

Boston Region Metropolitan Planning Organization

**FEDERAL FISCAL YEAR 2012
TITLE VI ANNUAL UPDATE**

January 13, 2012

Introduction

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal financial assistance. Two Executive Orders and related statutes further define populations that are protected under the umbrella of Title VI. Executive Order 12898 is concerned with environmental justice for minority and low-income populations. Executive Order 13166 is concerned with providing equal access to services and benefits for those individuals with limited English proficiency (LEP).

The Boston Region MPO submitted a comprehensive triennial Title VI report to MassDOT in April 2011 and a revision of that report in June 2011. This report is an annual update and follows MassDOT's Annual Title VI Report Template of April 2011. Only the policies and activities that have changed since the June revision are discussed. If there are no changes to present in a report section, that fact is noted.

Section 1: Process Used to Select MPO and Regional Transportation Advisory Council Members

Appendix I provides: (1) A description of the MPO election procedures as adapted in 2011 to the new MPO structure and (2) the bylaws of the Regional Transportation Advisory Council.

Section 2: General Reporting Requirements [FTA C 4702.1A IV]

A. Title VI Coordinator

Alicia Wilson, Transportation Equity Manager

B. Annual Title VI Certification and Assurance [FTA C 4702.1A IV.1]

The MPO's signed Title VI assurances are provided beginning on page 3.

C. Notification of Protection under Title VI [FTA C 4702.1A IV.5 and FTA C 4702.1A IV.7.a.5]

The MPO has developed the following notice to the public of protection under Title VI:

The Boston Region Metropolitan Planning Organization (MPO) fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The MPO does not discriminate on the basis of race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, gender identity or expression, or military service.

Meeting locations are accessible to people with disabilities and via public transportation. Assistive listening devices and large-print materials will be available at meeting sites. Upon advance request, every effort will be made to prepare materials in other formats and in languages other than English, and to provide interpreters in American Sign Language and other languages. For assistance or accommodations, contact Mike Callahan, preferably two weeks before the meeting, at (617) 973-8853 (voice), (617) 973-8855 (fax), (617) 973-7089 (TTY), or publicinformation@bostonmpo.org (e-mail).

**FEDERAL FISCAL YEAR 2012 CERTIFICATIONS AND ASSURANCES FOR FEDERAL TRANSIT
ADMINISTRATION ASSISTANCE PROGRAMS**

(Signature page alternative to providing Certifications and Assurances in TEAM-Web)

Name of Applicant: Boston Region Metropolitan Planning Organization

The Applicant agrees to comply with applicable provisions of Groups 01 – 24. _____

OR

The Applicant agrees to comply with applicable provisions of the Groups it has selected:

<u>Group</u>	<u>Description</u>	
01.	Assurances Required For Each Applicant.	<u> X </u>
02.	Lobbying.	<u> X </u>
03.	Procurement Compliance.	_____
04.	Protections for Private Providers of Public Transportation.	_____
05.	Public Hearing.	_____
06.	Acquisition of Rolling Stock for Use in Revenue Service.	_____
07.	Acquisition of Capital Assets by Lease.	_____
08.	Bus Testing.	_____
09.	Charter Service Agreement.	_____
10.	School Transportation Agreement.	_____
11.	Demand Responsive Service.	_____
12.	Alcohol Misuse and Prohibited Drug Use.	_____
13.	Interest and Other Financing Costs.	_____
14.	Intelligent Transportation Systems.	_____
15.	Urbanized Area Formula Program.	_____
16.	Clean Fuels Grant Program.	_____
17.	Elderly Individuals and Individuals with Disabilities Formula Program and Pilot Program.	_____
18.	Nonurbanized Area Formula Program for States.	_____
19.	Job Access and Reverse Commute (JARC) Program.	_____
20.	New Freedom Program.	_____
21.	Paul S. Sarbanes Transit in Parks Program.	_____
22.	Tribal Transit Program.	_____
23.	TIFIA Projects	_____
24.	Deposits of Federal Financial Funding to a State Infrastructure Banks.	_____

FEDERAL FISCAL YEAR 2012 FTA CERTIFICATIONS AND ASSURANCES SIGNATURE PAGE
(Required of all Applicants for FTA funding and all FTA Grantees with an active capital or formula project)

AFFIRMATION OF APPLICANT

Name of Applicant: Boston Region Metropolitan Planning Organization

Name and Relationship of Authorized Representative: David J. Mohler, Chair

BY SIGNING BELOW, on behalf of the Applicant, I declare that the Applicant has duly authorized me to make these certifications and assurances and bind the Applicant's compliance. Thus, the Applicant agrees to comply with all Federal statutes and regulations, and follow applicable Federal directives, and comply with the certifications and assurances as indicated on the foregoing page applicable to each application it makes to the Federal Transit Administration (FTA) in Federal Fiscal Year 2012.

FTA intends that the certifications and assurances the Applicant selects on the other side of this document, as representative of the certifications and assurances, should apply, as provided, to each project for which the Applicant seeks now, or may later seek FTA funding during Federal Fiscal Year 2012.

The Applicant affirms the truthfulness and accuracy of the certifications and assurances it has made in the statements submitted with this document and any other submission made to FTA, and acknowledges that the Program Fraud Civil Remedies Act of 1986, 31 U.S.C. 3801 *et seq.*, and implementing U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR part 31 apply to any certification, assurance or submission made to FTA. The criminal provisions of 18 U.S.C. 1001 apply to any certification, assurance, or submission made in connection with a Federal public transportation program authorized in 49 U.S.C. chapter 53 or any other statute

In signing this document, I declare under penalties of perjury that the foregoing certifications and assurances, and any other statements made by me on behalf of the Applicant are true and accurate.

Signature

David J. Mohler

Date:

01/17/12

Name

David J. Mohler

Authorized Representative of Applicant

AFFIRMATION OF APPLICANT'S ATTORNEY

For (Name of Applicant): _____

As the undersigned Attorney for the above named Applicant, I hereby affirm to the Applicant that it has authority under State, local, or tribal government law, as applicable, to make and comply with the certifications and assurances as indicated on the foregoing pages. I further affirm that, in my opinion, the certifications and assurances have been legally made and constitute legal and binding obligations on the Applicant.

I further affirm to the Applicant that, to the best of my knowledge, there is no legislation or litigation pending or imminent that might adversely affect the validity of these certifications and assurances, or of the performance of the project.

Signature

Date:

Name

Persons who believe that they have been subject to discrimination by the Boston Region MPO may file a complaint according to the MPO's procedures.

This statement is posted on the MPO's website along with the procedures for filing a complaint and the MPO's complaint form. Also, in all public-outreach materials the relevant portions of the statement are included.

D. Complaint Procedures [FTA C 4702.1A IV.2 and FTA C 4702.1A IV.7.a.3]

In order to comply with 49 CFR Section 21.9(b), the MPO has developed procedures for receiving, investigating, addressing, and tracking Title VI complaints. The MPO's complaint procedures and forms, updated in October 2011, are provided in Appendix II.

The MPO has not received any Title VI complaints or lawsuits, and no investigations have been initiated.

E. Meaningful Access for LEP Persons and Language Implementation Plan [FTA C 4702.1A IV.4]

The MPO used Massachusetts Department of Education data to supplement Census data for outreach. No other changes.

F. Special Studies of Traditionally Under-Served or Low-Income Populations

A draft analysis of low-income and minority responses to the 2008-2009 MBTA Systemwide Survey was conducted (a copy of the memorandum will be provided when finalized).

G. Title VI Investigations, Complaints, and Lawsuits [FTA C 4702.1A IV.3 and FTA C 4702.1A IV.7.a.4]

The MPO has not received any Title VI complaints.

H. MPO Funding Sources

Listings of the MPO's funding sources are provided in Appendix III.

I. Enhancement Projects Applications

The MPO has no enhancement projects .

J. Title VI Activities

The MPO submitted a triennial Title VI report to MassDOT in April 2011. In response, MassDOT made recommendations concerning the time limit for filing complaints, recording Title VI investigations, complaints, and lawsuits, and providing additional information in the Title VI notice. All recommendations were complied with and incorporated into MPO procedures. A revised report was submitted in June 2011.

K. The Planning Process and Its Responsiveness to Title VI Requirements

No changes.

L. Activities Undertaken to Identify the Needs of Low-Income and Minority Populations

(See 2F, above.)

Section 3: Public Involvement [FTA C 4702.1A IV.7.a and FTA C 4702.1A IV.9]

No changes.

Section 4: Contracting Opportunities

None. The MPO has no fiduciary authority.

Section 5: Community Impact Assessment [23 USC 109(h); FTA C 4702.1A IV.7.a; FHWA 23 CFR 200.9(b)(4)]

A. Overview

No changes.

B. MPO Policy and Plans

No changes.

C. The Transportation Planning Process

No changes.

D. Demographic Profile of Environmental Justice Areas [FTA C 4702.1A VII.1.a]

2010 Census minority population data at the tract level were released on March 22, 2011. Household income data at the tract level were released in December 2011. The MPO will produce new demographic profiles during the first few months of 2012.

E. Identification of Needs of Low-Income and Minority Populations [FTA C 4702.1A VII.1.b]

No changes.

F. How Community Values, Environmental Justice, and Discrimination Considerations Are Addressed

No changes.

Section 6: Service Equity

A. Long-Range Transportation Plan and Transportation Improvement Program: Assessment of Projects for Impacts on Environmental Justice Populations

The potential impact of a proposed project in environmental justice areas is considered in the project-ranking processes for the Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), and Unified Planning Work Program (UPWP). Environmental justice analyses for the LRTP and TIP are funded in the UPWP. In these analyses, MPO staff give projects positive or negative ratings on environmental justice criteria based on the estimated benefit to or burden on environmental justice areas. The MPO considers these ratings when deciding what

projects should receive funding. The MPO also considers environmental justice when determining which studies should be included in the UPWP. [These LRTP, TIP, and UPWP processes are not new, but are described here to provide context for the information reported below.]

LRTP: Analysis of the Effects of Planned Transportation Projects

The MPO adopted a new Long-Range Transportation Plan and Air Quality Conformity Determination (LRTP), *Paths to a Sustainable Region*, on September 22, 2011. This document states the MPO's transportation policies and goals, describes the public participation process for transportation planning, assesses the current state of the region's transportation system, estimates future needs and resources, and lays out a program for preserving and expanding the system for the upcoming 25-year period. The process used to develop *Paths to a Sustainable Region* is described in Appendix IV.

The LRTP includes a description of the MPO's Transportation Equity Program and presents environmental justice analyses of the planned projects conducted to ensure that they do not disproportionately burden, and that they equitably provide benefits to, minority and/or low-income communities. This analysis process has not changed. Chapter 9 of *Paths to a Sustainable Region* details the results of the analysis; this chapter is provided in Appendix V. The analysis showed that the projects recommended in the final LRTP benefit environmental justice areas slightly more overall than they benefit non-environmental-justice areas.

TIP: Analysis of the Effects of Planned Transportation Projects

The MPO adopted the federal fiscal years 2012–15 Transportation Improvement Program and Air Quality Conformity Determination (TIP) on September 22, 2011. Since the MPO's last Title VI submittal, there have been no changes in the process for developing the TIP or the process for analyzing the effects of planned TIP projects on environmental justice areas.

B. Coordination with Citizens and Community-Based Entities in Defining Environmental Justice Communities for the Purpose of Assessing Transportation Impacts

No changes.

C. Studies Sensitive to Title VI, Environmental Justice, and/or ADA Adherence

The following describes current and upcoming MPO initiatives in the UPWP for providing data collection and analysis that support MPO coordination of environmental justice issues and that help in addressing the transportation needs of minority, LEP, and low-income residents.

Transportation Equity/Environmental Justice Support

The primary purpose of this ongoing project is to integrate environmental justice issues and concerns into MPO planning and programming activities and support development of the LRTP, UPWP, TIP, Congestion Management Process (CMP), air quality conformity determinations, and project-specific work products. Another purpose is to foster awareness of the MPO in environmental justice populations and to facilitate their participation in MPO planning and programming. This has been done through continued outreach to minority, LEP, and low-income populations.

Analysis of JARC and New Freedom Projects

Many MPO-recommended proposals for the FTA's Job Access and Reverse Commute (JARC) and New Freedom grant programs were funded during the last three years. These proposals include: conducting studies on how to facilitate coordination of existing transportation resources, identifying resource gaps and developing strategies for closing them, enhancing consumers' abilities to access and use transportation options, and planning for and operating paratransit.

The MPO will determine which of these projects are/were effective and will use this information to recommend future projects, to encourage the use of best practices, and to update the Coordinated Public-Transit Human Services Transportation Plan.

Impacts of Walking Radius/Transit Frequency and Reliability

The current MBTA service delivery policy's coverage guideline states that, in areas that are served by bus and/or rapid transit with a population density of greater than 5,000 persons per square mile, no individual should need to walk farther than 0.25 miles to access transit service. As part of this project, CTPS will analyze the potential of and suggest possible system designs for local bus system consolidation under scenarios in which the 0.25-mile radius is relaxed to 0.33 miles, 0.4 miles, and 0.5 miles and the consolidated bus routes adhere to rapid-transit-service standards. This modeling-based effort will build on the MBTA Core Services Evaluation study and will help the MPO better understand the implications of the tradeoff involved in eliminating poorly performing local bus routes and increasing service on a smaller number of transit corridors. It will explore what the best option might be for providing mobility and accessibility through the bus network. The ultimate goal is to increase transit mode shares. The study will also consider the equity implications and potential tradeoffs of the potential service approaches.

APPENDIX I

Boston Region MPO Election Procedures and RTAC By-Laws

Official Notice

2011 Boston Region MPO Municipal Election Procedures

On Wednesday October 26, 2011, elections will be held for eight (8) of the twelve (12) total local municipal seats on the Boston Region Metropolitan Planning Organization (MPO). The election will be convened at the MAPC Fall Council meeting, which will be held at the Cambridge Marriott, Two Cambridge Center, 50 Broadway, Cambridge MA 02142, adjacent to the Kendall Square MBTA Red Line station, 8:30 – 11:30 AM. At that time eight (8) municipalities will be elected to the MPO by the chief elected officials of the 101 municipalities which constitute the Boston metropolitan region. Pursuant to the Memorandum of Understanding, approved on July 7, 2011 detailing the restructuring of the MPO, the Metropolitan Area Planning Council (MAPC) and the MBTA Advisory Board (Advisory Board) will administer the election of the municipal representatives to the MPO.

New MPO Structure

The new MPO will be made up of twenty two (22) seats, which include:

Massachusetts Department of Transportation (MassDOT) with three seats appointed by the Secretary of Transportation, at least one of which is from its Highway Division;
Massachusetts Bay Transit Authority (MBTA);
Massachusetts Port Authority (Massport);
Metropolitan Area Planning Council (MAPC);
MBTA Advisory Board;
Regional Transportation Advisory Council (RTAC);
City of Boston with two MPO seats;
Eight (8) elected municipalities, one seat each from the eight MAPC sub-regions;
Two (2) cities filling at-large seats;
Two (2) towns filling at-large seats.

MPO Seats Up For Election

One (1) from the North Shore Task Force sub-region
One (1) from the North Suburban sub-region
One (1) from the South West Advisory Planning Committee (SWAP) sub-region
One (1) from the Three Rivers Interlocal Council (TRIC) sub-region
Two (2) at-large town seats
Two (2) at-large city seats

Terms of election on the new MPO are for three years, however adjusting to the new membership will call for a few anomalies in the terms for several of the elected municipalities. For the 2011 elections, the city and the town running for an at-large seat that receive the most votes will serve an additional (fourth) year on the MPO. The North Suburban and TRIC representatives will also serve a fourth year. These communities will serve an additional year in order to stagger the MPO elections in future years so that there are four (4) municipal seats up for election each year.

