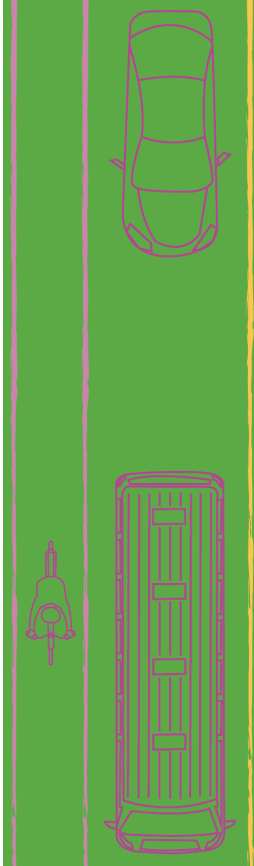
- Metropolitan Area Planning Council subregional group meetings
- Regional Transportation Advisory Council meetings
- Meetings with transportation advocacy and community groups
- A public survey soliciting study ideas and topics, distributed to MPO stakeholders and the public through email and social media communications and during meetings and engagement events
- Topics generated from recently completed planning studies and documents

The document development process, described in Chapter 2, culminated in the MPO UPWP Committee's recommendation for the FFY 2024 UPWP, including a set of new discrete studies. On June 15, 2023, the MPO approved a draft document for public circulation.

After receiving the MPO's approval to circulate the public-review draft FFY 2024 UPWP, staff posted the document on the MPO's website (https://www.bostonmpo.org/upwp) and used the MPO's contact list (MPOinfo) and social media accounts to notify the public of the document's availability and the opening of the 21-day period for public review and comment.

During the review period, staff presented the draft UPWP and this set of new studies at virtual open houses and made themselves available to interested parties who wanted to discuss the draft FFY 2024 UPWP.

The following pages contain the comments received about the UPWP during the public comment period, along with a table summarizing the text of each comment. All correspondents have received a response from the UPWP Manager, and responses have been included within the table.



Topic	Name	Support / Oppose / Request / Concern	Comment	Response
FFY 2024 UPWP: Bicycle and Pedestrian Planning Program; Climate Resilience Program	Cole Rainey-Slavick, Somerville resident	Support, Request / Suggest	Hello, Reading through the Unified Planning Work Program I am pleased to see a Bicycle and Pedestrian Planning Program established, although I would encourage you to consider increasing its budget as it is currently dwarfed by the scale of ongoing work and need in the bicycle network. I would also suggest you include bike parking within this committee's mandate and integrate that planning into all discussions and decisions around parking more broadly (including in the Lab and Municipal Parking study). I am also pleased to see continued funding of the Climate Resilience Program. I would, however, urge you to consider refocusing the committee away from simply protecting existing infrastructure from vulnerabilities to climate change to also considering how existing infrastructure contributes to exacerbating those vulnerabilities and developing strategies for mitigation or transformation. This should include factors such as the contribution of vehicle emissions to climate change and local air quality issues, the way excessive road space and lack of tree cover magnify urban heat island effect, the way impermeable surfaces contribute to flooding and a lack of ability to replenish groundwater, the risk of highways in creating forest and brushfires, etc. True climate resilience must go beyond protecting what currently exists; it should focus instead on developing regenerative infrastructure. Thank you for your time and consideration, Cole Rainey-Slavick Letter available on page B-7	Thank you for your thoughtful and insightful comments on our Bicycle and Pedestrian and Climate Resilience Programs. The Bicycle and Pedestrian Program is unique in that it is just one program through which bicycle and pedestrian transportation issues are addressed. For example, the FFYs 2024-28 Transportation Improvement Program funded the Malden-Spot Pond Brook Greenway project in FFY 2027, the Natick- Cochituate Rail Trail Extension in FFY 2028, and the Canton Center Bicycle Racks project in FFY 2024, to name a few. Additionally, the Community Connections program sets aside $7,500,000 between FFYs 2024-28 to support Bikeshare investments across the region. Beyond the TIP, bicycle planning work additionally takes place within the MPO's Multimodal Mobility Infrastructure Program and its Complete Streets work. The MPO is also in the process of establishing a Bicycle and Pedestrian Planning Committee, and I would be happy to connect you with the Bicycle and Pedestrian Program Manager. Regarding your comment on the Climate Resilience Program, these are valid concerns that we are addressing through the Resilience Program as we evaluate adaptation and mitigation strategies to reduce the impacts of transportation projects, but we can certainly be more clear in our dialogue about the role of transportation infrastructure in both creating and mitigating climate change concerns.
FFY 2024 UPWP: MBTA Green Line	James White, Boston resident	Request	Can you accelerate you work plan schedules if need be as they are doing on the Green Line section of tracks? Letter available on page B-8	Thank you for your comment on the Draft FFY 2024 Unified Planning Work Program. At this time, the UPWP does not directly fund the MBTA's work on the Green Line Extension. Comments or questions regarding the Green Line Extension can be directed to the MBTA at info@glxinfo.com.

Topic	Name	Support / Oppose / Request / Concern	Comment	Response
FFY 2024 UPWP: EV Charging	Ross Bloom, Wellesley resident	Request / Suggest	The Program should incorporate some planning studies and gather community input on the possibility of having publicly available Level 1 EV charging on public street curbsides, for residents of city neighborhoods that rely on street parking. This is a potential way to unlock resources and access for currently underserved communities wherever residents rely on street parking. Since Americans do 80+% of their EV charging at home, we need to figure out a way to provide equitable access to an experience that feels like home charging, to those that live in cities and/or rely on street parking and can't set up a charger in a driveway or garage. Current public charging projects are focused on Level 2 and Supercharging but these are very expensive solutions, difficult to implement in urban neighborhoods, and add immense stress to electrical grids. Just focusing on Level 2 and Supercharging is leaving residents of many city neighborhoods behind and causing delays in building out this critical infrastructure. Many cities and towns in the MPO could benefit from this type of infrastructure. If you work with the right stakeholders and connect Level 1 chargers directly onto utility poles, then you can deploy hundreds of these kinds of chargers for much less than any Level 2 or Supercharger out there. Urban dwellers tend to drive less than suburbanites for whom the current EV infrastructure is being disproportionately designed (for example, the average resident of Washington DC drives only ~20 miles a day). Level 1 can charge 30+ miles overnight while the driver sleeps, and can be part of a solution if placed near enough to people's homes (i.e. within a 5 min walk) and paired with other available fast charging. Many urban dwellers that want to adopt EV but are worried about charging access are also opting for plug-in hybrids for which Level 1 is a more than sufficient solution. This area of opportunity isn't being given enough attention or serious consideration and we are missing a chance to quickly address a significant gap in access and equity in electric vehicle infrastructure. I hope that the Program can dedicate some resources to considering the option of Level 1 Public Charging. Full disclosure, my passion for this topic is partly related to a startup business I founded here in Massachusetts to address this Public Level 1 EV charging need. I am happy to discuss further with the Program team as I have some additional research input I can provide on the topic. Public Level 1 Charging accessibility on curbsides in inner city neighborhoods can address the following stated goals of the Program: --Eliminate harmful environmental, health, and safety effects of the transportation system on people in disadvantaged communities. --Prioritize investments that address air pollution and environmental burdens experienced by disadvantaged and vulnerable communities. --Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants. Thank you, Ross Bloom Letter available on page B-9	Thank you for your comments on the FFY 2024 UPWP regarding EV charging. Your comment will be shared with the MPO Board and the Climate Resilience Program manager.

Topic	Name	Support / Oppose / Request / Concern	Comment	Response
FFY 2024 UPWP: Process, Studies, Programs	Regional Transportation Advisory Council (Advisory Council)	Support, Request, Concern	Advisory Council comment letter on draft FFY 2024 UPWP: process, selected studies, programs that support the 3C process Letter available on page B-11	
FFY 2024 UPWP: Programs, Studies	Massachusetts Bay Transportation Authority (MBTA)	Support	MBTA comment letter on draft FFY 2024 UPWP: graphics, programs, studies, technical assistance Letter available on page B-15	
FFY 2024	Massachusetts Department of Transportation Office of Transportation Planning	Suggest	OTP checklist on FFY 2024 UPWP Letter available on page B-16	

MASSACHUSETTS
BLUEbikes
BIKE LANE
NO PARKING ANY TIME
FEDERAL ST
MASSACHUSETTS
41163

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Srilekha Murthy <smurthy@ctps.org>

[Unified Planning Work Program (UPWP) Feedback] Bike parking and other comments

1 message

Boston Region MPO <drupaluser@ctps.org> Tue, Jun 27, 2023 at 8:07 AM
Reply-To: c.raineyslavick@gmail.com
To: upwp@ctps.org

Cole Rainey-Slavick (not verified) (c.raineyslavick@gmail.com) sent a message using the contact form at https://www.bostonmpo.org/contact/upwp.

The sender's name
Cole Rainey-Slavick

The sender's email
c.raineyslavick@gmail.com

Your ZIP code
02145

Subject
Bike parking and other comments

Message
Hello,
Reading through the Unified Planning Work Program I am pleased to see a Bicycle and Pedestrian Planning Program established, although I would encourage you to consider increasing its budget as it is currently dwarfed by the scale of ongoing work and need in the bicycle network. I would also suggest you include bike parking within this committee's mandate and integrate that planning into all discussions and decisions around parking more broadly (including in the Lab and Municipal Parking study).
I am also pleased to see continued funding of the Climate Resilience Program. I would, however, urge you to consider refocusing the committee away from simply protecting existing infrastructure from vulnerabilities to climate change to also considering how existing infrastructure contributes to exacerbating those vulnerabilities and developing strategies for mitigation or transformation. This should include factors such as the contribution of vehicle emissions to climate change and local air quality issues, the way excessive road space and lack of tree cover magnify urban heat island effect, the way impermeable surfaces contribute to flooding and a lack of ability to replenish groundwater, the risk of highways in creating forest and brushfires, etc. True climate resilience must go beyond protecting what currently exists; it should focus instead on developing regenerative infrastructure.
Thank you for your time and consideration,
Cole Rainey-Slavick

Srilekha Murthy <smurthy@ctps.org>

[Unified Planning Work Program (UPWP) Feedback] Work plan schedules

1 message

Boston Region MPO <drupaluser@ctps.org> Thu, Jun 29, 2023 at 11:54 AM
Reply-To: JW5551936@gmail.com
To: upwp@ctps.org

JAMES F WHITE (not verified) (JW5551936@GMAIL.COM) sent a message using the contact form at https://www.ctps.org/contact/upwp.

The sender's name
JAMES F WHITE

The sender's email
JW5551936@GMAIL.COM

Your ZIP code
02136

Subject
Work plan schedules

Message
Can you accelerate you work plan schedules if need be as they are doing on the Green Line section of tracks?

CTPS CENTRAL TRANSPORTATION PLANNING STAFF

Srilekha Murthy <smurthy@ctps.org>

[Unified Planning Work Program (UPWP) Feedback] Public Level 1 EV Charging access along city streets

1 message

Boston Region MPO <drupaluser@ctps.org> Thu, Jun 29, 2023 at 11:43 AM
Reply-To: mrossbloom@gmail.com
To: upwp@ctps.org

Ross Bloom (not verified) (mrossbloom@gmail.com) sent a message using the contact form at https://www.ctps.org/contact/upwp.

The sender's name
Ross Bloom

The sender's email
mrossbloom@gmail.com

Your ZIP code
02481

Subject
Public Level 1 EV Charging access along city streets

Message
The Program should incorporate some planning studies andgather community input on the possibility of having publicly available Level 1 EV charging on public street curbsides, for residents of city neighborhoods that rely on street parking. This is a potential way to unlock resources and access for currently underserved communities wherever residents rely on street parking. Since Americans do 80+% of their EV charging at home, we need to figure out a way to provide equitable access to an experience that feels like home charging, to those that live in cities and/or rely on street parking and can't set up a charger in a driveway or garage. Current public charging projects are focused on Level 2 and Supercharging but these are very expensive solutions, difficult to implement in urban neighborhoods, and add immense stress to electrical grids. Just focusing on Level 2 and Supercharging is leaving residents of many city neighborhoods behind and causing delays in building out this critical infrastructure. Many cities and towns in the MPO could benefit from this type of infrastructure. If you work with the right stakeholders and connect Level 1 chargers directly onto utility poles, then you can deploy hundreds of these kinds of chargers for much less than any Level 2 or Supercharger out there.
Urban dwellers tend to drive less than suburbanites for whom the current EV infrastructure is being disproportionately designed (for example, the average resident of Washington DC drives only ~20 miles a day). Level 1 can charge 30+ miles overnight while the driver sleeps, and can be part of a solution if placed near enough to people's homes (i.e. within a 5 min walk) and paired with other available fast charging. Many urban dwellers that want to adopt

EV but are worried about charging access are also opting for plug-in hybrids for which Level 1 is a more than sufficient solution.
This area of opportunity isn't being given enough attention or serious consideration and we are missing a chance to quickly address a significant gap in access and equity in electric vehicle infrastructure. I hope that the Program can dedicate some resources to considering the option of Level 1 Public Charging.
Full disclosure, my passion for this topic is partly related to a startup business I founded here in Massachusetts to address this Public Level 1 EV charging need. I am happy to discuss further with the Program team as I have some additional research input I can provide on the topic.
Public Level 1 Charging accessibility on curbsides in inner city neighborhoods can address the following stated goals of the Program:
--Eliminate harmful environmental, health, and safety effects of the transportation system on people in disadvantaged communities.
--Prioritize investments that address air pollution and environmental burdens experienced by disadvantaged and vulnerable communities.
--Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants.
Thank you,
Ross Bloom

REGIONAL TRANSPORTATION ADVISORY COUNCIL

July 7, 2023

David Mohler, Chair
Boston Region Metropolitan Planning Organization
10 Park Plaza, Suite 4150
Boston, MA 02116

RE: Comments on the Draft Unified Planning Work Program for FFY 2024

Dear Mr. Mohler,

We, the Regional Transportation Advisory Council (RTAC) for the Boston Region Metropolitan Planning Organization (MPO), also known as the "Advisory Council," herein offer our comments on the FFY2024 Unified Planning Work Program (UPWP). We fucus our comments on three aspects of the UPWP: (1) the process by which the four discrete studies were chosen, (2) our thoughts about the discrete studies that were selected, and (3) the programs that support the 3C process.

The Process

First, the fact that we saw perhaps the largest universe of projects ever submitted which then yielded a superb array of "finalists," is a testament to the effectiveness of public outreach this cycle, and it is in stark contrast to the fact the MPO was able to fund only four studies due to the availability of just $150K for discrete studies. That the UPWP Committee was able to fund even four studies is proof of their commitment to making it possible for the MPO to maximize the nature and extent of its research. It would have been very easy for the UPWP Committee to have chosen only two studies; however, with the adjustment of scopes, not only more, but also more diverse studies were chosen. We applaud the UPWP Committee for this effort, and we encourage it to continue this approach.

Still, we must note again that $150K is a very small amount, and that has led to the smallest number of discrete studies by far over the last 8 years. We request that the MPO explain to the public in the final version of the UPWP why the available funds for discrete studies is so low this year. We also strongly suggest that the MPO staff and the UPWP Committee review the entire universe of study proposals for this cycle as an informal survey of the interests and concerns of highly-engaged residents and organizations in our region.

The Selected Studies *

1. ***Lab and Municipal Parking Phase II***
Given the large amount of research in the life sciences in our region and the expectation that such will continue to be the case for the foreseeable future, we support research into the factors that affect parking at those facilities and the role that parking plays in the ways that employees commute to those facilities. The continuity ranging from the MAPC's "Perfect Fit" parking study released in 2019 to last year's Phase I of this study should make the results of this study insightful and useful.

2. ***Parking in Bike Lanes: Strategies for Safety and Prevention***

Beyond the paramount goal of making cycling safer, we hope that the strategies that emerge from this study will also make pedestrian street crossing(s) safer, bus trips more reliable, and freight delivery more efficient for both the haulers and the receiving businesses. We encourage staff to explore holistic, novel, and even experimental approaches toward finding solutions.

3. ***Strategies for Environmental Outreach and Engagement***
We strongly support the purpose, approach, and goal of this study. We also feel that this should be an ongoing effort by the MPO that extends far beyond one year. Our main concern with making this comment, however, is that the amount of funds available for discrete studies next year will be decreased by $25K.

4. ***Applying Conveyal to TIP Project Scoring***
We are very enthusiastic about the potential for this study. Its connection to a study done in 2022 as well an approach that involves working with other MPO regions exemplifies the comprehensive and cooperative qualities that make up the 3C process. This is the kind of study that could indeed have wide-ranging and long-lasting effects on the ways in which we select projects for the TIP and hopefully help us better determine the projects to which we provide technical assistance in hopes that the region can create a pipeline of projects that support the MPO's Long Range Transportation Plan.

Programs that Support the 3C Process

Before commenting on specific programs, we note that overall we are pleased with the quality of the programs that are devoted to supporting the 3C progress. In this document, we appreciate Table 3-1 which lists the budget, work progress, and products for FFY2023 alongside those proposed for FFY2024. The additional explanation provided later Chapter 3 add valuable details and explanations.

