



# MBTA TITLE VI PROGRAM

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# MBTA TITLE VI PROGRAM

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The Massachusetts Bay Transportation Authority (MBTA) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Transit Administration prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within the MBTA Title VI Program consistent with federal interpretation and administration. Additionally, the MBTA provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

The MBTA also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, the MBTA complies with the Governor's Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

**MBTA Office of Diversity and Civil Rights**

Title VI Unit  
10 Park Plaza, Suite 3800  
Boston, MA 02116

**Phone:** 857-368-8580

**Fax:** 617-222-3263

**TTY:** 711

**Email:** [MBTACivilRights@mbta.com](mailto:MBTACivilRights@mbta.com)

If your civil rights have been violated, you can file a complaint with the MBTA Office of Diversity and Civil Rights at <https://mbta.com/policies/file-discrimination-complaint>.

The MBTA offers various services (such as translation assistance and interpretation) to customers in a range of languages at <https://mbta.com/language-services>.

**English:** If this information is needed in another language, please contact the MBTA Title VI Specialist at 617-222-3200.

**Spanish:** Si necesita esta información en otro idioma, por favor contacte al especialista de MBTA del Título VI al 617-222-3200.

**Portuguese:** Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MBTA pelo telefone 617-222-3200.

**Chinese Simplified:** (mainland & Singapore): 如果需要使用其它语言了解信息，请联系麻纱湾区交通局（MBTA）《民权法案》第六章专员，电话617-222-3200。

**Chinese Traditional:** (Hong Kong & Taiwan): 如果需要使用其它语言了解信息，請聯繫麻省灣區交通局（MBTA）《民權法案》第六章專員，電話617-222-3200。

**French:** Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le spécialiste du Titre VI de MBTA en composant le 617-222-3200.

**Vietnamese:** Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Chuyên viên Luật VI của MBTA theo số điện thoại 617-222-3200.

**Russian:** Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь со специалистом по Титулу VI MBTA по тел:617-222-3200.

**Haitian Creole:** Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Espesyalis MBTA Title VI la nan nimewo 617-222-3200.

**Italian:** Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare lo Specialista MBTA del Titolo VI al numero 617-222-3200.

**Khmer:** ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែព័ត៌មាននេះ សូមទាក់ទងអ្នកឯកទេសលើជំពូកទី6 របស់MBTA តាមរយៈលេខទូរស័ព្ទ 617-222-3200

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# CHAPTER 1 INTRODUCTION

## PURPOSE OF THIS REPORT

This Title VI report has been prepared by the Massachusetts Bay Transportation Authority (MBTA) in compliance with the United States Department of Transportation (USDOT) Title VI regulations, 49 C.F.R. § 21.9 (b), and with Federal Transit Administration (FTA) Circular 4702.1B guidelines, titled *Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, which were issued October 1, 2012.

The purpose of this report is to demonstrate the MBTA's commitment to respecting the rights of individuals and communities reached by Title VI and Environmental Justice protections, which it demonstrates by actively monitoring, evaluating, and applying solutions to eliminate the risk of discrimination in its programs, services, and activities. The policies, practices, and analyses presented in this document show how the MBTA meets its civil rights obligations and complies with Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d et seq., and related federal and state laws and regulations.

## ABOUT THE MBTA

The MBTA is one of the oldest and largest public transportation systems in the United States, providing a variety of transit services and more than 1.2 million trips on an average weekday. The MBTA maintains and operates 175 bus routes, five of which are bus rapid transit lines; three heavy rail lines (Red, Orange, and Blue Line); five branches of light rail service (Green Line B, C, D, and E, and Mattapan–Ashmont); three trackless trolley lines; 12 commuter rail lines; and three commuter

ferry routes. The MBTA is overseen by two governing bodies—the Massachusetts Department of Transportation (MassDOT) Board and the Fiscal and Management Control Board (FMCB). The FMCB, originally created in 2015 to serve for a period of three to five years with a mission to rein in costs and ensure that the MBTA operates effectively, is now in its fifth and final year.

The MBTA general manager, as chief executive officer, has overall responsibility for providing assurance to the FTA of the MBTA’s commitment to comply with Title VI, which includes this triennial program submission. MassDOT’s Office of Diversity and Civil Rights (ODCR) has the delegated responsibility of coordinating Title VI program procedures, overseeing implementation, and monitoring and reporting on how the MBTA is meeting its Title VI compliance obligation. The Title VI requirements apply to all MBTA operations, and all MBTA managers, supervisors, and employees share the responsibility for conducting all programs, services, and activities in a nondiscriminatory manner.

## **TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AND HOW IT APPLIES TO THE MBTA**

Title VI of the Civil Rights Act of 1964 requires that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance.”

Moreover, Title VI requires that public funds not be “spent in any fashion which encourages, entrenches, subsidizes, or results in racial discrimination.”<sup>1</sup> The United States Department of Justice (USDOJ) is authorized to apply the provisions of Title VI to each program or activity by issuing applicable rules, regulations, or requirements in order to accomplish the purpose and spirit of Title VI. Under this authority, USDOT has delegated responsibility to its operating and administrative agencies, including the FTA, to effectuate the provisions of Title VI and issue guidance for recipients, including the MBTA, to ensure compliance with this civil rights requirement.<sup>2</sup>

## **RELATED FEDERAL AND STATE NONDISCRIMINATION REQUIREMENTS**

The MBTA also complies with and incorporates related federal and state nondiscrimination requirements into its policies and practices. The additional federal prohibitions respected by the MBTA include those against discrimination based on sex, age, and disability. On the state level, the MBTA incorporates standards under the Massachusetts Public Accommodation Law, M.G.L. ch. 272 §§ 92a, 98, 98a, and Massachusetts Governor’s Executive Order 526, Section 4, which require that access to programs, services, and benefits be provided without regard to religion, creed, sexual orientation, gender identity or expression, veteran’s status, and/or ancestry.

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<sup>1</sup> See H.R. Misc. Doc. No. 124, 88th Cong., 1st Sess. 3, 12 (1963) (A message from President Kennedy on Civil Rights and Job Opportunities, June 19, 1963).

<sup>2</sup> 49 C.F.R. part 21.1.

## **ADDITIONAL PROTECTIONS FOR INDIVIDUALS CLASSIFIED AS LOW-INCOME, MINORITY, AND LIMITED ENGLISH PROFICIENT**

In addition to the Title VI protections, and those provided by related federal and state laws and regulations, the MBTA also complies with two presidential executive orders designed to remove obstacles for and harmful effects to persons who are classified as low-income, minority, and/or limited English proficient. In 1994, President Bill Clinton signed Executive Order 12898 to address adverse health and environmental effects on minority and low-income populations, and to provide minority and low-income communities access to public information and public participation opportunities. Protections under this executive order refer to ensuring *environmental justice*. Although low-income populations are not designated a protected class of individuals under Title VI, FTA guidance requires that transit providers evaluate whether a service or fare change will have a disproportionate or adverse impact on low-income communities.

In 2000, President Bill Clinton signed Executive Order 13166, requiring federal agencies and recipients of federal financial assistance to provide meaningful access to persons who have limited English proficiency. To help government agencies meet this requirement and to avoid the risk of discrimination on the basis of national origin under Title VI, the USDOJ issued guidance for federal agencies and recipients of federal funds to take reasonable steps to provide meaningful access to vital information, programs, services, and activities. The connection between national origin discrimination under Title VI and limited English proficiency stems from the decision of the United States Supreme Court in the case of *Lau v. Nichols*, 414 U.S. 563 (1974), which determined that the failure to address a language barrier in a public education context was a violation of national origin discrimination prohibitions under Title VI.

## **VIOLATION OF TITLE VI NONDISCRIMINATION REQUIREMENTS**

There are two ways an agency can be in violation of Title VI—by actions resulting in *disparate treatment* or *disparate impact*. Disparate treatment occurs when a policy or practice denies an opportunity to or otherwise adversely affects a person within a protected class (including race, color, or national origin) because of their protected characteristic. Disparate impact occurs when an otherwise facially neutral policy or decision, i.e., one that on its surface does not make a discriminatory distinction, results in a discriminatory effect on a protected class.

An analytical approach is often required to determine if a disparate impact occurs as a result of a facially neutral policy or decision. Such analysis compares the benefits or burdens received by those who are members of a protected class to the benefits or burdens received by those who are not members of the protected class. This type of analytical approach is applied when determining the impacts of a fare change or major transit service change, and when monitoring transit performance relative to a transit operator's systemwide service standards and policies.

However, a decision or policy that is considered to result in disparate treatment or a disparate impact can be determined nondiscriminatory if there is a substantial legitimate, nondiscriminatory justification or reason for the decision or policy, and if no alternative means of achieving the legitimate policy objective exist. If there is an alternative means of achieving the policy objective that would reduce the degree of disparate impacts, that alternative should be adopted.

## DEFINITIONS

Terminology and definitions used in this report are drawn from the FTA Title VI Circular 4702.1B. Those definitions are provided in Appendix 1A.

## REPORT SUMMARY

This report constitutes the MBTA's Title VI Program, adopted with the approval of General Manager Steve Poftak and the FMCB. (See Appendix 1B for a copy of the FMCB's approval.) This report has been prepared in accordance with FTA Circular 4702.1B and incorporates the reporting requirements set forth therein.

Chapter 2 addresses the MBTA's general reporting requirements. Chapter 2 includes a summary of the MBTA's notice to the public regarding protection under Title VI and a description of the locations where the notice is posted; a description of the MBTA's procedures for filing civil rights complaints; a list of Title VI investigations, complaints, and lawsuits; a summary of the MBTA's public engagement plan; and a narrative description of the MBTA's efforts to ensure that subrecipients are complying with Title VI. The appendices to Chapter 2 include the notice to the public regarding protection under Title VI; the Title VI complaint form; the MBTA's public engagement plan; the MBTA's language assistance plan; and the MBTA's subrecipient monitoring review procedures.

Chapters 3 through 7 address the MBTA's requirements as a fixed-route transit provider. Chapter 3 includes several maps that show the MBTA's extensive transit-service network and the locations of minority and low-income populations, along with tables that summarize this information. Chapter 4 presents passenger survey data regarding customer demographics and travel patterns. Chapter 5 describes the service policies and standards under which the MBTA operates to ensure high-quality and safe service to the public. Chapter 6 analyzes the extent to which the MBTA has met its service standards, and it compares the levels and quality of service provided to the various communities served by the MBTA. Finally, Chapter 7 presents the service and fare equity analyses that have been conducted by the MBTA since the last Title VI submission.

The MBTA developed this report with technical support for data collection and analysis from the Central Transportation Planning Staff (CTPS) of the Boston Region Metropolitan Planning Organization. CTPS was also responsible for the production of the document.

Any questions or comments about the content of this program can be addressed to the MassDOT and MBTA Office of Diversity and Civil Rights, 10 Park Plaza, Boston, MA 02116, 857-368-8580, [MBTAcivilrights@mbta.com](mailto:MBTAcivilrights@mbta.com).





# CHAPTER 2

## GENERAL REPORTING REQUIREMENTS

This chapter presents the MBTA's Title VI general reporting requirements, defined in the Federal Transit Administration (FTA) Circular 4702.1B, III, including the following:

- Title VI Notice to the Public
- Title VI Complaint Form and Procedures
- List of Title VI Investigations, Complaints, and Lawsuits
- Public Engagement Plan
- Language Assistance Plan
- Minority Representation on Planning and Advisory Boards
- Monitoring of Subrecipients
- Equity Analyses for Locations of Constructed Facilities

### TITLE VI NOTICE TO THE PUBLIC (FTA C 4702.1B, III-4.A.(1))

The MBTA takes proactive steps to inform members of the public about their rights under Title VI. The goal is to ensure that customers are aware of their legal protections and that they know how to request information about the MBTA's nondiscrimination obligations and how they can file a complaint alleging discrimination.