Nomination Process

Nominees for the elected municipal seats shall be the chief elected official of the municipality. In cities, this is the Mayor or, if the city does not have the office of Mayor, then the Chairman of the Council, with the exception of Plan E cities (Cambridge) in which case it shall be the City Manager. In towns, the chief elected official is the Chairman of the Board of Selectmen. The MPO will accept the Chairman's nomination regardless if the full Board of Selectman has not voted it.

A nominee for an open municipal seat must receive five nominations made by any chief elected official from the Boston region. A chief elected official may nominate his or her municipality and that nomination shall count as one of the five nominations needed to place a municipality on the ballot.

Each chief elected official may only sign nomination papers for one municipality per sub-region for the four open sub-regional seats, and one nomination paper for each of the at-large seats (two cities and two towns). Nomination papers must be filed by 5 PM on Friday September 23, 2011 with the Executive Director of the Metropolitan Area Planning Council (MAPC) who will coordinate the certification of the nominations with the Executive Director of the Advisory Board.

Nomination papers shall include a statement of candidacy (250 word limit) of the community.

Nominations papers are due on Friday, September 23, 2011 to MAPC by 5:00 PM and must be filed in person or by mail at MAPC, 60 Temple Place, 6th Floor, Boston, MA 02111, Attn: MPO Elections. Faxes or emails will not be accepted.

Voting Process

Each of the 101 communities may vote for one (1) municipality from each of the four (4) open sub-regional seats, one (1) town for each of the two (2) open at-large town seats, and one (1) city for each of the two (2) open at-large city seats, for a total of eight (8) votes that each of the 101 municipalities may cast.

MAPC Sub-regions

Attached for your reference is a list and map of towns and cities by sub-region. (Attachment A). Because Bedford (Minuteman Advisory Group on Interlocal Coordination), Somerville (Inner Core Committee), Framingham (Metro West Regional Collaborative), and Braintree (South Shore Coalition) already serve on the MPO until at least 2012, only communities from the North Suburban Planning Council, North Shore Task Force, South West Advisory Planning Committee, and Three Rivers Interlocal Council can run for the open sub-regional seats. However, any municipality not currently serving on the MPO may run for one of the two open at-large town seats and two at-large city seats.

Ballot

A ballot will be prepared by MAPC and the Advisory Board based on the certification of nomination papers for the communities. The ballot shall contain a list of the nominated municipalities. Candidate communities shall appear on the ballot in an order drawn by lot by designated officers of MAPC and the Advisory Board. The subregion of each of the communities, as well as the communities running for at-large seats, shall be identified on the ballot. A candidates' booklet shall be issued that shall contain the statement of candidacy of the communities. The list of communities shall appear in the booklet in the same order that they appear on the ballot. In the second mailing, MAPC and the Advisory Board will include an absentee ballot and instructions for how municipalities can cast their vote.

Opportunities for Discussion with Representatives of the Candidate Communities

The Metropolitan Area Planning Council and the MBTA Advisory Board shall provide appropriate opportunities for the electorate to meet representatives of candidate communities and discuss issues. In 2011, this will be accomplished by holding a Candidates Night approximately two weeks before the MPO election. The date, time, and location of the Candidates Night will follow in a second mailing.

Election

The election will be held at MAPC's Fall Council Meeting on Wednesday October 26, 2011 at the Cambridge Marriott, Two Cambridge Center, 50 Broadway, Cambridge MA 02142, adjacent to the Kendall Square MBTA Red Line station, 8:30 – 11:30 AM. On that day, the designated officers of

MAPC and the Advisory Board shall supervise the election to the municipal seats. Ballots shall be cast by the chief elected official of the community (as defined by the rules for nominees), or that person's designee. Designees shall present a letter signed by the chief elected official to the designated officers of MAPC and of the Advisory Board 30 minutes prior to the convening of the election on election day. This letter will appoint the designee and confirm his or her authority to cast the community's ballot. Such a designation shall be delivered in person or by mail. Designees may represent only one community in the election. The designation may require the designee to vote for specific individuals or may vest discretion in the designee.

If the chief elected official is unable to attend the election and does not designate another individual to attend, an absentee ballot may be filed. Such an absentee ballot must be filed by 5 PM on Tuesday October 25, 2011 with the Metropolitan Area Planning Council, 60 Temple Place, Boston, MA 02111. **No faxes will be accepted.** This ballot is valid for any election (e.g. run off election in case of a tie) held on the day of the MPO election for which the candidates selected on the ballot are still eligible to receive votes.

The eight municipalities that receive the most votes, from the 101 cities and towns in the region, for the open seats for which they are running, shall be elected to a three-year term. The exception, for the 2011 elections, is that the city and the town running for an at-large seat that receive the most votes will serve an additional (fourth) year on the MPO.

The seats are held by the municipality and the chief elected official (or their official designee) shall represent the municipality throughout the municipality's term of office.

The designated officers of MAPC and of the Advisory Board shall certify the results of the election to the chairman of the MPO by 12 noon on Friday October 28, 2011.

MAPC Sub-regions

SUBREGION	COMMUNITIES
North Shore Task Force	Beverly, Danvers, Essex, Gloucester, Hamilton, Ipswich, Manchester-by-the-Sea, Marblehead, Middleton, Nahant, Peabody, Rockport, Salem, Swampscott, Topsfield, Wenham
North Suburban Planning Council	Burlington, Lynnfield, North Reading, Reading, Stoneham, Wakefield, Wilmington, Winchester, Woburn
Minuteman Advisory Group Interlocal Coordination (MAGIC)	Acton, Bedford, Bolton, Boxborough, Carlisle, Concord, Hudson, Lexington, Littleton, Lincoln, Maynard, Stow, Sudbury
MetroWest Regional Collaborative	Ashland, Framingham, Holliston, Marlborough, Natick, Southborough, Wayland, Wellesley, Weston
South West Advisory Planning Committee (SWAP)	Bellingham, Dover, Franklin, Hopkinton, Medway, Milford, Millis, Norfolk, Sherborn, Wrentham
Three Rivers (TRIC)	Canton, Dedham, Dover, Foxborough, Medfield, Milton, Needham, Norwood, Randolph, Sharon, Stoughton, Walpole, Westwood
South Shore Coalition	Braintree, Cohasset, Duxbury, Hanover, Hingham, Holbrook, Hull, Marshfield, Norwell, Pembroke, Rockland, Scituate, Weymouth
Inner Core	Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Lynn, Malden, Medford, Melrose, Milton, Newton, Quincy, Revere, Saugus, Somerville, Waltham, Watertown, Winthrop

Metropolitan Area Planning Council 101 Cities and Towns

Cities

Beverly	Lynn	Revere
Boston	Malden	Salem
Braintree	Marlborough	Somerville
Cambridge	Medford	Waltham
Chelsea	Melrose	Watertown*
Everett	Newton	Weymouth
Franklin*	Peabody	Woburn
Gloucester	Quincy	

**MAPC Legal Counsel has rendered an opinion that Franklin and Watertown are defined as cities for the purpose of the MPO Election.*

Towns

Acton	Hopkinton	Randolph
Arlington	Hudson	Reading
Ashland	Hull	Rockland
Bedford	Ipswich	Rockport
Bellingham	Lexington	Saugus
Belmont	Lincoln	Scituate
Bolton	Littleton	Sharon
Boxborough	Lynnfield	Sherborn
Brookline	Manchester	Southborough
Burlington	Marblehead	Stoneham
Canton	Marshfield	Stoughton
Carlisle	Maynard	Stow
Cohasset	Medfield	Sudbury
Concord	Medway	Swampscott
Danvers	Middleton	Topsfield
Dedham	Milford	Wakefield
Dover	Millis	Walpole
Duxbury	Milton	Wayland
Essex	Nahant	Wellesley
Foxborough	Natick	Wenham
Framingham	Needham	Weston
Hamilton	Norfolk	Westwood
Hanover	North Reading	Wilmington
Hingham	Norwell	Winchester
Holbrook	Norwood	Winthrop
Holliston	Pembroke	Wrentham

Overview of MPO Member Responsibilities

Background:

The Metropolitan Planning Organization is established as a required part of the transportation planning process under federal law. It is responsible for planning and programming financial resources for a multi-modal transportation system for the Boston region. The MPO was established in 1973. In 2011 the MPO Memorandum of Understanding (MOU) was updated to reflect the new Massachusetts Department of Transportation (MassDOT) and the new MPO membership.

The Boston MPO Memorandum of Understanding (MOU) that details the governing structure and process of the MPO can be viewed at www.bostonmpo.org/mou

Specific Responsibilities:

The MPO must prepare and approve several plans and programs on an annual basis. These include:

- The Unified Planning Work Program (UPWP), which programs funds for transportation planning programs in the region;
- The Transportation Improvement Program (TIP), which programs federal, state, and local funding for surface transportation projects (highway and transit).

The MPO also prepares and approves several other plans and programs as necessary. These include:

- The Regional Transportation Plan (RTP), which provides a 25-year plan for the Region's transportation needs and priorities and;
- The conformity of all surface transportation plans and programs with applicable federal laws (including air quality, and the Americans with Disabilities Act).

MPO Meetings:

Meetings are held as needed to accomplish the MPO's business. There are approximately two MPO related meetings a month that are held in Boston, during the day, at the state transportation building. Four of these meeting will be held quarterly outside of Boston. These meetings typically occur at 10am on the first and third Thursday of the month, and last approximately three hours. The MPO has the authority to establish necessary committees to accomplish its responsibilities. Recent experience suggests that the municipal members of the MPO or their designees attend at least two meetings per month to accomplish the work of the committees.

Adopted 5/8/2002 and Amended 10/ 14/2009

BYLAWS OF THE REGIONAL TRANSPORTATION ADVISORY COUNCIL

Article I - NAME

The organization will be known as the Regional Transportation Advisory Council, referred to as the Advisory Council.

Article II - PURPOSE

The Regional Transportation Advisory Council advises the Boston Metropolitan Planning Organization on transportation policy and planning. The Advisory Council provides a forum for broad public participation in the transportation planning process.

Article III - MEMBERSHIP

Membership shall consist of a broad and balanced spectrum of providers and users of any form of transportation. Individuals are welcome to participate in all meetings of the Advisory Council, but membership is limited to public and private organizations and governmental units, including state agencies and municipalities.

Member entities shall designate in writing one representative and up to two alternates. Representatives and alternates should be empowered by the entities they represent to cast votes on matters before the Advisory Council. Entities may be admitted to membership by vote of the existing members. Continuing membership shall depend on active participation, defined as attendance at the majority of council meetings in a federal fiscal year. As used herein, the term "member" refers to an entity, and the terms "representative" and "alternate" refer to individuals designated by a member entity.

All members of the Boston Metropolitan Planning Organization shall be non-voting members of the Advisory Council.

Article IV - Officers

The Officers shall be a Chairman and a Vice Chairman.

The Chairman shall be the primary contact for the Advisory Council, shall set agendas and call and preside at the meetings.

As provided in the Boston MPO's Memorandum of Understanding of December 13, 2001: The Advisory Council is an ex-officio, non-voting member of the Boston MPO and the Chairman representing the Advisory Council, will attend and participate in Boston MPO meetings; The Chairman shall be a voting member of the Transportation Planning and Programming Committee of the Boston Metropolitan Planning Organization; the Chairman will also chair the standing Public Participation Committee of the Boston MPO and the Chairman or his/her designee shall have the opportunity to be represented on all committees appointed by the Boston MPO and shall have full voting rights on these committees,

The Vice Chairman shall serve in the absence of the Chairman and shall replace the Chairman in case of a vacancy in that office. The Vice Chairman shall actively participate in meetings of the Transportation Planning and Programming Committee of the Boston MPO and will vote only in the absence of the Chairman of the Advisory Council. The Vice Chairman will actively participate in meetings of the Boston MPO in the absence of the Chairman of the Advisory Council.

Article V - MEETINGS

The Advisory Council will meet monthly as determined by the Chairman with at least seven days notice of the time and agenda provided to the representatives. Special meetings may be called by the Chairman with seven days notice. All meetings are open to the public.

The conduct of the meetings shall be governed by Roberts Rules of Order, however, parliamentary discretion shall be vested in the Chairman. The Chairman shall recognize all attendees wishing to be heard, and shall grant the floor, except in the discussion of a motion on the floor, where the Chairman shall have discretion.

Article VI - QUORUM

One third of the voting members shall constitute a quorum. A simple majority of members present and voting is necessary for passage of all motions.

Article VII - MOTIONS

Motions will be accepted only if moved and seconded by voting members' designated representatives or alternates participating in a representative's absence.

Article VIII - VOTING

Each voting member shall have one vote, to be cast by its designated representative, or in case of absence, by an alternate.

Article IX - COMMITTEES

The Chairman shall appoint committees to assist in carrying out the business of the Advisory Council. Reports by committees shall be submitted to the Chairman for report to the Council. The Chairman shall publish a list of existing committees and their membership in November. The following committees will be established, as well as other committees deemed appropriate by the Chairman of the Advisory Council, with members appointed by the Chairman unless otherwise provided by these bylaws.

An Executive Committee shall consist of the Chairman, the Vice Chairman, the immediate past Chairman, and Chairs of all Standing committees. The Executive Committee shall be authorized to act in place of the full Advisory Council on any matters arising between Council meetings that require immediate action. Any actions so taken shall be reported to the Advisory Council at its next meeting. In the case of officer vacancies, the Executive Committee shall nominate replacements for election at the next occurring Advisory Council meeting, and the Executive Committee nominees shall serve until those elections.

A Membership Committee shall be chaired by the Vice Chairman of the Advisory Council and shall include at least one representative each from a citizen advocacy organization, a municipality, and a state agency. The membership committee should assess the breadth of representation on an ongoing basis and report annually to the Chairman changes that should be made in Council membership, if any.

Committees shall be appointed by the Chairman to review and offer recommendations on each of the following plans and programs: the Regional Transportation Plan, the Transportation Improvement Program, and the Unified Planning Work Program.

A Nominating Committee shall be appointed by the Chairman prior to yearly elections of officers, and shall be chaired by the immediate past Chairman of the Advisory Council. Nominating Committee membership shall include at least one representative each from a citizen advocacy organization, a non-MPO member municipality, and a non-MPO member state agency.

Article X - ELECTIONS

The Nominating Committee shall recommend candidates for Chairman and Vice Chairman in August. Nominations from the floor, when duly seconded, will be accepted. Elections shall be held in September, and the Officers terms shall begin in October.

Article XI - AMENDMENTS

These bylaws may be amended by a two-thirds majority vote of members present and voting at a meeting of the Advisory Council. Specific notice of the proposed amendment shall be provided to members at least seven days in advance of the meeting, in order to have representation available to vote at the meeting.