1. ***Climate Resilience Program***
Of the seven items listed, we highlight the following:

- Develop text and material to create a resilience-focused page on the MPO's website
- Review usability, data needs, outputs, and credibility of vulnerability assessment tools and develop a plan for assessment of Boston region transportation assets of interest to the MPO
- Evaluate resilience and environmental TIP criteria and adjust as necessary to successfully invest in resilience-focused projects

2. ***Freight Planning Support***
Of the seven items listed, we highlight the following:

- Freight planning roadmap
- Develop a program to coordinate freight and land use in the Boston MPO region
- Develop a dashboard with freight infrastructure in the region

3. ***Roadway Model Enhancement***
Of the seven items listed, we highlight the following:

- Conduct exploratory analysis to demonstrate TDM23 capabilities and identify needs for enhancements
- Develop a post-pandemic model base year calibrated to most recent roadway and transit data

4. ***Data Program***
Of the four items listed, we highlight the following:

- Develop data publication standards and explore new methods for sharing data publicly
- Research new data sources and analytic techniques

5. ***Bicycle and Pedestrian Program***
Of the five items listed, we highlight the following:

- Update how gaps are identified in the Boston region bicycle network
- Evaluate regional intersections and roadways using the Pedestrian Report Card Assessment and Bicycle Report Card tools

Also under this program we are pleased to read that the MPO "will officially establish the Bicycle and Pedestrian Committee and convene the first full year of committee meetings" in FFY24

6. ***Multimodal Mobility Infrastructure Program***
Of the seven items listed, we highlight the following

- Multimodal mobility infrastructure program roadmap
- Guidebook(s) to support multimodal infrastructure studies

To be clear, we find all items in each program worthy of being listed as a work product and/or a goal to which the MPO should progress. Our highlights primarily reflect our enthusiasm and our sense of priority and importance.

Finally, we close by expressing our gratitude for the data on the geographic distribution of UPWP studies and technical analysis presented in Appendix D. We strongly agree with the recommendations for uses of that data and the conclusion that "analyses such as these would provide the MPO with a clearer understanding of how the work programmed through the UPWP addresses the needs of the region."

We offer these comments in good faith, and we look forward to discussing them more with you as well as working with you and the MPO Board in the upcoming year.

Respectfully,
The Advisory Council

* As is often the case, there is a diversity of opinions in our group that leads to a healthy and enlightening dialogue. Below, we offer the verbatim comments of one of our members that also reflect the thoughts of other Advisory Council Members:

"Contrary to the Staff's recommendation...R-1 should be the Resiliency study because, unlike R-2, it is actionable, timely and needed in The Commonwealth to help save lives. R-2 is a communication issue which is a "nice to know" internal knowledge problem; it is somewhat actionable but is one which an unfunded study or conference can identify, if it becomes a more quantified (versus weighted to qualitative) study; R-2 is not worth sacrificing R-1. R-1 better and directly addresses the LRTP objectives.

Otherwise, to me the two Transit studies (T-3 & T-5) should be the remaining focus and both should be included because they address two important and vital issues confronting **Transit**...the key aspect of any improvement to the state's long-term mobility, access, and inclusionary efforts.

M-1 is a good study but given the constantly changing dynamics of MA commercial real estate, there are too many moving parts in this evolving Lab Building situation...premature situation and many aspects that are in play outside the Core City...to make this study actionable at this point. Consulting the BPDA Transportation Section regarding Article 80 Lab Buildings and their traffic studies would be helpful...plus BPDA and BTD will develop the actions and policies for Labs.

TE-1 should not be included. This study of "Conveyal" is the Staff's 'pet' app for internal experimentation

for scoring TIP selections on Equity. It might be appropriate, but it should not take up budget and attention from other worthy actionable studies that would better the Commonwealth. TE-1 should actually be funded and fielded either as part of the Staff's discretionary budget OR funded outside UPWP as part of the TIP budget...as a tool to assist TIP planning.

The comments are in reference to this list of proposed studies:
https://www.bostonmpo.org/data/calendar/pdfs/2023/0420_UPWP_Universe_Ranking_Survey_Results.pdf

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Gina Fiandaca, Secretary & CEO
Phillip Eng, General Manager & CEO

massDOT
Massachusetts Department of Transportation

Srilekha Murthy
UPWP Manager, Central Transportation Planning Staff
10 Park Plaza Suite 2150, Boston, MA 02116

Dear Ms. Murthy,

The MBTA is pleased to congratulate MPO staff on the publication of the draft Federal Fiscal Year (FFY) 2024 UPWP, and to offer the following comments:

- We compliment staff on the refreshed and impressive visual look of the UPWP, including more diverse and interesting images.
- MBTA is thrilled to see inclusion of the Climate Resilience Program, and look forward to working together.
- As a primary user of data compiled and maintained by CTPS, we applaud the development of CTPS' Data Program and stand ready to help vet and verify its functionality if needed.
- We are interested to see that the MPO will be establishing a Bike and Ped Committee in FFY 2024, and have staff who could participate when you are ready to launch this work. We encourage the Multimodal Mobility Infrastructure Program to include the MBTA in outreach and engagement, particularly where analysis or recommendations may touch on MBTA station or stop access.
- While none of the selected discrete studies involve the MBTA directly, the slate is interesting and we applaud staff's highly transparent and thoughtful process for study selection. We do look forward to hearing more about how study selection and analysis will work within the permanent programs given the redistribution of funding from discrete studies to permanent programs.
- We are excited to see the evolution of CTPS' and MAPC's technical assistance programs. MBTA staff have been in dialogue with MAPC about collaborating on certain relevant municipal technical assistance projects, and would welcome similar dialogue with CTPS.

We appreciate the opportunity to comment on the draft UPWP, and the engagement of MPO staff and the UPWP Committee throughout the development process. If you have any questions or would like to discuss, please contact Sandy Johnston, Deputy Director of Regional Transit Planning, at sjohnston2@mbta.com.

Sincerely,

Lynsey M. Heffernan

Lynsey M. Heffernan
Assistant General Manager for Policy and Transit Planning

massDOT
Massachusetts Department of Transportation

MPO Liaison UPWP Review Checklist					
Completeness					
ID			Review Item	Comments	Reference
A1	✓	*	Table of Contents is accurate and internally-linked.		✓ -- for use in column B
A2	✓	*	Document has no broken links.		✗ -- for use in column B
A3		*	Document has no text or image placeholders.	Placeholders for endorsement and public comments to be added in final version.	
A4	✓	*	Charts, tables, and maps are legible and properly annotated.		
A5	✓	*	Document passes an accessible check.		
A6	✓	*	New federal emphasis areas from the Bipartisan Infrastructure Law (BIL) are referenced.		https://www.transit.dot.gov/regulations-and-programs/transportation-planning/2021-planning-emphasis-areas
A7	✓	*	Document is available in relevant languages per the MPO's Title VI Plan.		
A8	✓	*	List of MPO members is current.		
A9		*	Signatory sheet is included and accurate. Update Gina Fiandaca as Secretary/CEO of MassDOT.	To be added in final version.	
A10	✓	*	Acronyms and partner agency lists are up to date.		
Narrative					
ID			Review Item	Comments	Reference
B1	✓	*	UPWP is comprehensible to the general public.		
B2	✓	*	UPWP refers directly to vision, goals, and objectives from RTP.		
B3	✓	*	UPWP Amendment/Adjustment procedures are explicit and align with latest federal guidance (see MAPRA materials)		
B4	✓		Governing MOUs between MassDOT, MPO, RTAs, and neighboring MPOs have been reviewed for potential improvements or updates.		
B5	✓		Planning efforts are coordinated with MassDOT modal plans.		https://www.mass.gov/statewide-plans
UPWP Tasks					
ID			Review Item	Comments	Reference
C1	✓	*	Individual tasks include detailed scopes, budgets, and schedules.		
C2	✓	*	Individual tasks outline community beneficiaries.	Page 56 - The section, "Developing the New FFY UPWP," only goes into depth on the process of identifying and selecting discrete studies. Please add additional information about the process for selecting studies as part of recurring tasks in the UPWP (e.g. corridor studies, operational analyses, etc.). The process of referring ideas heard through outreach on the universe of studies to these recurring tasks should also be referenced.	

C3	✓		Transit-related tasks are specific.		
C4	✓	*	Includes a task on performance-based planning.		
C5	✓	*	Includes a task for an update to any congestion mitigation planning efforts.		Required for TMA MPOs if current CMP is out of date.
C6	✓	*	UPWP includes a summary of available staff hours.		
C7	✓		Individual tasks anticipate needed staff-hours / consulting resources.	Page 101 - The "Regional Model Enhancement" task indicates a budget of $762,000 on this page but is $762,500 in the overall budget. Please revise accordingly. Page 133 - Please double check the amount for "Computer Resource Management" as it is listed as $280,000 but the budget indicates the FFY 2024 amount is $300,000.	
C8	✓		Tasks from previous UPWPs have been analyzed for past utilization.		
Impacts Analysis					
ID			Review Item	Comments	Reference
D1	✓	*	UPWP includes a geographic equity distribution table showing 2018–2022 and current UPWP-funded studies by municipality and number of tasks.	In addition to the analysis that is provided, please provide a more qualitative assessment in the narrative on the extent to which funding has been distributed equitably according to the analysis (both from the perspective of geographic and social equity).	
D2	✓	*	UPWP includes a social equity distribution table of past and current UPWP-funded studies considering language access and EJ populations.	Page 37 - Please note the length and dates of the public comment period.	
D3	✓	*	Public involvement and comment are explicitly documented and in line with MPO's Public Participation Plan.		

* *indicates required by state or federal regulation.*

massDOT
Massachusetts Department of Transportation

MPO Liaison TIP Review Checklist

Completeness

ID		Review Item	Comments	Reference
A1	*	Table of Contents is accurate and internally-linked.		✓ -- for use in column B
A2	*	Document has no broken links.		✗ -- for use in column B
A3	*	MPO self certification statement is included.		
A4	*	GHG certification is included.		
A5	*	Air Quality Conformity statement is included.		
A6	*	Document has no text or image placeholders.		
A7	*	Charts, tables, and maps are legible and properly annotated.		
A8	*	Document passes an accessible check.		
A9	*	Document is available in relevant languages per the MPO's Title VI Plan.		
A10	*	List of MPO members is current.		
A11	*	Signatory sheet is included and accurate. Update Gina Fiandaca as Secretary/CEO of MassDOT.		
A12	*	Acronyms and partner agency lists are up to date.		
A13	*	Dates listed w/in TIP reflect FFY 2024–2028.		

Narrative

ID		Review Item	Comments	Reference
B1	*	TIP outlines MPO institutional organization.		
B2	*	TIP links back to national planning factors.		
B3	*	TIP references the RTP and the UPWP.		
B4	*	TIP narrative is concise and reader-friendly.		
B5	*	TIP discusses evaluation scoring.		
B6	*	TIP includes project scoring table.		
B7	*	TIP describes public participation process.		
B8	*	TIP includes procedures for adjustments and amendments, including any deviations from MassDOT guidelines.		
B9	*	TIP describes funding sources accurately.		https://www.fhwa.dot.gov/specialfunding/

Performance Measurement

ID		Review Item	Comments	Reference
C1	*	TIP includes discussion of target-setting process.		
C2	*	TIP references relevant Transit Asset Management (TAM) Plans and includes all TAM Plan targets.		https://www.transit.dot.gov/TAM/TAMPlans
C3	*	TIP references relevant Public Transportation Agency Safety Plans (PTASPs) and includes all PTASP targets		https://www.transit.dot.gov/PTASP
C4	*	TIP includes current adopted performance targets.		PM1, PM2, PM3, TAM, and any regionally-derived targets

C5	*	TIP discusses relationship between performance targets and project selection.		
C6		Discussion on performance measures compares regional data to statewide data where available.		
Project Listing				
ID		Review Item	Comments	Reference
D1	*	Financial projections align with MassDOT guidance.		
D2	*	TIP template is formatted correctly.		
D3	*	Projects use MassDOT ProjectInfo TFPCs.		
D4	*	assumptions.		2025: 4%; 2026: 8%; 2027: 12%; 2028: 16%
D5	*	Projects use MassDOT ProjectInfo description.		
D6	*	Additional comment field contains all necessary info.		Total cost, AC, Year-of-expenditure, TEC scores
D7	*	MassDOT projects are (accurately) included into regional template.		
D8	*	Regional target projects adhere to Readiness Days feedback.		
D9	*	List includes all projects, including FLAP, FLTP, and Tribal projects.		
D10	*	Transit TIP is formatted properly.		Should be unchanged from Transit eSTIP
Impact Analysis				
ID		Review Item	Comments	Reference
E1	*	TIP includes GHG certification.		
E2	*	GHG analysis is available for all (and only) funded projects.		
E3	*	All projects are appropriately labeled as qualitative or quantitative.		
E4	*	Transit projects have been analyzed for GHG.		
E5	*	Past and current TIP projects have been analyzed for geographic equity, including a relevant table of programming by municipality.		
E6	*	Past and current TIP projects have been analyzed for social equity.		
E7	*	Social equity analysis considers Title VI / language access.		
E8	*	Social equity analysis considers EJ populations, including both federal and state definitions.		
E9	*	Equity analysis includes a narrative to accompany any figures.		

* *indicates required by state or federal regulation.*

			MPO Liaison
			Co
ID			Review Item
A1		*	Table of Contents is accurate and internally-linked.
A2		*	Document has no broken links.
A3		*	**MPO self certification statement is included.**
A4		*	**GHG certification is included.**
A5		*	**Air Quality Conformity statement is included.**
A6		*	Document has no text or image placeholders.
A7		*	Charts, tables, and maps are legible and properly annotated.
A8		*	Document passes an accessible check.
A9		*	Document is available in relevant languages per the MPO's Title VI Plan.
A10		*	List of MPO members is current.
A11		*	Signatory sheet is included and accurate. Update Gina Fiandaca as Secretary/CEO of MassDOT.
A12		*	Acronyms and partner agency lists are up to date.
ID			Review Item
B1		*	RTP outlines MPO institutional organization.
B2		*	RTP links to BIL planning emphasis areas.
B3		*	RTP references the TIP and the UPWP.
B4		*	RTP narrative is concise and reader-friendly.
B5		*	RTP discusses evaluation scoring.
B6		*	RTP includes project scoring table.
B7		*	RTP describes public participation process.
B8		*	RTP references projects that are considered to be regionally significant. **If RTP lists "regionally significant" projects in a financially constrained manner, please notify the Manager of MPO Activities**.
B9		*	RTP describes funding sources accurately and notes new funding sources in BIL.
B10		*	RTP is comprehensible to the general public.
B11		*	RTP vision, goals, and objectives are clearly stated, and discuss the influence of public feedback and participation.
B12		*	RTP discusses coordination and collaboration with regional and state agencies that contributed to document development.
B13		*	RTP outlines reference and coordination with other regional planning efforts and MassDOT statewide plans. This includes all modes of transportation and also economic development, housing coordination, recreation, etc.
			Performa
ID			Review Item
C1		*	RTP includes discussion of target-setting process.

C2	*	RTP references relevant Transit Asset Management (TAM) Plans and includes all TAM Plan targets.
C3	*	RTP references relevant Public Transportation Agency Safety Plans (PTASPs) and includes all PTASP targets
C4	*	RTP includes current adopted performance targets.
C5	*	RTP discusses relationship between performance targets and project selection.
C6		Discussion on performance measures compares regional data to statewide data where available.
C7	*	Future projects and studies under consideration outline beneficiaries at the local, regional, state, and inter-state leve as appropriate.
C8		Transit-related efforts are specific.
C9	*	Includes a discussion on performance-based planning.
C10	*	Includes a discussion of efforts to update to any congestion mitigation planning.
C11		If previous priorities, projects, or studies have not advances, please discuss challenges and potential solutions.
		Project Listing a
ID		Review Item
D1	*	Financial projections align with MassDOT guidance.
		If the LRTP establishes or updates programs, there is a clear linkage to the TIP (e.g. X% of funds spent on Complete Streets, X% of Safety, etc.)
D2	*	If projects are listed, they use MassDOT ProjectInfo TFPCs.
	*	
D3		If projects are listed, they use MassDOT ProjectInfo description.
		Imp
ID		Review Item
E2	*	GHG analysis is available for all (and only) funded projects.
E3	*	All projects are appropriately labeled as qualitative or quantitative.
E4	*	Transit projects have been analyzed for GHG.
E5	*	Past and current TIP projects have been analyzed for geographic equity, including a relevant table of programming by municipality.
E6	*	Past and current TIP projects have been analyzed for social equity.
E7	*	Social equity analysis considers Title VI / language access.
E8	*	Social equity analysis considers EJ populations, including both federal and state definitions.
E9	*	Equity analysis includes a narrative to accompany any figures.
E10	*	RTP includes a geographic equity distribution table showing location of 2024-2028 TIP projects and 2018–2022 and current UPWP-funded studies by municipality and number of tasks.

E11	*	RTP includes a social equity distribution table of 2024-2028 TIP projects and 2018-2022 and current UPWP funded-studies considering language access and EJ populations.
E12	*	Public involvement and comment are explicitly documented and in line with MPO's Public Participation Plan.