The MBTA disseminates its Title VI Notice to its customers in multiple ways. Each version of the notice is designed to include the following elements:

- A statement that the MBTA operates its programs without regard to race, color, or national origin
- A description of the steps members of the public can take to request additional information about the MBTA's Title VI obligations
- A description of the steps members of the public can take to file a Title VI discrimination complaint relating to the programs, services, and activities managed by the MBTA

## **MBTA BASIC TITLE VI NOTICE**

The MBTA's basic Title VI Notice is intentionally brief so that it can be displayed in a wide variety of space-limited situations, including in stations, vehicles, and publications such as maps and schedules. The following is the text of the MBTA's basic Title VI Notice:

*Under Title VI of the Civil Rights Act of 1964, the MBTA does not discriminate against any person in its programs, services, and activities based on race, color, or national origin. To learn more about your civil rights or to file a complaint, please contact:*

*MBTA Title VI Specialist  
Office of Diversity and Civil Rights  
10 Park Plaza  
Boston, MA 02116  
(617)-222-3200  
Email: [MBTACivilRights@mbta.com](mailto:MBTACivilRights@mbta.com)  
Website: [www.mbta.com/TitleVI](http://www.mbta.com/TitleVI)*

The MBTA also maintains a long-form Title VI Notice, which includes much more detail on additional civil rights protections for customers and complaint filing procedures. The full text of the MBTA's Title VI/Nondiscrimination Notice is presented in Appendix 2A.

## **LOCATIONS OF NOTICE POSTINGS**

The MBTA's strategy for disseminating the Title VI Notice includes posting it in the following locations:

- MBTA website (<https://www.mbta.com/policies/title-vi>)
- Transit stations (subject to space and infrastructure limitations at surface rapid transit stations)
- Ferry vessels, docks, and ticketing offices
- Public-facing offices at the MBTA, including the Office of Diversity and Civil Rights, Human Resources, and the Office of the Secretary of Transportation

A complete list of transit stations where the notice is posted is included in Appendix 2B.

## **STATUS OF ONGOING NOTICE DISSEMINATION EFFORTS**

The MBTA's Title VI Notice is currently posted in stations serving all transit modes, where practicable, including all gated rail rapid transit stations. Currently, notices are only posted at surface stations on the Green Line where physical infrastructure exists for such postings. Starting in late 2018, the MBTA deployed 18 electronic "E-Ink" screens at five stations on the Green Line D Branch in a pilot test. The results from that test lead the MBTA to conclude that E-Ink screens are likely to be viable during Boston's winters in terms of power, connectivity, and the ability to show real-time information to riders. The test included three combinations and sizes of screens: one 8 by 11 inch screen, two 8 by 11 inch screens stacked vertically, and one 15.5 by 27 inch screen. However, the 15.5 by 27 inch screen was not recommended for further deployment to the Green Line based on platform logistics at Green Line surface stops. Based on the pilot, the recommended option for posting Title VI notices at E-Ink locations is to mount printed materials to the poles that will be installed for the E-Ink screens.

The schedule for installing screens and associated poles at Green Line surface stops is still being determined. The MBTA Customer Technology Department has developed a capital project proposal to deploy E-Ink screens at all Green Line surface stations in the summer of 2021. That proposal is currently undergoing a scoring and prioritization process as part of the development of the 2020–24 Capital Investment Plan. The project team should have an indication in May 2020 regarding whether this project will advance as an approved capital investment or if other funding and project delivery strategies will be needed.

Bus passengers are reached by posting the Title VI Notice in all major bus transfer stations. Similarly, ferry passengers can view the Title VI Notice at all ferry docks in the network. Lastly, commuter rail passengers can find the Keolis-branded Title VI Notice (which mirrors the MBTA's full notice) at all platforms and stations throughout the network.

The Title VI Notice is also disseminated electronically on the MBTA's website, included with major publications, posted at public meetings, and incorporated into system maps and other printed materials.

## **MBTA TITLE VI COMPLAINT FORM (FTA C 4702.1B, III-4.A.(2))**

The MBTA's Title VI Complaint Form is included as Appendix 2C.

## **MBTA TITLE VI COMPLAINT PROCEDURES (FTA C 4702.1B, III-4.A.(2))**

This section details the MBTA's procedures for processing Title VI discrimination complaints (on the basis of race, color, or national origin, including limited English proficiency). Federal law and regulations governing Title VI of the Civil Rights Act of 1964 (Title VI) places the overall coordination authority for the investigation of civil rights complaints with the United States Department of Justice (USDOJ), which works collaboratively with federal agencies that carry out this responsibility. In the transportation sector, this investigative authority rests with the United States Department of Transportation (USDOT) and its agencies that oversee the different modes of transportation,

including FTA. In accordance with USDOT requirements, FTA has established regulations and guidance that require recipients and subrecipients of financial assistance provided through FTA to establish procedures for processing Title VI complaints.

The MBTA has translated these procedures into the ten most commonly spoken languages in its service area. Those translations are included as Appendix 2D.

## **THE COMPLAINT PROCESS**

The procedures described below, modeled on recommended complaint procedures promulgated by the USDOJ, are designed to provide a fair opportunity for addressing complaints that respect due process for both complainants and respondents. In addition to the formal complaint resolution process detailed here, the MBTA takes affirmative steps to pursue informal resolution of any and all Title VI complaints, when possible.

### **Who can file a complaint?**

Any member of the public, along with all MBTA customers, applicants, contractors, or subrecipients who believe that they themselves, a third party, or a class of persons were mistreated or treated unfairly because of their race, color, or national origin (including limited English proficiency) in violation of Title VI of the Civil Rights Act of 1964, related federal and state laws and executive orders, or the MBTA's Anti-Discrimination Harassment Prevention (ADHP) Policy. Retaliation against a member of the public on the basis of race, color, or national origin is also prohibited under Title VI and the ADHP policy.

### **Where do I file a complaint?**

Customers may file a complaint by contacting the MBTA's Title VI Specialist, calling the MBTA's Customer Call Center, or writing to the FTA directly. The contact information is as follows:

#### **The MBTA Title VI Specialist**

Massachusetts Bay Transportation Authority  
Office of Diversity and Civil Rights  
Attention: Title VI Specialist  
10 Park Plaza, Suite 3800, Boston, MA 02116  
Phone: (857) 368-8580 or 7-1-1 for Relay Service  
Email: [MBTACivilRights@mbta.com](mailto:MBTACivilRights@mbta.com)

#### **The MBTA Customer Call Center: (617) 222-3200**

The Call Center staff will seek to obtain basic information about the matter from the caller, and details of the call will be forwarded to the Office of Diversity and Civil Rights for processing according to these procedures.

## **The Federal Transit Administration**

Federal Transit Administration  
Office of Civil Rights  
Attention: Complaint Team  
East Building, 5<sup>th</sup> Floor—TCR  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Please note: When FTA receives a Title VI complaint regarding the MBTA, a subrecipient, or a contractor, the FTA may request that the MBTA investigate the matter.

### **What do I need to include in a complaint?**

A complaint form is available electronically on the MBTA's Title VI website ([www.mbta.com/titlevi](http://www.mbta.com/titlevi)) or in hardcopy from the MBTA Title VI Specialist, whose contact information is listed above.

Alternatively, a complainant may submit correspondence in an alternative format that should include the following information:

- Contact information
  - o Please note: Complaints can be filed anonymously. However, doing so may make it more difficult for MBTA investigators to look into the allegations as they may not be able to obtain additional and/or clarifying information from the complainant as the investigation progresses.
- The basis for the alleged discrimination (e.g. race, color, national origin, limited English proficiency, etc.)
- The person or group injured by the alleged discrimination, as well as the person, agency, organization, or institution alleged to have discriminated
- An explanation of the alleged discrimination, including the name and contact information of any witnesses

In cases where the complainant is unable to provide a written statement, a verbal complaint may be made. The complainant may call or visit the MBTA's Office of Diversity and Civil Rights and request assistance to file a verbal complaint:

Massachusetts Bay Transportation Authority  
Office of Diversity and Civil Rights  
Attention: Title VI Specialist  
10 Park Plaza, Suite 3800, Boston, MA 02116  
Phone: (857) 368-8580 or 7-1-1 for Relay Service  
Email: [MBTACivilRights@mbta.com](mailto:MBTACivilRights@mbta.com)

All complaints should be signed by the complainant.

Complaints are accepted in any recognized language. Multilingual complaint forms are available.

## How long do I have to file a complaint?

A complaint alleging violation of Title VI and/or the MBTA's ADHP policy must be filed no later than 180 days from the date of the alleged violation. Complaints alleging violations of state or federal law must be filed within the time frames established by statute, regulation, or case law.

## How will my complaint be handled?

When a complaint is received, it is assigned to a civil rights investigator (CRI). The CRI determines jurisdiction based on whether the complaint meets the following criteria:

- The complaint involves a statement or conduct that violates
  - o the MBTA's legal obligation and commitment to prevent discrimination, harassment, or retaliation on the basis of a protected characteristic with regard to any aspect of the MBTA's service to the public; or
  - o the commitment made by subrecipients and contractors working with the MBTA to adhere to MBTA policies.
- The complaint was filed within 180 days of the alleged violation.

If the CRI determines that the MBTA has jurisdiction over the complaint, the CRI takes the following steps:

- Acknowledges receipt of the complaint and describes the outcome of the jurisdictional determination within ten business days of receipt of the complaint
- Notifies the complainant and Title VI Specialist in writing that the matter shall be closed, if the CRI determines that the complaint does not have the potential to establish a civil rights violation
- Conducts a thorough investigation of the allegations contained in the complaint in accordance with the MBTA's Internal Complaint Procedures
- Interviews the complainant(s)

## What happens after the investigation?

At the conclusion of the investigation, the CRI will transmit to the complainant and the respondent one of the following three letters based on the findings:

- Letter of resolution that explains the steps the respondent has taken or will take to comply with Title VI and/or the ADHP policy

- Letter of finding, issued when the respondent is found to be in compliance with Title VI and/or the ADHP policy, which includes an explanation of why the respondent was found to be in compliance and which provides notification of the complainant’s appeal rights (a finding of compliance may still include recommendations from the CRI to further avoid the risk of Title VI and/or ADHP policy violations)
- Letter of finding, issued when the respondent is found to be in noncompliance, which includes a statement of each violation referenced as to the applicable regulations, a brief description of the findings and recommendations, a statement regarding the consequences of failure to achieve voluntary compliance, and an offer of assistance in devising a remedial plan for compliance, if appropriate

## How can I appeal a finding?

If a complainant or respondent does not agree with the findings of the CRI, that party may appeal to the Assistant Secretary of Diversity and Civil Rights. The appealing party must provide any new information that was not readily available during the course of the original investigation that would lead the MBTA to reconsider its determinations. The request for an appeal and any new information must be submitted within 60 days of the date the letter of the finding was transmitted. After reviewing this information, the MBTA will respond either by issuing a revised letter of resolution or by informing the appealing party that the original letter of resolution or finding remains in force. To file a request for an appeal, the complainant must contact the MBTA’s Office of Diversity and Civil Rights at the following address:

Massachusetts Bay Transportation Authority  
 Office of Diversity and Civil Rights  
 Attention: Assistant Secretary for Civil Rights  
 10 Park Plaza, Suite 3800, Boston, MA 02116  
 Phone: (857) 368-8580 or 7-1-1 for Relay Service  
 Email: [MBTACivilRights@mbta.com](mailto:MBTACivilRights@mbta.com)

## Definitions

The terms relevant to the complaint process are defined as follows:

**Complainant**—A person who files a complaint with the MBTA alleging a violation of Title VI, the ADHP Policy, or a related nondiscrimination obligation.

**Complaint**—Written, verbal, or electronic statement concerning an allegation of discrimination based on race, color, or national origin (including limited English proficiency). Where a person with a disability or a person with limited English proficiency files a complaint, the term complaint encompasses alternative formats and languages other than English.

**Discrimination**—An act or inaction, which can be either intentional or unintentional, through which a person or group of persons has been subjected to unequal treatment or disparate impact on the basis of race, color, or national origin (including limited English proficiency).

**Respondent**—The person, agency, institution, or organization alleged to have engaged in behavior that violates Title VI, the ADHP Policy, or related nondiscrimination obligations.

## **TITLE VI INVESTIGATIONS, COMPLAINTS, AND LAWSUITS (FTA C 4702.1B, III-4.A.(3))**

Title VI complaints are investigated by the Office of Diversity and Civil Rights (ODCR) Investigations Unit. The investigator assigned to a complaint determines whether or not there is sufficient evidence to find that there is a violation of Title VI. All Title VI complaints that are investigated will result in a finding of either “Cause” or “No Cause.” At the conclusion of the investigation, regardless of outcome, the decision (or finding) is referred to the appropriate MBTA Area for remedial or corrective action. The MBTA Area the decision is referred to depends upon the garage, transportation line, repair shop, or department where the respondent works. If further investigation is conducted by the Area, it will only relate to “non-civil rights” issues raised in the complaint or during the investigation. These issues could include customer service concerns, courtesy rule violations, or safety issues. In some instances, Title VI complaints with “No Cause” findings result in discipline to the employee for non-civil rights rules and policy violations. In some cases, the Area works in consultation with Labor Relations, Human Resources, or ODCR’s Training and Mediation Unit.