Regional Transportation Advisory Council Membership

Updated: June 10, 2011

Voting Members

Agencies

Boston Redevelopment Authority (BRA)
Cape Ann Transportation Authority (CATA)
Department of Conservation and Recreation (DCR)
Executive Office of Elder Affairs
Division of Energy Resources
Executive Office of Energy and Environmental Affairs (EOEEA)
Joint Legislative Transportation Committee
Massachusetts Aeronautics Commission (MAC)
MassRIDES
Seaport Advisory Council
Subregions:

Inner Core
MAGIC
MetroWest Growth Management Committee
North Shore Task Force
North Suburban Planning Council
South Shore Coalition
SWAP
TRIC

Municipalities

Acton
Arlington
Belmont
Brookline
Cambridge
Canton
Lexington
Marlborough
Medfield
Millis
Natick
Needham
Quincy
Revere
Wayland
Wellesley
Westwood
Weymouth

Advocacy Groups

128 Business Council
Access Advisory Committee to the MBTA (AACT)
American Council of Engineering Companies (ACEC)

American Planning Association/Massachusetts Chapter (APA)
Association for Commuter Transportation (ACT)
Association for Public Transportation (APT)
Boston Society of Architects (BSA)
Boston Society of Civil Engineers (BSCES/ASCE)
Construction Industries of Massachusetts (CIM)
Eastern Massachusetts Freight Rail Coalition (EMFRC)
Institute of Transportation Engineers (ITE)
Massachusetts Bus Association (MBA)
Massachusetts Motor Transportation Association (MMTA)
MassBike
Mass Commute
Medical Academic and Scientific Community Organization, Inc. (MASCO)
MoveMass
National Corridors Initiative (NCI)
Neponset Valley Chamber of Commerce (NVCC)
Riverside Neighborhood Association
WalkBoston

Non-Voting Members

Agency Members of the Boston Region MPO

MassDOT Office on Planning and Programming
Massachusetts Bay Transportation Authority (MBTA)
Massachusetts Port Authority (MassPort)
MassDOT Highway Division
MBTA Advisory Board
Metropolitan Area Planning Council (MAPC)

Municipal Members of the Boston Region MPO

Bedford
Boston
Braintree
Framingham
Hopkinton
Newton
Somerville

Advisory

Federal Highway Administration (FHWA)
Federal Transit Administration (FTA)

Other MPOs

Central Massachusetts
Merrimack Valley
Montachusett
Northern Middlesex
Old Colony
Southeastern Massachusetts

APPENDIX II

Title VI Nondiscrimination Complaint Procedure and Forms

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION TITLE VI NONDISCRIMINATION COMPLAINT PROCEDURE

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal financial assistance. Two Executive Orders and related statutes further define populations that are protected under the umbrella of Title VI. Executive Order 12898 is concerned with environmental justice for minority and low-income populations. Executive Order 13166 is concerned with providing equal access to services and benefits for those individuals with limited English proficiency (LEP). The rights of women, the elderly, and people with disabilities are protected under related statutes. Title VI requires that recipients of federal assistance not discriminate against the protected populations whether the aid is received directly or through contractual means. Massachusetts General Law extends these protections to prevent discrimination on the basis of religion, military service, ancestry, sexual orientation or gender identity or expression.

In order to comply with 49 CFR Section 21.9(b), the Boston Region Metropolitan Planning Organization (MPO) maintains the following procedure for receiving, investigating, addressing, and tracking Title VI complaints.

1. Submittal of Complaints

Any individual who believes that he or she, or any specific class of persons, has been subjected to discrimination or retaliation, as prohibited by Title VI of the Civil Rights Act of 1964, as amended, and related statutes, by the Boston Region MPO in its role of planning and programming federal funds may file a written complaint. Complaints may be filed for discrimination on the basis of race, color, national origin, language, gender, age, disability, income, religion, military service, ancestry, sexual orientation, or gender identity or expression. Such complaint must be filed no later than 180 calendar days after the date the person believes the discrimination occurred.

Written complaints shall be submitted to:

Mr. Richard A. Davey, Chair
Boston Region Metropolitan Planning Organization
State Transportation Building
10 Park Plaza, Suite 2150
Boston, MA 02116-3968

Complaints shall be in writing and shall be signed by the complainant and/or the complainant's representative. Complaints shall set forth as completely as possible the facts of and circumstances surrounding the alleged discrimination and shall include the following information:

- Name, address, and phone number of the complainant.

- A written statement of the complaint, including the following details:
 - o Basis of alleged discrimination (for example, race, color, national origin, or language).
 - o A detailed description of the alleged discriminatory act(s).
 - o What in the nature of the incident(s) led the complainant to feel discrimination was a factor.
 - o The date or dates on which the alleged discriminatory event or events occurred.
 - o Name(s) of alleged discriminating individual(s), if applicable.
- Other agencies (state, local, or federal) where the complaint is also being filed.
- Complainant's signature and date.

In the case where a complainant is unable or incapable of providing a written statement and has no designee to do so, a verbal complaint of discrimination may be made through the Deputy Director. Verbal complaints may be submitted (either in person, by telephone at (617) 973-7117, or via a recording) to the Deputy Director. The Deputy Director will convert the verbal allegations to writing and provide the complainant with the written document for confirmation, revision, and a signature before processing. In cases where the Complainant will be assisted in converting an oral complaint into a written complaint, the Complainant is required to sign the written complaint.

Written complaints may also be submitted to:

MassDOT Director of Civil Rights
10 Park Plaza, Suite 4160
Boston, MA 02116

Departmental Office of Civil Rights
U.S. Department of Transportation
1200 New Jersey Ave.
Washington D.C. 20590

2. *Review of Complaint*

Upon receipt of the complaint, the MPO chair shall appoint the Boston Region MPO staff Executive Director and other MPO staff to review it. This review may include the collection of additional information from the complainant and/or the alleged discriminating party(ies). Upon completion of the review, the Boston Region MPO staff Executive Director shall report to the chair of the MPO's Transportation Planning and Programming Committee. This report may include recommendations for possible action to address the complaint. Recommendations may include:

- Forwarding the complaint to a responsible implementing agency.

- Identifying remedial actions available to provide redress.
- Identifying improvements to the MPO's processes relative to Title VI and environmental justice.

The chair of the Transportation Planning and Programming Committee shall refer the matter to the Transportation Planning and Programming Committee's Administration and Finance Subcommittee, which shall meet to discuss the complaint and the staff report.

3. Responding to Complaints

The Administration and Finance Subcommittee shall develop a proposed response to the complaint, recommending a course of action, and submit it to the Transportation Planning and Programming Committee for discussion and approval. The committee shall forward the approved response to the MPO chair for consideration and potential implementation. The chair shall decide on a response to the complaint and inform the committee of what that response will be.

The MPO chair shall issue a written response to the complainant. This response shall be issued no later than 60 days after the date on which the chair received the complaint. If more time is required, the chair shall notify the complainant of the estimated time frame for completing the review and response.

If a complaint concerns agencies other than the Boston Region MPO, MPO staff will seek permission from the complainant to forward his/her complaint to appropriate individuals at those agencies.

4. Appeals

The complainant may appeal the chair's response to the complaint. Appeals must be in writing and be submitted to either of the following no later than 30 days after the date of the written response:

MassDOT Director of Civil Rights
10 Park Plaza, Suite 4160
Boston, MA 02116

Departmental Office of Civil Rights
U.S. Department of Transportation
1200 New Jersey Ave.
Washington D.C. 20590

In the case where a complainant is unable or incapable of providing a written appeal and has no designee to do so, a verbal appeal to a complaint of discrimination decision may be made through the Deputy Director. Verbal appeals may be submitted (either in person, by telephone at (617) 973-7117, or

via a recording) to the Deputy Director. The Deputy Director will convert the verbal appeal to writing and provide the complainant with the written document for confirmation, revision, and a signature before processing. In cases where the Complainant will be assisted in converting an oral appeal into a written appeal, the Complainant is required to sign the written appeal.

These procedures do not deny the right of the complainant to file formal complaints with other state or federal agencies or to seek private counsel. These procedures are part of an administrative process that does not include punitive damages or compensatory remuneration for the complainant.

MPO staff will forward complaints and responses to those complaints to the Massachusetts Department of Transportation's Office of Civil Rights.

The MPO shall maintain a list of complaints, lawsuits, and investigations alleging discrimination on the basis of race, color, or national origin. The list shall include filing date(s), allegation summaries, the status of the investigation, lawsuit or complaint, and actions taken by the MPO. The list of complaints, investigations and resolutions will be forwarded to MassDOT's Office of Civil Rights. A summary of all civil rights compliance review activities conducted over the latest three-year period shall be maintained.

**DISCRIMINATION COMPLAINT AGAINST THE BOSTON REGION
METROPOLITAN PLANNING ORGANIZATION**

Complainant Contact Information

Name: _____
Address: _____
City/Town: _____ State: _____ Zip: _____
Home phone: _____ Work phone: _____
E-mail: _____

Complaint

Date of alleged incident: _____

Decision, document, statement, or other act
that you believe was discriminatory: _____

If you believe that one or more MPO employees discriminated
against you, name of employee(s), if known: _____

Basis of alleged discrimination:

- | | | |
|--|---|--|
| ☐ Race | ☐ Age | ☐ Ancestry |
| ☐ Color | ☐ Disability | ☐ Sexual orientation |
| ☐ National origin | ☐ Income | ☐ Gender identity or expression |
| ☐ Language | ☐ Religion | ☐ Other: _____ |
| ☐ Gender | ☐ Military service | |

Describe the nature of the incident. Explain what happened and the allegedly discriminatory action(s). Indicate who was involved. Include how other people were treated differently, if present, or how you believe others would have been treated differently if they had been present. Attach any written or graphic material or other information pertaining to the complaint.

List names and contact information of anyone who may have knowledge of the alleged discrimination.

Name	Address	Telephone
_____	_____	_____
_____	_____	_____
_____	_____	_____

How do you think this issue can be resolved?

In the course of conducting a thorough complaint review process, it may become necessary to disclose your name to persons other than those conducting the review. To allow this, sign, date, and submit the consent/release form, enclosed for your convenience.

This discrimination complaint form must also be signed and dated below.

I certify that to the best of my knowledge the information I have provided is accurate and the events and circumstances occurred as I have described them.

Signature: _____ Date: _____

Attachments: ☐ Yes ☐ No

Please submit complaint form, consent/release form, and any additional information to:

Mr. Richard A. Davey, Chair
Boston Region Metropolitan Planning Organization
State Transportation Building
10 Park Plaza, Suite 2150
Boston, MA 02116-3968

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION
Consent/Release Form for Discrimination Complaints

Name: _____

Address: _____

City/Town: _____ State: _____ Zip: _____

As a complainant, I understand that the MPO may need to disclose my name during the course of the complaint review process to persons other than those conducting the review, in order for the review to be thorough. I am also aware of the obligation of the MPO to honor requests under the Freedom of Information Act: I understand that it may be necessary for the MPO to disclose information, including personally identifying details, which it has gathered as part of the investigation of my complaint. In addition, I understand that as a complainant I am protected by MPO policies and practices from intimidation or retaliation in response to my having taken action or participated in action to secure rights protected by nondiscrimination statutes and regulations that are enforced by the MPO.

Please check one:

☐ **I GIVE CONSENT** and authorization to the MPO to reveal, insofar as required for an effective investigation, my identity to persons at the organization identified by me in my formal complaint. I also authorize the MPO to discuss, receive, and review materials and information about me with appropriate administrators or witnesses for the purpose of investigating this complaint. In doing so, I have read and understand the information at the beginning of this form. I also understand that the information received will be used for authorized civil rights compliance activities only. I further understand that I am not required to sign this release, and do so voluntarily.

☐ **I DENY CONSENT** and authorization to the MPO to reveal, in the course of its investigation of my discrimination complaint, my identity to persons at the organization identified by me in my formal complaint, other than those who will be conducting the investigation. I also deny consent to the MPO to disclose any information contained in this complaint to any witnesses I have mentioned in the complaint. In doing so, I understand that I am not authorizing the MPO to discuss, receive, and review materials and information about me from the same. In doing so, I have read and understand the information at the beginning of this form. I also understand that my decision to deny consent may impede the investigation of my complaint and may result in an unsuccessful resolution of my case.

Signature: _____ Date: _____

Please **sign and submit** complaint form, consent form, and any additional information to:

Mr. Richard A. Davey, Chair
Boston Region Metropolitan Planning Organization
State Transportation Building
10 Park Plaza, Suite 2150
Boston, MA 02116-3968

APPENDIX III

Boston Region MPO Funding Sources

Funding Programs

Many federal-aid transportation programs support transportation activities in metropolitan areas, each having different requirements and program characteristics. Non-federal aid (state funds) for the Statewide Road and Bridge Program and the Central Artery/Tunnel Project, is derived from various sources, including the Commonwealth's Transportation Bond Bill.

Federal programs that fund projects in the federal fiscal years 2012–15 TIP are listed in the following two tables.

TABLE 2-1
Federal-Aid Highway Program

Abbreviation	Program	Eligible Uses	Examples
Bridge	Bridge Replacement and Rehabilitation	Replacement and rehabilitation of any public bridge.	Central Street over the Sudbury River (Framingham) – 2012 Element
CMAQ	Congestion Mitigation and Air Quality Improvement	A wide range of projects in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and small particulate matter that reduce transportation-related emissions.	South Bay Harbor Trail (Boston) – 2014 Element
IM	Interstate Maintenance	Resurfacing, restoring, and rehabilitating routes on the interstate highway system.	Interstate 95 (Wakefield to Lynnfield) – 2013 Element
NHS	National Highway System	Interstate routes, major urban and rural arterials, connectors to major intermodal facilities, and the national defense network.	Route 128 Improvement Program (Dedham, Needham, Westwood) – 2012 Element
STP	Surface Transportation Program	A broad range of surface transportation capital needs, including many roads; transit, sea, and airport access; and vanpool, bicycle, and pedestrian facilities.	Trapelo Road (Belmont) – 2012 Element
HPP	High-Priority (Demonstration) Projects	Funds identified for a specific project.	Route 140 Improvements (Franklin) – 2013 Element
Various	Discretionary Funding	Funds identified for specific projects in annual appropriations (e.g., Enhancements).	Massachusetts Avenue (Arlington) – 2013 Element

TABLE 2-2
Federal Transit Administration Programs

Program Designation		Eligible Uses	Examples
Section 5309	Capital Investment	New starts or extensions to existing fixed-guideway systems, fixed-guideway modernization, and bus and related facilities.	MBTA Blue Line Modernization – 2012 Element
Section 5307	Urbanized Areas	Capital and preventive maintenance; 1% must go to transit enhancements.	MBTA Accessibility Program – 2012 Element
Section 3037	Job Access and Reverse Commute (JARC) and New Freedoms Programs	Capital and operating costs of job-access and additional transportation services.	MetroWest Regional Transit Authority Shuttle Buses – 2010 Element
Various	Discretionary Funding	Funds identified for specific projects in annual appropriations.	Boston Bike Share Program (Hubway) – 2011 Element (Urban Circulator Grant Program Award)

PROJECT EVALUATION

Overview

The MPO uses evaluation criteria to make the process of selecting projects for programming in the TIP both more logical and more transparent. The criteria are based on the MPO's visions and policies that were adopted for its Long-Range Transportation Plan, Paths to a Sustainable Region.

All projects are required to show consistency with the Long-Range Transportation Plan and other statewide and regional plans (for example, the Program for Mass Transportation and the Massachusetts Statewide Bicycle Transportation Plan). The evaluation process assesses factors such as the condition of infrastructure, safety, management and operations, and issues of regional and local concern (environmental justice, land use, economic development, and the environment). For evaluation purposes, projects are segregated by type. For example, arterial highway projects are compared to each other, but are not compared to enhancement projects.

MPO staff evaluate each project that is considered for inclusion in the TIP based upon the specific criteria that have been developed by the MPO. Other inputs include project readiness and municipal support. Additional background information on the TIP project

FFYs 2012-15 TIP FFY 2012

Regional Highway Program

FEDERAL-AID TARGET PROJECTS

Congestion Mitigation and Air Quality Improvement Program

Boston Region	Clean Air and Mobility Program	Federal Funds	State/Local Funds	Total Funds
Acton	Rail Shuttle, year 3	\$1,659,713	\$414,928	\$2,074,641
Boston	Bike Share, year 3	\$55,327	\$11,065	\$66,392
Brookline	Bike Share, year 2	\$600,000	\$120,000	\$720,000
Cambridge	Bike Share, year 2	\$90,000	\$18,000	\$108,000
CATA	Stage Fort Shuttle, year 3	\$125,822	\$25,164	\$150,986
Somerville	Community Path Cedar to Lowell	\$5,000	\$1,000	\$6,000
		\$752,201	\$150,440	\$902,641
	Congestion Mitigation and Air Quality Improvement Program Total	\$1,659,713	\$414,928	\$2,074,641
		Minimum CMAAQ Regional Target		\$0

Clean Air and Mobility Awards listed above will be funded depending on readiness.