TIP Review Checklist	
mpleteness	
Comments	Reference
	✓ -- for use in column B
	✗ -- for use in column B
Narrative	
Comments	Reference
	https://www.transit.dot.gov/regulations-and-programs/transportation-planning/2021-planning-emphasis-areas
	https://www.fhwa.dot.gov/specialfunding/
	https://www.mass.gov/statewide-plans
nce Measurement	
Comments	Reference

	https://www.transit.dot.gov/TAM/TAMPlans https://www.transit.dot.gov/PTASP PM1, PM2, PM3, TAM, and any regionally-derived targets
	Required for TMA MPOs if current CMP is out of date.

nd Program Development	
Comments	Reference

act Analysis	
Comments	Reference



APPENDIX C

UNIVERSE OF PROPOSED NEW STUDIES FOR FEDERAL FISCAL YEAR 2024 UPWP

This appendix describes the Universe of Proposed New Studies, a key step in the evolution of the federal fiscal year (FFY) Unified Planning Work Program (UPWP). The Universe documents the study concepts that the Boston Region Metropolitan Planning Organization (MPO) staff collected or suggested for the development of the FFY 2024 UPWP. Study suggestions are collected through email, a public survey, and presentations at Metropolitan Area Planning Council (MAPC) subregional committee meetings and Regional Transportation Advisory Council meetings. Each entry includes a summary of the purpose of the proposed study.

Studies in the Universe, shown in Table C-1, are organized into the following categories:

- Active Transportation
- Land Use, Environment, and Economy
- Multimodal Mobility
- Transit
- Transportation Equity
- Resilience
- Other Technical Support

Table C-2 tracks the breakdown of studies chosen for funding in the UPWP from FFY 2017 to the present by category.

Staff and the UPWP Committee evaluate each proposed study in the Universe based on the extent to which a study concept addresses each of the six Long-Range Transportation Plan goal areas:

- Safety
- System Preservation
- Clean Air/Clean Communities
- Transportation Equity
- Capacity Management/Mobility
- Economic Vitality

The process of developing a final list of studies to be funded also includes consideration of staff capacity in relevant areas and work that is occurring in other agencies to avoid redundancy.



In addition to evaluating the proposed new studies in the Universe, MPO staff define general scopes and estimated costs for the proposed studies and consider potential feasibility issues. These various factors, along with the availability of funds for new studies, were considered as staff identified a recommended set of new proposed planning studies for review by the UPWP Committee. For more information about the process of developing and evaluating the Universe, please see Chapter 2.

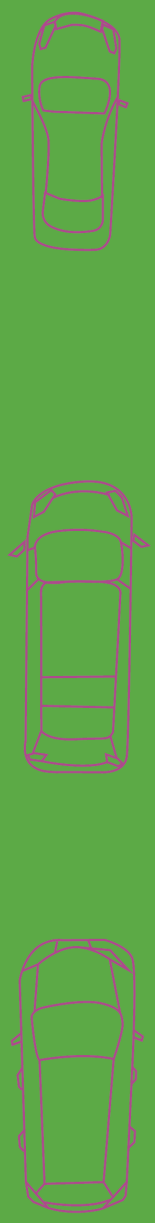




Table C-1
Universe of Proposed Studies for FFY 2024

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
ACTIVE TRANSPORTATION					
A-1	Parking in Bike Lane: Strategies for Safety and Prevention	**Purpose:** The purpose of this study is to address the issue of vehicles parked in bike lanes in the Boston region. This poses a safety hazard for cyclists and pedestrians and creates a need for them to switch lanes. The study aims to research successful strategies and practices employed in other cities and municipalities to address the problem and recommend strategies that can be implemented in the Boston region. **Approach/Methodology:** The study will begin with a comprehensive research phase that will analyze the approaches adopted by other cities (such as a New York proposal to pay people who report cars parked in bike lanes) in addressing the issue of vehicles parked in bike lanes. The research will include a review of existing policies and programs, as well as interviews with peers to better understand their approach and challenges. In addition, the study will engage with municipalities in the Boston region to understand existing policies, gather data on the problem in the region through data collection and surveys, and identify municipalities most interested in piloting the recommended approaches. The study will work with the selected municipalities to develop potential concepts and pilot the most promising one, ensuring the program is tailored to the needs of the region. **Anticipated Outcome:** The anticipated outcome of the study is a report that summarizes the research findings, including successful strategies employed by other cities to address the issue of parked vehicles in bike lanes, and recommendations for potential approaches that can be piloted in the Boston region. The report will also include details on the piloted program and its feasibility and effectiveness, along with recommendations for scaling the program beyond the pilot phase.		Ilana Strauss, Staff Survey	
A-2		Separated bike/pedestrian paths are starting to come together on the north side of Boston, between the Minuteman Bikeway to the Northern Strand Trail. It would be great to see a comprehensive plan that identifies what is needed to provide safe non-motorized travel throughout as much of this region as possible, including connections with public transit stations and blue bikes.		Julie Wormser (Mystic River Watershed Association), Public Survey	

18 Total study concepts

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
A-3		**Pedestrian Safety:** Inventory, survey, and assess Inner Core and Suburban roadway and street Intersection and mid-block crosswalks for existing conditions and identify pedestrian safety deficiencies/ threats needing remedial actions and/or facilities. Locations of pedestrian crossings (i.e., formal and informal "desire lines") are frequent sites of pedestrian-vehicle conflicts, crashes, and injuries/fatalities. Such problem areas persist, despite attention given to pavement markings, traffic control lights, and other measures. Sometimes the situation is an uneven implementation of Complete Street design guidance; sometimes it is due to lack of context-sensitive common sense; other times vehicle speed or curb enforcement is not applied. Other times, pedestrians themselves act irresponsibly, are distracted from awareness of surroundings. A too-frequent problem occurs in (often retail) areas with dense curbside parking available to mixed sizes and types of vehicles. The common situation is with a crosswalk (even a marked one) that permits vehicle parking too close to a pedestrian's entry point to the crosswalk. In these cases, the view of the pedestrian to oncoming/upstream traffic is severely diminished or totally obstructed until the pedestrian is already walking perhaps 10 feet into the crosswalk, often too late for a driver to adjust. This situation is a pedestrian threat with any vehicle parked too close to the crosswalk, but is especially dangerous when a vehicle is large, such as SUVs, mini vans, delivery vans/vehicles, trucks. Consistent and enforced remedy is needed in all such (municipal) crosswalk locations. To avoid unsafe perpetuation from debate or confusion, a suggestion is there should be a universal ban on any vehicle parking within 15 feet upstream from a crosswalk, mid-block, or intersection. To rely on each of the Commonwealth's 351 municipalities to adhere to implementing such a policy almost falls into the realm of fantasy. Once the type and degree of the problem situations are identified by CTPS, ultimately, this pedestrian safety measure would best come in the form of a statewide law from the State House.		John McQueen, Email	
LAND USE, ENVIRONMENT, AND ECONOMY					
L-1	Opportunities for the MPO to Support TOD	This study will analyze and identify ways for the MPO to support TOD in the Boston region, through policy and/or investment. The FFY 2022 TDM study surfaced the idea of the MPO helping the Commonwealth enforce the MBTA Communities TOD zoning through TIP criteria revisions or similar policy options. This study would engage MPO members, policy experts, and others about the feasibility of this and other ways for the MPO to support TOD throughout the region. This would be primarily a policy study, with intensive engagement work among the MPO board, planning professionals, and other policy specialists. There may be some public engagement work as well. The study would likely involve interviews and focus groups and culminate in a series of MPO Board discussions. Staff will prepare a report and lead discussions at the MPO board.	$40,000–$60,000	Staff Survey	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
ROADWAY AND MULTIMODAL MOBILITY					
M-1	Lab and Municipal Parking Phase II	This year's UPWP includes a discrete study that focuses on Lab and Municipal Parking. The objective of this work is to expand upon MAPC's Perfect Fit Parking study, which focused on residential parking, to develop a methodology to study supply of and demand for parking at lab and life science facilities. The methodology will be defined during Phase I of this study. On-site data collection for a number of sites will be required. Phase II of the study would employ this methodology to study parking supply and utilization at lab and life science facilities across the region. A data set of parking supply and utilization at lab and life science facilities; recommendations for municipal planners regarding provision of parking at these facilities.	$60,000–$80,000	Staff Survey	
M-2	Exploring Roadway Pricing: Engagement with Local Stakeholders	**Context of the underlying problem** While many roadway-pricing projects have been successful in reducing congestion, fund transportation projects, and address air quality, others have not been implemented for a variety of reasons. Concerns such as impacts on transportation equity populations, suburban and rural drivers, and business activities have been raised for some projects. Ongoing, substantive, and sincere public engagement and education efforts have meaningfully influenced roadway-pricing program design. Although roadway pricing has been implemented in many cities in the United States, studies have found that the public and many policymakers still have difficulty understanding the purpose and benefits of the concept. However, once projects open, there are few complaints and positive feedback. **Potential solutions to explore** • MPO staff will identify key stakeholders in Massachusetts to communicate and build consensus on the benefits from roadway pricing. • The engagement efforts will include advocates or interest groups, business chambers of commerce, municipal officials, planners, and the public. • MPO staff will survey, host forums, and develop brochures on several topics such as pricing styles, benefits, transportation equity, business activities, air quality, etc. **Anticipated outcomes** Staff will prepare a memorandum documenting the communications and engagement efforts. The findings will provide the MPO valuable public feedback on how to implement a future roadway-pricing scheme.		Seth Asante, Staff Survey	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TRANSIT					
T-1	Effective ways to reduce school-related vehicle trips	Over the last several decades, there has been a noticeable shift from parents allowing children to commute to school independently. Modes such as walking, biking, and taking the bus to school have been used less frequently, compared to dropping their children off at school. The effects of this shift have resulted in an increase of SOV travel; an increase in vehicle emissions; an increase of stress on commuting parents; potentially a decline in personal heath (both parents and children spend more time sitting in a vehicle instead of walking and biking). The purpose of this project is to analyze ways to reverse the trend of parents driving their children to school. This a travel demand management study that has solutions, which will be analyzed in this study. These solutions could include • bringing back robust school bus systems (large school bus systems were common in many communities in the 1970s and 1980s and have since been decimated due to budget cuts and negative stigmas); • the encouragement of biking and walking to school by conducting outreach, and improving infrastructure such as bike trails, sidewalks, and bike racks located near schools; and • the implementation of congestion pricing strategies, such as charging a curb access fee for dropping off children at or near school, in order to encourage parents to consider alternative means of transportation to commute their kids to school. This study would look at several funding mechanisms such as taxes, sponsorships, or congestion pricing to provide funding for the solutions listed above. This study will analyze different strategies that will look at ways to alleviate congestion near schools. First, a literature review will be written to show studies that have previously been completed on this topic. Then, a brief analysis would be conducted to see what strategies best fit the Boston region. A memorandum will be written that would summarize each of the final strategies. The memorandum can then be presented to specific communities that have congested roadway locations near schools.	$60,000–$80,000	Staff Survey	
T-2	Review and Analysis of Community Connections Shuttles	This study would consist of a review of shuttle services funded through the MPO Community Connections program to gain a better understanding of the various successes and challenges of the MPO's shuttle programs. Further, the study could pull data from all available shuttles to break down cost per rider, usage rates, GHG reductions, and other interesting/useful data points. The study is intended for MPO members and municipalities to enable decision-making regarding the long-term viability of the Community Connections shuttle program. Literature review and data analysis of current and past funded shuttle programs by the MPO; types of services offered; technology used by service; mapping of current shuttle service areas; data analysis of ridership, air quality, and equity impacts of the services; financial analysis of shuttle services; implementation, startup, and funding of shuttle services; long-term funding and successes; current needs and issues; interviews with current shuttle operators. This study would be used to evaluate the current success of funding shuttle services through the Community Connections program and could enable further discussion on the future viability of the program and whether the program is good in terms of cost/benefit.	$40,000–$60,000	Staff Survey	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
T-3	Toward Regional Transit Fare and Service Integration	This study would be an extension of the current MBTA Mobility Integrations study. Other regions have found success unifying multiple transit operators under a single fare schedule and enhancing interagency coordination on service, scheduling, and infrastructure. Such integrations make transit more user friendly by simplifying payment and provide a more cohesive transit network that encourages connections across a greater geographic area. These integrations may also make the transit system more equitable by enhancing service options for workers in transit-critical communities, who often have longer commutes that cross geographic, agency, and modal boundaries. This study would seek to determine best practices for initiating and implementing these integrations, and potentially identify specific considerations, concerns, and opportunities relevant to Greater Boston. This study would primarily involve identifying and researching regions where these kinds of intermodal and interagency integrations have been successful. This would include researching policy documentation, studying which integrations were implemented and how, and identifying challenges or missteps to avoid if such integrations are to take place in Greater Boston. If time and budget allow, this could also involve interviewing individuals from these regions/agencies (similar to the Mobility Integrations interviews). Current fare policies and service integrations among Greater Boston RTAs would also be examined. Interviews might also be applicable to this portion of the project to identify potential venues for this collaboration to take place and any specific concerns that agencies may have.	$40,000–$60,000	Staff Survey	
T-4		In our Boston Metro region (and our state), we do not have an overarching comprehensive transportation plan that notes where we believe there should be fixed route service, where there should be demand services, where there should be point-to-point services, and who should run these. The result is an array of disparate services that are urged to regionalize themselves and collaborate themselves, though often times so many separate town borders and agency differences make this challenging. In addition, this plethora of diverse transportation options still leave us with many gaps and inefficiencies. We should map out the most ideal transportation network, including its frequencies and also map out the most ideal plan for how we deal with the inevitable gaps in the network. This work should also lead to a better CPT–HST plan and enhance so many other planning efforts. Even MBTA Bus Network Redesign does not really indicate the most ideal network, rather it just seems to be based on what can they most easily achieve within limited resources. In addition to better planning processes, we can then best identify the funding mechanisms to carry out this plan and identify when we may be able to pool resources, blend and braid funds, and consider any legislative changes, if necessary. This is for the entire Boston MPO region, which includes many transit authorities and also an array of services in between. Such planning would also help us identify how we would deal with overlap in these areas and also gaps in services. I would also recommend that in this process, we look at the integration of paratransit with other demand response services.		Susan Barrett, Public Survey	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
T-5		**Context:** For a variety of reasons with which we are all familiar, increasing the use of transit is a goal of the BRMPO; but which parameters have larger impact on transit use? The new TDM contains many parameters, with some being new and some being different versions of parameters that were used in the previous TDM. **Proposed Study:** This would be a basic research study to explore which parameters and combinations of parameters have larger effects on transit usage (with a focus on EJ communities and/or communities with large populations of minorities and/or those with low incomes). The study would explore parameters that easily come to mind but it would also explore combinations of parameters that would not ordinarily come to mind. **Anticipated Outcomes:** Discovery/confirmation of the parameters and combination of parameters that have larger impacts on transit use could help in the design and selection of projects that increase the use of transit. It could also provide insight as to how to design projects that minimize the negative effects on the use of transit.		Len Diggins, Email	
T-6	Demographic Change and Transit Propensity in Eastern MA	Planners often use demographic data, among other tools, to project how people will travel around our area of responsibility. Typically, we expect that people in wealthier areas will use transit less, and that there is a significant difference in both demographics and land use between cities and suburbs. And while it is true that the Boston area is highly segregated, it is also true that American suburbs are changing and diversifying rapidly. In addition, the COVID-19 pandemic forced transit agencies to reconsider who their core markets are and who best to serve them. This study would seek to contextualize the pandemic-era shifts within a broader story of demographic change, and push planners to question (or reconfirm!) longstanding assumptions about who lives where and what they need. This study partially follows up on the work done in the FFY 2022 UPWP study "An Exploration of Destination Access and Transportation Cost Analyses." Among other things, that study examined demographic change from the 2010 Census to the 2020 Census, and used 2020 Census data to examine destination access for protected populations. We propose expanding the analysis to include the 2000 Census, giving a longer-term view of demographic change over time, and exploring the ability to use destination access tools and past transit schedule data to examine change in destination access over time. In turn, this analysis would be used to analyze the impact those changes might have on demand for transit. More details can be requested from MBTA staff.		Sandy Johnston, MBTA	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
T-7	Review of and Lessons From Transit Capital Construction Costs Research	In recent years there has been significant examination in the transit world of the problem of rising capital construction costs. This is particularly significant in light of investments being made as part of the Bipartisan Infrastructure Law (BIL), as well as the need to rehab significant parts of the MBTA's legacy infrastructure; invest in resiliency; and prepare for fleet electrification. We propose a study focused on examining recent research and findings on this topic and making high-level recommendations to the MBTA and other relevant stakeholders for how to streamline construction and lower costs. Sources could include the NYU Transit Costs Project and Eno Center report on the same topic. The study could also include interviews with experts in the field and people working on capital construction at the MBTA and other agencies.		Sandy Johnston, MBTA	
RESILIENCE					
R-1	Modeling Evacuation Routes	Use flood risk data to determine what infrastructure might fail at a given risk level; model transportation flows when that infrastructure is unavailable. The Massachusetts Coastal Flood Risk Model would be used to identify infrastructure at risk of flooding. The Travel Demand Model networks would be updated to reflect the infrastructure unavailable during floods to examine how travel patterns would change in response. Anticipated outcomes include a report of findings and potential identification of key evacuation routes.	$80,000–$100,000	Staff Survey	
R-2	Strategies for Environmental Outreach and Engagement	The MPO is well-positioned to connect different types of stakeholders around shared interests and facilitate collaboration throughout the region on transportation planning topics, including the key goal areas of climate resiliency and equity. To bring more representation of environmental, EJ, and resiliency topics and perspectives into our work, it is important to understand the various efforts and interests currently operating in this space, and to build relationships with practitioners and other interested parties. A first step to building these connections and expanding collaboration on environmental and resiliency themes is to determine the most effective engagement strategies for the MPO to pursue. Doing so would support the current UPWP's themes of resiliency, equity, and uncertainty by bringing environmental practitioners to the table who have not historically been engaged in MPO work. This study would support and advance both the resiliency and engagement programs, which currently lack capacity to build in this work at the program level. Surveys and interviews to connect with local environmental advocacy and environmental justice groups as well as municipal-level environmental departments to understand how resiliency practitioners would like to be engaged in MPO work. • Literature review and interview methodology to evaluate environmental engagement strategies employed by other MPOs in Massachusetts and elsewhere. • Invite environmental stakeholders to existing MPO events such as Regional Transportation Advisory Council or Transit Working Group meetings to assess different engagement platforms. • Equitable engagement approaches such as compensation in order to reach a more diverse range of stakeholders. Report outlining the benefits and obstacles associated with different approaches to environmental engagement, a list of Boston Region groups and departments interested in engaging with the MPO, and recommendations on environmental engagement best practices, strategies, and platforms to be utilized by MPO staff in future work.	$20,000–$40,000	Judy Taylor and Stella Jordan, Staff Survey	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
R-3	MPO Support for Transportation Network Electrification	This would be a research project to inform the MPO and its partners (municipalities, transportation agencies, and others) about the challenges and opportunities related to electrifying various aspects of the region's transportation system (electric automobiles, trucks, bikes, and transit vehicles). The goal would be to guide the MPO as it makes investments to meet objectives in its Clean Air and Healthy Communities Goal area. This research could cover • Processes involved in investing in and maintaining charging stations or e-bike locks • Roles that municipalities, transit agencies, state or federal agencies, and the private sector play in electrifying the transportation system (particularly in Massachusetts) • Ways that MPOs around the United States have supported the electrification of the transportation systems (use of federal funds, projects and programs implemented, etc.) • Equity considerations related to electrifying the transportation system • Commonwealth plans for supporting electrification of the transportation system, and how the MPO could be involved in implementing these plans. • Explore existing charging facilities for distribution, availability, methods used to themselves (websites, Google search), types of plugs, charging speed, cost, and other rules of service. • Analysis to identify current gaps in access to charging infrastructure • Implications of electrification for utilities/impacts to the grid • Review of the air quality benefits of electrification The output of this study could be a report similar to "Connected and Autonomous Vehicles and the Boston MPO—A First Look" (2017) and "Promising Greenhouse Gas Reduction Strategies for the Boston Region" (2018). This report would be geared towards helping MPO members understand key issues related to transportation system electrification. Depending on the results of this research, future studies could support the development of guidebooks.	$50,000		Michelle Scott, Judy Taylor