A list of Title VI complaints, lawsuits, and investigations that occurred during this triennial reporting period is presented in Appendix 2E.

## **MBTA PUBLIC ENGAGEMENT PLAN (FTA C 4702.1B, III-4.A.(4))**

The MBTA’s Public Engagement Plan (PEP) is a document that provides instruction to all MBTA staff, project partners, subrecipients, and contractors on the MBTA’s public engagement goals and methods to elicit diverse participation and feedback regarding the MBTA’s programs, services, activities, and decisions. While this document is designed to satisfy FTA requirements for public engagement on service and fare changes, the PEP also incorporates information about engagement on capital projects and policy development. The document outlines several guiding principles around which all engagement at the MBTA is centered.

## **UPDATING THE PUBLIC ENGAGEMENT PLAN**

The PEP incorporated into this triennial Title VI Program reflects an important effort that took place during this 2017–20 reporting period when a new PEP was drafted that outlines the MBTA’s goals and priorities regarding public engagement.

In order to ensure alignment between the MBTA and the public regarding these principles for engagement, the MBTA released the draft PEP for public comment. Over an approximately 45-day public review period, MBTA customers were able to provide feedback to the MBTA regarding the content of the draft PEP. Opportunities for input included four public meetings that were held across the MBTA service area, online feedback forms (in English, Spanish, Haitian Creole, Portuguese, Vietnamese, Simplified Chinese, and Traditional Chinese), and stakeholder meetings with transit



advocates and other advocacy groups, including those that support the disability community. Outreach efforts to inform the public of opportunities to comment were provided through on-vehicle media, in-station media (i.e., digital screens), the MBTA website, board presentations, and traditional print news media (including the *Bay State Banner*, *Chelsea Record*, *South Boston Today*, *Quincy Sun*, *Framingham Bulletin*, *Sampan*, *El Mundo*, *Portuguese Times*, and other newspapers). For this initiative, the MBTA also created a new email inbox ([publicengagement@mbta.com](mailto:publicengagement@mbta.com)) where MBTA customers may provide feedback.

Once all comments were received, they were summarized into key themes and posted online for customers to review. The final draft of the PEP was also provided, alongside a redline version, so that customers could see how feedback was incorporated into the document. The full text of the final MBTA PEP can be found in Appendix 2F and on the MBTA website at [www.mbta.com/public-engagement](http://www.mbta.com/public-engagement).

## **IMPLEMENTING THE PUBLIC ENGAGEMENT PLAN**

Final revisions to the PEP were completed in March 2020, so the MBTA has turned its focus to implementation activities. These activities include informing all departmental leadership about the contents of the final PEP. Moreover, the MBTA will need to assign a multidisciplinary team of staff responsible for managing the PEP, including staff from the General Manager's Office, ODCR, Customer Experience, and others. This team will be available to provide training and technical assistance to those responsible for operationalizing the PEP's engagement methods.

## **MONITORING EFFECTIVENESS**

The new 2020 MBTA PEP will be monitored for effectiveness in the following ways:

- Staff feedback regarding empirical or anecdotal indicators that engagement strategies in the PEP elicited diverse and robust participation
- Stakeholder feedback regarding the effectiveness of MBTA's outreach activities
- Data metrics, where available, such as social media statistics, website visits, document downloads, and form submissions
- The ability to achieve outreach and feedback benchmarks built in to particular initiatives (such as achieving the sampling plan for the Rider Census)
- The number and nature of complaints regarding outreach strategies as envisioned in the PEP
- The ability of the PEP to adapt to new outreach practices and technologies, where appropriate (such as Virtual Public Involvement)

Based on the results of these monitoring activities, the MBTA will consider future revisions, updates, or other modifications to the PEP.

## **SUMMARY OF DEPARTMENT-LEVEL PUBLIC ENGAGEMENT ACTIVITIES**

The following section outlines key efforts among MBTA departments that had significant public engagement activities during this triennial cycle, including approaches to reach diverse communities. A list of public meetings that the MBTA held during this triennial reporting period is provided in Appendix 2G.

### **Better Bus Project**

As part of the Better Bus Project, on January 28, 2019, the MBTA released 47 budget-neutral proposals to update and modernize existing bus service and made them available for public comment through March 13, 2019. During the public review period, MBTA staff engaged with municipal and state officials, stakeholders, and customers to describe the proposals and collect feedback. Information about the proposals was distributed online and in person at a myriad of MBTA-hosted events and through briefings with stakeholders and conversations with customers.

During six weeks of intensive public engagement about these near-term proposals, the MBTA had more than 2,500 in-person interactions during the course of approximately 75 meetings, briefings, and street team efforts. (Street teams are MBTA employees who go to events or busy pedestrian areas to elicit feedback from the public.) The MBTA collected approximately 3,500 discrete comments about the original 47 proposals. This feedback allowed the MBTA to consider some issues that had not previously been identified. As a result, the MBTA moved 36 of the proposals forward for implementation, with some revisions, and held 11 proposals for future consideration.

It was essential for the MBTA to share the near-term proposals widely to inform riders and stakeholders about the potential benefits and impacts and to collect feedback. The MBTA also wanted to assess whether riders and stakeholders thought the scope of the changes appropriate and to identify any impacts of which MBTA staff were not aware.

### **Bilingual Station Announcements**

Since the last triennial submission, audio systems in MBTA stations have been programmed to make numerous courtesy and safety announcements in English and Spanish. In the event of an emergency, an announcement asks customers to remain calm and listen for further instructions. Regular safety announcements remind customers to report any unattended packages and not to litter in stations because litter can land on tracks and catch fire, leading to delays. Courtesy announcements remind customers that they are encouraged to remove their backpacks to speed up boarding, that smoking is prohibited, and that bicycles are not permitted at rush hour or at any time on the Green Line.

### **Bus Network Redesign**

The Bus Network Redesign project is a complete reimagining of the MBTA's bus network to reflect the travel needs of the region. The project team is planning to conduct extensive outreach to complement data collection and analysis about how people are traveling in the region. The Massachusetts Department of Transportation (MassDOT) and the MBTA recently acquired location-based services data from smartphone applications about the trip-making patterns in the Boston

region, but the data underrepresent seniors since they are less likely than the general public to have a smartphone. Public outreach targeted to seniors will help the MBTA better understand how seniors are traveling so the agency can design a network that can better meet their needs. The location-based services data also do not reflect trips people want to make but cannot make due to lack of transit access. Through outreach, the MBTA wants to understand the full breadth of how people would like to travel in order to access opportunities in the region.

The Bus Network Redesign project team has also been working closely with the project's External Task Force to develop a metrics framework to evaluate success for the project. Since the primary goal is to get people where they need to go, the first key component of the metrics focuses on access to destinations. The second key component is competitiveness with private vehicles because, in addition to creating connections, the MBTA wants to make sure to make those connections with high-quality transit service.

The project team plans to conduct targeted outreach to seniors, people with limited-English-proficiency, people identified as members of minority groups, people with disabilities, and people who have low-incomes to ensure that traditionally underrepresented populations are included in the process of designing a new network. The following types of engagement are currently being planned for this process:

- Street teams and pop-ups at locations such as malls, health centers, and transit hubs
- Presentations at existing neighborhood meetings and other community meetings
- Workshops targeting specific underrepresented population groups
- Regional public meetings

## Fare Transformation

The MBTA is transforming its fare collection system to make paying for transit easier while also speeding up MBTA services. The next generation of fare collection technology at the MBTA will build upon the existing system while introducing significant improvements, including the acceptance of mobile wallets such as Apple Pay and Google Pay, contactless credit cards, and new and improved CharlieCards. The system will also enable more reliable service on buses and the surface Green Line by allowing all-door boarding at all times. Finally, the new system will allow fare payments at the MBTA to be seamless across all modes. Bus, rapid transit, ferry, and commuter rail will all be integrated, allowing possibilities such as transfers between commuter rail and rapid transit.

The new fare collection system represents the MBTA's response to concerns heard from riders over the years. As part of the Fare Transformation project, the MBTA aspires to achieve the following:

- Increase ease of access to CharlieCards by stocking them in all fare vending machines
- Expand the number of locations outside of subway stations where customers can load fares
- Simplify the application and administration of reduced fare programs to make it easier for customers to join these programs

- Address accessibility issues voiced by people with disabilities
- Decrease operations and maintenance costs of the system

When introducing this program, the MBTA engaged customers across its service area, with a particular focus on traditionally underserved communities. The MBTA hosted several public advisory meetings in communities around Greater Boston to inform the public about the project and elicit input directly from riders. The MBTA completed more than 75 meetings and focus groups with community organizations and residents of housing developments, and the MBTA hosted several street teams at bus stops across the system. Several meetings have focused on organizations that represent people with disabilities, including the Boston Center for Independent Living and the Massachusetts Commission for the Blind.

## Green Line Transformation

The goal of the Green Line Transformation (GLT) program is to improve the quality of service on the Green Line. The program involves increasing capacity and enhancing accessibility through fleet modernization, infrastructure and facility upgrades, and state-of-the-art technology implementation.

The public outreach plan for GLT included an analysis of Title VI populations that are served or affected by the Green Line. Staff analyzed census data in MassDOT's Engage mapping tool to determine languages other than English that are spoken by at least five percent of the residents in the census tracts near the Green Line. These demographics provided basic information for determining translation needs. Any targeted outreach for GLT will consider the language needs of specific populations in the appropriate census tracts.

The planning for a series of initial public meetings about GLT in the fall of 2019 involved specific steps to engage minority and limited-English-proficient populations in advance of each of five meetings held to introduce the GLT program to the communities served by the Green Line. Meeting locations were selected to accommodate traditionally underserved populations such as people with disabilities and low-income populations. At these meetings, flyers and postcards were available in English, Spanish, Simplified and Traditional Chinese, and Russian. There were no requests for interpreters, but a Spanish-speaking staff member was available, and a Cantonese and Mandarin interpreter was available at one meeting. Advertisements were placed in an assortment of local English, Spanish, and Chinese newspapers, and microphones and loudspeakers were in place for each public meeting.

The GLT program will continue to be proactive by engaging with stakeholders from the communities along the Green Line corridor and by incorporating methods for connecting with minority and limited-English-proficient populations. In addition, inclusive design for all projects in the GLT portfolio will be prioritized and the MBTA will work to ensure that outcomes result in an improved customer experience for riders of all backgrounds and abilities.

## Lynn Transit Access Plan

The Lynn Transit Action Plan effort began in June 2019 and is focused on identifying transit improvements to better serve the residents of Lynn, a city with large low-income, immigrant, minority, and limited-English-proficiency populations. As part of the existing conditions analysis, the team developed and released a survey, available in six languages, to learn about the transit-related challenges and needs of the community. The team collected responses in the field over several days, gathering input at locations where there were many pedestrians, including the local high schools, Walmart, Market Basket, farmer's markets, and the MBTA commuter rail station.

The team also worked with the project's advisory committee, many of whom have strong connections with different parts of the community, to send a link to an online version of the survey across their networks. The team also coordinated with the YMCA so that visitors could complete the survey on a tablet at the front desk and flyers were posted in English and Spanish advertising the survey at several locations. The survey was open between September and November 2019 and gathered more than 1,000 responses.

## Rail Vision

Rail Vision is a project to identify cost-effective strategies to transform the existing MBTA commuter rail system into one that better supports improved mobility and economic competitiveness in Greater Boston. Outreach for the project included two public meetings, briefings during local meetings for interested cities and towns, and a survey aimed at non-riders. The outreach consisted primarily of local briefings in the MBTA's commuter rail service area, which is an area encompassing 175 municipalities. In 2019, these briefings included presentations to several cities and towns with large minority or limited-English-proficient populations, including presentations at a Lawrence City Council meeting, MassINC events in Lynn and Fitchburg, the Merrimack Valley Planning Commission in Haverhill, the Northern Middlesex Council of Governments in Lowell, several meetings of the Boston Region Metropolitan Planning Organization, and the Fairmount Line Working Group.