National Highway System

Dedham, Needham & Westwood	603206	Route 128 Improvement Program Contract 4, Year Five of Five	State Funds	Total Funds
			\$4,666,000	\$23,330,000
		National Highway System Total	\$4,666,000	\$23,330,000

Surface Transportation Program

Belmont	604688	Trapelo Road	State Funds	Total Funds
Concord & Lincoln	602984	Route 2 (Crosby's Corner), Year Two of Five	\$2,918,336	\$14,591,678
Natick	601586	Route 9/Oak Street	\$1,322,065	\$6,610,323
			\$898,934	\$4,494,672
		Surface Transportation Program Total	\$5,139,335	\$25,696,673

FFYs 2012-15 TIP FFY 2012

Highway Safety Improvement Program (HSIP) Project

Concord & Lincoln	602984	Route 2 (Crosby's Corner), Year Two of Five	<i>Federal Funds</i>	<i>State Funds</i>	<i>Total Funds</i>
			\$3,867,039	\$429,671	\$4,296,710
		Highway Safety Improvement Program Total	\$3,867,039	\$429,671	\$4,296,710
			<i>Minimum HSIP Regional Target</i>		\$4,296,710

Total Regional Target Programming
Boston Region MPO Regional Target with State Match
\$55,398,024
\$55,398,024

FEDERAL AID NON-TARGET PROJECTS

High-Priority Projects (SAFETEA-LU)

Acton/Stow	604531	Assabet River Rail Trail Design (HPP 1761)	<i>Federal Funds</i>	<i>State/Local Funds</i>	<i>Total Funds</i>
Boston		Improvements to Gainsborough and St. Botolph Sts. Design (HPP 2012)	\$615,451	\$153,863	\$769,314
Malden	605173	Pleasant Street Construction (HPP 589)	\$400,000	\$100,000	\$500,000
Somerville	604331	Somerville Community Path Design and Construction (HPP 2782)	\$1,367,848	\$341,962	\$1,709,810
Section 112			\$809,911	\$202,478	\$1,012,389
Natick	601586	Route 9/Oak Street	<i>Federal Funds</i>	<i>State/Local Funds</i>	<i>Total Funds</i>
Section 117			\$1,386,000		\$1,386,000
Malden	605173	Pleasant Street Construction	<i>Federal Funds</i>	<i>State/Local Funds</i>	<i>Total Funds</i>
Somerville		Adaptive Reuse and Streetscape Improvements (Study)	\$1,657,656		\$1,657,656
Transportation Community and System Preservation (TCSP)			\$593,928		\$593,928
Cambridge	606116	Longfellow Bridge Gateway Improvements	<i>Federal Funds</i>	<i>State/Local Funds</i>	<i>Total Funds</i>
2010 Surface Transportation Priority Project Earmark(s)			\$889,200	\$222,300	\$1,111,500
Medway	605657	Reconstruction and Rehabilitation of Route 109/Main St. (Design) (MA266)	<i>Federal Funds</i>	<i>State/Local Funds</i>	<i>Total Funds</i>
		High-Priority Projects Total	\$8,119,926	\$1,020,603	\$9,140,529

FEDERAL-AID BRIDGE PROJECTS

Bridge

Foxborough	605414	I-95 over Green Street	<i>Federal Funds</i>	<i>State Funds</i>	<i>Total Funds</i>
Framingham	602839	Central Street over the Sudbury River	\$1,920,000	\$480,000	\$2,400,000
Lexington	603722	Route 2A over I-95	\$2,426,400	\$606,600	\$3,033,000
		Bridge Total	\$5,946,400	\$1,486,600	\$7,433,000

FFYs 2012-15 TIP

FFY 2012

Advance Construction Bridge					
Boston	604517	Chelsea Street Bridge			
Boston	603370	Route 99 (Alford Street) over Mystic River	Federal Funds	State Funds	Total Funds
			\$9,600,000	\$2,400,000	\$12,000,000
			\$11,200,000	\$2,800,000	\$14,000,000
Advance Construction Bridge Total			\$20,800,000	\$5,200,000	\$26,000,000
Accelerated Bridge Program - Federal Aid GANs Projects**					
Boston/Cambridge	604361	Longfellow Bridge			
Boston	603654	Morton Street over the MBTA/CSX			
Quincy	604382	Fore River Bridge	Federal Funds	State Funds	Total Funds
					\$260,467,424
					\$10,574,787
					\$317,511,812
					\$588,554,023
					\$621,987,023

**GANs conversion to federal aid to begin in 2015.

Accelerated Bridge Program Total Federal-Aid Bridge Total

FEDERAL AID MAJOR INFRASTRUCTURE AND STATEWIDE CATEGORIES

Interstate Maintenance					
Boston/Somerville	606167	Interstate 93			
Franklin to Milford	606169	Interstate 495	Federal Funds	State Funds	Total Funds
			\$9,664,200	\$1,073,800	\$10,738,000
			\$13,593,600	\$1,510,400	\$15,104,000
			\$23,257,800	\$2,584,200	\$25,842,000
Interstate Maintenance Total					
National Highway System Pavement Preservation					
Acton to Littleton	604472	Route 2			
Randolph/Canton	605607	Route 24	Federal Funds	State Funds	Total Funds
			\$4,870,051	\$1,217,513	\$6,087,564
			\$4,712,332	\$1,178,083	\$5,890,415
			\$9,582,383	\$2,395,596	\$11,977,979
National Highway System Pavement Preservation Total					
Safe Routes To School Program					
Newton	606520	Bowen School			
Swampscott	605872	Stanley School	Federal Funds	State Funds	Total Funds
			\$450,000		\$450,000
			\$425,000		\$425,000
			\$875,000		\$875,000
			Total Highway Program		\$725,220,555

Safe Routes To School Program Total

FFYs 2012-15 TIP FFY 2012

CENTRAL ARTERY/TUNNEL PROJECT

National Highway System (NHS)			
Bridge			
State Transportation Program (STP)/Flex			
State Transportation Program (STP)			
	<i>Federal Funds</i>	<i>State Funds</i>	<i>Total Funds</i>
	\$70,000,000		\$70,000,000
	\$75,960,000		\$75,960,000
	\$20,000,000		\$20,000,000
Federal-Aid Subtotal			
Federal-Aid Matching Funds Subtotal	\$165,960,000		
			\$165,960,000
			\$165,960,000

Total Federal Fiscal Year 2012 Central Artery/Tunnel Funds

Commonwealth Funding Commitments (not programming these funds in the TIP; shown for informational purposes only)

STATE IMPLEMENTATION PLAN

Green Line Extension Project**
 Fairmount Improvements****
 Red Line-Blue Line Connector Design*****
 1,000 Parking Spaces - Wonderland*****

	<i>Federal Funds</i>	<i>State Funds</i>	<i>Total Funds</i>
		\$66,200,000	\$66,200,000
		\$36,407,814	\$36,407,814
		\$2,000,000	\$2,000,000
	\$13,648,436	\$10,622,542	\$24,270,978
			\$128,878,792

State Implementation Plan Total

***The Green Line Extension project is currently in the New Starts pipeline and the Commonwealth anticipates a decision in a Full Funding Grant Agreement in FFY 2015. The cash flows for the project, therefore, provide 100% bond funding for FFY 2012-14 and begin programming New Starts funding in FFY 2015. The Commonwealth is committed to fully funding this project with bond funds if New Starts is not awarded.

****Lists cash flows (based on state fiscal year) for Fairmount Improvements.

*****MassDOT made a formal request on Aug. 1, 2011, to remove this project from the State Implementation Plan regulation. The MPO is continuing to carry this out until the process is completed.

*****Lists cash flows for the Wonderland Parking Garage. Federal funds are derived from prior programmed CDD (earnmarks) and ARRA funds. State funds include \$8,575,927 in MBTA bond funds.

FFYs 2012-15 TIP FFY 2012

Regional Transit Program

Section 5307		Federal Funds	MBTA Funds	Total Funds
Systemwide	Vehicles - Commuter Rail	\$12,012,172	\$3,003,043	\$15,015,215
	<i>Locomotive and Coach Procurement</i>			
Systemwide	Vehicles - Bus/THE RIDE/Ferry/Non-Revenue	\$23,000,000	\$5,750,000	\$28,750,000
	<i>123 CNG Buses - Overhaul</i>			
Systemwide	Vehicles - Subway	\$25,000,000	\$6,250,000	\$31,250,000
Systemwide	Station Upgrades (all modes)	\$26,000,000	\$6,500,000	\$32,500,000
Systemwide	Accessibility Program	\$25,000,000	\$6,250,000	\$31,250,000
	<i>Government Center</i>			
	<i>Elevator Replacement/Rehabilitation</i>			
	<i>MBTA Accessibility Program (LRAP)</i>			
	<i>Commuter Rail Accessibility Program</i>			
	<i>Station Accessibility Program</i>			
Systemwide	Facilities Upgrades	\$5,000,000	\$1,250,000	\$6,250,000
	<i>Parking Program</i>			
	<i>Everett Maintenance Facility</i>			
	<i>Maintenance Facilities - Equipment</i>			
Systemwide	Environmental Program	\$5,000,000	\$1,250,000	\$6,250,000
Systemwide	Preventative Maintenance	\$12,000,000	\$3,000,000	\$15,000,000
Section 5307 MBTA Match Total		\$133,012,172	\$33,253,043	\$166,265,215

FFYs 2012-15 TIP FFY 2012

Section 5307 (continued)

Cape Ann	Cape Ann Transportation Authority	Federal Funds	State/RTA Funds	Total Funds
	Preventative Maintenance	\$509,548	\$204,637	\$714,185
	Two 30' Buses	\$300,000	\$75,000	\$375,000
	Support Vehicles	\$103,000	\$103,000	\$206,000
	Tires	\$32,000	\$8,000	\$40,000
	Facility Maintenance	\$14,631	\$3,638	\$18,289
	Support Equipment	\$8,000	\$2,000	\$10,000
	MetroWest Regional Transit Authority	\$51,917	\$12,979	\$64,896
MetroWest	ADA Paratransit	\$1,668,698	\$417,175	\$2,085,873
	Facilities/Parking Lot Paving, Bus Accessories, IT Equipment	\$1,300,000	\$325,000	\$1,625,000
		\$368,698	\$92,175	\$460,873
	Section 5307 State Match Total	\$2,178,246	\$621,812	\$2,800,058

Section 5309 Infrastructure Program

Blue Line	Blue Line Modernization	Federal Funds	MBTA Funds	Total Funds
	Government Center	\$10,000,000	\$2,500,000	\$12,500,000
Systemwide	System Upgrades	\$6,981,902	\$1,745,476	\$8,727,378
Systemwide	Signal System Upgrades	\$15,000,000	\$3,750,000	\$18,750,000
	Columbia Junction			
Systemwide	Power Program	\$37,000,000	\$9,250,000	\$46,250,000
Systemwide	Bridge and Tunnel Program	\$25,000,000	\$6,250,000	\$31,250,000
	Section 5309 MBTA Match Total	\$93,981,902	\$23,495,476	\$117,477,378

Section 5309 Earmarks

Cape Ann	Cape Ann Transportation Authority Bus	Federal Funds	State Funds	Total Funds
		\$276,000	\$89,000	\$365,000
	Section 5309 State Match Total	\$276,000	\$89,000	\$365,000

Federal-Aid Subtotal

Federal-Aid State Matching Funds Subtotal

Federal-Aid MBTA Matching Funds Subtotal

		\$229,448,320	\$710,812	\$56,748,519
Total FFY 2012 Regional Transit Funds				\$286,907,650
Total FFY 2012 TIP Total				\$1,178,088,205

8 BOSTON REGION MPO BUDGET AND OPERATING SUMMARIES

This chapter contains overall budget information by recipient agency and by funding source for the projects listed in the previous chapters. The information is presented according to the same UPWP categories used in those chapters:

Administration and Resource Management Projects	\$832,200
Certification Requirements	2,475,000
Planning Studies	1,166,800
Technical Support/Operations Analysis Projects	2,090,800
MassDOT Match to CTPS FFY 2012 Section 5303 Funds	<u>260,400</u>
<i>Total</i>	\$6,825,200

Funding for the projects listed in Chapters 4 through 7 of this UPWP comes from the following sources, which are described in Chapter 1:

FHWA 3C Planning (PL)/MassDOT Local Match	\$3,286,300
FHWA Statewide Planning and Research (SPR)/MassDOT Local Match	500,000
FTA/MassDOT and MAPC Local Match	2,134,200
MassDOT	385,000
MBTA	460,500
Other	<u>59,200</u>
<i>Total</i>	\$6,825,200

On the following pages, the funding information presented in the preceding chapters is summarized in four tables, one for each UPWP category. These tables are followed by a one-page summary showing the entire budget by recipient agency and funding source, a table showing the grant application categories for Section 5303 funding, and charts presenting schedules and staff assignments for CTPS projects in this UPWP. The purpose of these summaries is to assist federal and state contract administrators in reviewing the overall work program in detail.

APPENDIX IV

Paths to a Sustainable Region Development Process



THE PURPOSE OF THE LONG-RANGE TRANSPORTATION PLAN

Paths to a Sustainable Region, the Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization (referred to as the LRTP), is the long-range, comprehensive transportation planning document for the Boston region. The region encompasses 101 cities and towns from Ipswich to Duxbury and Boston to Marlborough (see Figure 1-1). This is the area in which transportation planning is the responsibility of the Boston Region Metropolitan Planning Organization (MPO), as will be explained in this chapter. Covering 1,405 square miles, the MPO region makes up about 18 percent of the state's land area; however, with more than three million residents, it has 48 percent of the state's population.

The LRTP defines transportation visions for the future of the region, establishes goals and policies that will lead to the achievement of the visions, and allocates projected revenue to transportation programs and projects that implement those goals and policies. Fundamentally, the LRTP is about making choices for the future of the metropolitan area—choices about local and regional land use, choices about where to allocate limited transportation resources, and choices about the type of future we wish to see for our region and, by extension, the commonwealth of Massachusetts. In accordance with applicable federal planning regulations, the LRTP addresses surface transportation issues only.

The LRTP's 23-year scope (2012 to 2035) allows the MPO to consider the transportation network's future from a broad perspective. Only projects funded with federal dollars designated as “regionally significant” and “major investment” projects are specifically listed by name in the LRTP. The term “regionally significant” refers to projects required by federal regulations to be included in the travel demand model (a computer model) for air quality conformity purposes—generally, any project that adds capacity to the regional transportation network. Major investment projects are projects that cost over \$10 million.

THE BOSTON REGION MPO'S MUNICIPALITIES



For a more detailed explanation of the types of projects that must be included in the model, see Chapter 10, Air Quality Conformity Determination. Many of the transportation projects and programs that will be funded with federal dollars in the next 23 years do not add capacity to the transportation system and are, therefore, not specifically identified in the LRTP. The function of these projects will be primarily to maintain and operate the existing system. Nevertheless, when it comes time to select projects for funding in the Transportation Improvement Program, selection will be based upon how well they implement the goals and policies adopted in the LRTP.

THE BOSTON REGION MPO STRUCTURE

The Boston Region MPO is responsible for the development of the LRTP. It conducts transportation planning in its region for a variety of transportation modes and facilities, including highway, transit, nonmotorized, and freight. By bringing together representatives from local, regional, state, and federal entities and a public advisory council, and engaging with members of the public, MPO decision making is sensitive to the diverse range of interests and concerns that exist in the Boston region.

Federal law establishes requirements and guidelines for transportation planning in urbanized areas with populations of more than 200,000. In order to be eligible for federal transportation funding, an area must maintain a continuing, cooperative, and comprehensive (3C) transportation planning process. The Boston Region MPO is responsible for carrying out the 3C process in its area.