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TECHNICAL SUPPORT and OTHER					
TRANSIT EQUITY					
TE-1	Applying Conveyal to TIP Project Scoring	This study would create a process and a baseline set of resources that could be used to score TIP projects using the Conveyal destination access analysis application. It would be geared towards helping the MPO select projects that will help it achieve objectives in its Access and Connectivity goal area. Staff would build on experiences using Conveyal for the Identifying Transportation Inequities in the Boston Region Baseline Inequities Study while exploring new ways to use this tool, particularly to represent projects and how they might affect the destinations people in the region can access within a given time frame. Staff could conduct a literature review to understand how other planning agencies have used Conveyal to assess project benefits and impacts. Staff would then use lessons and ideas from this review to set up a Conveyal deployment that reflects assumptions about the roadway and transit network for a specific timeframe (e.g., a five-year TIP development cycle). Next, staff would explore ways to reflect projects of various types (complete streets, intersection improvements, etc.) in Conveyal and run analyses to show how destination access outcomes metrics would change if a project or a group of projects were implemented. Staff would document approaches for representing projects in Conveyal and identify destination access metrics and parameters that could be helpful to incorporate into updates to the MPO's TIP criteria and scoring processes. Staff would also develop methodology adapted from the Identifying Transportation Inequities study to analyze access for different demographic groups. Throughout this project, staff could consult with MassDOT OTP staff, the Conveyal development team, and other RTAs in Massachusetts about how to use Conveyal to assess project benefits and impacts. Outcomes could include • A deployment of Conveyal that includes Open Street Map and GTFS inputs to represent the transportation network • Test results from Conveyal analyses that reflect candidate TIP projects • Documentation of a methodology to analyze proposed TIP projects in Conveyal • Potentially a short memo describing lessons learned during the process and considerations of how to use these tools as part of project scoring. • A presentation for the MPO describing the study process and the kinds of Conveyal outputs that can be used in project scoring.	$70,000	Michelle Scott, Betsy Harvey, Logan Casey, Ethan Lapointe	

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TE-2	Identify transit options that match transportation-underserved workers with transportation-underserved employers in transportation-underserved areas.	**Objective** The goal of this proposed study is to ensure that Massachusetts offers transportation services that provide (1) environmental/energy/congestion benefits, (2) livability benefits (social and economic justice), (3) mobility equity, and (4) improved public and economic health. To achieve these, staff are recommending that UPWP conduct a study of transit options designed to match transportation-underserved workers with transportation-underserved employers, in transportation-underserved areas. The desired outcome is a set of models: well-researched, evidence-based, practicable examples for municipalities to use according to their unique circumstances. **Context** Transportation-underserved areas include rural and suburban communities with weak links to commuter rail and public transit (MBTA and/or RTAs). Also, in these communities, Chapter 40B and 40R requirements have resulted in substantial affordable developments, where those who need to work may have to rely on their own cars. Adding to residents who are financially vulnerable (especially single parents) are those students who are working while seeking credentials for secure employment, and retirees, whose pensions/Social Security may not be sufficient (e.g., the housing-cost burdened). Such residents are actually or potentially transportation-underserved workers. Operating in transportation-underserved areas are transportation-underserved employers. Not only in-town retail businesses but also large corporations in rural/suburban areas have difficulty finding and keeping employees.[1] In Massachusetts, entry-level jobs in the healthcare sector are an example: personal care aides, homecare aides, nurses/aides. Other entry-level jobs that are hard to fill include support staff and workers in food preparation and service. The goal is not simply to provide transportation to low-level workers but to assure that growth can occur because transportation nodes include education/training sites, dependent care sites (child care and adult day), and other sites that help workers not only keep jobs but gain skills. **Proposed Study Details** The UPWP study would be guided by the fundamental transportation principle of coverage, i.e., the study would incorporate coverage goals to ensure equity in the target region(s) and, hence, in the Commonwealth.[]) The study would focus on the transportation-underserved, across residents, businesses, and geographic areas; that is, transportation-underserved workers, employers, and municipalities (see details below).			

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TE-2 (cont.)	Identify transit options that match transportation-underserved workers with transportation-underserved employers in transportation-underserved areas.	**Transportation-underserved workers are those** • already engaged in job-designed education/training/apprenticeships; • seeking a job (may include the prior group); • seeking transition from part- to full-time employment (e.g., students); • working second, third, and/or weekend shifts; and • returning/needing to work (e.g., single heads of household, retirees). The goal of the proposed transit network is to help fill high demand jobs such as personal care aides, home health aides, nursing assistants, school support staff, and food prep and serving. Illustrations from BLS.gov data on Massachusetts employment include examples of certificate and/or entry-level jobs. NOTE: health services and education are the two biggest employers in the state (see details below). **Transportation-underserved employers include** • healthcare and related institutions (support staff, nursing assistants, home health aides); • major education/community/social service institutions (support and para-staff [e.g., substance abuse, behavioral, mental health counselors]; social and human service assistants; teacher aides and administrative support); • major food preparation and serving-related institutions (food prep and serving, including fast food; wait staff; support staff); • major building/grounds cleaning and maintenance businesses (janitors/cleaners; landscaping/groundskeeping); and • major personal care and service businesses (personal care aides; cosmetologist). **Transportation-underserved geographic areas** In many municipalities—rural towns and certain areas of suburban communities outside dense cities—transportation planning and service operations face variable and generally sparse population density. Commuting for non-drivers and access to jobs in evenings and on weekends are difficult. A number of rural towns offer no public transportation; in other towns, parking for commuter rail is constrained; and in most municipalities there are few walking/biking routes from residences to likely employment destinations. The MAGIC region of the state, for example, has been defined as a transportation desert. That appellation applies to a number of other similar regions.			

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TE-2 (cont.)	Identify transit options that match transportation-underserved workers with transportation-underserved employers in transportation-underserved areas.	**Potential Solutions** By incorporating the guiding principle of coverage in the study of transportation underserved (above), the UPWP study should provide the following innovative design solutions: a. Primary design innovation: inclusion of employment-supporting nodes in an origin-employment-destination transit model. b. Secondary design innovation: transit providers chosen to be predominantly hybrid or EVs (environmental/energy benefits); fares/subsidies encourage predominance of shared rides (reduction of congestion); integration with MBTA and RTAs (increase energy/congestion reduction benefits. c. Tertiary design innovation: Financial sustainability by multiple means of funding. **Each potential solution is described in more detail below.** The primary innovation is design of an Origin-Support-(Employment) Destination transit network model. There is compelling evidence that the workers who are this study's focus cannot succeed only with transportation to and from their jobs.[3] For instance, single-parent heads of household, workers such as students at second/third/weekend shift jobs, individuals returning to work, and retirees may also need dependent-care (child care, adult day care) sites, in order to hold a job or move from part-time to full-time employment with benefits. Thus, UPWP's primary innovation is creation of a transit network that enlarges the origin-destination model to include support nodes. In addition to dependent care sites, such nodes might include "layover stops" on certain days at grocery stores, pharmacies, banks for brief errands on the way home. They could also include designated education/training sites, at specific times, so that workers could gain/improve skills and students would have reliable transportation from school to work. The secondary innovation is design of environmental/energy/congestion benefits model. Participation as transit providers would require vendors to use hybrid/EV fleets as much as possible. Rider fees and subsidies would be designed to ensure predominance of shared rides. And, reliable integration with MBTA, commuter rail, and RTA fixed route schedules would further increase these benefits.			

(Table C-1 cont.)

ID	Project Name	Project Purpose and Outcome	Estimated Budget	Source	Staff Comments
TE-2 (cont.)	Identify transit options that match transportation-underserved workers with transportation-underserved employers in transportation-underserved areas.	The tertiary innovation is design of financial sustainability via multiple means of funding. Innovative transit systems like the one proposed require innovative financial support. Coverage goals, because they seek to assure equity as well as efficiency, will require subsidies. The origin-support-destination transit network can become financially sustainable by a variety of means: • Employer contributions (a stable, reliable workforce reduces the organizational costs of turnover, hiring, training) • Carbon offsets (by use of hybrid/EV) • Municipal contributions (town and cities with visible mobility for all are attractive to residents as well as businesses [4]) • Sliding scale rider fees • Transportation gift cards, coupons, etc. • Mass transit assessments • Grants **Anticipated Outcomes** The proposed UPWP study will produce models—well-researched, evidence-based, practicable examples for numerous municipalities to use and modify according to their unique circumstances. Because the principle of coverage informs the models, operationalizing them should help cities and towns to close systemic gaps in service, improving social and economic justice and providing greater mobility equity. Because the models are well-researched and evidence-based, operationalizing them should begin to improve data on public and economic health of the cities and towns. And, because the models are practicable, operationalizing them should show immediate environmental energy/congestion benefits. **NOTES** 1. Transit Means Business, Metropolitan Planning Council, Chicago, 2019. 2. "Public transport faces an increasingly intense conflict between patronage goals and coverage goals. Broadly speaking, patronage goals seek to maximize patronage of all types, while coverage goals lead to the provision of service despite low patronage, for example, to achieve social inclusion objectives. The conflict between these goals follows inevitably from the underlying structure of the public transport product, including both its costs and geometry. The tradeoff between patronage and coverage is [a value judgment] and the decision about how to balance social versus patronage goals [must be] made consciously rather than inadvertently, with a clear understanding of the consequences of the choice." By Jarrett Walker, McCormick Rankin Cag-ney, Level 13, 167 Macquarie Street, Sydney, NSW 2000, Australia © 2008 Elsevier Ltd. 3. See: http://fortune.com/2015/03/05/employees-loyalty-marriott/ 4. World Health Organization, Global age-friendly cities: a guide. 2007.			

Table C-2
Studies Funded in the UPWP, by Category, FFYs 2017–24

	FFY 2017	FFY 2018	FFY 2019	FFY 2020	FFY 2021	FFY 2022	FFY 2023	FFY 2024
Active Transportation	1	1	1	1	1	1	3	1
Land Use, Environment, and Economy	1	1	1	0	1	3	0	0
Roadway and Multimodal Mobility	4	5	6	4	5	5	1	1
Transit	1	2	1	3	2	1	4	0
Transportation Equity	–	–	0	1	0	1	4	1
Resilience	–	–	0	1	1	0	0	1
Other	1	1	1	1	3	1	0	0
Total	**8**	**10**	**10**	**11**	**13**	**12**	**12**	**4**



APPENDIX D

GEOGRAPHIC DISTRIBUTION OF UPWP STUDIES AND TECHNICAL ANALYSES

INTRODUCTION

This Appendix summarizes the Metropolitan Planning Organization (MPO)-funded work products produced by MPO staff (the Central Transportation Planning Staff) and the staff of the Metropolitan Area Planning Council (MAPC) during federal fiscal years (FFY) 2019 through 2023, as well as work products expected to be completed by the end of FFY 2023. The narrative below describes the methodology used to compile this information, as well as potential use cases for these data to inform and guide public involvement and regional equity considerations.

PURPOSE AND METHODOLOGY

PURPOSE

The purpose of this data collection is to better understand the geographic spread of Unified Planning Work Program (UPWP) work products (that is, reports and technical memoranda) throughout the Boston region. This analysis provides an initial glimpse at which communities and areas of the metropolitan region have benefited from transportation studies and analyses (or have received technical support) conducted by the MPO staff with continuing, comprehensive, and cooperative (3C) planning funds.

In addition, this Appendix includes a preliminary analysis of the distribution of MPO work products to minority populations, low-income populations, and people with limited English proficiency (LEP) based on their share of the population in each municipality. This is an initial approach to assess how MPO studies may benefit these populations. To further analyze this work, a pair of maps were developed that display the geographic spread of the 2023 work products. In the future, the development of the UPWP Study Recommendations Tracking Database, which will include these visualizations and the creation of an interactive online interface, will allow a more precise analysis of where and how study and analysis funds are spent.

Table D-1 presents a summary of UPWP tasks completed from FFY 2019 through FFY 2023 that resulted in benefits to specific municipalities, aggregated to the subregional level. Figure D-1 is a map that displays the 2023 results geographically. Table D-2 presents the information from Table D-1 disaggregated by municipality, and Figure D-2 maps these results. Studies that had a regional focus are presented in Table D-3.

The geographic distribution of UPWP studies (those benefiting specific communities and those benefiting a wider portion of the region) can inform the UPWP funding decisions made for each FFY. When considered in combination with other information, the geographic distribution of MPO-funded UPWP studies can help guide the MPO's public outreach to ensure that, over time, we are meeting needs throughout the region.

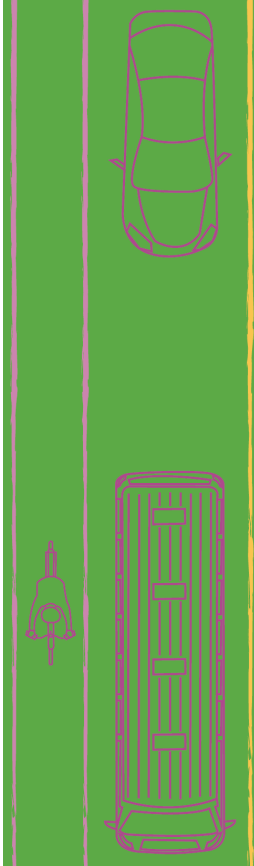


Table D-1
Summary of Distribution of Work Products by FFY and Subregion

Subregion	Number of Work Products						Demographics			
Name	FFY 2019	FFY 2020	FFY 2021	FFY 2022	FFY 2023	FFYs 2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP
ICC	26	17	14	20	46	123	1,759,970	48.2%	25.7%	16.2%
MAGIC	16	9	6	4	13	48	181,858	26.8%	9.0%	5.5%
MWRC	2	0	9	3	4	18	250,783	33.8%	14.8%	10.9%
NSPC	3	1	1	1	2	8	217,978	19.8%	10.5%	4.8%
NSTF	7	4	1	6	4	22	297,068	16.9%	17.4%	5.6%
SSC	3	3	1	9	2	18	224,764	17.5%	13.0%	4.3%
SWAP	0	0	3	1	1	5	149,159	19.6%	10.9%	5.2%
TRIC	15	14	10	10	7	56	275,614	29.1%	12.0%	6.9%
Regionwide Total	**72**	**48**	**45**	**54**	**79**	**298**	**3,357,194**	**36.5%**	**19.7%**	**11.5%**

Notes:

LEP is tabulated for the population aged five years and older, the minority population and population in poverty are for the entire region.

People who identify as minority are those who identify as a race other than White or as Hispanic or Latino/a/x.