## Riders' Transportation Access Group

In December 2018, the MBTA entered into a memorandum of understanding (MOU) with the newly formed Riders' Transportation Access Group (R-TAG). R-TAG is an autonomous, customer-driven organization whose role is to advise the MBTA on matters related to accessibility. Since the MOU was signed, R-TAG has facilitated opportunities for sharing information about fixed-route and paratransit services and for eliciting feedback during decision-making processes. R-TAG has hosted six public meetings at which the MBTA has sought feedback on a number of topics, including the Better Bus Project, fare policy, the Green Line Extension, changes to bus operator training, improvements to customer complaint tracking, elevator cleanliness, a software upgrade for The RIDE, and service pilots of The RIDE. In addition to public meetings, R-TAG has hosted numerous executive board meetings and working groups at which MBTA personnel have heard from customers.

## **LANGUAGE ASSISTANCE PLAN (FTA C 4702.1B, III-4.A.(5))**

The MBTA's Language Assistance Plan is provided in Appendix 2H.

## **MINORITY REPRESENTATION ON PLANNING AND ADVISORY BODIES (FTA C 4702.1B, III-4.A.(6))**

During this reporting period, two advisory groups were assembled by the MBTA to assist with policy development and service improvement considerations. When reaching out and soliciting participation in these groups, the MBTA was purposeful in assembling a diverse group of external stakeholders and organizations that not only reflected diverse membership but also represented diverse communities and diverse viewpoints from throughout the service area. Each one of these organizations had full discretion to select members to send to any particular meeting of the advisory body, and the attendees would often change depending on subject matter expertise and the topics to be discussed during any given meeting. As such, data regarding individual attendees' racial demographics were not collected. For details of the efforts to ensure diverse participation among these advisory bodies, please see the following sections.

### ***BUS NETWORK REDESIGN EXTERNAL TASK FORCE***

The Bus Network Redesign project, which will design a new bus network, requires the project team to engage with current and potential future riders. As part of this process, the MBTA created a Bus Network Redesign External Task Force to represent different perspectives and inform the development of goals, metrics, and bus network alternatives. The Task Force consists of a broad range of stakeholders, including municipalities, business groups, transit advocates, social service providers, public health and housing officials, and organizations that represent minority populations. The Task Force includes representatives from the following organizations:

- Alliance for Business Leadership
- Alternatives for Community and Environment
- Barr Foundation
- Boston Business Chamber
- Chinese Progressive Association
- City of Boston
- City of Cambridge
- City of Chelsea
- City of Everett
- City of Somerville
- Fairmount Indigo Network
- Greenroots Chelsea
- Kendall Now

- Livable Streets
- Madison Park Community Development Corporation
- Massachusetts Community Labor United
- Massachusetts Department of Public Health
- Massachusetts Executive Office of Housing and Economic Development
- Massachusetts House of Representatives
- Mattapan ABCD
- Mattapan Food and Fitness Coalition
- MBTA Advisory Board
- Medical Academic and Scientific Community Organization (MASCO)
- Metropolitan Area Planning Council
- Neighbor to Neighbor
- New Lynn Coalition
- Office of Boston City Councilor Andrea Campbell
- Project Right
- Quincy Asian Resources
- Riders' Transportation Access Group
- Seaport Transportation Management Association
- Transportation for Massachusetts
- Transportation, Resources, Information, Planning & Partnership for Seniors
- The Urban Labs

## ***FARE TRANSFORMATION POLICY DEVELOPMENT WORKING GROUP***

As the MBTA is transforming its fare collection system, it has created the Policy Development Working Group as a mechanism to engage local transit advocates directly on the MBTA's fare-related policy. While membership in this working group is open to the public, local advocates have been specifically encouraged to participate. The purposes of the Policy Development Working Group are (1) to identify specific user communities or organizations for future engagement, (2) to brainstorm solutions to identified policy issues, and (3) to react to proposed MBTA policies. This group also will help to explore how specific policy decisions may impact different users within the system. The Policy Development Working Group is made up of multiple organizations that represent minority populations and other advocacy groups, including the following:

- Massachusetts Senior Action Council
- TransitMatters
- Fairmount Indigo Network Coalition

- LivableStreets Alliance
- Transportation for Massachusetts
- American Civil Liberties Union of Massachusetts
- A Better City
- City Life, Vida Urbana
- GreenRoots Chelsea
- Allston-Brighton Health Collaborative
- Massachusetts Community Labor United
- Conservation Law Foundation
- Lawyers for Civil Rights

### **SUBRECIPIENT ASSISTANCE AND MONITORING (FTA C 4702.1B, III-4.A.(7))**

The MBTA's Title VI Subrecipient Monitoring Procedure is included in Appendix 2I.

### **TITLE VI EQUITY ANALYSIS FOR DETERMINATION OF LOCATION OF CONSTRUCTED FACILITIES (FTA C 4702.1B, III-4.A.(8))**

During this reporting period, no facilities were constructed of the type that would require an equity analysis of the determination of the siting location.





# CHAPTER 3

## DEMOGRAPHIC AND SERVICE PROFILE MAPS AND CHARTS

For each Title VI triennial program update, the Massachusetts Bay Transportation Authority (MBTA) provides maps and charts depicting the demographics of the service area based on the most recently available American Community Survey (ACS) data that includes a decennial census (Federal Transit Administration Circular 4702.1B, IV-5.a). These materials are used to identify neighborhoods and municipalities that have high concentrations of minority and low-income populations and their spatial relationship in reference to the location of the MBTA's transit services, transit facilities, and planned system improvements.

The MBTA follows the Federal Transit Administration's (FTA) Title VI guidelines for defining a minority person as one who identifies as any of the following:

- American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment
- Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam
- Black or African American, which refers to people having origins in any of the Black racial groups of Africa

- Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race
- Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

As encouraged by FTA's Title VI guidelines, the MBTA uses a locally developed threshold for defining a low-income individual. The MBTA defines a low-income individual as someone who lives in a household that earns less than 60 percent of the median household income of the MBTA's service area.

To identify neighborhoods that have high concentrations of minority and/or low-income populations, the FTA requires transit operators to shade in census tracts on each demographic map where the percentage of the minority and/or low-income population exceeds the average minority and/or low-income percentage of the population for the service area as a whole. Since the MBTA provides different modes of service that primarily serve distinct geographic areas with different demographics, the MBTA has defined two separate service areas: one for the urban fixed-route transit, or core, service area, and another for the commuter rail system:

- **Core service area:** The core service area is comprised of the 59 municipalities that have access to the MBTA's bus and rapid transit services. According to data from the 2010 Census, 31.8 percent of the population in the core service area was comprised of members of minority groups. A minority census tract was defined as one in which the minority percentage of the population exceeds 31.8 percent. According to data from the 2010–14 ACS five-year estimates, the median household income in the core service area was \$71,999. A low-income census tract was defined as one in which the median household income was less than 60 percent of the area median income, or \$43,199.
- **Commuter rail service area:** The commuter rail service area is comprised of the 175 municipalities that have access to the MBTA's commuter rail service. According to data from the 2010 Census, 26.2 percent of the population in the commuter rail service area was comprised of members of minority groups. A minority census tract was defined as one in which the minority percentage of the population exceeds 26.2 percent. According to data from the 2010–14 ACS five-year estimates, the median household income in the commuter rail service area was \$72,358. A low-income census tract was defined as one in which the median household income was less than 60 percent of the area median income, or \$43,415.

This chapter contains a series of demographic maps that show the location of the MBTA's transit services, transit facilities, major transit trip generators, major streets and highways, and planned system improvements. Each map has a version "a" that references the extent of the 175-municipality commuter rail service area and a version "b" that references the extent of the 59-municipality core service area. The text in this chapter provides descriptions of the distribution of items that are depicted on each map. All maps are listed at the end of this chapter.

Figures 3-1a and 3-1b show the MBTA's services and fixed transit facilities (parking lots; transit routes, lines, and stations; and bus shelters) in relation to the minority and low-income populations in each of the MBTA's service areas.

Figure 3-1a shows that while the majority of census tracts served by the MBTA's commuter rail outside of the core service area are neither minority nor low-income, most of the minority and/or low-income tracts outside of the core are either directly served by or near commuter rail service. Tables 3-1, 3-2, and 3-3 summarize the distribution of commuter rail and boat stations and commuter rail and boat parking lots across minority and low-income census tracts in the commuter rail service area.

**Table 3-1**  
**Distribution of Commuter Rail and Boat Transit Facilities:**  
**Number and Percentage of Facilities by Tract Classification**

Facility	Total Number of Facilities	Number of Facilities in Minority Tracts	Number of Facilities in Low-Income Tracts	Percentage of Facilities in Minority Tracts	Percentage of Facilities in Low-Income Tracts
Commuter rail/boat station	147	41	17	28%	12%
Commuter rail/boat parking	119	22	9	18%	8%

Note: The data pertain to census tracts in the MBTA's commuter rail service area.

**Table 3-2**  
**Distribution of Commuter Rail and Boat Transit Facilities:**  
**Number of Facilities per 100 Tracts, by Tract Classification**

Facility	Number of Facilities in Minority Tracts, per 100 Minority Tracts	Number of Facilities in Nonminority Tracts, per 100 Nonminority Tracts	Number of Facilities in Low-Income Tracts, per 100 Low-Income Tracts	Number of Facilities in Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
Commuter rail/boat station	10	16	11	14
Commuter rail/boat parking	5	15	6	12

Note: The data pertain to census tracts in the MBTA's commuter rail service area.

**Table 3-3**  
**Distribution of Commuter Rail and Boat Transit Facilities:**  
**Percentage of Tracts with Facility, by Tract Classification**

<b>Facility</b>	<b>Percentage of Minority Tracts with Facility</b>	<b>Percentage of Nonminority Tracts with Facility</b>	<b>Percentage of Low-Income Tracts with Facility</b>	<b>Percentage of Non-Low-Income Tracts with Facility</b>
Commuter rail/ boat station	10%	15%	11%	13%
Commuter rail/ boat parking	6%	14%	6%	12%

Note: The data pertain to census tracts in the MBTA's commuter rail service area.

Figure 3-1b shows that many of the tracts in the core service area are classified as minority and/or low income, and that more bus and rapid transit facilities are located in minority and/or low-income tracts than are not. Tables 3-4, 3-5, and 3-6 summarize the distribution of bus shelters, rapid transit stations, and rapid transit parking lots across minority and low-income census tracts in the core service area.

**Table 3-4**  
**Distribution of Bus and Rapid Transit Facilities:**  
**Number and Percentage of Facilities by Tract Classification**

<b>Facility</b>	<b>Total Number of Facilities</b>	<b>Number of Facilities in Minority Tracts</b>	<b>Number of Facilities in Low-Income Tracts</b>	<b>Percentage of Facilities in Minority Tracts</b>	<b>Percentage of Facilities in Low-Income Tracts</b>
Bus shelter	669	428	242	64%	36%
Rapid transit station	119	57	25	48%	21%
Rapid transit parking	25	16	3	64%	12%

Note: The data pertain to census tracts in the MBTA's core service area.

**Table 3-5**  
**Distribution of Bus and Rapid Transit Facilities:**  
**Number of Facilities per 100 Tracts, by Tract Classification**

Facility	Number of Facilities in Minority Tracts, per 100 Minority Tracts	Number of Facilities in Nonminority Tracts, per 100 Nonminority Tracts	Number of Facilities in Low-Income Tracts, per 100 Low-Income Tracts	Number of Facilities in Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
Bus shelter	188	72	285	89
Rapid transit station	25	18	29	20
Rapid transit parking	7	3	4	5

Note: The data pertain to census tracts in the MBTA's core service area.

**Table 3-6**  
**Distribution of Bus and Rapid Transit Facilities:**  
**Percentage of Tracts with Facility, by Tract Classification**

Facility	Percentage of Minority Tracts with Facility	Percentage of Nonminority Tracts with Facility	Percentage of Low-Income Tracts with Facility	Percentage of Non-Low-Income Tracts with Facility
Bus shelter	66%	37%	80%	43%
Rapid transit station	18%	10%	4%	11%
Rapid transit parking	7%	3%	18%	4%

Note: The data pertain to census tracts in the MBTA's core service area.

Figures 3-2a and 3-2b show the MBTA's operational facilities (maintenance facilities, remote layover facilities, garages, yards, shops, and offices) in relation to the minority and low-income populations in each of the MBTA's service areas.