The MPO is a cooperative board of 14 voting members:¹

- Massachusetts Department of Transportation (MassDOT) – three members, including the MassDOT Highway Division
- Massachusetts Bay Transportation Authority (MBTA)
- Massachusetts Bay Transportation Authority Advisory Board
- Massachusetts Port Authority (Massport)
- Metropolitan Area Planning Council (MAPC)
- City of Boston
- Six elected municipalities (three cities and three towns) from the Boston region, currently:
 - o City of Somerville
 - o City of Newton
 - o Town of Braintree (city form of government)
 - o Town of Bedford
 - o Town of Framingham
 - o Town of Hopkinton

¹ The Boston Region MPO has revised its Memorandum of Understanding (MOU) and organizational structure. It will become effective November 1, 2011. The new structure can be reviewed at www.bostonmpo.org in the fall of 2011.

The Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Regional Transportation Advisory Council (the Advisory Council), which is the MPO's official advisory group, also participate on the MPO, in a nonvoting capacity.

THE RELATIONSHIP TO OTHER PLANNING DOCUMENTS

In addition to the LRTP, the Boston Region MPO is required to develop other documents and programs as part of the 3C transportation planning process. These include:

- The Unified Planning Work Program (UPWP)
- The Congestion Management Process (CMP)
- The Transportation Improvement Program (TIP)



The UPWP and the CMP are used in the development of the LRTP. Along with the TIP, they help to implement the visions and objectives of the LRTP. Other documents or initiatives considered in the development of the LRTP are:

- The MBTA Program for Mass Transportation (PMT)
- Legal commitments of the Commonwealth of Massachusetts

Brief descriptions of all of the above and their relationship to the LRTP are provided below.

The Unified Planning Work Program

The annual Unified Planning Work Program (UPWP) describes transportation planning studies to be undertaken by the MPO and other entities in the Boston region during a given federal fiscal year. The UPWP is intended to serve two purposes. The first is to provide information to federal and state government officials, municipalities, regional organizations and interest groups, and the general public about all of the transportation planning studies that are expected to be undertaken in the region. The second is to provide complete budget information to federal and state officials about the expenditure of federal funds for planning studies that will be carried out by the MPO.

The planning studies in the UPWP are an important source of ideas and information that may help in project selection for the LRTP and TIP and also may evolve into projects that will eventually be included in the LRTP, and ideas received during the public outreach process for the LRTP sometimes lead to studies included in the UPWP.

The Congestion Management Process

The MPO's Congestion Management Process (CMP) is an ongoing program for monitoring mobility in the region, providing the MPO and transportation planners with timely information about transportation system performance, and making recommendations in the areas where mobility deficiencies are found. The CMP program includes the systematic measurement and analysis of mobility problems in the region. The MPO staff then provides decision makers with information about transportation system performance and with strategies and recommendations for addressing identified problems and improving mobility. Information from the CMP and associated planning studies funded through the UPWP are used in the selection of projects for the LRTP and the TIP.

The Transportation Improvement Program

The Transportation Improvement Program (TIP) is a multimodal program that sets forth a detailed list of transportation projects that are programmed to receive federal funding during the four-year horizon of the document. The projects advanced in the TIP are consistent with the policies and goals of the LRTP. The TIP describes the transportation projects that are expected to be implemented during this four-year period and provides information about how they have been prioritized. It also includes a financial plan showing the revenue source or sources, current or proposed, for each project. In order to be eligible to receive federal funds, a project must be programmed in the current federal fiscal year's TIP. In addition to the federally funded projects, most highway projects funded with state transportation money are also included in the TIP in the Boston region. In order for any regionally significant project to be included in the TIP, it must be included in the LRTP. One function of the TIP is to serve as the implementation arm for the LRTP.

The projects advanced in the TIP are consistent with the policies and goals of the LRTP.

One function of the TIP is to serve as the implementation arm for the LRTP.

The MBTA Program for Mass Transportation

The MBTA Program for Mass Transportation (PMT) is the long-range, fiscally unconstrained, 25-year capital program of the MBTA. The objective of the PMT is to identify and prioritize projects that will result in a cost-effective mass transit system that serves the greatest number of passengers while furthering environmental, economic development, and environmental justice goals. The MBTA adopted the current PMT in December 2009. The MPO uses it to prioritize transit projects for inclusion in the LRTP.

Legal Commitments

Several transportation projects are legal commitments that MassDOT or other transportation agencies in Massachusetts must complete within a certain time frame. The legal commitments that have the greatest impact on planning in the Boston region are those pertaining to the State Implementation Plan (SIP) and the Central Artery/Tunnel project.

The federal Clean Air Act requires states with one or more MPO regions that do not meet federal air quality standards, such as Massachusetts, to produce a SIP. A SIP describes the efforts that a state has made, or proposes to make, to reduce levels of pollutants, such as ozone and carbon monoxide. Massachusetts was required to produce a SIP, and MassDOT and other transportation agencies, including the MBTA and

Massport, are required to implement the transportation projects and policies that are included in the SIP.

In the SIP, the Central Artery/Tunnel (CA/T) project commitments are the result of an agreement entered into by the state's Department of Environmental Protection (DEP) and the former Executive Office of Transportation (EOT, now MassDOT) during the approval process for the CA/T project. This agreement was updated, with revised implementation schedules, in an Administrative Consent Order between DEP and EOT in 2000. In 2004, EOT and DEP began a process, completed in July 2008, of reevaluating the projects in the original SIP commitments. This process was undertaken to ensure that any further investments fund the best regionally significant projects that meet air quality goals and requirements.

As a matter of policy, the MPO includes all legal commitments related to the SIP and the Consent Order in the LRTP.

THE LRTP DEVELOPMENT PROCESS

Federal metropolitan planning regulations require MPOs to develop a regional transportation plan every four years. This section outlines the process that was followed in the development of the new LRTP, *Paths to a Sustainable Region*.

Public Outreach for the LRTP

Process and Activities

The MPO's Public Participation Program is designed to provide opportunities for members of the public, interest groups, other stakeholders, and elected officials to be involved in MPO decision making, including the development of the LRTP, the UPWP, and TIP; the program also supports the ongoing work of the Regional Transportation Advisory Council (the Advisory Council) and the MPO's Transportation Equity Program. The MPO adopted its current Public Participation Program in June 2007 and amended it in April 2010. The activities identified in the program are designed to meet federal planning rules that require the MPO to maintain a continuing, cooperative, and comprehensive (3C) transportation planning process and also reflect the MPO's commitment to providing opportunities for substantive public involvement. The MPO followed and expanded on the Public Participation Program as it developed a specific Public Involvement Plan for *Paths to a Sustainable Region*, which was approved by the MPO in February 2010.

In developing *Paths to a Sustainable Region*, the MPO conducted a variety of outreach



activities, beginning in the spring of 2010, inviting the involvement of participants that included the Regional Transportation Advisory Council; area residents; municipal, state, and federal officials; businesses; transportation interest groups; environmental groups; transportation providers; persons with disabilities; low-income and minority communities; the elderly; and persons with limited English proficiency. Methods for eliciting public input included the following:

- **The Advisory Council**, the main avenue for public involvement for the MPO. It serves the MPO as its official advisory group. Composed of transportation advocacy and other interest groups, municipal officials, and state agencies, it is charged with creating a forum for the ongoing and robust discussion of pertinent regional transportation topics and for generating diverse views to be considered by the MPO. MPO staff often discussed *Paths to a Sustainable Region* with the Advisory Council and its LRTP subcommittee during the course of the LRTP development. The Advisory Council submitted several letters and reports to the MPO, expressing its views and providing guidance to the MPO.
- **Open houses** that informed the public about the transportation planning process and about studies and projects underway, and that offered a forum for discussion and an exchange of ideas. Open houses were held periodically from the adoption of the last LRTP in 2009 through the summer of 2011, and focused on LRTP topics such as policies, modeling, transportation equity, transportation projects, and land use planning.
- **Public workshops** held in July 2010, February 2011, and August/September 2011 to hear the views of members of the public, and to provide information on the LRTP and TIP. The February 2011 workshops were held to generate feedback on the draft transportation needs assessment, and the August/September 2011 workshops were held to discuss the draft LRTP and seek more comments.
- **A Transportation Equity Forum** held in February 2011 at the Boston Public Library for professionals working in organizations serving environmental justice neighborhoods and for members of the public, to discuss the transportation needs of low-income and minority persons living in these neighborhoods.
- **“Invite Us Over” sessions**, where MPO staff visited, when requested, organizations with an interest in transportation planning, to present information and discuss ideas for the LRTP.
- **MAPC subregion meetings**, where MPO staff met periodically with MAPC subregional groups to keep these local officials informed of the LRTP process and progress and to gather feedback on the visions and policies, the transportation needs assessment, and information on projects under consideration for inclusion in the LRTP.



- Environmental Consultation, held in July 2011, where staff discussed the environmental facets of long-range transportation issues and solutions with state agencies responsible for environmental matters.

Communicating with the Public

The MPO uses several means to keep members of the public informed about MPO news, activities, and events, and to encourage public participation in the transportation planning process.

Email Distribution Lists: MPOinfo and MPOmedia

As an ongoing part of the planning process, the MPO prepares press releases, flyers, and other notices for distribution to a broad network of interested parties. These materials are distributed via the MPO's one-way email list, MPOinfo, which includes more than 1,700 contacts, including municipal officials, planners, transportation equity contacts, special interest groups, members of the general public, legislators, environmental agencies and interest groups, and freight and transportation providers. Press releases and informational flyers are also distributed to more than 200 media outlets, including local Spanish-language publications (which receive Spanish-language text). Outreach materials are also distributed to the Access Advisory Committee to the MBTA (AACT), which works with the MBTA to ensure that the public transportation system in the region is accessible to the elderly and people with disabilities.

The MPO has expanded its email contacts so that its messages reach councils on aging; commissions on disability; community development corporations; chambers of commerce; economic development, Main Street districts, and transportation committees; and conservation, youth, historical, and natural resource commissions.

TRANSREPORT

The MPO's monthly newsletter, TRANSREPORT, is an important means of providing information on various aspects of the entire MPO planning process, including announcements of public participation opportunities and outreach activities. Each issue provides information on upcoming transportation-related public meetings and events, MPO studies completed or underway, other MPO activities, and ways to contact MPO staff with ideas and questions. Special inserts on important LRTP topics are included to provide detailed information and encourage public comment.

TRANSREPORT is sent to approximately 3,000 recipients, including over 100 state legislators and their staffs, numerous local officials, and members of the general public in each municipality in the region.

TRANSREPORT issues are posted each month on the MPO's website, which also has an archive of past issues.



Website

The MPO's website has pages designated for the LRTP and each of the other certification documents. These pages are updated frequently. Basic information on *Paths to a Sustainable Region* has been posted at www.bostonmpo.org/2035plan since the planning process for the current LRTP was launched. Draft documents were posted as they became available, at www.bostonmpo.org/2035input. These Web pages were promoted through the website's home page, by email messages to MPOinfo, and on postcards that were distributed at public meetings.

A new Web feature developed for *Paths to a Sustainable Region* allows visitors to easily submit feedback. Under each draft document, a "Provide Feedback" button was posted. By clicking on this button, a visitor to the website could provide feedback on any draft material at any time. The feedback was organized by topic and presented to the MPO.

Social Media

The MPO launched a Twitter account (@BostonRegionMPO) in March 2010. Social media sites are among the most visited websites on the Internet and allow the MPO to reach a broad audience and attract people to the MPO's website to learn more about the MPO's work. Announcements about *Paths to a Sustainable Region*, such as the availability of draft documents and public meeting information, are transmitted through Twitter. The MPO also uses YouTube to explain transportation planning issues and will produce a video summary of the LRTP. The use of social media is also consistent with the MPO's Public Participation Program, which calls for utilizing new avenues of communication.

Public Comments

As a result of the outreach, the MPO received numerous comments on the LRTP from municipalities, regional entities, interest groups, and members of the public. The MPO reviewed and considered all comments during the decision-making process. A summary of written and oral comments relating to the development of the LRTP is included in Appendix A. In addition, the MPO responded to comments received during the formal comment period for the draft LRTP (August/September 2011). The comments received during the formal comment period, along with the MPO actions taken, are also included in Appendix A, in a separate table.



Environmental Justice

Environmental justice was an important factor in the development of *Paths to a Sustainable Region*. MPO policies promote the equitable sharing of the benefits and burdens of the region's transportation system, as well as participation in decision making. In addition to the public outreach program described above, the MPO also has a transportation equity program to identify transportation needs of minority and low-income populations and to provide information about the planning process in order to encourage public involvement.

The MPO's transportation equity program is composed of three key elements: outreach, analysis, and the MPO's evaluation of environmental justice issues (see Chapter 6, Transportation Equity, for more information). After one-on-one meetings, surveys, and interviews, the MPO provides feedback to community organizations by classifying their needs and concerns as they relate to the LRTP, TIP, UPWP, transit service planning, or another agency. The information is then directed to the agency or entity that can best address each need.

In selecting projects for the LRTP, the potential impact of a proposed project on environmental justice areas is a criterion in the project ranking processes, as discussed in the section, Use of the MPO's Visions and Policies in the Selection of Projects, below. The MPO staff gives positive ratings to projects that are estimated to benefit environmental justice areas.

As part of the LRTP process, the MPO performed a systemwide environmental justice analysis on the set of projects that are currently funded by the MPO (for 2035 conditions if no new projects were funded and constructed) and the set of projects recommended in this LRTP (2035 build conditions). The analysis focuses on the mobility, accessibility, and emissions for communities with a high proportion of low-income or minority residents (see Chapter 9, Environmental Justice Assessment, for more information).



Consultations on Environmental Issues

The MPO has responded to the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) directives by consulting with agencies responsible for land management, natural resources, historic preservation, and environmental protection and conservation, as related to transportation initiatives. SAFETEA-LU is the federal government's legislation for reauthorization of funding for the nation's surface transportation program. Natural, environmental, and historic resources were mapped for the Boston region using information from the Commonwealth's Office of Geographic and Environmental Information Systems (MassGIS). The information included Areas of Critical Environmental Concern,

flood hazard areas, wetlands, water supply and wellhead protection areas, protected open space, and Natural Heritage and Endangered Species Priority Habitats, and was used in evaluating the projects. This was done by corridor in the needs assessment by overlaying the projects on the maps to determine where environmental issues could potentially arise.

The MPO staff consulted with MassDOT's and the MBTA's environmental divisions to determine their processes for environmental review of project designs. The Massachusetts Environmental Policy Act (MEPA) unit of the Executive Office of Energy and Environmental Affairs was also consulted. The MEPA unit oversees the Massachusetts Environmental Policy Act, which requires project proponents to study the environmental consequences of their actions and to take all feasible measures to avoid, minimize, and mitigate damage to the environment. In addition, the MPO held an environmental consultation meeting in July 2011 to discuss the environmental facets of long-range transportation issues in the region. The Executive Office of Energy and Environmental Affairs and the Department of Environmental Protection attended the meeting along with MassDOT.

Through this consultation, it was determined that the MPO was taking into consideration the appropriate areas of environmental concern. In the Boston region, environmental reviews for projects are conducted by the proponent transportation agency or municipality, not the MPO. The environmental reviews occur when each of the projects is in the design phase and prior to being funded for construction. However, the MPO is willing to consider performing further review and consultation on environmental issues, effects, and mitigation as part of the ongoing 3C process.

Development of MPO Visions and Policies

The first step in developing the LRTP was articulating the MPO's visions for the future of the region and spelling out the policies for achieving that end state. This work was completed in the spring of 2010, with the MPO adopting the LRTP's visions and policies. These are used to guide MPO work and, in particular, as the basis for evaluation criteria and decision making for the LRTP, UPWP, and TIP.

A complete list of the visions and policies guiding the development of the LRTP is provided in Chapter 2, The MPO's Visions and Policies.