Sources:

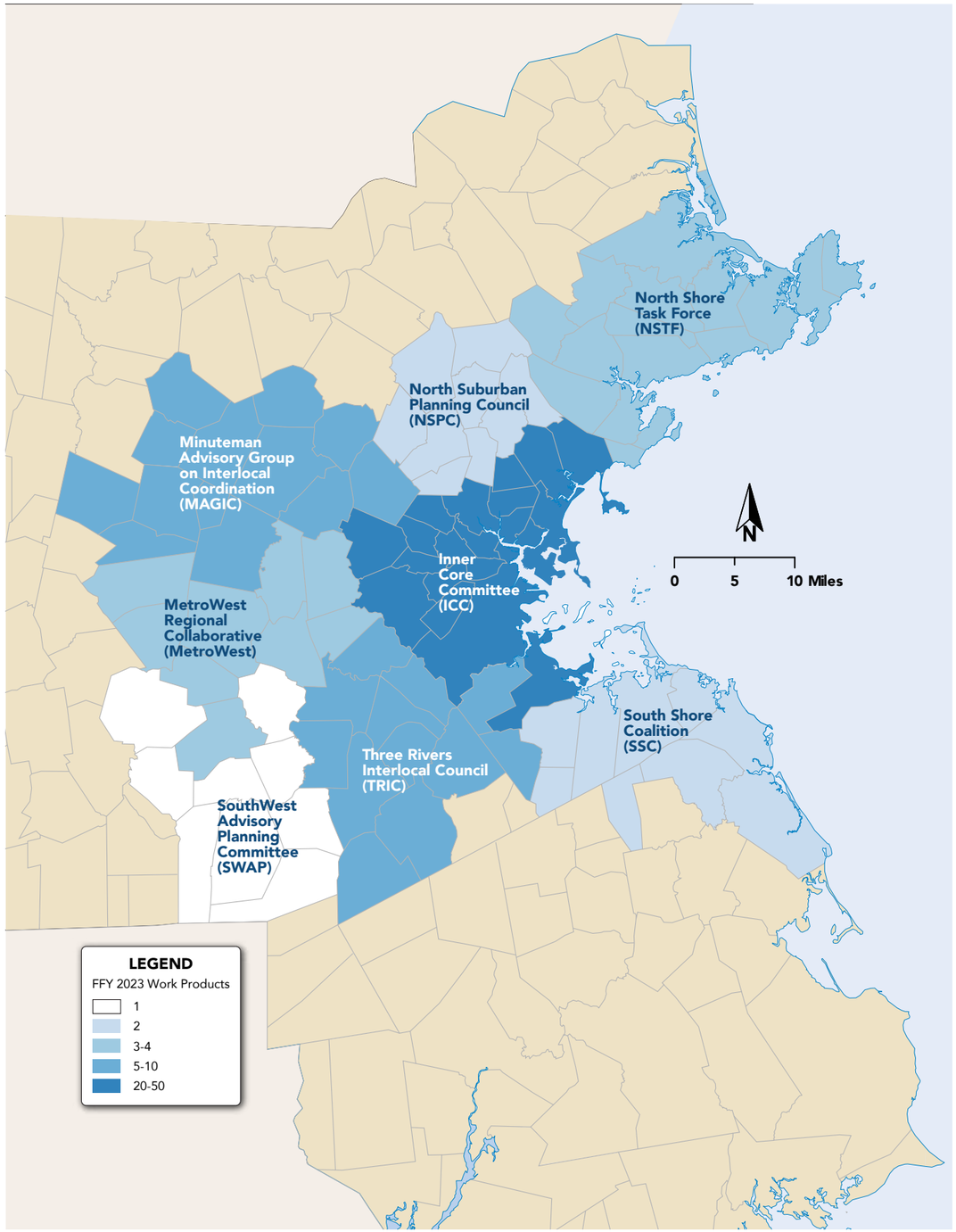
Minority population: U.S. Census Bureau; Decennial Census, Table P2 (Race); generated by CTPS; using api.census.gov (2023-03-27).

Low-income population: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table C17002 (Income Level), generated by CTPS; using api.census.gov; (2023-03-27).

People with LEP: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B16004 (Limited English Proficiency), generated by CTPS; using api.census.gov; (2023-03-27).

Median Household Income: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B19013 (Median Household Income), generated by CTPS; using api.census.gov; (2023-03-27).

Figure D-1
Map of 2023 Work Products by Subregion



METHODOLOGY

As noted above, this analysis examined FFYs 2019 through 2023. To generate information on the number of UPWP studies during these FFYs that benefitted specific cities and towns in the Boston region, MPO staff performed the following tasks:

- Reviewed all work products listed as complete in UPWPs from FFYs 2019 through 2023
- excluded all agency and other client-funded studies and technical analyses to focus the analysis on MPO-funded work only
- excluded all work products with a focus that was regional or not limited to a specific geography
- excluded all work related to certification requirements (Chapter 3), resource management, and support activities (Chapter 5), which consist of programs and activities that support the MPO, its staff operations, and its planning and programming activities
- compiled a count of all reports and technical memoranda completed specifically for one municipality or reports and technical memoranda directly benefiting multiple municipalities. In the case where multiple municipalities directly benefit from a report or technical memoranda, the work product was counted once for each municipality that benefited
- reviewed and discussed the status and focus of studies, technical memoranda, and reports with project managers and technical staff
- refreshed demographic data using 2020 Decennial Census counts and American Community Survey 2017–21 five-year estimates

PLANNING STUDIES AND TECHNICAL ANALYSES BY COMMUNITY

Table D-2 shows the number of completed MPO-funded UPWP work products from FFY 2019 through FFY 2023 that are determined to provide benefits to specific municipalities. Studies and technical analyses are grouped by the year in which they were completed, rather than the year in which they were first programmed in the UPWP. Examples of the types of studies and work in the table include the following:

- Bicycle and Pedestrian Support Activities
- Technical support for Regional Transit Service Planning
- Complete Streets analyses for specific municipalities
- Roadway Safety Audits

Figure D-2 maps these results for FFY 2023.

The data in the tables show that there is not a strong relationship between the percent of the population in municipalities who identify as minority and the number of studies conducted in the municipality since 2019. The same is true for the percent of the population in poverty, with LEP, or for median household income. This suggests that studies are not always distributed equitably; if they were, we would expect to see the number of studies increase with the percent of people who identify as minority, have a low income, or have LEP, and where there is a lower median income.

With regards to geographic distribution, the Inner Core Committee subregion (ICC), has had the most studies since 2019, with 557, but also the highest population, with 1,759,970 people. It also has the highest ratio of studies per person, followed by the Minuteman Advisory Group on Interlocal Coordination (Magic) and the Three Rivers Interlocal Council (TRIC). The South West Advisory Planning Committee (SWAP) has the lowest. This suggests that municipalities in the ICC, Magic, and TRIC subregions receive disproportionately more studies that municipalities in other subregions.

As the MPO considers studies to fund in future years, it should consider prioritizing funding in those municipalities that have received less funding in the past and where many minority, low-income, and/or people with LEP live.

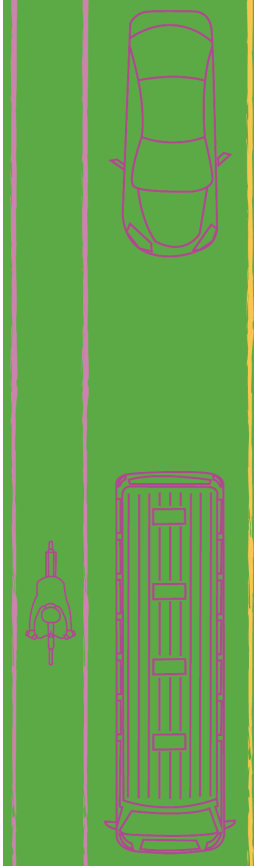


Table D-2
Number of UPWP Tasks by FFY and Municipality, Grouped by Subregion

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Arlington	2	1	0	0	3	6	46,308	24.80%	10.60%	6.60%	$125,701
Belmont	0	0	0	1	0	1	27,295	30.40%	9.40%	8.50%	$151,502
Boston	9	3	5	11	8	36	675,647	55.40%	31.60%	16.70%	$81,744
Brookline	1	3	0	1	2	7	63,191	34.70%	17.30%	9.10%	$122,356
Cambridge	1	1	0	0	2	4	118,403	44.60%	19.50%	7.90%	$112,565
Chelsea	1	2	1	0	3	7	40,787	79.80%	41.90%	41.30%	$64,782
Everett	1	2	0	0	3	6	49,075	65.90%	33.70%	31.40%	$71,510
Lynn	1	0	1	1	2	5	101,253	65.90%	33.90%	26.00%	$63,922
Malden	1	0	1	0	3	5	66,263	60.00%	31.80%	26.90%	$77,119
Medford	0	1	0	0	1	2	59,659	33.20%	18.10%	9.70%	$107,853
Melrose	0	0	1	0	2	3	29,817	20.40%	11.20%	5.50%	$125,229
Newton	0	1	0	1	2	4	88,923	29.90%	9.20%	6.40%	$164,607
Quincy	2	1	2	3	3	11	101,636	45.80%	23.80%	20.60%	$85,041
Revere	2	1	1	0	3	7	62,186	55.10%	32.10%	29.30%	$73,041
Saugus	0	0	0	0	0	0	28,619	24.90%	17.60%	6.70%	$93,737
Somerville	3	0	2	0	5	10	81,045	34.80%	20.80%	11.00%	$108,896
Waltham	1	0	0	1	0	2	65,218	39.60%	19.10%	10.20%	$103,498
Watertown	0	1	0	1	2	4	35,329	26.90%	14.30%	10.00%	$101,402
Winthrop	1	0	0	0	2	3	19,316	21.10%	16.10%	7.00%	$86,780
ICC Subtotals	**26**	**17**	**14**	**20**	**46**	**123**	**1,759,970**	**48.20%**	**25.70%**	**16.20%**	**N/A**

(Table D-2 cont.)

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Acton	3	3	0	0	1	7	24,021	36.90%	11.40%	8.90%	$138,163
Bedford	2	0	0	1	2	5	14,383	26.50%	8.40%	4.60%	$140,647
Bolton	1	0	0	0	0	1	5,665	13.50%	7.90%	2.00%	$167,132
Boxborough	1	0	0	0	0	1	5,506	32.90%	10.00%	5.40%	$136,875
Carlisle	1	0	0	0	0	1	5,237	21.20%	5.70%	1.60%	$216,000
Concord	1	1	2	1	3	8	18,491	18.20%	8.10%	3.30%	$169,335
Hudson	1	0	1	0	0	2	20,092	21.40%	14.80%	10.60%	$94,191
Lexington	1	1	1	1	1	5	34,454	43.30%	6.10%	7.00%	$202,852
Lincoln	1	1	1	0	1	4	7,014	23.80%	15.50%	2.10%	$145,833
Littleton	1	1	0	0	1	3	10,141	16.90%	11.30%	2.00%	$140,511
Maynard	1	1	0	0	1	3	10,746	17.00%	10.90%	5.00%	$112,432
Stow	1	0	0	0	0	1	7,174	14.30%	6.50%	2.20%	$147,841
Sudbury	1	1	1	1	3	7	18,934	19.10%	3.70%	2.30%	$217,847
MAGIC Subtotals	**16**	**9**	**6**	**4**	**13**	**48**	**181,858**	**26.80%**	**9.00%**	**5.50%**	**N/A**
Ashland	0	0	1	0	1	2	18,832	31.50%	11.50%	9.20%	$115,959
Framingham	2	0	1	1	2	6	72,362	46.30%	21.10%	17.90%	$90,638
Holliston	0	0	1	0	0	1	14,996	15.80%	8.30%	4.30%	$142,348
Marlborough	0	0	1	0	0	1	41,793	40.90%	22.10%	14.90%	$86,230
Natick	0	0	1	1	0	2	37,006	24.40%	10.80%	7.80%	$122,914
Southborough	0	0	1	0	0	1	10,450	24.50%	8.50%	5.40%	$170,223

(Table D-2 cont.)

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Wayland	0	0	1	1	0	2	13,943	23.20%	5.60%	4.40%	$203,789
Wellesley	0	0	1	0	0	1	29,550	26.70%	7.40%	4.40%	$226,250
Weston	0	0	1	0	1	2	11,851	26.00%	12.30%	4.60%	$220,815
MWRC Subtotals	**2**	**0**	**9**	**3**	**4**	**18**	**250,783**	**33.80%**	**14.80%**	**10.90%**	**N/A**
Burlington	1	0	0	0	0	1	26,377	30.00%	11.70%	5.20%	$124,755
Lynnfield	0	0	0	0	0	0	13,000	13.50%	10.00%	2.90%	$147,237
North Reading	0	0	0	0	0	0	15,554	11.50%	7.00%	2.60%	$123,813
Reading	0	0	0	0	0	0	25,518	12.80%	8.10%	2.60%	$145,552
Stoneham	0	0	0	0	0	0	23,244	18.60%	12.10%	6.00%	$105,541
Wakefield	0	0	1	1	2	4	27,090	14.30%	11.20%	3.10%	$110,372
Wilmington	1	1	0	0	0	2	23,349	13.80%	8.50%	2.20%	$146,250
Winchester	0	0	0	0	0	0	22,970	25.40%	7.20%	5.70%	$184,844
Woburn	1	0	0	0	0	1	40,876	27.20%	14.60%	8.80%	$95,184
NSPC Subtotals	**3**	**1**	**1**	**1**	**2**	**8**	**217,978**	**19.80%**	**10.50%**	**4.80%**	**N/A**
Beverly	1	1	0	1	1	4	42,670	15.40%	19.60%	4.50%	$89,882
Danvers	1	0	0	1	0	2	28,087	12.70%	12.50%	3.60%	$105,654
Essex	1	0	0	0	0	1	3,675	7.50%	18.80%	1.00%	$116,027
Gloucester	0	0	0	0	0	0	29,729	11.70%	20.30%	4.30%	$82,984
Hamilton	1	0	0	0	0	1	7,561	11.10%	12.60%	2.00%	$116,699
Ipswich	0	0	0	0	0	0	13,785	9.00%	14.40%	1.70%	$111,701

(Table D-2 cont.)

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Manchester-by-the-Sea	1	0	0	1	1	3	5,395	6.70%	5.60%	1.20%	$193,279
Marblehead	0	0	0	0	0	0	20,441	9.20%	9.20%	2.60%	$154,049
Middleton	0	0	0	0	0	0	9,779	15.70%	9.30%	5.00%	$155,482
Nahant	0	0	0	0	0	0	3,334	9.00%	12.80%	2.10%	$99,456
Peabody	1	1	0	1	0	3	54,481	22.70%	18.20%	9.60%	$83,570
Rockport	0	0	0	0	0	0	6,992	6.90%	13.40%	0.40%	$88,377
Salem	1	1	1	2	2	7	44,480	31.50%	28.90%	8.70%	$72,884
Swampscott	0	1	0	0	0	1	15,111	14.20%	12.80%	9.40%	$114,086
Topsfield	0	0	0	0	0	0	6,569	10.00%	9.90%	1.40%	$155,208
Wenham	0	0	0	0	0	0	4,979	12.60%	6.90%	2.70%	$154,375
NSTF Subtotals	**7**	**4**	**1**	**6**	**4**	**22**	**297,068**	**16.90%**	**17.40%**	**5.60%**	**N/A**
Braintree	0	1	0	1	1	3	39,143	29.90%	11.90%	9.60%	$114,916
Cohasset	0	0	0	1	0	1	8,381	7.20%	8.50%	0.00%	$156,689
Hingham	2	1	1	2	0	6	24,284	8.50%	8.30%	2.10%	$154,300
Holbrook	0	0	0	0	0	0	11,405	34.40%	14.10%	3.60%	$89,763
Hull	0	0	0	1	1	2	10,072	8.30%	10.30%	0.70%	$117,120
Marshfield	0	0	0	1	0	1	25,825	6.80%	14.40%	0.40%	$109,841
Norwell	1	1	1	1	0	4	11,351	8.80%	5.30%	1.60%	$172,022
Rockland	0	0	0	0	0	0	17,803	17.50%	18.40%	4.00%	$90,315
Scituate	0	0	0	1	0	1	19,063	6.60%	8.20%	2.40%	$129,132

(Table D-2 cont.)

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Weymouth	0	0	0	1	0	1	57,437	22.60%	17.60%	6.20%	$91,592
SSC Subtotals	**3**	**3**	**1**	**9**	**2**	**18**	**224,764**	**17.50%**	**13.00%**	**4.30%**	**N/A**
Bellingham	0	0	0	0	0	0	16,945	14.60%	13.50%	3.90%	$109,042
Franklin	0	0	0	0	0	0	33,261	14.90%	10.10%	2.70%	$127,608
Hopkinton	0	0	0	0	0	0	18,758	26.80%	7.00%	2.40%	$179,192
Medway	0	0	0	1	1	2	13,115	11.70%	9.30%	1.50%	$147,257
Milford	0	0	1	0	0	1	30,379	34.00%	18.30%	15.80%	$89,332
Millis	0	0	0	0	0	0	8,460	12.00%	11.80%	6.70%	$131,138
Norfolk	0	0	0	0	0	0	11,662	15.90%	3.40%	0.90%	$168,281
Sherborn	0	0	1	0	0	1	4,401	18.30%	3.60%	1.20%	$218,906
Wrentham	0	0	1	0	0	1	12,178	10.40%	8.20%	0.80%	$147,201
SWAP Subtotals	**0**	**0**	**3**	**1**	**1**	**5**	**149,159**	**19.60%**	**10.90%**	**5.20%**	**N/A**
Canton	1	3	0	1	1	6	24,370	27.10%	7.70%	5.10%	$118,814
Dedham	1	2	1	1	0	5	25,364	22.00%	14.30%	5.60%	$108,047
Dover	1	0	1	0	0	2	5,923	19.20%	2.40%	3.20%	$250,001
Foxborough	1	2	1	0	0	4	18,618	16.40%	17.50%	3.90%	$95,410
Medfield	1	0	1	0	0	2	12,799	12.50%	7.50%	1.10%	$196,820
Milton	2	1	3	2	1	9	28,630	29.00%	12.70%	4.60%	$153,971
Needham	2	0	0	1	1	4	32,091	18.90%	6.60%	4.70%	$182,813
Norwood	2	2	1	2	2	9	31,611	27.50%	16.30%	10.50%	$96,414

(Table D-2 cont.)