Figure 3-2a shows that many of the tracts served by the MBTA's commuter rail outside of the core service area are neither minority nor low-income, and a majority of the remote layover facilities are located at or near the ends of commuter rail lines in census tracts that are neither minority nor low-income. Tables 3-7, 3-8, and 3-9 summarize the distribution of commuter rail layover facilities and maintenance facilities across minority and low-income census tracts in the commuter rail service area.

**Table 3-7**  
**Distribution of Commuter Rail Operational Facilities:**  
**Number and Percentage of Facilities by Tract Classification**

Facility	Total Number of Facilities	Number of Facilities in Minority Tracts	Number of Facilities in Low-Income Tracts	Percentage of Facilities in Minority Tracts	Percentage of Facilities in Low-Income Tracts
Layover facility	11	2	1	18%	9%
Maintenance facility	5	3	0	60%	0%

Note: The data pertain to census tracts in the MBTA's commuter rail service area.

**Table 3-8**  
**Distribution of Commuter Rail Operational Facilities:**  
**Number of Facilities per 100 Tracts, by Tract Classification**

Facility	Number of Facilities in Minority Tracts, per 100 Minority Tracts	Number of Facilities in Nonminority Tracts, per 100 Nonminority Tracts	Number of Facilities in Low-Income Tracts, per 100 Low-Income Tracts	Number of Facilities in Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
Layover facility	<1	1	1	1
Maintenance facility	<1	<1	0	<1

Note: The data pertain to census tracts in the MBTA's commuter rail service area.

< = less than.

**Table 3-9**  
**Distribution of Commuter Rail Operational Facilities:**  
**Percentage of Tracts with Facility, by Tract Classification**

<b>Facility</b>	<b>Percentage of Minority Tracts with Facility</b>	<b>Percentage of Nonminority Tracts with Facility</b>	<b>Percentage of Low-Income Tracts with Facility</b>	<b>Percentage of Non-Low-Income Tracts with Facility</b>
Layover facility	<1%	1%	<1%	1%
Maintenance facility	<1%	<1%	0%	<1%

Note: The data pertain to census tracts in the MBTA’s commuter rail service area.

< = less than.

Figure 3-2b shows that many of the tracts in the core service area are classified as minority and/or low-income, and that more of the MBTA’s offices and operational facilities are located in census tracts that are minority and/or low-income than are not. There are clusters of facilities both north and south of downtown Boston in non-residential areas. The rapid transit facilities are generally located at or near the ends of the lines, and the bus facilities are distributed throughout the core service area. All of the MBTA’s offices are located in the city of Boston. Tables 3-10, 3-11, and 3-12 summarize the distribution of the MBTA’s offices, and bus and rapid transit garages, yards, and shops across minority and low-income census tracts in the core service area.

**Table 3-10**  
**Distribution of Bus and Rapid Transit Operational Facilities:**  
**Number and Percentage of Facilities by Tract Classification**

<b>Facility</b>	<b>Total Number of Facilities</b>	<b>Number of Facilities in Minority Tracts</b>	<b>Number of Facilities in Low-Income Tracts</b>	<b>Percentage of Facilities in Minority Tracts</b>	<b>Percentage of Facilities in Low-Income Tracts</b>
MBTA office	7	6	2	86%	29%
Garage, yard, or shop	33	13	5	39%	15%

Note: The data pertain to census tracts in the MBTA’s core service area.

**Table 3-11**  
**Distribution of Bus and Rapid Transit Operational Facilities:**  
**Number of Facilities per 100 Tracts, by Tract Classification**

Facility	Number of Facilities in Minority Tracts, per 100 Minority Tracts	Number of Facilities in Nonminority Tracts, per 100 Nonminority Tracts	Number of Facilities in Low-Income Tracts, per 100 Low-Income Tracts	Number of Facilities in Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
MBTA office	3	<1	2	1
Garage, yard, or shop	6	6	6	6

Note: The data pertain to census tracts in the MBTA's core service area.

< = less than.

**Table 3-12**  
**Distribution of Bus and Rapid Transit Operational Facilities:**  
**Percentage of Tracts with Facility, by Tract Classification**

Facility	Percentage of Minority Tracts with Facility	Percentage of Nonminority Tracts with Facility	Percentage of Low-Income Tracts with Facility	Percentage of Non-Low-Income Tracts with Facility
MBTA office	2%	<1%	2%	1%
Garage, yard, or shop	5%	3%	4%	4%

Note: The data pertain to census tracts in the MBTA's core service area.

< = less than.

Figures 3-3a and 3-3b show major transit trip generators (colleges and universities, high schools, hospitals, libraries, and city and town halls) in relation to the minority and low-income populations in each of the MBTA's service areas.

Figure 3-3a shows that while the majority of census tracts served by the MBTA's commuter rail outside of the core service area are neither minority nor low-income, most of the minority and/or low-income areas outside of the core are either directly served by or near to commuter rail service. While the major trip generators are spread throughout the commuter rail service area, many of the locations with higher concentrations of transit trip generators are located in urban areas that are served by the commuter rail. In many areas where commuter rail service is not offered, regional transit authorities and local transit services provide access to the trip generators.



Figure 3-3b shows that many of the tracts in the core service area are classified as minority and/or low-income, and that the major transit trip generators are located throughout the entire core service area near the MBTA's bus and rapid transit lines.

Figures 3-4a and 3-4b show the major streets and highways in relation to the MBTA's rail, rapid transit, and bus networks and the minority and low-income populations in each of the MBTA's service areas.

Figure 3-4a shows that while the majority of census tracts served by the MBTA's commuter rail outside of the core service area are neither minority nor low-income, most of the minority and/or low-income tracts outside of the core are either directly served by or near commuter rail service. Also, the commuter rail service provides similar access to and from Boston as the access provided by the region's highway system.

Figure 3-4b shows that many tracts in the core service area are classified as minority and/or low-income, and that most of the tracts in the core service area that are classified as minority and/or low-income are served by the bus and rapid transit network, which provides similar access across the metropolitan area to that of the major street and highway network.

Figures 3-5a and 3-5b show the projects from the MBTA's Capital Improvement Plan (2020–24) in relation to the minority and low-income populations in each of the MBTA's service areas.

Figure 3-5a shows that while the majority of census tracts served by the MBTA's commuter rail outside of the core service area are neither minority nor low-income, many commuter rail projects are improvements along rail lines that serve minority and low-income tracts. Tables 3-13, 3-14, and 3-15 summarize the distribution of commuter rail line improvement projects and station and facility improvement projects across minority and low-income census tracts in the commuter rail service area.

**Table 3-13**  
**Distribution of Commuter Rail Improvements:**  
**Number and Percentage of Projects by Tract Classification**

Improvement Type	Total Number of Projects	Number of Projects Serving Minority Tracts	Number of Projects Serving Low-Income Tracts	Percentage of Projects Serving Minority Tracts	Percentage of Projects Serving Low-Income Tracts
Line	4	4	4	100%	100%
Station or facility	66	19	7	29%	11%

Note: The data pertain to census tracts in the MBTA's commuter rail service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.

**Table 3-14**  
**Distribution of Commuter Rail Improvements:**  
**Number of Projects per 100 Tracts, by Tract Classification**

Facility	Number of Projects Serving Minority Tracts, per 100 Minority Tracts	Number of Projects Serving Nonminority Tracts, per 100 Nonminority Tracts	Number of Projects Serving Low-Income Tracts, per 100 Low-Income Tracts	Number of Projects Serving Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
Line	1	<1	3	2
Station or facility	5	7	5	7

Note: The data pertain to census tracts in the MBTA's commuter rail service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.

< = less than.

**Table 3-15**  
**Distribution of Commuter Rail Improvements:**  
**Percentage of Tracts with Projects, by Tract Classification**

Facility	Percentage of Minority Tracts Served by Projects	Percentage of Nonminority Tracts Served by Projects	Percentage of Low-Income Tracts Served by Projects	Percentage of Non-Low-Income Tracts Served by Projects
Line	2%	3%	4%	1%
Station or facility	1%	1%	3%	3%

Note: The data pertain to census tracts in the MBTA's commuter rail service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.

Figure 3-5b shows that many of the tracts in the core service area are classified as minority and/or low-income, and that many of the MBTA's bus and rapid transit projects are located in census tracts that are classified as minority and/or low-income. Tables 3-16, 3-17, and 3-18 summarize the distribution of rapid transit line and station improvement projects and bus and rapid transit facility improvement projects across minority and low-income census tracts in the core service area.

**Table 3-16**  
**Distribution of Bus and Rapid Transit Improvements:**  
**Number and Percentage of Projects by Tract Classification**

Improvement Type	Total Number of Projects	Number of Projects Serving Minority Tracts	Number of Projects Serving Low-Income Tracts	Percentage of Projects Serving Minority Tracts	Percentage of Projects Serving Low-Income Tracts
Line	1	0	0	0%	0%
Station or facility	104	48	12	46%	12%

Note: The data pertain to census tracts in the MBTA's core service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.

**Table 3-17**  
**Distribution of Bus and Rapid Transit Improvements:**  
**Number of Projects per 100 Tracts, by Tract Classification**

Facility	Number of Projects Serving Minority Tracts, per 100 Minority Tracts	Number of Projects Serving Nonminority Tracts, per 100 Nonminority Tracts	Number of Projects Serving Low-Income Tracts, per 100 Low-Income Tracts	Number of Projects Serving Non-Low-Income Tracts, per 100 Non-Low-Income Tracts
Line	0	<1	0	<1
Station or facility	21	17	14	19

Note: The data pertain to census tracts in the MBTA's core service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.

< = less than.

**Table 3-18**  
**Distribution of Bus and Rapid Transit Improvements:**  
**Percentage of Tracts with Projects, by Tract Classification**

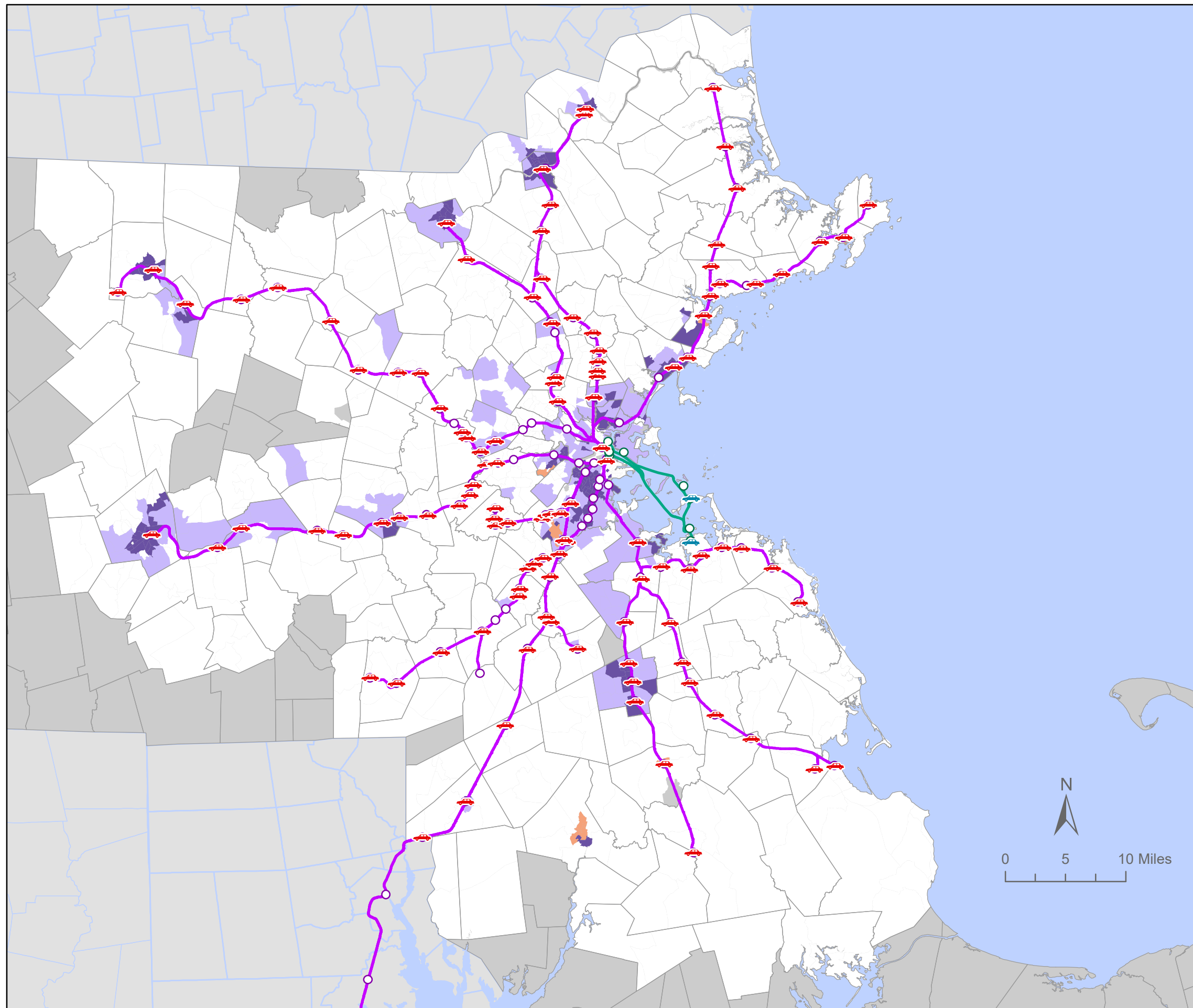
Facility	Percentage of Minority Tracts Served by Projects	Percentage of Nonminority Tracts Served by Projects	Percentage of Low-Income Tracts Served by Projects	Percentage of Non-Low-Income Tracts Served by Projects
Line	0%	2%	0%	1%
Station or facility	10%	5%	7%	7%

Note: The data pertain to census tracts in the MBTA's core service area. Line improvements were assigned to the census tracts in which stations along the improved segment are located.