Selection of Projects

One of the primary components of this LRTP is a list of major capital expansion projects for implementation over the next 23 years. To select these projects, the MPO first performed a needs assessment for the region to help in determining priorities for the region. This allowed the MPO to prioritize projects from a Universe of Projects and Programs, which is a list of all possible projects for consideration.

Needs Assessment for the Region

The Regional Needs Assessment (included as Volume II of this document) was an initial step in the development of the LRTP. The needs assessment gathered, organized, and analyzed information about the state of the region's transportation system. The needs assessment is a critical component of the LRTP because the region's transportation needs must be inventoried before decisions are made on how problems should be addressed within the constraints of anticipated future funding.

The existing conditions of the various components of the transportation system, their current use, and their projected use in the future are all described in the needs assessment. In addition to issues related to the effective functioning of the transportation system, this needs assessment includes issues related to how the transportation system interacts with the region's current and projected land use conditions, the environment, and low-income and minority populations. The needs assessment was developed at a corridor level using six radial corridors, two circumferential corridors, and a central area. This helped to make the transportation needs of a complex region easier to comprehend.

The needs were prioritized for each of these corridors by five of the MPO's visions – system preservation, mobility, safety, the environment, and transportation equity. It was estimated that the needs of all of the corridors will exceed the financial resources that can be anticipated between now and 2035. Therefore, the region's needs, which were prioritized to guide investment decisions, are summarized in Chapter 3, The Region's Corridors, of this document (Volume I), and in Chapter 10, Regionwide Needs Assessment of Volume II, The Regional Needs Assessment.



Universe of Highway Projects and Programs

The highway Universe of Projects and Programs is composed of projects that were included in a previously adopted Long-Range Transportation Plan; projects identified through the MPO's Congestion Management Process; projects previously studied or currently being studied; projects included in comments received during the public outreach process for the 2000–25 and 2004–25 LRTPs and JOURNEY to 2030; projects over \$10 million that are in the current TIP; and projects over \$10 million included in the FFYs 2011–14 TIP Universe of Projects. The

highway Universe of Projects and Programs (Appendix B) lists projects by the corridors identified in the Needs Assessment, along with information on each project's status:

- Identified through a corridor study
- Currently in MassDOT's environmental review or design process
- Included in the JOURNEY to 2030 LRTP (as a recommended or illustrative project)
- Included in the current TIP
- Identified through public comment
- Meets a need identified in the Needs Assessment

Universe of Transit Projects and Programs

The MBTA adopted its current Program for Mass Transportation (PMT) in December 2009. The PMT defines a long-range vision for regional mass transportation with

respect to infrastructure improvements. The planning approach taken in this PMT reflects the MBTA's priority of maintaining the existing system with MassDOT and the Commonwealth playing a major role in prioritizing and paying for transit expansions. Past versions of the PMT have placed emphasis on identification and evaluation of potential expansion projects. The current PMT continues to include transit expansion and capacity improvements as important elements for achieving its long-range vision.

The transit Universe of Projects and Programs was derived from this PMT as well as from the MBTA Capital Investment Program (CIP), the MBTA's five-year fiscally constrained plan for investing in the transit system, which currently includes only maintenance projects. The transit Universe of Projects and Programs (Appendix B) lists projects by the corridors identified in the Needs Assessment, along with information on each project's status:

- Included in the current PMT
- Included in the current CIP
- Transit projects recommended as part of the MPO's Congestion Management Process
- Included in the JOURNEY to 2030 LRTP (as a recommended or illustrative project)
- Identified through public comment
- Meets a need identified in the Needs Assessment

Investment Categories

The Universe of Projects and Programs was then organized by investment categories to better understand the degree to which different project types advance the MPO's visions and policies. Staff conducted an evaluation to determine whether a project's primary or secondary purposes supported the various MPO policies. The investment categories are:

- State of Good Repair and Maintenance – transit and roadway
- Multimodal Traffic Management and Modernization – transit and roadway
- Management and Operations – transit and roadway
- Expansion – transit, roadway, freight, and shared-use paths (which include MassDOT Bay State Greenway 100 paths)
- Clean Air and Mobility



The Use of the MPO's Visions and Policies in the Selection of Projects

The MPO used its visions and policies, in the project selection process of the LRTP, as the basis for the project evaluation criteria and for the organization of the MPO's investment categories discussed above.

For those highway and transit projects included in the Universe of Projects and Programs that met a need identified in the Needs Assessment, a very preliminary evaluation was done to determine which of the MPO's vision topics it addressed. This information is included in Appendix B.

The next step was to evaluate how well the projects and programs advanced the MPO's policies within each vision as well as within the investment categories listed above. All projects that were included in the JOURNEY to 2030 LRTP, were evaluated, and projects and programs that are not included in the JOURNEY to 2030 that staff felt would advance the visions of the region were all evaluated in order to show how well their primary and secondary purposes advance the MPO's visions and policies. This information was prepared to help the MPO select a strategy that will help to achieve its visions while adhering to its policies. This information is provided at www.bostonmpo.org/2035plan.

The Availability of Funding for Projects in the LRTP

MassDOT provided estimates of highway funding for the Boston Region's LRTP in five-year time bands from 2011 through 2035. The estimates include the following funding categories:

- Major Infrastructure Projects
- Regional Discretionary Funding
- Federal-Aid Bridge Projects
- National Highway System/Interstate Maintenance Projects
- Statewide Maintenance

The first two categories – Major Infrastructure Projects and Regional Discretionary Funding – are the categories in which the MPO was given responsibility for project selection. The MPO used this information in developing its financially constrained LRTP.

In addition to the consideration of the various funding categories, the MPO also discussed the amount of allocation of funding to listed projects (projects that either added capacity to the system or that cost over \$10 million) in relation to the amount of funding left unassigned for projects and programs that would maintain or modernize the transportation system.

The MPO agreed with the assumptions in the PMT that all transit funding would go to the MBTA's priority of maintaining the existing system, with MassDOT and the Commonwealth prioritizing and paying for transit expansions. If the MPO were to fund additional transit projects not funded through the Commonwealth, they would do so by using highway funding flexed to transit projects.

The Development of Investment Strategies for the LRTP

MPO staff prepared three investment strategies, described below, which were designed to provide options highlighting various examples of funding possibilities for consideration. In the development of this LRTP, the MPO is facing serious funding shortfalls and severe maintenance and state-of-good-repair needs. These strategies offered the MPO several choices for working within these constraints, while still maintaining the existing system, improving mobility in all modes, achieving greenhouse gas reductions, and moving toward the other forward-looking visions and policies the MPO embraces.

- Strategy 1 – Current Approach: This strategy proposed that current programming trends continue and that the projects listed in JOURNEY to 2030 would continue to be funded with highway discretionary and major infrastructure funding in *Paths to a Sustainable Region*.
- Strategy 2 – Current LRTP with a Regional Needs-Based Focus: This strategy proposed highlighting from the JOURNEY to 2030 the large-scale regional solutions to identified regional needs. It focused mainly on large-scale highway projects from the JOURNEY to 2030 that address the greatest regional needs.
- Strategy 3 – New Mix of Projects and Programs – Lower Cost/More Flexibility: This strategy was developed to pull into the LRTP a more diverse set of projects and a more varied set of programs, based on identified needs. It was guided by the premise that in times of fiscal constraint, focusing on lower-cost projects would provide the flexibility to address mobility and other needs in many geographic areas of the MPO region, rather than focusing investments in only a few areas.

The MPO focused their discussions around these strategies and the investment categories discussed above. A detailed discussion on the final recommended set of projects is included in Chapter 8, The Recommended Plan.

Development of Demographic Projections

As part of the LRTP process, land use projections for the year 2035 were used to forecast travel demand. MAPC developed the demographic forecasts using MetroFuture, its long-range plan for land use, housing, economic development, and environmental preservation in the Boston region. It includes both a vision for the region's future and a set of strategies for achieving that future. The MPO adopted the MetroFuture projections for the 101 municipalities in the Boston Region MPO in April 2008. At the same time, the MPO agreed to use the forecasts from the neighboring regional planning agencies for the 63 municipalities that are in the modeled area but that are outside of the Boston Region MPO area. This land use is referred to as the Regional Planning Agency (RPA) Hybrid Scenario, which is used as an input into the MPO's travel demand model, discussed below.

Travel Demand Forecasts

In developing *Paths to a Sustainable Region*, the MPO conceptualized the region's transportation needs over the next 23 years. Land use patterns, growth in employment and population, and trends in travel patterns differ in how they affect demands on the region's transportation system. In order to estimate future demands on the system for

this LRTP, the MPO utilized a regional travel-demand forecast model. The model is a planning tool used to evaluate the impacts of transportation alternatives given varying assumptions with regard to population, employment, land use, and traveler behavior. The model is used to assess potential projects in terms of air quality benefits, travel-time savings, and congestion reduction.

Illustrative Projects

Illustrative projects are defined as projects that could significantly contribute toward the MPO visions, but which are not included in the recommended list of projects because there is not sufficient revenue to fund them. During the development of this document, the MPO decided not to include illustrative projects in the LRTP. Since there is a significant backlog of maintenance and state-of-good repair work to be done on the highway and transit system, the MPO did not want to highlight specific unprogrammed infrastructure projects that it would select if additional funding were to become available. As described above, under the Universe of Highway and Transit Projects and Programs, projects that were included as illustrative projects in the last LRTP – JOURNEY TO 2030, are shown in Appendix B.

Looking Forward

The MPO views the LRTP as a living document. Implementing this plan will be an integral part of the ongoing planning process. The needs assessment will be updated in an ongoing manner, as new information and analysis are available. Performance measures for the region will be developed and applied. Input from public involvement will be added to information surfacing from these two initiatives to help the MPO assess its progress toward its visions.

APPENDIX V

Paths to a Sustainable Region Environmental Justice Assessment



BACKGROUND

In addition to its transportation equity program (discussed in Chapter 6), the MPO has performed a detailed, system-level analysis of transportation equity in the region, examining the distribution of the transportation system's benefits and burdens among environmental justice and non-environmental justice areas and among environmental justice and non-environmental justice population zones. (These types of areas and zones are defined in the section below.) The analysis also examined the impacts, in terms of various analysis factors, of this LRTP's recommended set of projects through 2035 (see Chapter 8 for the list of projects) on those types of areas and zones. The measures focus on mobility, accessibility, and environmental-impact concerns.

As interpreted from federal guidance, the MPO should recommend a regional set of transportation projects in its LRTP that does not burden environmental justice areas when compared to a network that includes no projects other than those already underway. The results of the final analysis, summarized in this chapter, show that the MPO's recommended set of transportation projects does not burden environmental justice areas and environmental justice population zones more than the 2035 No-Build network and, in several cases, benefits them.

ENVIRONMENTAL JUSTICE AREAS AND ENVIRONMENTAL JUSTICE POPULATION ZONES

Geography Used for Outreach and Accessibility Analysis

As discussed in Chapter 6, environmental justice areas are based on the demographics of the people living in a transportation analysis zone (TAZ). TAZs are an aggregation of census geography based on population and numbers of trips. According to the definition used for the MPO's transportation equity program, "A TAZ will be considered an environmental justice area if it is over 50 percent minority or has a median household

income at or below 60 percent of the region's median [income]" (60% of the region's median household income of \$55,800 is \$33,480).¹ (Environmental justice areas are presented in Figures 6-1 and 6-2 (in Chapter 6).

In addition to being the focus of the transportation equity program, environmental justice areas are used in the accessibility portion of the MPO's environmental justice analysis, as described in this chapter.

Geography Used for Mobility, Congestion, and Air Quality Analysis

In the mobility, congestion, and environmental quality portions of the analysis, environmental justice population zones are used. To locate environmental justice populations, the MPO selected broader criteria for lower-income and minority TAZs than those used for locating environmental justice areas. Though not required, this greater inclusion of TAZs is in line with—and slightly more inclusive than—the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) definition of environmental justice populations. The broader criteria avoid masking data for isolated TAZs and include more environmental justice populations. The MPO's thresholds for these environmental justice populations are:

- Low income – The median household income in the MPO region in 2000 was approximately \$55,800. A low-income TAZ was defined as having a median household income at or below 80 percent of this level (\$44,640).
- Minority – Of the MPO population in 2000, 21.4% were minorities (nonwhite and Hispanic). A minority TAZ is defined as having a percentage of minority population greater than 21.4 percent.

The environmental justice population zones in the Boston Region MPO area and in the urban core are shown in Figures 9-1 and 9-2, respectively.

The 2035 demographic forecasts assumed the same distributions of the environmental justice areas and environmental justice population zones as were observed in the 2000 census, and that the environmental justice population's growth rate will be the same as the rate that the Metropolitan Area Planning Council has forecast for the overall population of the given area. The 2035 Build and 2035 No-Build networks were based on the same demographic forecasts but developed unique distributions of trip flows based on the transportation network for the No-Build and Build scenarios.

ANALYSIS FACTORS

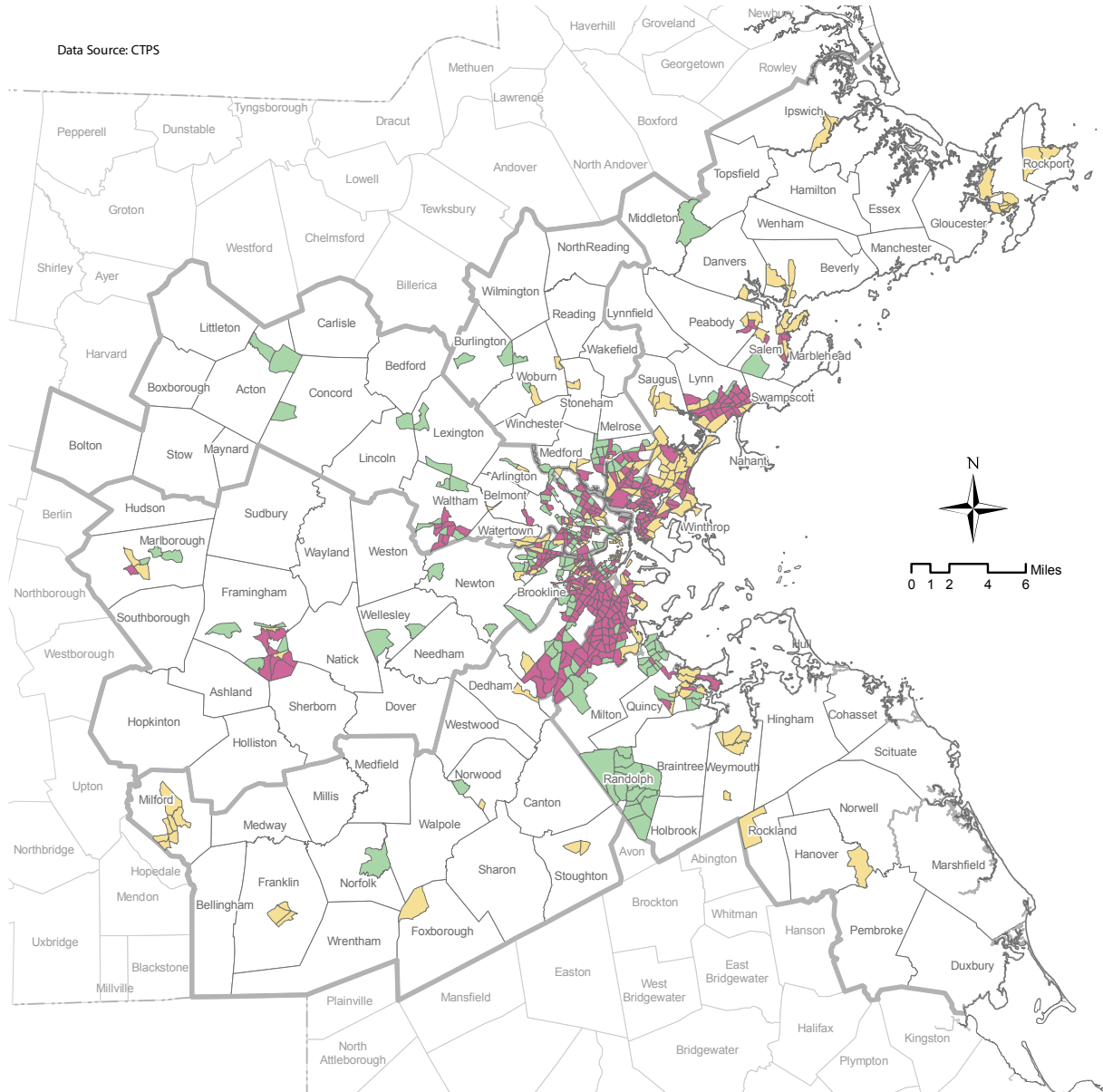
The MPO used several factors as indicators of benefits and burdens for environmental justice and non-environmental justice areas. These factors are:

- Accessibility to needed services and jobs

¹ The MPO used the 2000 U.S. census to define environmental justice areas. Though the 2010 census minority population data at the tract level was released on March 22, 2011, the household income data have yet to be released at the tract level. MPO staff have determined that the 2005–09 American Community Survey (ACS) sample data have high margins of error at the tract level for minority population and did not want to use them as a source. Environmental justice areas will be redefined when complete, new data are available.