Municipality	Number of Work Products						Demographics				
	2019	2020	2021	2022	2023	2019-23 Total	Total Population	Percent Minority	Percentage of Residents in Poverty	Percentage of Residents with LEP	Median Income
Randolph	1	0	0	1	1	3	34,984	73.40%	22.50%	18.90%	$87,869
Sharon	1	0	0	0	1	2	18,575	33.20%	3.70%	5.80%	$157,928
Walpole	1	2	1	1	0	5	26,383	17.10%	10.40%	3.00%	$138,821
Westwood	1	2	1	1	0	5	16,266	17.20%	6.30%	3.80%	$171,071
TRIC Subtotals	**15**	**14**	**10**	**10**	**7**	**56**	**275,614**	**29.10%**	**12.00%**	**6.90%**	**N/A**
Grand Total	**72**	**48**	**45**	**54**	**79**	**298**	**3,357,194**	**36.50%**	**19.70%**	**11.50%**	**N/A**

Notes:

Limited English proficiency is tabulated for the population aged five and older, the minority population and population in poverty are for the entire region.

People who identify as minority are those who identify as a race other than White or as Hispanic or Latino/a/x.

Sources:

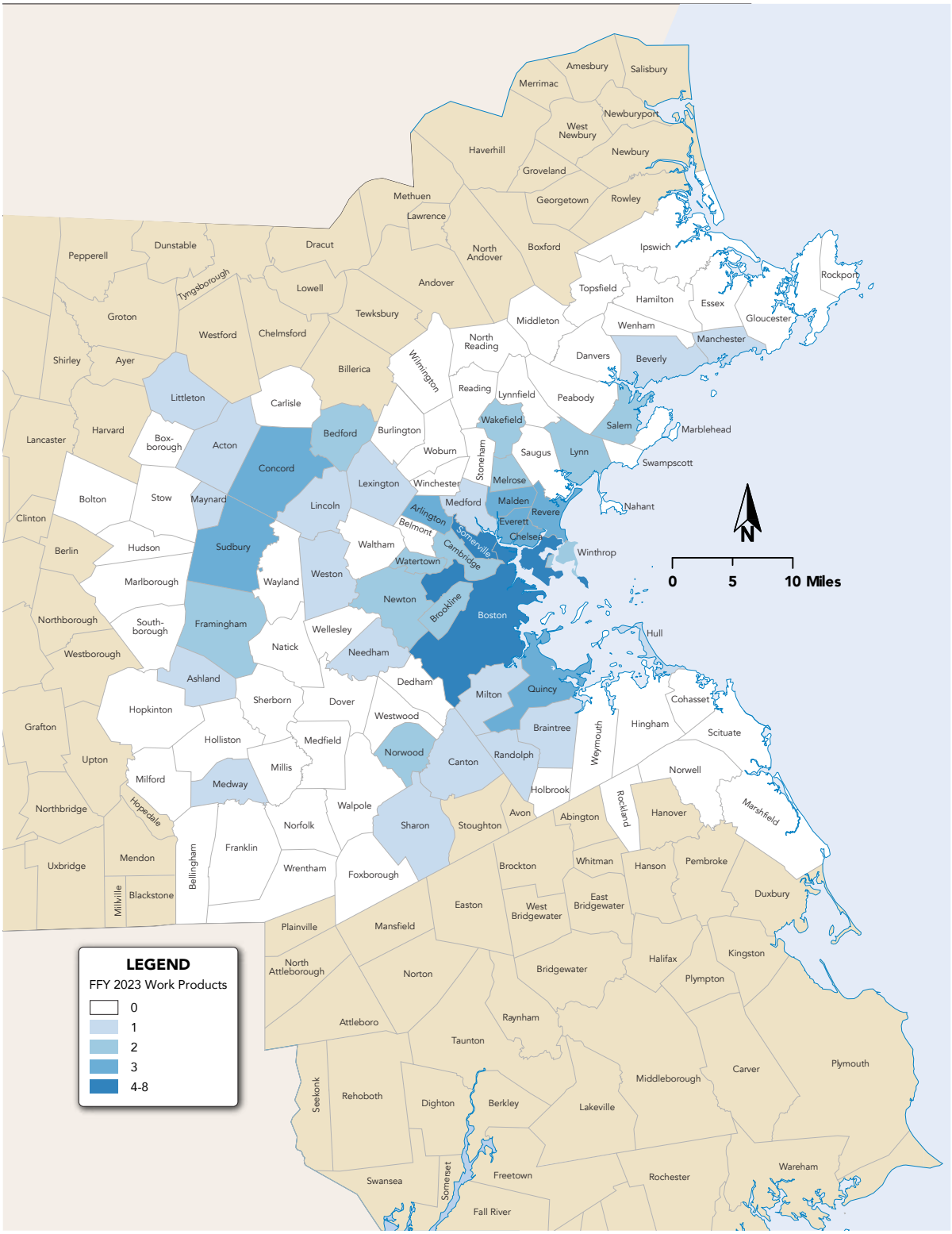
Minority population: U.S. Census Bureau; Decennial Census, Table P2 (Race); generated by CTPS; using api.census.gov (2023-03-27).

Low-income population: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table C17002 (Income Level), generated by CTPS; using api.census.gov; (2023-03-27).

People with LEP: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B16004 (Limited English Proficiency), generated by CTPS; using api.census.gov; (2023-03-27).

Median Household Income: U.S. Census Bureau; American Community Survey, 2017-2021 American Community Survey 5-Year Estimates, Table B19013 (Median Household Income), generated by CTPS; using api.census.gov; (2023-03-27).

Figure D-2
Map of 2023 UPWP Tasks by Municipality



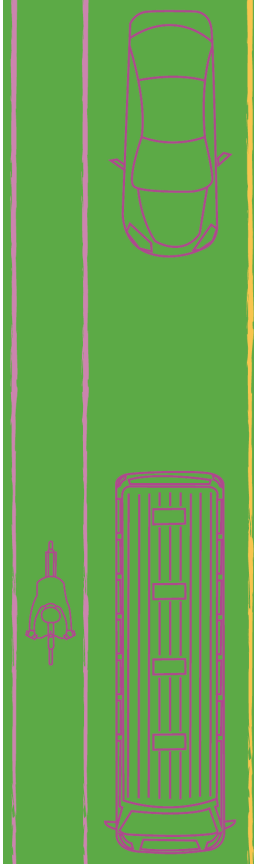
REGIONWIDE PLANNING STUDIES AND TECHNICAL ANALYSES

In addition to work that benefits specific municipalities, many projects funded by the MPO through the UPWP have a regional focus. Table D-3 lists MPO-funded UPWP studies completed from 2019 through 2023 that were regional in focus, meaning that they provided benefit to multiple communities and types of municipalities. Some regionally focused studies may have work products that overlap with those analyzed in the tables above.

More information on these studies and other work can be found on the MPO's website (https://www.bostonmpo.org/recent_studies) or by contacting Srilekha Murthy, UPWP Manager, at smurthy@ctps.org.

Table D-3
Regionally Focused MPO-Funded UPWP Studies

FFY 2023	
CTPS	**MAPC**
• Update Bicycle/Pedestrian Count Database • Flexible Fixed-Route Bus Service • Transit Modernization Program • Lab and Municipal Parking Study • Learning from Roadway Pricing Experiences	
FFY 2022	
CTPS	**MAPC**
• Trip Generation Follow-up • Travel Demand Management Follow-up • The Future of the Curb Phase 3 • Identifying Transportation Inequities in the Boston Region • Staff-Generated Research Topics	• MetroCommon 2050: Greater Boston's Next Regional Vision

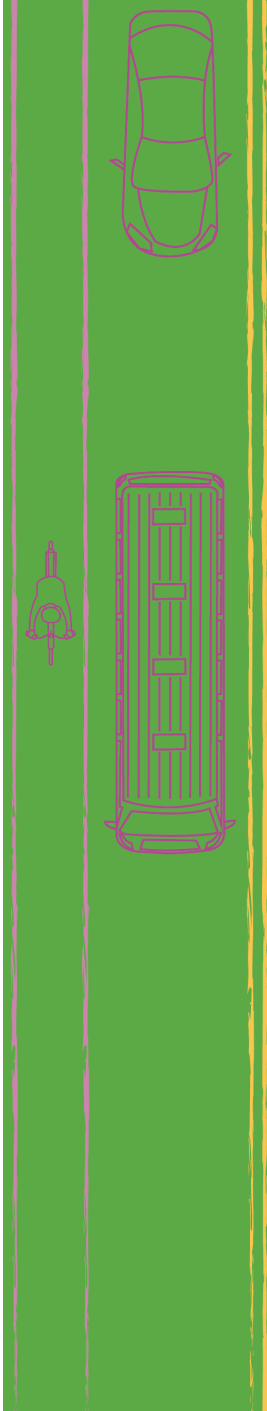


(Table D-3 cont.)

FFY 2021	
CTPS	**MAPC**
• Improving Pedestrian Variables in the Travel Demand Model • Regional TDM Strategies • Trip Generation Rate Research • Access to CBDs Phase 2 • The Future of the Curb Phase 2 • Multimodal Resilience and Emergency Planning • MPO Staff-Generated Research Topics • Mapping Major Transportation Infrastructure Projects in the Boston Region • Exploring Resilience in MPO-Funded Corridor and Intersection Studies	• Rideshare Electrification Working Group • Impacts of E-commerce in Massachusetts • Planning Successful Bus Priority • Projects in Greater Boston • MetroCommon Regional Plan Development
FFY 2020	
CTPS	**MAPC**
• Operating a Successful Shuttle Program • Further Development of the MPOs Community Transportation Program • Disparate Impact Metrics Analysis • Pedestrian Report Card Assessment Dashboard • Innovations in Estimating Trip Generation Rates • Review of Vision Zero Strategies	• Participation in Rail Vision Study • Participation in East-West Rail Study • MetroCommon Regional Plan Development • Review of Institute of Traffic Engineers Trip Generation Estimates • Inventory of National TNC Fee Structures • Analysis of How Local and State Governments in North America Use TNC Data for Regulation • Literature Review of Initiatives to Incentivize Zero Emission TNC Vehicles

(Table D-3 cont.)

FFY 2019	
CTPS	**MAPC**
• Pedestrian Report Card Assessment Dashboard • New and Emerging Metrics for Roadway Usage • The Future of the Curb • Updates to Express-Highway Volumes Charts	• Coordination and convening of municipalities to implement recommendations of water transportation study • MetroCommon Regional Plan for smart growth and regional prosperity, including extensive stakeholder outreach and public engagement • Support for Bluebike bikeshare system, Lime dockless bikeshare system, and support for coordinated regulation of electric scooters • Analysis of Transportation Network Company trips from varying data sources



USES FOR THE DATA

MPO staff collects these data annually. These data can potentially be used to inform UPWP funding decisions and could be used in concert with other data in the following future analyses:

- Compare the number of tasks per community to the presence and size of a municipal planning department in each city and town.
- Examine the use of different measures to understand the geographic distribution of benefits derived from funding programmed through the UPWP. For example, in addition to analyzing the number of tasks per community, the MPO could consider the magnitude of benefits that could be derived from UPWP studies (such as congestion reduction or air quality improvement).
- Examine in greater detail the geographic distribution of UPWP studies and technical analyses per subregion or per MAPC community type to understand the type of tasks being completed and how these compare to municipally identified needs.
- Examine the number of tasks per community and compare the data to the number of road miles or amount of transit service provided in the municipality.
- Develop graphics illustrating the geographic distribution of UPWP studies and spending and map that distribution relative to Environmental Justice and Transportation Equity concern areas.
- Compare the number of tasks directly benefiting each municipality with the geographic distribution of transportation needs identified in the upcoming Long-Range Transportation Plan (LRTP), *Destination 2050*. The transportation needs of the region for the next 25 years are identified and organized in the LRTP according to the MPO's goal areas, which are
    - Equity,
    - Safety,
    - Mobility and Reliability,
    - Access and Connectivity,
    - Resiliency, and
    - Clean Air and Healthy Communities.
- Compare the data analyzed in this appendix to the data collected through the MPO's UPWP Study Recommendations Tracking Database, which classifies tasks differently and provides a higher level of detail but is reliant on provision of data by municipalities.

Analyses such as these would provide the MPO with a clearer understanding of how the work programmed through the UPWP addresses the needs of the region.



Photo courtesy of MOTT, by Kindra Clineff



APPENDIX E

REGULATORY AND POLICY FRAMEWORK

This appendix contains detailed background on the regulatory documents, legislation, and guidance that shape the Boston Region Metropolitan Planning Organization's (MPO) transportation planning process.

REGULATORY FRAMEWORK

The Boston Region MPO is charged with executing its planning activities in line with federal and state regulatory guidance. Maintaining compliance with these regulations allows the MPO to directly support the work of these critical partners and ensures its continued role in helping the region move closer to achieving federal, state, and regional transportation goals. This appendix describes all of the regulations, policies, and guidance taken into consideration by the MPO during development of the certification documents and other core work the MPO will undertake during federal fiscal year (FFY) 2024.

FEDERAL REGULATIONS AND GUIDANCE

The MPO's planning processes are guided by provisions in federal transportation authorization bills, which are codified in federal statutes and supported by guidance from federal agencies. The Bipartisan Infrastructure Law (BIL), signed into law on November 15, 2021, replaced the Fixing America's Surface Transportation (FAST) Act as the nation's five-year surface transportation bill, and covers FFYs 2022–26. This section describes new provisions established in the BIL as well as items established under previous bills, such as the FAST Act.

Fixing America's Surface Transportation (FAST) Act: National Goals

The purpose of the national transportation goals, outlined in Title 23, section 150, of the United States Code (23 USC § 150), is to increase the accountability and transparency of the Federal-Aid Highway Program and to improve decision-making through performance-based planning and programming. The national transportation goals include the following:

1. **Safety:** Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2. **Infrastructure condition:** Maintain the highway infrastructure asset system in a state of good repair
3. **Congestion reduction:** Achieve significant reduction in congestion on the National Highway System
4. **System reliability:** Improve efficiency of the surface transportation system
5. **Freight movement and economic vitality:** Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development

6. **Environmental sustainability:** Enhance performance of the transportation system while protecting and enhancing the natural environment
7. **Reduced project delivery delays:** Reduce project costs, promote jobs and the economy, and expedite movement of people and goods by accelerating project completion by eliminating delays in the project development and delivery process, including by reducing regulatory burdens and improving agencies' work practices

The Boston Region MPO has incorporated these national goals, where practicable, into its vision, goals, and objectives, which provide a framework for the MPO's planning processes. More information about the MPO's vision, goals, and objectives is included in Chapter 1.

FAST Act: Planning Factors

The MPO gives specific consideration to the federal planning factors, described in Title 23, section 134, of the US Code (23 USC § 134), when developing all documents that program federal transportation funds. In accordance with the legislation, studies and strategies undertaken by the MPO shall

1. Support the economic vitality of the metropolitan area, especially by enabling global competition, productivity, and efficiency
2. Increase the safety of the transportation system for all motorized and nonmotorized users
3. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users
4. Increase accessibility and mobility of people and freight
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize preservation of the existing transportation system
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
10. Enhance travel and tourism

The Boston Region MPO has also incorporated these federal planning factors into its vision, goals, and objectives. Table E-1 shows the relationships between FFY 2023 MPO studies and activities and these federal planning factors.