**FIGURE 3-1a**  
**MBTA 2020 Title VI Report**

**MBTA Fixed Transit  
 Facilities: Commuter  
 Rail Service Area**



**MBTA Transit Facility**

- Commuter rail station with parking
- Commuter boat station with parking
- Commuter rail station without parking
- Commuter boat station without parking
- Commuter rail line
- Commuter boat route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA commuter rail service area

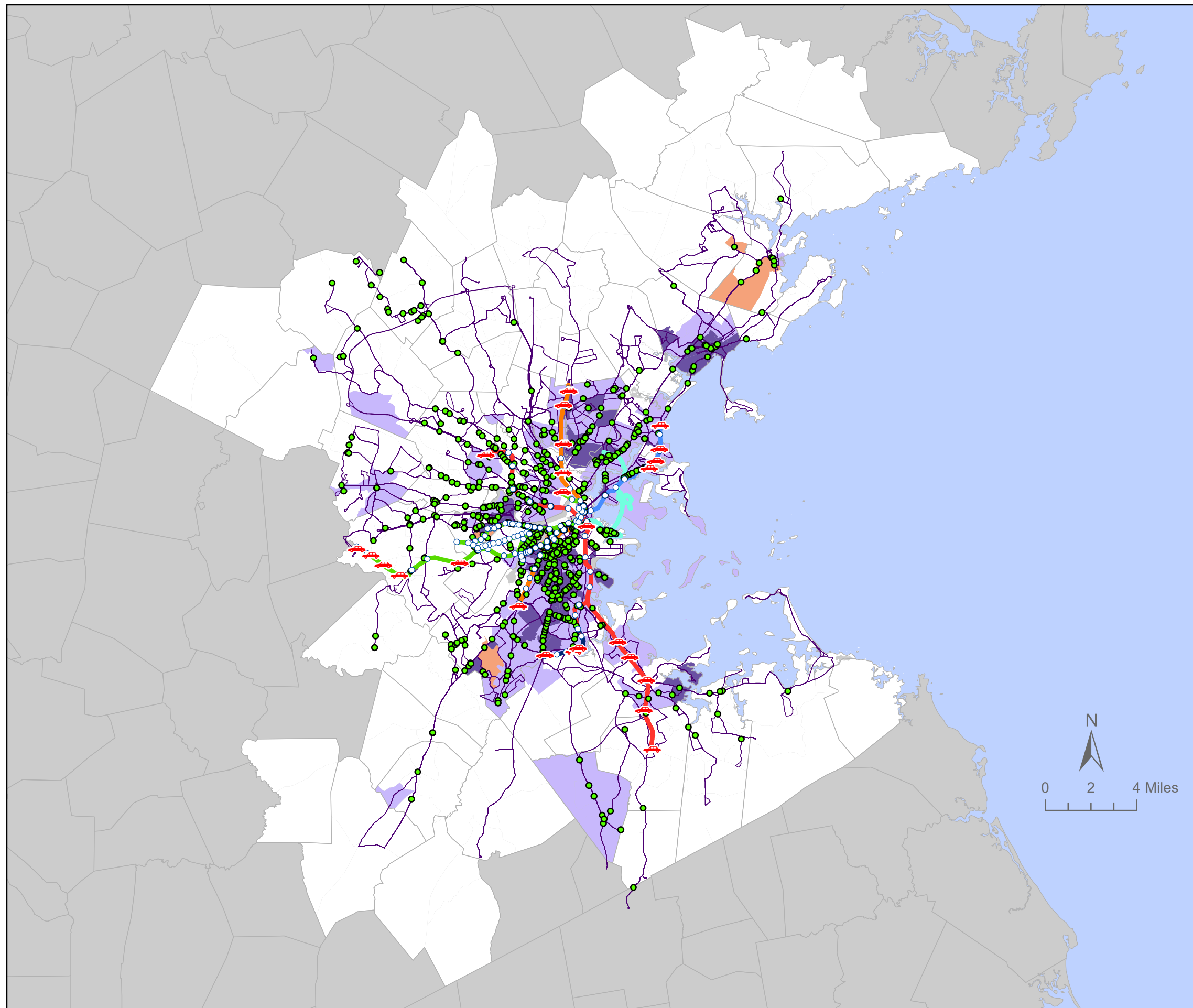
In the 175 municipalities of the MBTA commuter rail service area, 26.2 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 26.2 percent.

In the 175 municipalities of the MBTA commuter rail service area, the median household income in 2014 was \$72,358. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,415.



**FIGURE 3-1b**  
**MBTA 2020 Title VI Report**

**MBTA Fixed Transit  
 Facilities: Core  
 Service Area**



**MBTA Transit Facility**

- Rapid transit station with parking
- Rapid transit station without parking
- Bus shelter
- Blue Line
- Green Line
- Orange Line
- Red Line
- Mattapan Line
- Silver Line
- Bus route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA core service area

In the 59 municipalities of the MBTA core service area, 31.8 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 31.8 percent.

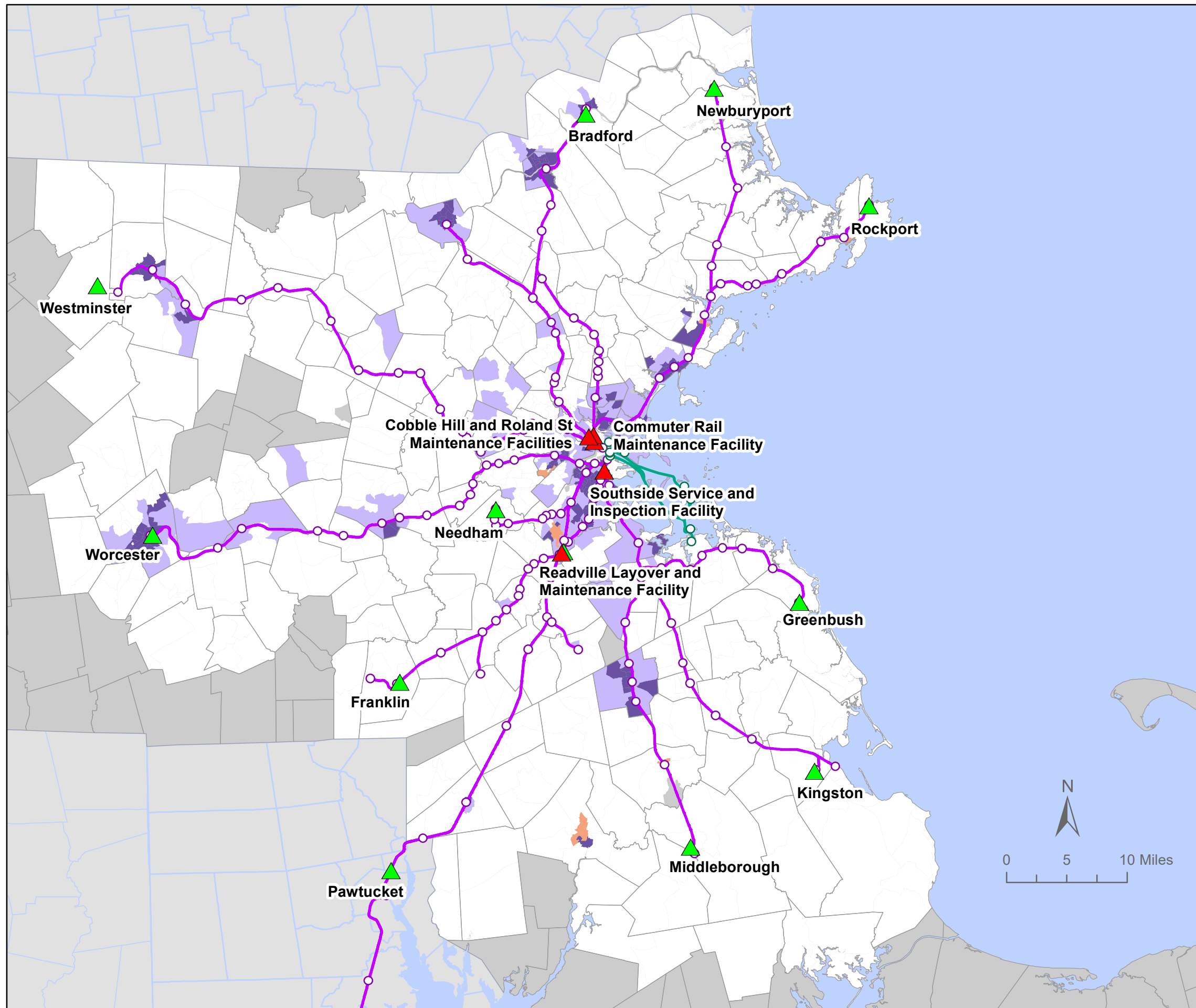
In the 59 municipalities of the MBTA core service area, the median household income in 2014 was \$71,999. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,199.





**FIGURE 3-2a**  
**MBTA 2020 Title VI Report**

**MBTA Commuter Rail  
Operational Facilities**



**MBTA Operational Facility**

- ▲ Maintenance facility
- ▲ Remote layover facility

**MBTA Transit Facility**

- Commuter rail station
- Commuter boat station
- Commuter rail line
- Commuter boat route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA commuter rail service area