FIGURE 9-1

ENVIRONMENTAL JUSTICE POPULATION ZONES – REGIONWIDE



Transportation Analysis Zones (TAZs) That Meet Environmental Justice Population Zone Criteria*

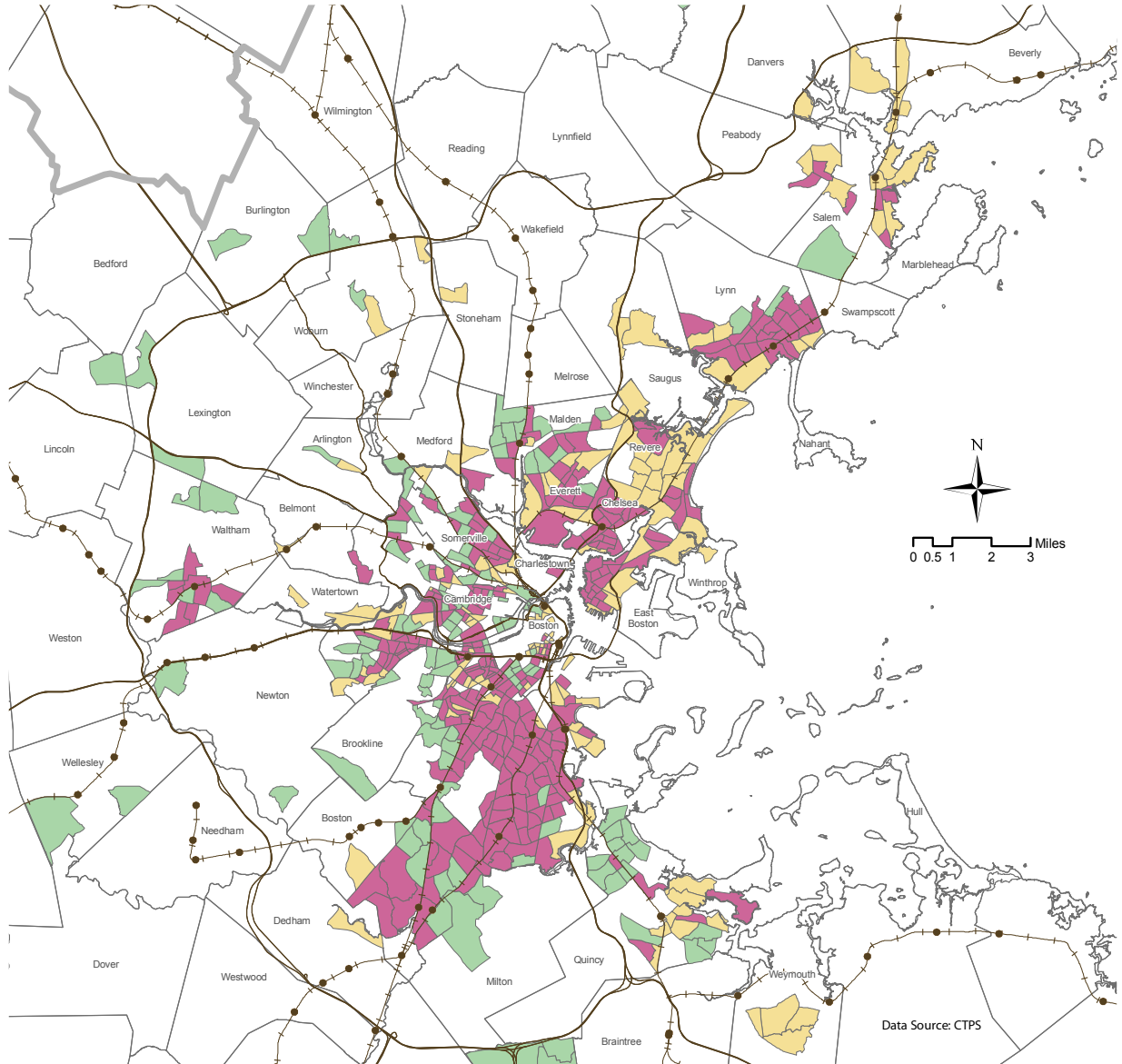
- Meets income criterion
- Meets minority criterion
- Meets both criteria

***Criteria for Environmental Justice Population Zones**

A TAZ in which the median household income in 1999 was equal to or less than 80% of the MPO median of \$55,800 (\$44,600) or in which the 2000 population was more than 21.4% minority.

FIGURE 9-2

ENVIRONMENTAL JUSTICE POPULATION ZONES – CENTRAL AREA



Transportation Analysis Zones (TAZs) That Meet Environmental Justice Population Zone Criteria*

- Meets income criterion
- Meets minority criterion
- Meets both criteria

***Criteria for Environmental Justice Population Zones**

A TAZ in which the median household income in 1999 was equal to or less than 80% of the MPO median of \$55,800 (\$44,600) or in which the 2000 population was more than 21.4% minority.

- Mobility and congestion
- Air Quality

The first factor was applied to environmental justice and non-environmental justice areas, the second and third to environmental justice population zones and non-environmental justice population zones.

To avoid confusion, environmental justice areas and environmental justice zones will both be referred to as environmental justice areas in the remainder of this chapter.

Accessibility Analysis

MPO staff analyzed access to needed services and jobs in terms of average transit and highway travel times from environmental justice areas to industrial, retail, and service employment opportunities; health care; and institutions of higher education. The analysis of transit travel times included destinations within a 40-minute transit trip, and the analysis of highway travel times included destinations within a 20-minute auto trip. The accessibility analysis also included an examination of the number of destinations within a 40-minute transit trip and a 20-minute auto trip. The thresholds of a 40-minute transit trip and 20-minute highway trip represent average commute times in the region based on the 2000 census Journey-to-Work data.

Staff examined differences between the 2035 No-Build network and the 2035 Build network for environmental justice and non-environmental justice areas. The accessibility analysis factors were:

- The average travel time to industrial, retail, and service jobs within a 40-minute transit trip and a 20-minute auto trip
- The average number of industrial, retail, and service jobs within a 40-minute transit trip and a 20-minute auto trip
- The average travel time to hospitals, weighted by the number of beds, within a 40-minute transit trip and a 20-minute auto trip
- The average number of hospitals, weighted by the number of beds, within a 40-minute transit trip and a 20-minute auto trip
- The average travel time to facilities of two- and four-year institutions of higher education, weighted by enrollment, within a 40-minute transit trip and a 20-minute auto trip
- The average number of facilities of two- and four-year institutions of higher education, weighted by enrollment, within a 40-minute transit trip and a 20-minute auto trip

Based on census Journey-to-Work data, a 40-minute transit trip and a 20-minute highway trip represent average commute times in the region.

Mobility, Congestion, and Air Quality Analysis

MPO staff analyzed mobility, congestion, and environmental impacts by comparing analysis factors for environmental justice areas to those for non-environmental justice areas. Staff examined differences between the average levels of these analysis factors within the two types of areas for the 2035 No-Build network and the 2035 Build network.

The mobility, congestion, and air quality analysis factors were:

- Congested vehicle-miles traveled (VMT) – congested vehicle-miles traveled: the volume of vehicle-miles traveled within a TAZ on highway links with a volume-to-capacity ratio of 0.75 or higher
- VMT per square mile – the number of vehicle-miles traveled per square mile of dry land within a TAZ
- Carbon monoxide (CO) per square mile – the number of kilograms of carbon monoxide emitted per square mile of dry land within a TAZ
- Transit production time² – the average door-to-door travel time for all transit trips produced in the TAZ
- Highway production time – the average door-to-door travel time for all highway trips produced in the TAZ
- Transit attraction time – the average door-to-door travel time for all transit trips attracted to the TAZ
- Highway attraction time – the average door-to-door travel time for all highway trips attracted to the TAZ

SUMMARY OF RECOMMENDED LRTP ANALYSIS RESULTS

The recommended LRTP benefits environmental justice areas.

The environmental justice analysis determined that while the 2035 recommended LRTP Build network improves accessibility, mobility, and congestion conditions relative to the 2035 No-Build network for both environmental justice and non-environmental justice areas, it benefits environmental justice areas slightly more. Carbon monoxide emissions are higher in environmental justice areas than in non-environmental justice areas in both the No-Build and the Build networks, and they increase for both populations in the Build network over the No-Build. Results are summed for each type of area and are averaged by the number of environmental justice and non-environmental justice TAZs, respectively.

Accessibility Analysis Results:

Results from the accessibility analysis show the following for trips from environmental justice areas to nearby jobs, colleges, and hospitals:

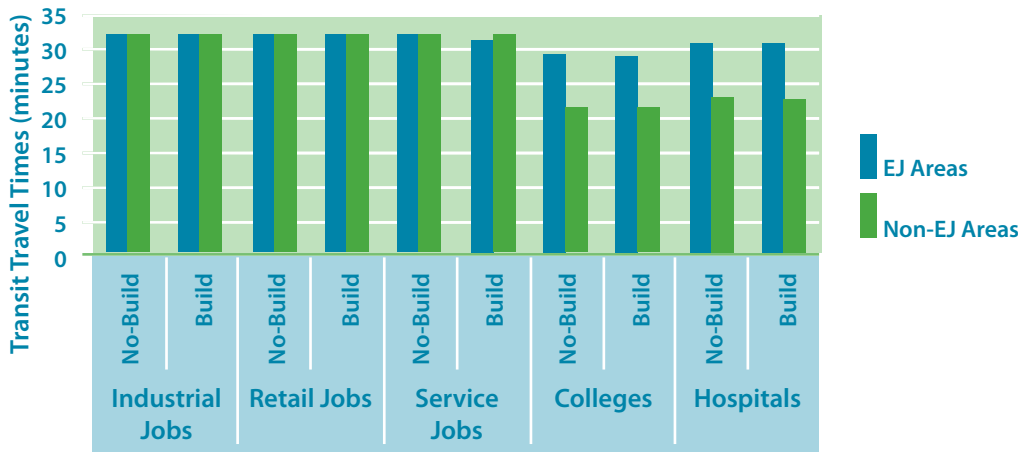
- Travel times to destinations are less or the same for environmental justice areas in the 2035 Build network as for those in the 2035 No-Build network.
- People in environmental justice areas will be able to access more destinations within a 40-minute transit ride in the 2035 Build network than in the 2035 No-Build network, and even though the transportation model indicates 20-minute highway access to slightly fewer jobs and hospital beds in the Build network, the difference is not statistically significant as it is within the model's margin of error.
- The 2035 Build network increases the number of area destinations accessible by transit for environmental justice areas.

² Productions and attractions are used in transportation modeling to identify types of trip ends and are loosely related to origins and destinations.

Figure 9-3 shows that average transit travel times to area jobs are approximately 30 minutes, with those for environmental justice areas slightly less than for non-environmental justice areas. Travel times to hospitals and colleges are higher for environmental justice areas in both the No-Build and Build networks.

FIGURE 9-3

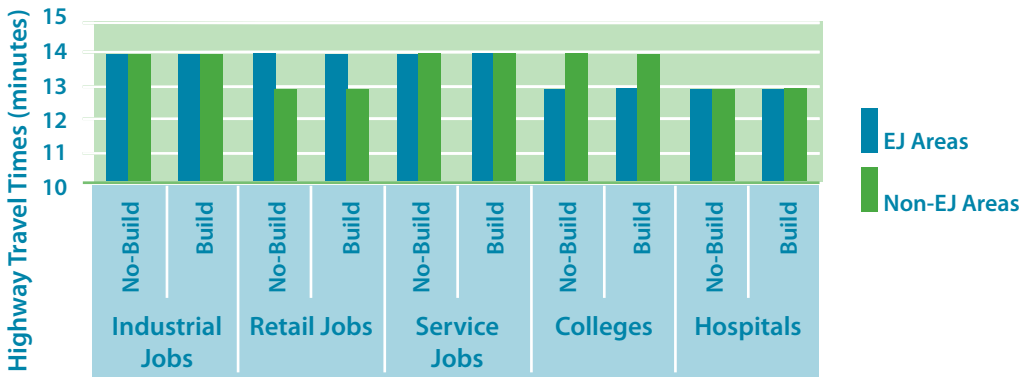
AVERAGE TRANSIT TRAVEL TIMES TO DESTINATIONS FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE AREAS IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS



While Figure 9-4 shows that average highway travel times to colleges and hospitals are slightly less for environmental justice areas than for non-environmental justice areas, the differences in average highway travel time to jobs are statistically insignificant.

FIGURE 9-4

AVERAGE HIGHWAY TRAVEL TIMES TO DESTINATIONS FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE AREAS IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS



Figures 9-5 to 9-7 show that the average environmental justice area has transit and highway access to notably more jobs than the average non-environmental justice area. In addition, environmental justice populations can access more jobs by transit in the Build network than in the No-Build network.