Photo courtesy of Susana Hey, MBTA

Table E-1
FFY 2024 3C-Funded UPWP Studies and Programs–Relationship to Federal Planning Factors

	Federal Planning Factor	3C-funded Certification Activities																Ongoing Technical Assistance			New and Recurring 3C-funded Planning Studies*				Administration and Resource Management		MAPC Activities								
		Support to the MPO and its Committees	General Editorial	General Graphics	Public Engagement Program	Long-Range Transportation Plan	Transportation Improvement Program	Performance-Based Planning and Programming	Air Quality Conformity and Support Activities	Unified Planning Work Program	Transportation Equity Program	Congestion Management Process	Multimodal Mobility Infrastructure Program	Freight Planning Support	Data Program	Transit Working Group Support	Bicycle and Pedestrian Support Activities	Climate Resiliency Program	Roadway Safety Audits	Community Transportation Technical Assistance (CTPS and MAPC)	Regional Transit Service Planning Technical Support	Strategies for Environmental Outreach and Engagement	Parking in Bike Lanes: Strategies for Safety and Prevention	Lab and Municipal Parking Phase II	Applying Conveyal to TIP Project Scoring	Computer Resource Management	Professional Development	Corridor/Subarea Planning Studies	Alternative Mode Planning and Coordination	MetroCommon 2050	Land-Use Development Project Reviews	MPO/MAPC Liaison Activities	UPWP Support	Land-use Data and Forecasts for Transportation Modeling	Subregional Support Activities
1	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.	●				●	●	●		●		●		●	●	●	●	●	●	●	●	●	●	●		●		●	●			●	●
2	Increase the safety of the transportation system for all motorized and nonmotorized users.	●				●	●	●		●	●	●	●				●	●	●	●	●			●				●	●		●	●		●
3	Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users.	●				●	●			●	●							●														●		
4	Increase accessibility and mobility of people and freight.	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●		●	●	●	●
5	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.	●			●	●	●	●	●	●	●	●			●		●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●
6	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.	●		●		●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●		●	●		●
7	Promote efficient system management and operation.	●				●	●	●	●	●		●	●	●	●	●			●	●	●	●	●					●	●		●	●		●
8	Emphasize the preservation of the existing transportation system.	●				●	●	●		●			●	●			●	●	●	●			●						●		●	●		●
9	Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation.	●				●	●	●	●	●			●					●	●	●			●	●	●			●		●	●	●			●
10	Enhance travel and tourism.	●				●	●			●		●					●			●	●									●			●		●

KENDALL
INBOUND TO ASHMONT & BRAINTREE
VIA PARK & DOWNTOWN CROSSING

FAST Act: Performance-Based Planning and Programming

The United States Department of Transportation (USDOT), in consultation with states, MPOs, and other stakeholders, established performance measures relevant to the national goals established in the FAST Act. These performance topic areas include roadway safety, transit system safety, National Highway System (NHS) bridge and pavement condition, transit asset condition, NHS reliability for both passenger and freight travel, traffic congestion, and on-road mobile source emissions. The FAST Act and related federal rulemakings require states, MPOs, and public transportation operators to follow performance-based planning and programming practices—such as setting targets—to ensure that transportation investments support progress towards these goals. See Chapter 3 for more information about how the MPO has and will continue to conduct performance-based planning and programming.

Bipartisan Infrastructure Law (BIL): Planning Emphasis Areas

On December 30, 2021, the Federal Highway Administration and Federal Transit Administration jointly issued updated planning emphasis areas for use in MPOs' transportation planning process, following the enactment of the BIL. Those planning emphasis areas include the following:

1. **Tackling the Climate Crisis—Transition to a Clean Energy, Resilient Future:** Ensure that transportation plans and infrastructure investments help achieve the national greenhouse gas (GHG) reduction goals of 50–52 percent below 2005 levels by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change.
2. **Equity and Justice40 in Transportation Planning:** Ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas.
3. **Complete Streets:** Review current policies, rules, and procedures to determine their impact on safety for all road users. This effort should work to include provisions for safety in future transportation infrastructure, particularly for those outside automobiles.
4. **Public Involvement:** Increase meaningful public involvement in transportation planning by integrating virtual public involvement tools into the overall public involvement approach while ensuring continued public participation by individuals without access to computers and mobile devices.
5. **Strategic Highway Network (STRAHNET)/US Department of Defense (DOD) Coordination:** Coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure needs for STRAHNET routes and other public roads that connect to DOD facilities.

6. **Federal Land Management Agency (FLMA) Coordination:** Coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.

7. **Planning and Environment Linkages:** Use a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals early in the transportation planning process, and use the information, analysis, and products developed during planning to inform the environmental review process.

8. **Data in Transportation Planning:** Incorporate data sharing and consideration into the transportation planning process.

1990 Clean Air Act Amendments

The Clean Air Act, most recently amended in 1990, forms the basis of the United States' air pollution control policy. The act identifies air quality standards, and the US Environmental Protection Agency (EPA) designates geographic areas as *attainment* (in compliance) or *nonattainment* (not in compliance) areas with respect to these standards. If air quality in a nonattainment area improves such that it meets EPA standards, the EPA may redesignate that area as being a *maintenance* area for a 20-year period to ensure that the standard is maintained in that area.

The conformity provisions of the Clean Air Act "require that those areas that have poor air quality, or had it in the past, should examine the long-term air quality impacts of their transportation system and ensure its compatibility with the area's clean air goals." Agencies responsible for Clean Air Act requirements for nonattainment and maintenance areas must conduct air quality conformity determinations, which are demonstrations that transportation plans, programs, and projects addressing that area are consistent with a State Implementation Plan (SIP) for attaining air quality standards.

Air quality conformity determinations must be performed for capital improvement projects that receive federal funding and for those that are considered regionally significant, regardless of the funding source. These determinations must show that projects in the MPO's Long-Range Transportation Plan (LRTP) and Transportation Improvement Program (TIP) will not cause or contribute to any new air quality violations; will not increase the frequency or severity of any existing air quality violations in any area; and will not delay the timely attainment of air quality standards in any area. The policy, criteria, and procedures for demonstrating air quality conformity in the Boston region were established in Title 40, parts 51 and 53, of the Code of Federal Regulations (40. C.F.R. 51, 40 C.F.R. 53).



On April 1, 1996, the EPA classified the cities of Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere, and Somerville as in attainment for carbon monoxide (CO) emissions. Subsequently, the Commonwealth established a CO maintenance plan through the Massachusetts SIP process to ensure that emission levels did not increase. While the maintenance plan was in effect, past TIPs and LRTPs included an air quality conformity analysis for these communities. As of April 1, 2016, the 20-year maintenance period for this maintenance area expired and transportation conformity is no longer required for carbon monoxide in these communities. This ruling is documented in a letter from the EPA dated May 12, 2016.

On April 22, 2002, the EPA classified the City of Waltham as being in attainment for CO emissions with an EPA-approved limited-maintenance plan. In areas that have approved limited-maintenance plans, federal actions requiring conformity determinations under the EPA's transportation conformity rule are considered to satisfy the conformity test. The MPO is not required to perform a modeling analysis for a conformity determination for carbon monoxide, but it has been required to provide a status report on the timely implementation of projects and programs that will reduce emissions from transportation sources—so-called transportation control measures—which are included in the Massachusetts SIP. In April 2022, the EPA issued a letter explaining that the carbon monoxide limited maintenance area in Waltham has expired. Therefore, the MPO is no longer required to demonstrate transportation conformity for this area, but the rest of the maintenance plan requirements, however, continue to apply, in accordance with the SIP.

On February 16, 2018, the US Court of Appeals for the DC Circuit issued a decision in *South Coast Air Quality Management District v. EPA*, which struck down portions of the 2008 Ozone National Ambient Air Quality Standards (NAAQS) SIP Requirements Rule concerning the ozone NAAQS. Those portions of the SIP Requirements Rule included transportation conformity requirements associated with the EPA's revocation of the 1997 ozone NAAQS. Massachusetts was designated as an attainment area in accord with the 2008 ozone NAAQS but as a nonattainment or maintenance area as relates to the 1997 ozone NAAQS. As a result of this court ruling, MPOs in Massachusetts must once again demonstrate conformity for ozone when developing LRTPs and TIPs.



Photo courtesy of Susana Hey, MBTA

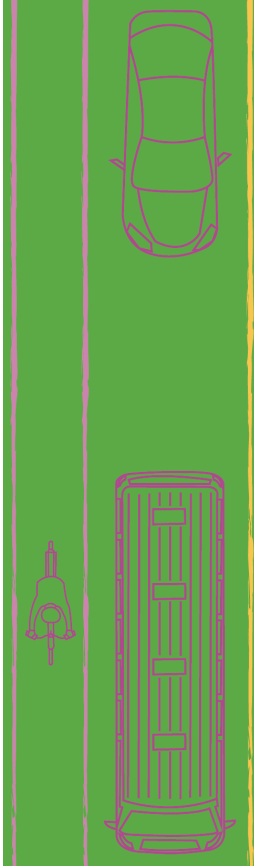
MPOs must also perform conformity determinations if transportation control measures (TCM) are in effect in the region. TCMs are strategies that reduce transportation-related air pollution and fuel use by reducing vehicle-miles traveled and improving roadway operations. The Massachusetts SIP identifies TCMs in the Boston region. SIP-identified TCMs are federally enforceable and projects that address the identified air quality issues must be given first priority when federal transportation dollars are spent. Examples of TCMs that were programmed in previous TIPs include rapid-transit and commuter-rail extension programs (such as the Green Line Extension in Cambridge, Medford, and Somerville, and the Fairmount Line improvements in Boston), parking-freeze programs in Boston and Cambridge, statewide rideshare programs, park-and-ride facilities, residential parking-sticker programs, and the operation of high-occupancy-vehicle (HOV) lanes.

In addition to reporting on the pollutants identified in the 1990 Clean Air Act Amendments, the MPOs in Massachusetts are also required to perform air quality analyses for carbon dioxide as part of the state's Global Warming Solutions Act (GWSA) (see below).

Nondiscrimination Mandates

The Boston Region MPO complies with Title VI of the Civil Rights Act of 1964, the American with Disabilities Act of 1990 (ADA), Executive Order 12898—*Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations* (EJ EO), and other federal and state nondiscrimination statutes and regulations in all programs and activities it conducts. Per federal and state law, the MPO does not discriminate on the basis of race, color, national origin (including limited-English proficiency), religion, creed, gender, ancestry, ethnicity, disability, age, sex, sexual orientation, gender identity or expression, veteran's status, or background. The MPO strives to provide meaningful opportunities for participation of all persons in the region, including those protected by Title VI, the ADA, the EJ EO, and other nondiscrimination mandates.

The MPO also assesses the likely benefits and adverse effects of transportation projects on equity populations (populations covered by federal regulations, as identified in the MPO's Transportation Equity program) when deciding which projects to fund. This is done through the MPO's project selection criteria. MPO staff also evaluate the projects that are selected for funding, in the aggregate, to determine their overall impacts and whether they improve transportation outcomes for equity populations. The major federal requirements pertaining to nondiscrimination are discussed below.



Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 requires that no person be excluded from participation in, be denied the benefits of, or be subjected to discrimination on the basis of race, color, or national origin, under any program or activity provided by an agency receiving federal financial assistance. Executive Order 13166–*Improving Access to Services for Persons with Limited English Proficiency*, dated August 11, 2000, extends Title VI protections to people who, as a result of their nationality, have limited English proficiency. Specifically, it calls for improved access to federally assisted programs and activities, and it requires MPOs to develop and implement a system through which people with limited English proficiency can meaningfully participate in the transportation planning process. This requirement includes the development of a Language Assistance Plan that documents the organization's process for providing meaningful language access to people with limited English proficiency who access their services and programs.

Environmental Justice Executive Order

Executive Order 12898, dated February 11, 1994, requires each federal agency to advance environmental justice by identifying and addressing any disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority and low-income populations.

On April 15, 1997, the USDOT issued its *Final Order to Address Environmental Justice in Minority Populations and Low-Income Populations*. Among other provisions, this order requires programming and planning activities to

- explicitly consider the effects of transportation decisions on minority and low-income populations;
- provide meaningful opportunities for public involvement by members of minority and low-income populations;
- gather (where relevant, appropriate, and practical) demographic information such as race, color, national origin, and income level of populations affected by transportation decisions; and
- minimize or mitigate any adverse impact on minority or low-income populations.

The 1997 Final Order was updated in 2012 with USDOT Order 5610.2(a), which provided clarification while maintaining the original framework and procedures.

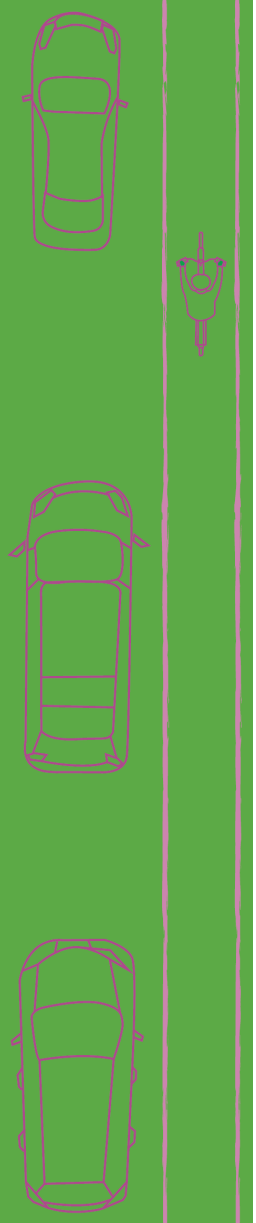
Americans with Disabilities Act

Title III of the ADA "prohibits states, MPOs, and other public entities from discriminating on the basis of disability in the entities' services, programs, or activities," and requires all transportation projects, plans, and programs to be accessible to people with disabilities. Therefore, MPOs must consider the mobility needs of people with disabilities when programming federal funding for studies and capital projects. MPO-sponsored meetings must also be held in accessible venues and be conducted in a manner that provides for accessibility. Also, MPO materials must be made available in accessible formats.

Other Nondiscrimination Mandates

The Age Discrimination Act of 1975 prohibits discrimination on the basis of age in programs or activities that receive federal financial assistance. In addition, the Rehabilitation Act of 1975, and Title 23, section 324, of the US Code (23 USC § 324) prohibit discrimination based on sex.





STATE GUIDANCE AND PRIORITIES

Much of the MPO's work focuses on encouraging mode shift and diminishing GHG emissions through improving transit service, enhancing bicycle and pedestrian networks, and studying emerging transportation technologies. All of this work helps the Boston region contribute to statewide progress towards the priorities discussed in this section.

Beyond Mobility

Beyond Mobility, the Massachusetts 2050 Transportation Plan, is a planning process that will result in a blueprint for guiding transportation decision-making and investments in Massachusetts in a way that advances MassDOT's goals and maximizes the equity and resiliency of the transportation system. MPO staff continue to coordinate with MassDOT staff so that *Destination 2050*, the MPO's next Long-Range Transportation Plan, is aligned with the Beyond Mobility plan.

Choices for Stewardship: Recommendations to Meet the Transportation Future

The Commission on the Future of Transportation in the Commonwealth—established by Massachusetts Governor Charlie Baker's Executive Order 579—published *Choices for Stewardship* in 2019. This report makes 18 recommendations across the following five thematic categories to adapt the transportation system in the Commonwealth to emerging needs:

1. Modernize existing transportation assets to move more people
2. Create a mobility infrastructure to capitalize on emerging transportation technology and behavior trends
3. Reduce transportation-related GHG emissions and improve the climate resiliency of the transportation network
4. Coordinate land use, housing, economic development, and transportation policy
5. Alter current governance structures to better manage emerging and anticipated transportation trends

Beyond Mobility will build upon the Commission report's recommendations. The Boston Region MPO supports these statewide goals by conducting planning work and making investment decisions that complement MassDOT's efforts and reflect the evolving needs of the transportation system in the region.

Massachusetts Strategic Highway Safety Plan

The *Massachusetts 2023 Strategic Highway Safety Plan* (SHSP) identifies the state's key safety needs and guides investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads. The SHSP establishes statewide safety goals and objectives and key safety emphasis areas, and it draws on the strengths of all highway safety partners in the Commonwealth to align and leverage resources to address the state's safety challenges collectively. The Boston Region MPO considers SHSP goals, emphasis areas, and strategies when developing its plans, programs, and activities.

Massachusetts Transportation Asset Management Plan

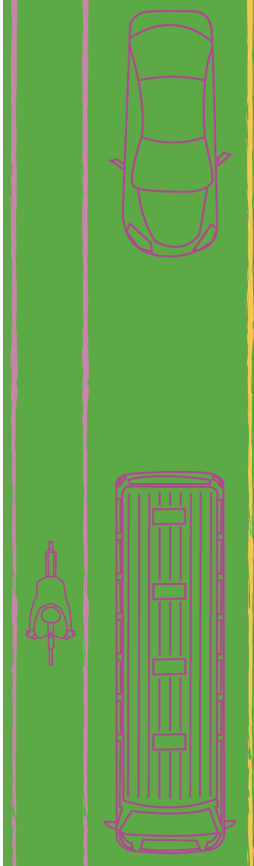
The Massachusetts Transportation Asset Management Plan (TAMP) is a risk-based asset management plan for the bridges and pavement that are in the NHS inventory. The plan describes the condition of these assets, identifies assets that are particularly vulnerable following declared emergencies such as extreme weather, and discusses MassDOT's financial plan and risk management strategy for these assets. The Boston Region MPO considers MassDOT TAMP goals, targets, and strategies when developing its plans, programs, and activities.

MassDOT Modal Plans

In 2017, MassDOT finalized the *Massachusetts Freight Plan*, which defines the short- and long-term vision for the Commonwealth's freight transportation system. In 2018, MassDOT released the related *Commonwealth of Massachusetts State Rail Plan*, which outlines short- and long-term investment strategies for Massachusetts' freight and passenger rail systems (excluding the commuter rail system). In 2019, MassDOT released the *Massachusetts Bicycle Transportation Plan and the Massachusetts Pedestrian Transportation Plan*, both of which define roadmaps, initiatives, and action plans to improve bicycle and pedestrian transportation in the Commonwealth. These plans were updated in 2021 to reflect new investments in bicycle and pedestrian projects made by MassDOT since their release. The MPO considers the findings and strategies of MassDOT's modal plans when conducting its planning, including through its Freight Planning Support and Bicycle/Pedestrian Support Activities programs.

Global Warming Solutions Act

The GWSA makes Massachusetts a leader in setting aggressive and enforceable GHG reduction targets and implementing policies and initiatives to achieve these targets. In keeping with this law, the Massachusetts Executive Office of Energy and Environmental Affairs (EEA), in consultation with other state agencies and the public, developed the *Massachusetts Clean Energy and Climate Plan for 2020*. This implementation plan, released on December 29, 2010 (and updated in 2015), establishes the following targets for overall statewide GHG emission reductions:



- 25 percent reduction below statewide 1990 GHG emission levels by 2020
- 80 percent reduction below statewide 1990 GHG emission levels by 2050

In 2018, EEA published its GWSA 10-year Progress Report and the GHG Inventory estimated that 2018 GHG emissions were 22 percent below the 1990 baseline level.