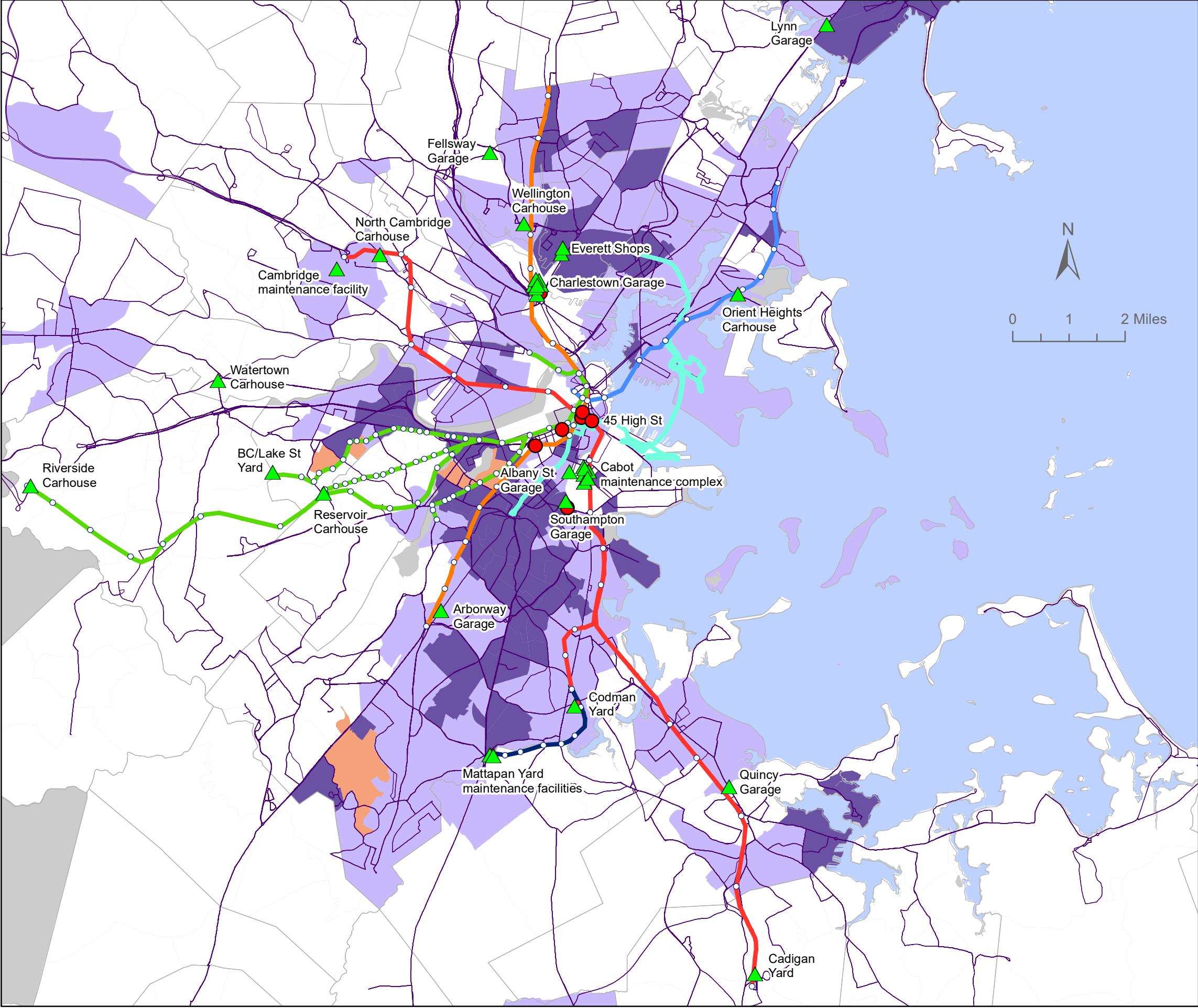
In the 175 municipalities of the MBTA commuter rail service area, 26.2 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 26.2 percent.

In the 175 municipalities of the MBTA commuter rail service area, the median household income in 2014 was \$72,358. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,415.



**FIGURE 3-2b**  
**MBTA 2020 Title VI Report**

**MBTA Bus and Rapid Transit Operational Facilities**



**MBTA Facility**

- ▲ MBTA garage, yard, or shop
- MBTA office

**MBTA Transit**

- Rapid transit station
- Bus route
- Blue Line
- Green Line
- Orange Line
- Red Line
- Mattapan Line
- Silver Line

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA core service area

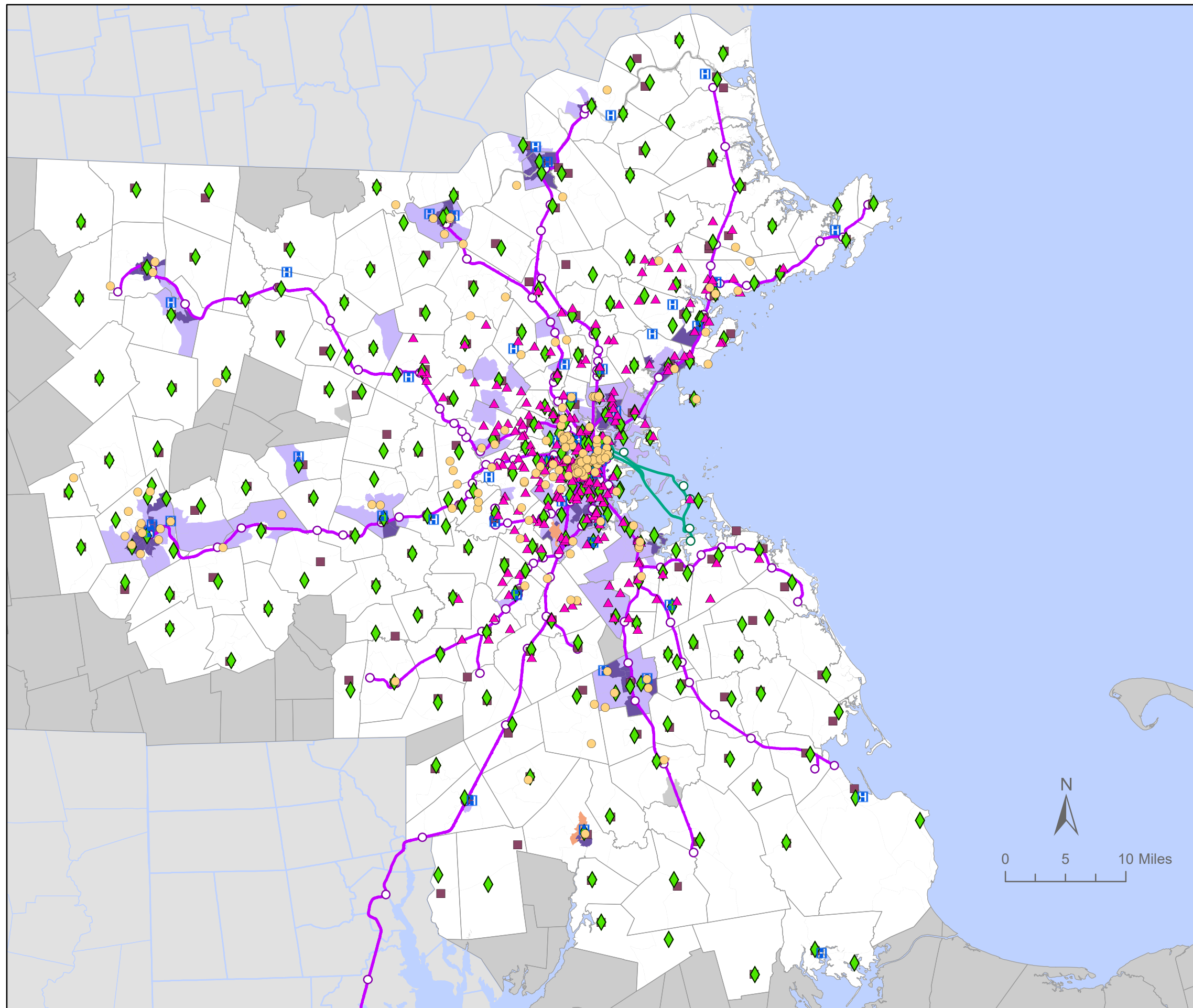
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In the 59 municipalities of the MBTA core service area, the median household income in 2014 was \$71,999. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,199.



**FIGURE 3-3a**  
**MBTA 2020 Title VI Report**

**Major Transit Trip  
 Generators: Commuter  
 Rail Service Area**



**Trip Generator**

- College or university
- ▲ High school
- Hospital
- ◆ Library
- City or town hall

**MBTA Transit Facility**

- Commuter rail station
- Commuter boat station
- Commuter rail line
- Commuter boat route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA commuter rail service area

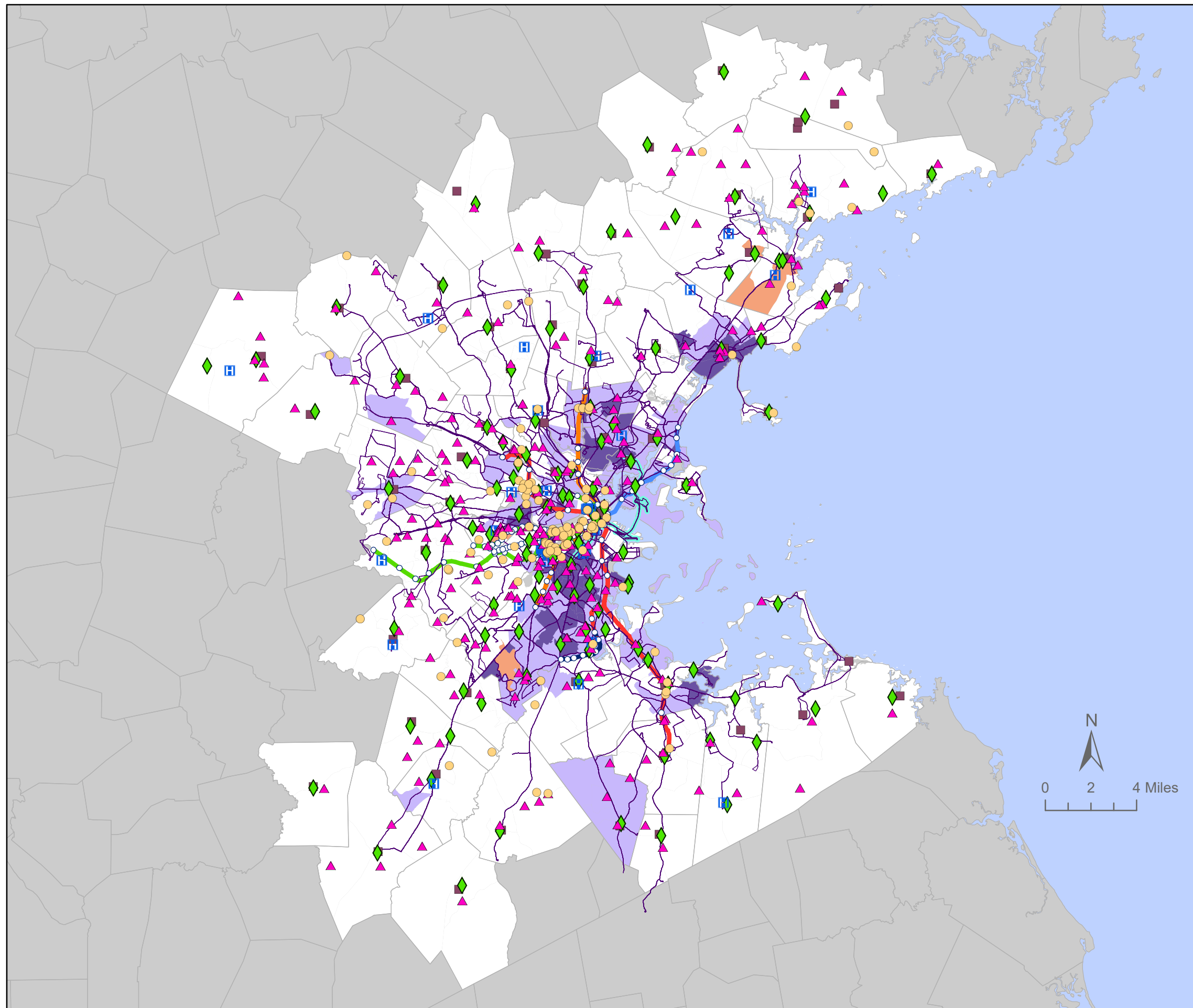
In the 175 municipalities of the MBTA commuter rail service area, 26.2 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 26.2 percent.

In the 175 municipalities of the MBTA commuter rail service area, the median household income in 2014 was \$72,358. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,415.



**FIGURE 3-3b**  
**MBTA 2020 Title VI Report**

**Major Transit Trip  
 Generators:  
 Core Service Area**



**Trip Generator**

- College or university
- ▲ High school
- ⊠ Hospital
- ◆ Library
- City or town hall

**MBTA Transit**

- Rapid transit station
- Bus route
- Blue Line
- Green Line
- Orange Line
- Red Line
- Mattapan Line
- Silver Line

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA core service area

In the 59 municipalities of the MBTA core service area, 31.8 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 31.8 percent.