FIGURE 9-5

AVERAGE NUMBER OF INDUSTRIAL JOBS TO WHICH THERE IS ACCESS FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE AREAS IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS

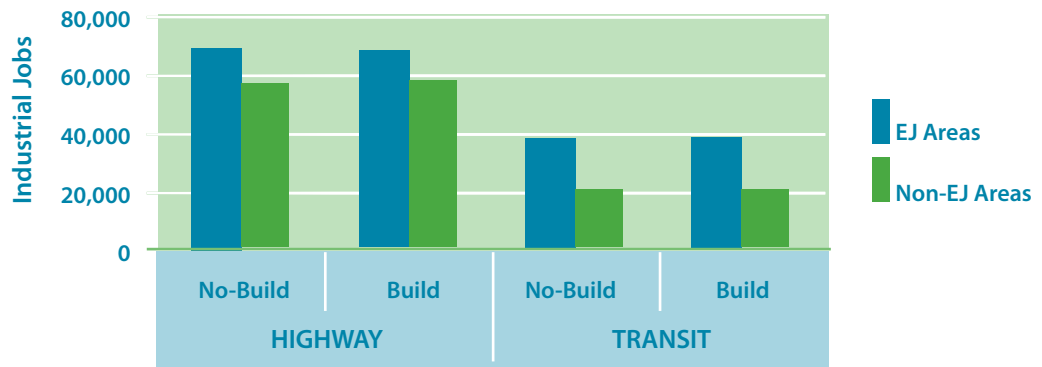


FIGURE 9-6

AVERAGE NUMBER OF RETAIL JOBS TO WHICH THERE IS ACCESS FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE AREAS IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS

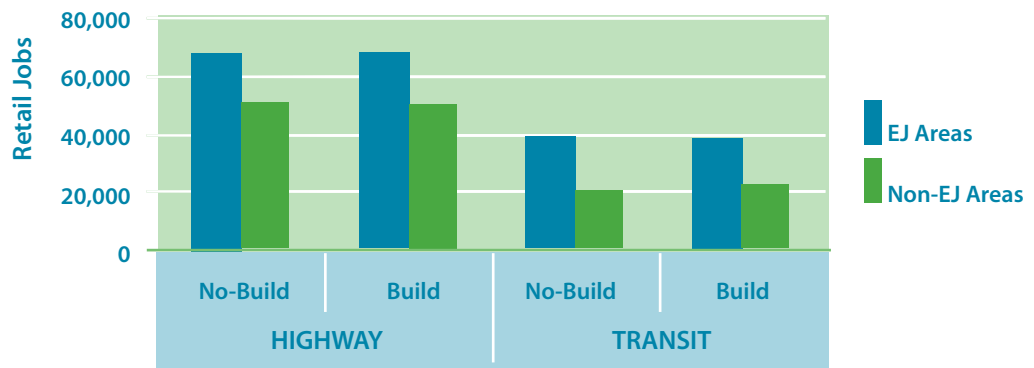


FIGURE 9-7

AVERAGE NUMBER OF SERVICE JOBS TO WHICH THERE IS ACCESS FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE AREAS IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS

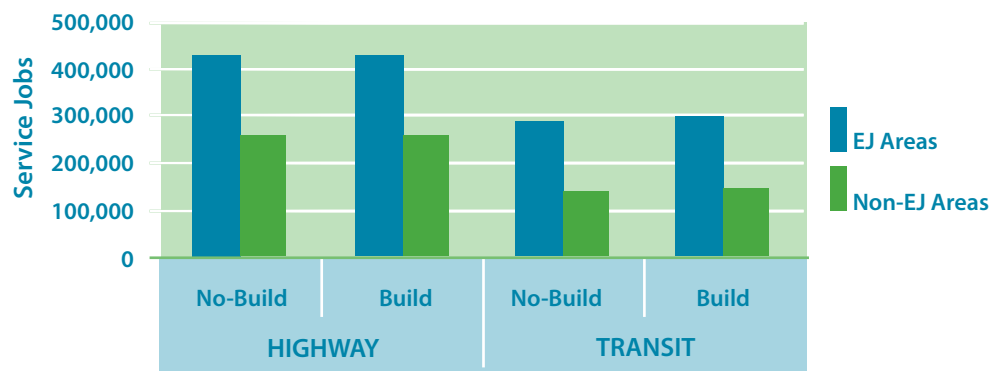


Figure 9-8 shows that the average environmental justice area has transit and highway access to notably more two- and four-year colleges than the average non-environmental justice area. The figure also shows that people in environmental justice areas are estimated to have access to more colleges in the Build network than in the No-Build network.

FIGURE 9-8

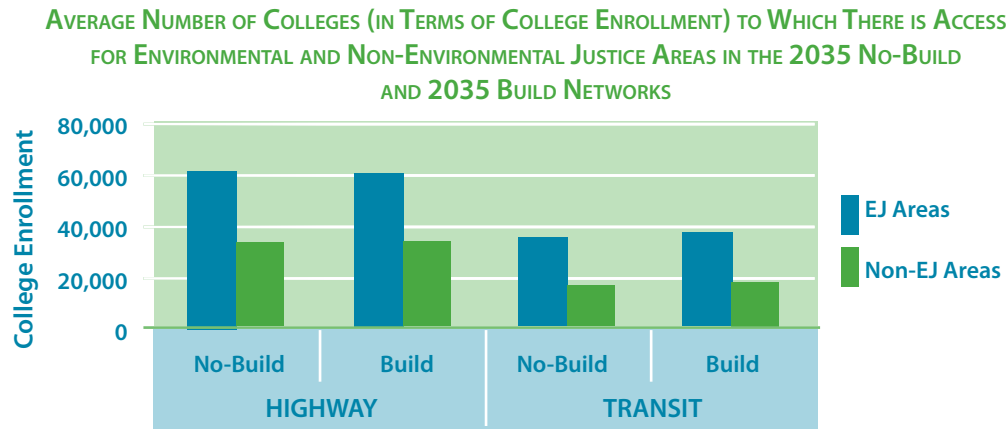
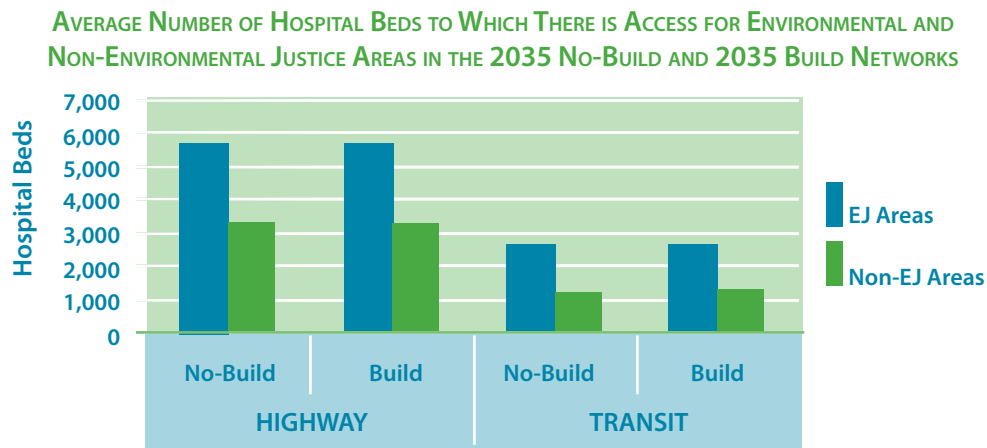


Figure 9-9 shows that the average environmental justice area has transit and highway access to more hospital beds than the average non-environmental justice area.

FIGURE 9-9



Mobility, Congestion, and Air Quality Analysis Results:

Results from the mobility, congestion, and environmental analysis show the following for trips within environmental justice areas:

- Congested VMT is slightly less for environmental justice areas in the 2035 Build network than in the 2035 No-Build network.
- VMT per square mile is less for environmental justice areas in the 2035 Build network than in the 2035 No-Build network, indicating a diversion of travel mode choices from highway to transit.

- The 2035 Build network yields slightly more CO emissions per square mile for both environmental justice and non-environmental justice areas than the 2035 No-Build network does; however, the increase is smaller for environmental justice population zones than for environmental justice areas.

Figure 9-10 shows that average transit travel times for attractions and productions are shorter for environmental justice areas than for non-environmental justice areas.

FIGURE 9-10

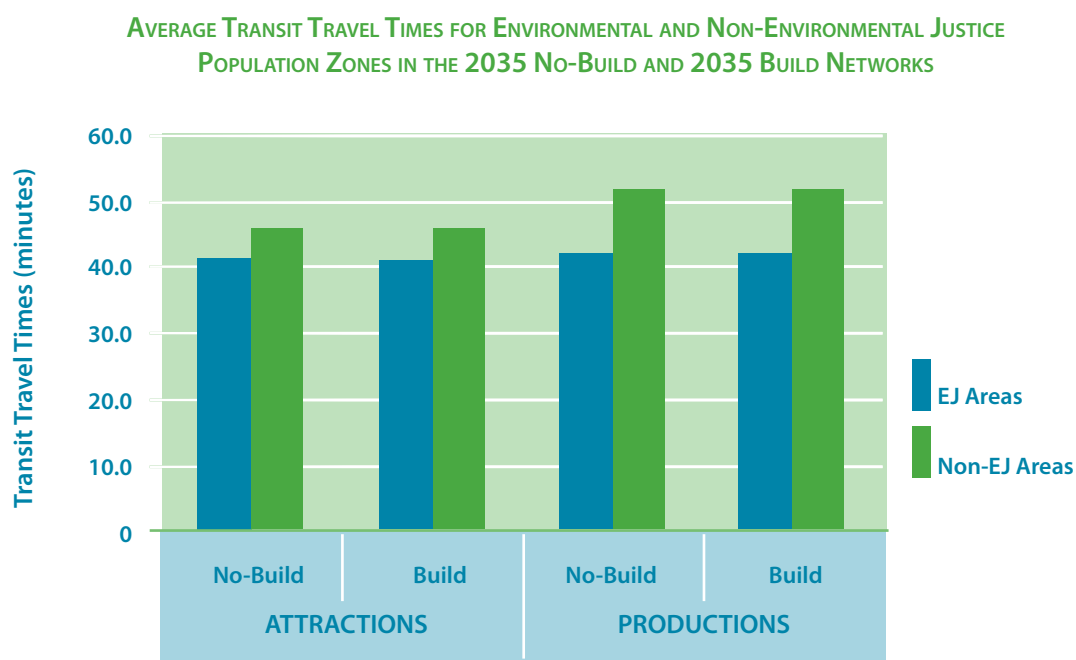
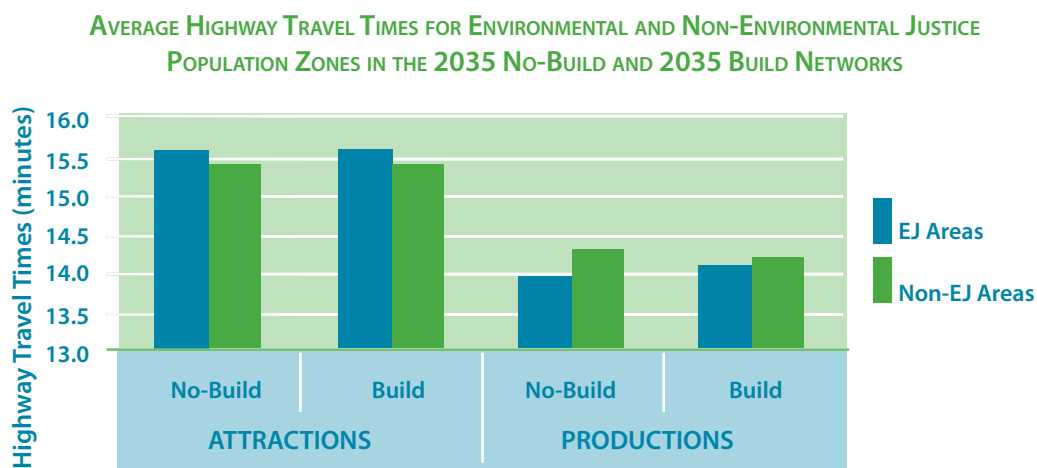


Figure 9-11 shows that there is no statistical difference in average highway attraction and production travel times for environmental justice areas and non-environmental justice areas.

FIGURE 9-11



Both figures show that differences in average travel time between environmental justice population zones and non-environmental justice population zones are more pronounced for transit than for highway trips.

Figure 9-12 shows that average congested VMT is less for environmental justice areas than for non-environmental justice areas.

FIGURE 9-12

AVERAGE CONGESTED VEHICLES MILES TRAVELED (VMT) FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE POPULATION ZONES IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS

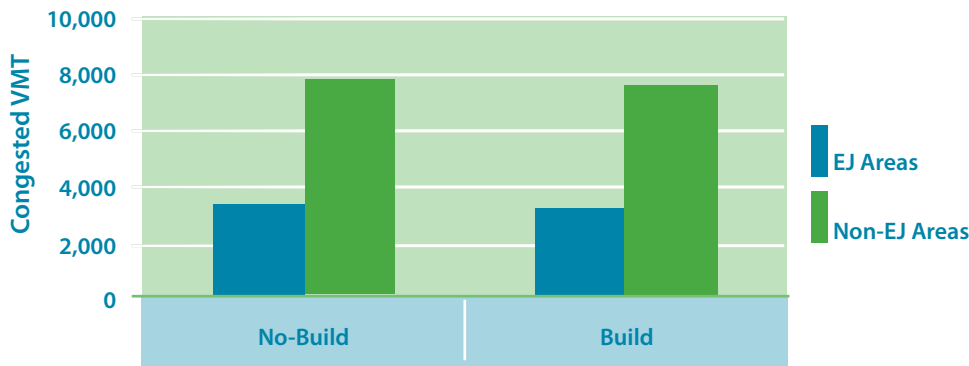


Figure 9-13 shows that average VMT per square mile is greater for environmental justice areas than for non-environmental justice areas in both the No-Build and Build networks.

FIGURE 9-13

AVERAGE VMT FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE POPULATION ZONES IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS

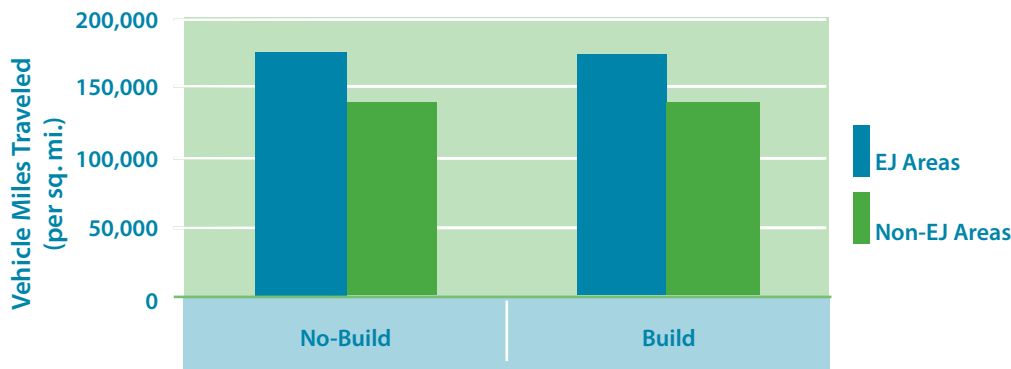
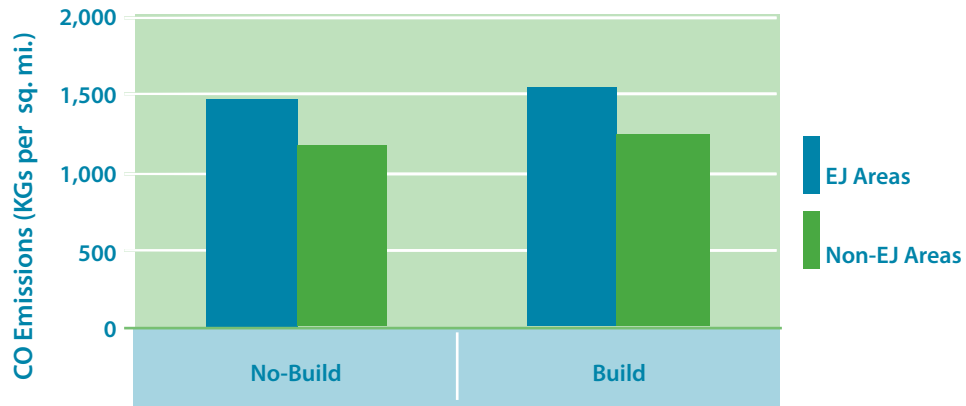


Figure 9-14 shows that average CO emissions are greater for environmental justice areas than for non-environmental justice areas in both the No-Build and Build networks.

FIGURE 9-14

AVERAGE CARBON MONOXIDE (CO) EMISSIONS PER SQUARE MILE FOR ENVIRONMENTAL AND NON-ENVIRONMENTAL JUSTICE POPULATION ZONES IN THE 2035 NO-BUILD AND 2035 BUILD NETWORKS



SELECTED PROJECTS THAT WILL BENEFIT ENVIRONMENTAL JUSTICE AREAS

The following transit project in the LRTP will improve air quality and provide more transportation options for environmental justice populations:

- Somerville: Extend Green Line from Lechmere to Mystic Valley Parkway – Provides better access to rapid transit stations, employment, and retail opportunities.

The following highway project will benefit people living in nearby and adjacent environmental justice areas in the following ways:

- Framingham: Route 126/Route 135 Grade Separation – Improves air quality in the area by allowing traffic to flow more freely. Improves connectivity for people accessing downtown destinations.