MassDOT fulfills its responsibilities, defined in the *Massachusetts Clean Energy and Climate Plan for 2020*, through a policy directive that sets three principal objectives:

1. To reduce GHG emissions by reducing emissions from construction and operations, using more efficient fleets, implementing travel demand management programs, encouraging eco-driving, and providing mitigation for development projects
2. To promote healthy transportation modes by improving pedestrian, bicycle, and public transit infrastructure and operations
3. To support smart growth development by making transportation investments that enable denser, smart growth development patterns that can support reduced GHG emissions

In January 2015, the Massachusetts Department of Environmental Protection amended Title 310, section 7.00, of the Code of Massachusetts Regulations (310 CMR 60.05), *Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation*, which was subsequently amended in August 2017. This regulation places a range of obligations on MassDOT and MPOs to support achievement of the Commonwealth's climate change goals through the programming of transportation funds. For example, MPOs must use GHG impact as a selection criterion when they review projects to be programmed in their TIPs, and they must evaluate and report the GHG emissions impacts of transportation projects in LRTPs and TIPs.

The Commonwealth's 10 MPOs (and three non-metropolitan planning regions) are integrally involved in supporting the GHG reductions mandated under the GWSA. The MPOs seek to realize these objectives by prioritizing projects in the LRTP and TIP that will help reduce emissions from the transportation sector. The Boston Region MPO uses its TIP project evaluation criteria to score projects based on their GHG emissions impacts, multimodal Complete Streets accommodations, and ability to support smart growth development. Tracking and evaluating GHG emissions by project will enable the MPOs to anticipate GHG impacts of planned and programmed projects. See Chapter 3 for more details related to how the MPO conducts GHG monitoring and evaluation.

Healthy Transportation Policy Initiatives

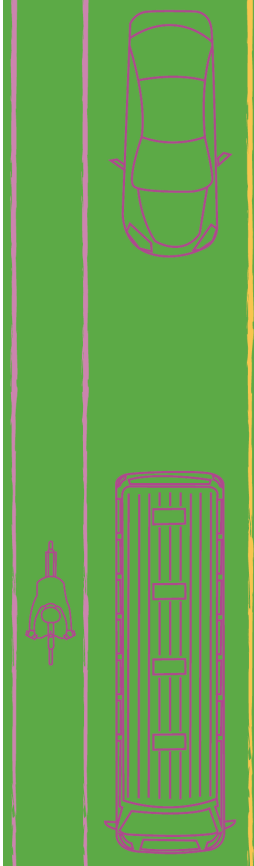
On September 9, 2013, MassDOT passed the Healthy Transportation Policy Directive to formalize its commitment to implementing and maintaining transportation networks that allow for various mode choices. This directive will ensure that all MassDOT projects are designed and implemented in ways that provide all customers with access to safe and comfortable walking, bicycling, and transit options.

In November 2015, MassDOT released the *Separated Bike Lane Planning & Design Guide*. This guide represents the next step in MassDOT's continuing commitment to Complete Streets, sustainable transportation, and the creation of more safe and convenient transportation options for Massachusetts' residents. This guide may be used by project planners and designers as a resource for considering, evaluating, and designing separated bike lanes as part of a Complete Streets approach.

In the current LRTP, *Destination 2040*, the Boston Region MPO has continued to use investment programs—particularly its Complete Streets and Bicycle Network and Pedestrian Connections programs—that support the implementation of Complete Streets projects. The next LRTP, *Destination 2050*, is being developed in tandem with the FFY 2024–28 TIP and will continue to provide similar support. In the Unified Planning Work Program, the MPO budgets to support these projects, such as the MPO's Bicycle and Pedestrian Support Activities program, corridor studies undertaken by MPO staff to make conceptual recommendations for Complete Streets treatments, and various discrete studies aimed at improving pedestrian and bicycle accommodations.

Congestion in the Commonwealth 2019

MassDOT developed the *Congestion in the Commonwealth 2019* report to identify specific causes of and impacts from traffic congestion on the NHS. The report also made recommendations for reducing congestion, including addressing local and regional bottlenecks, redesigning bus networks within the systems operated by the Massachusetts Bay Transportation Authority (MBTA) and the other regional transit authorities, increasing MBTA capacity, and investigating congestion pricing mechanisms such as managed lanes. These recommendations guide multiple new efforts within MassDOT and the MBTA and are actively considered by the Boston Region MPO when making planning and investment decisions.



REGIONAL GUIDANCE AND PRIORITIES

Focus40, The MBTA's Program for Mass Transportation

On March 18, 2019, MassDOT and the MBTA released Focus40, the MBTA's Program for Mass Transportation, which is the 25-year investment plan that aims to position the MBTA to meet the transit needs of the Greater Boston region through 2040. Complemented by the MBTA's Strategic Plan and other internal and external policy and planning initiatives, Focus40 serves as a comprehensive plan guiding all capital planning initiatives at the MBTA. These initiatives include the Rail Vision plan, which will inform the vision for the future of the MBTA's commuter rail system; the Bus Network Redesign (formerly the Better Bus Project), the plan to re-envision and improve the MBTA's bus network; and other plans. The Boston Region MPO continues to monitor the status of Focus40 and related MBTA modal plans to inform its decision-making about transit capital investments, which are incorporated to the TIP and LRTP.

MetroCommon 2050

MetroCommon 2050, which was developed by the Metropolitan Area Planning Council (MAPC) and adopted in 2021, is Greater Boston's regional land use and policy plan. MetroCommon 2050 builds off of MAPC's previous plan, MetroFuture (adopted in 2008), and includes an updated set of strategies for achieving sustainable growth and equitable prosperity in the region. The MPO considers MetroCommon 2050's goals, objectives, and strategies in its planning and activities. See Chapter 7 for more information about MetroCommon 2050 development activities.

MetroCommon 2050 will serve as the foundation for land use projections in the MPO's next LRTP, *Destination 2050*. The MPO's next LRTP is currently in development and is anticipated to be adopted by the MPO board in the summer of 2023

The Boston Region MPO's Congestion Management Process

The purpose of the Congestion Management Process (CMP) is to monitor and analyze the mobility of people using transportation facilities and services, develop strategies for managing congestion based on the results of traffic monitoring, and move those strategies into the implementation stage by providing decision-makers in the region with information and recommendations for improving the transportation system's performance. The CMP monitors roadways, transit, and park-and-ride facilities in the Boston region for safety, congestion, and mobility, and identifies problem locations. See Chapter 3 for more information about the MPO's CMP.

Coordinated Public Transit–Human Services Transportation Plan

Every four years, the Boston Region MPO completes a Coordinated Public Transit–Human Services Transportation Plan (CPT–HST), in coordination with the development of the LRTP. The CPT–HST supports improved coordination of transportation for seniors and people with disabilities in the Boston region. This plan also guides transportation providers in the Boston region who are developing proposals to request funding from the Federal Transit Administration's Section 5310 Program. To be eligible for funding, a proposal must meet a need identified in the CPT–HST. The CPT–HST contains information about

- current transportation providers in the Boston region;
- unmet transportation needs for seniors and people with disabilities;
- strategies and actions to meet the unmet needs; and
- priorities for implementing those needs.

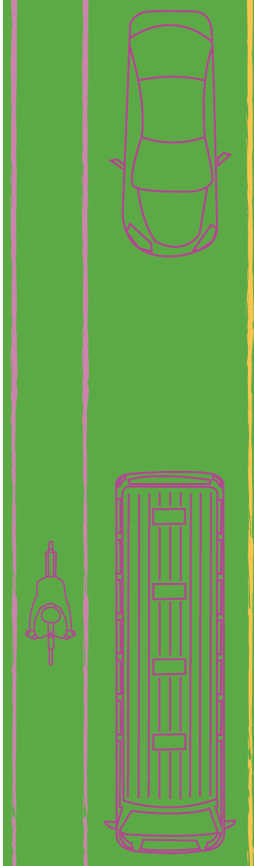
The MPO adopted its current CPT–HST in 2019 and is currently developing its next CPT–HST, which is expected to be adopted in 2023.

MBTA and Regional Transit Authority (RTA) Transit Asset Management Plans

The MBTA and the region's RTAs—the Cape Ann Transportation Authority (CATA) and the MetroWest Regional Transit Authority (MWRTA)—are responsible for producing transit asset management plans that describe their asset inventories and the condition of these assets, strategies, and priorities for improving the state of good repair of these assets. The Boston Region MPO considers goals and priorities established in these plans when developing its plans, programs, and activities.

MBTA and RTA Public Transit Agency Safety Plans

The MBTA, CATA, and MWRTA are required to create and annually update Public Transit Agency Safety Plans that describe their approaches for implementing Safety Management Systems on their transit systems. The Boston Region MPO considers goals, targets, and priorities established in these plans when developing its plans, programs, and activities.



STATE AND REGIONAL COVID-19 ADAPTATIONS

The COVID-19 pandemic has radically shifted the way many people in the Boston region interact with the regional transportation system. The pandemic's effect on everyday life has had short-term impacts on the system and how people travel, and it may have lasting effects. State and regional partners have advanced immediate changes in the transportation network in response to the situation brought about by the pandemic. Some of the changes may become permanent, such as the expansion of bicycle, bus, sidewalk, and plaza networks, and a reduced emphasis on traditional work trips. As the region recovers from the impacts of the COVID-19 pandemic and the long-term effects become apparent, state and regional partners' guidance and priorities are likely to be adjusted.





Photo courtesy of Susana Hey, MBTA



APPENDIX F

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION MEMBERSHIP

VOTING MEMBERS

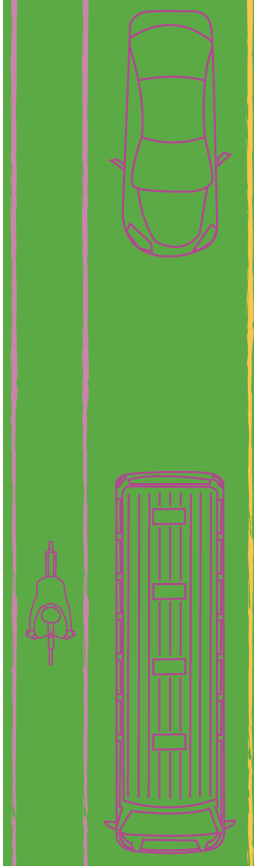
The Boston Region Metropolitan Planning Organization (MPO) includes both permanent members and municipal members who are elected for three-year terms. Details about the MPO's members are listed below.

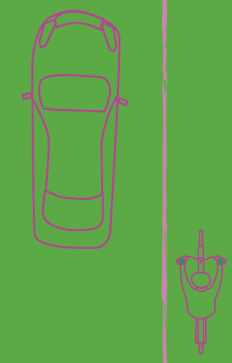
The **Massachusetts Department of Transportation (MassDOT)** was established under *Chapter 25 (An Act Modernizing the Transportation Systems of the Commonwealth of Massachusetts)* of the Acts of 2009. MassDOT has four divisions: Highway, Rail and Transit, Aeronautics, and the Registry of Motor Vehicles. The MassDOT Board of Directors, composed of 11 members appointed by the governor, oversees all four divisions and MassDOT operations and works closely with the Massachusetts Bay Transportation Authority (MBTA) Board of Directors. The MassDOT Board of Directors was expanded to 11 members by the Legislature in 2015, a group of transportation leaders assembled to review structural problems with the MBTA and deliver recommendations for improvements. MassDOT has three seats on the MPO board, including seats for the Highway Division.

The **MassDOT Highway Division** has jurisdiction over the roadways, bridges, and tunnels that were overseen by the former Massachusetts Highway Department and Massachusetts Turnpike Authority. The Highway Division also has jurisdiction over many bridges and parkways that previously were under the authority of the Department of Conservation and Recreation. The Highway Division is responsible for the design, construction, and maintenance of the Commonwealth's state highways and bridges. It is also responsible for overseeing traffic safety and engineering activities for the state highway system. These activities include operating the Highway Operations Control Center to ensure safe road and travel conditions.

The **MBTA**, created in 1964, is a body politic and corporate, and a political subdivision of the Commonwealth. Under the provisions of Chapter 161A of the Massachusetts General Laws, it has the statutory responsibility within its district of operating the public transportation system in the Boston region, preparing the engineering and architectural designs for transit development projects, and constructing and operating transit development projects. The MBTA district comprises 175 communities, including all of the 97 cities and towns of the Boston Region MPO area.

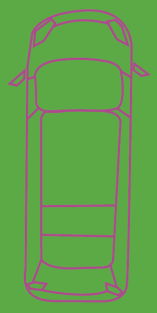
In April 2015, as a result of a plan of action to improve the MBTA, a five-member Fiscal and Management Control Board (FMCB) was created. The FMCB was created to oversee and improve the finances, management, and operations of the MBTA. The FMCB's authorizing statute called for an initial three-year term, with the option for the board to request that the governor approve a single two-year extension. In 2017, the FMCB's initial mandate, which would have expired in June 2018, was extended for two years, through June 30, 2020. In 2020, the FMCB's mandate was extended a second time for an additional period of one year, through June 30, 2021.





Following the expiration of the FMCB's extended mandate, the MBTA Board of Directors was formed as a permanent replacement to provide oversight for the agency. By statute, the board consists of seven members, including the Secretary of Transportation as an ex-officio member. The MBTA Advisory Board appoints one member who has municipal government experience in the MBTA's service area and experience in transportation operations, transportation planning, housing policy, urban planning, or public or private finance. The Governor appoints the remaining five board members, which include an MBTA rider and member of an environmental justice population, and a person recommended by the President of the American Federation of Labor and Congress of Industrial Organizations.

The **MBTA Advisory Board** was created by the Massachusetts Legislature in 1964 through the same legislation that created the MBTA. The Advisory Board consists of representatives of the 175 cities and towns that compose the MBTA's service area. Cities are represented by either the city manager or mayor, and towns are represented by the chairperson of the board of selectmen. Specific responsibilities of the Advisory Board include reviewing and commenting on the MBTA's long-range plan, the Program for Mass Transportation; proposed fare increases; the annual MBTA Capital Investment Program; the MBTA's documentation of net operating investment per passenger; and the MBTA's operating budget. The MBTA Advisory Board advocates for the transit needs of its member communities and the riding public.



The **Massachusetts Port Authority (Massport)** has the statutory responsibility under Chapter 465 of the Acts of 1956, as amended, for planning, constructing, owning, and operating such transportation and related facilities as may be necessary for developing and improving commerce in Boston and the surrounding metropolitan area. Massport owns and operates Boston Logan International Airport, the Port of Boston's Conley Terminal, Flynn Cruiseport Boston, Hanscom Field, Worcester Regional Airport, and various maritime and waterfront properties, including parks in the Boston neighborhoods of East Boston, South Boston, and Charlestown.



The **Metropolitan Area Planning Council (MAPC)** is the regional planning agency for the Boston region. It is composed of the chief executive officer (or a designee) of each of the cities and towns in the MAPC's planning region, 21 gubernatorial appointees, and 12 ex-officio members. It has statutory responsibility for comprehensive regional planning in its region under Chapter 40B of the Massachusetts General Laws. It is the Boston Metropolitan Clearinghouse under Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966 and Title VI of the Intergovernmental Cooperation Act of 1968. Also, its region has been designated an economic development district under Title IV of the Public Works and Economic Development Act of 1965, as amended. MAPC's responsibilities for comprehensive planning encompass the areas of technical assistance to communities, transportation planning, and development of zoning, land use, demographic, and environmental studies. MAPC activities that are funded with federal metropolitan transportation planning dollars are documented in the Boston Region MPO's Unified Planning Work Program.

The **City of Boston**, six elected cities (currently **Beverly**, **Everett**, **Framingham**, **Newton**, **Somerville**, and **Burlington**), and six elected towns (currently **Acton**, **Arlington**, **Brookline**, **Hull**, **Medway**, and **Norwood**,) represent the 97 municipalities in the Boston Region MPO area. The City of Boston is a permanent MPO member and has two seats. There is one elected municipal seat for each of the eight MAPC subregions and four seats for at-large elected municipalities (two cities and two towns). The elected at-large municipalities serve staggered three-year terms, as do the eight municipalities representing the MAPC subregions.

The **Regional Transportation Advisory Council**, the MPO's citizen advisory group, provides the opportunity for transportation-related organizations, non-MPO member agencies, and municipal representatives to become actively involved in the decision-making processes of the MPO as it develops plans and prioritizes the implementation of transportation projects in the region. The Advisory Council reviews, comments on, and makes recommendations regarding certification documents. It also serves as a forum for providing information on transportation topics in the region, identifying issues, advocating for ways to address the region's transportation needs, and generating interest among members of the general public in the work of the MPO.

The **Federal Highway Administration (FHWA)** and **Federal Transit Administration (FTA)** participate in the Boston Region MPO in an advisory (nonvoting) capacity, reviewing the Long-Range Transportation Plan, Transportation Improvement Program, and Unified Planning Work Program, and other facets of the MPO's planning process to ensure compliance with federal planning and programming requirements. These two agencies oversee the highway and transit programs, respectively, of the United States Department of Transportation under pertinent legislation and the provisions of the Bipartisan Infrastructure Law (BIL).