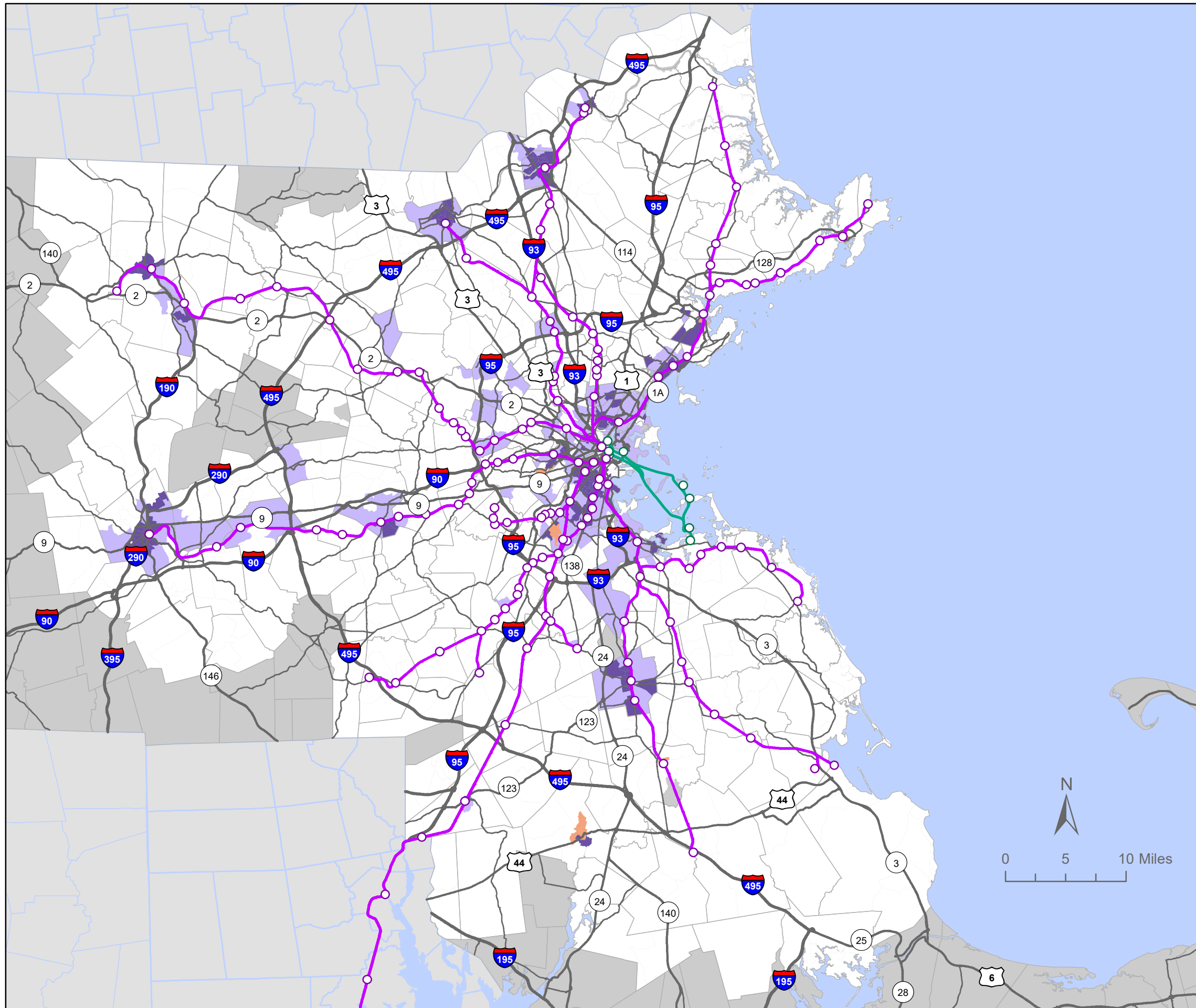
In the 59 municipalities of the MBTA core service area, the median household income in 2014 was \$71,999. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,199.





**FIGURE 3-4a**  
**MBTA 2020 Title VI Report**

**Major Streets and Highways: Commuter Rail Service Area**



**Road Network**

- Interstate
- Principal arterial
- Other arterial

**MBTA Transit Facility**

- Commuter rail station
- Commuter boat station
- Commuter rail line
- Commuter boat route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA commuter rail service area

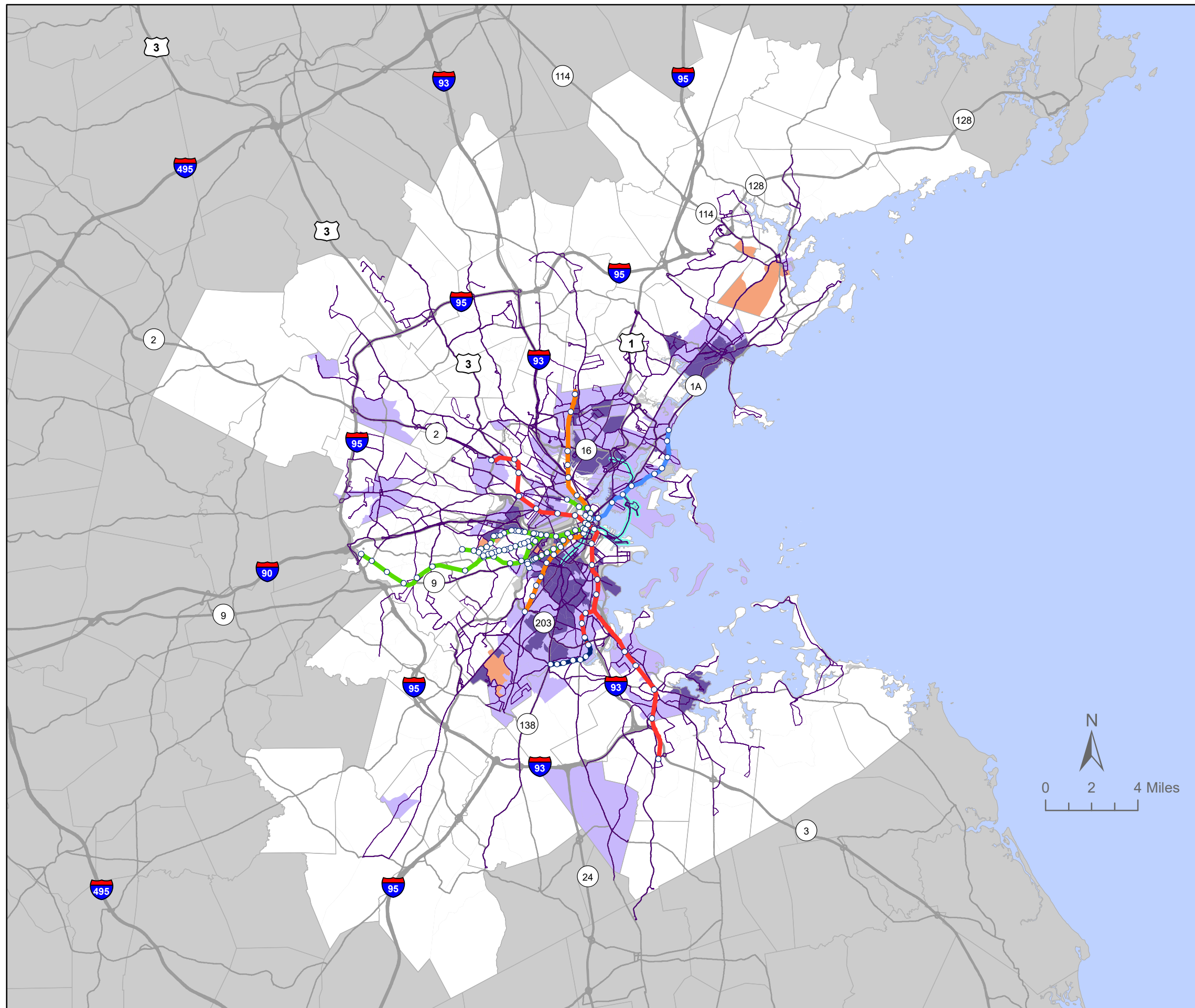
In the 175 municipalities of the MBTA commuter rail service area, 26.2 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 26.2 percent.

In the 175 municipalities of the MBTA commuter rail service area, the median household income in 2014 was \$72,358. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,415.



**FIGURE 3-4b**  
**MBTA 2020 Title VI Report**

**Major Streets and Highways: Core Service Area**



**Road Network**

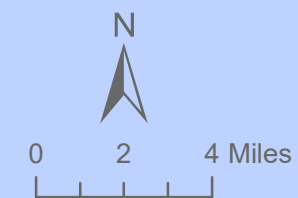
- Interstate
- Principal arterial
- Other arterial

**MBTA Transit**

- Rapid transit station
- Bus route
- Blue Line
- Green Line
- Orange Line
- Red Line
- Mattapan Line
- Silver Line

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA core service area



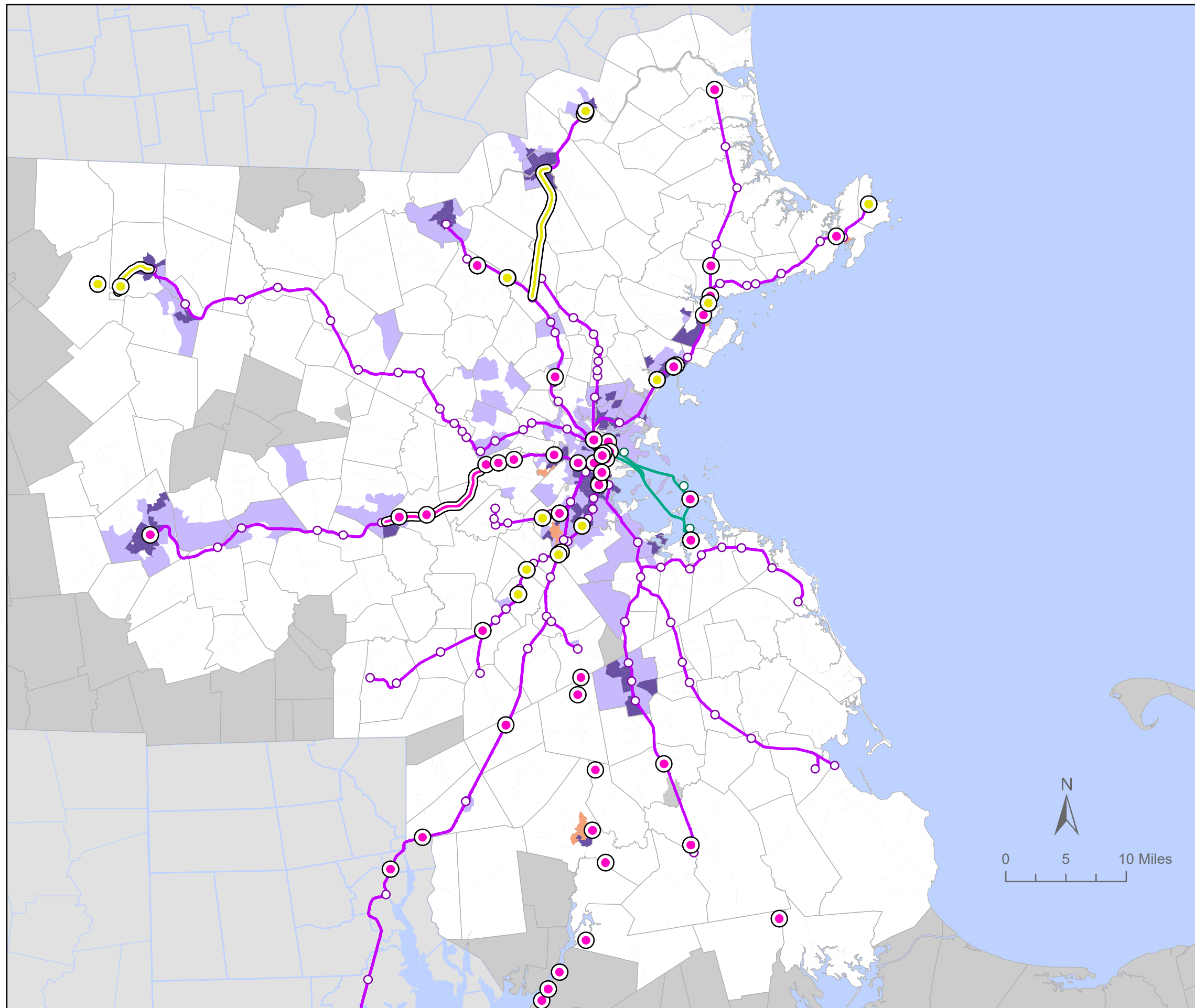
In the 59 municipalities of the MBTA core service area, 31.8 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 31.8 percent.

In the 59 municipalities of the MBTA core service area, the median household income in 2014 was \$71,999. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,199.





**FIGURE 3-5a**  
**MBTA 2020 Title VI Report**





**MBTA Capital Improvements:  
 Commuter Rail**








**Improvement Status**

-  Completed in state fiscal year 2017–19
-  Planned in state fiscal year 2020–24 Capital Investment Plan

**MBTA Transit Facility**

-  Commuter rail station
-  Commuter boat station
-  Commuter rail line
-  Commuter boat route

**Minority and Low-Income Classification**

-  Minority and low-income tract
-  Minority tract
-  Low-income tract
-  Nonminority, non-low-income tract
-  Outside MBTA commuter rail service area

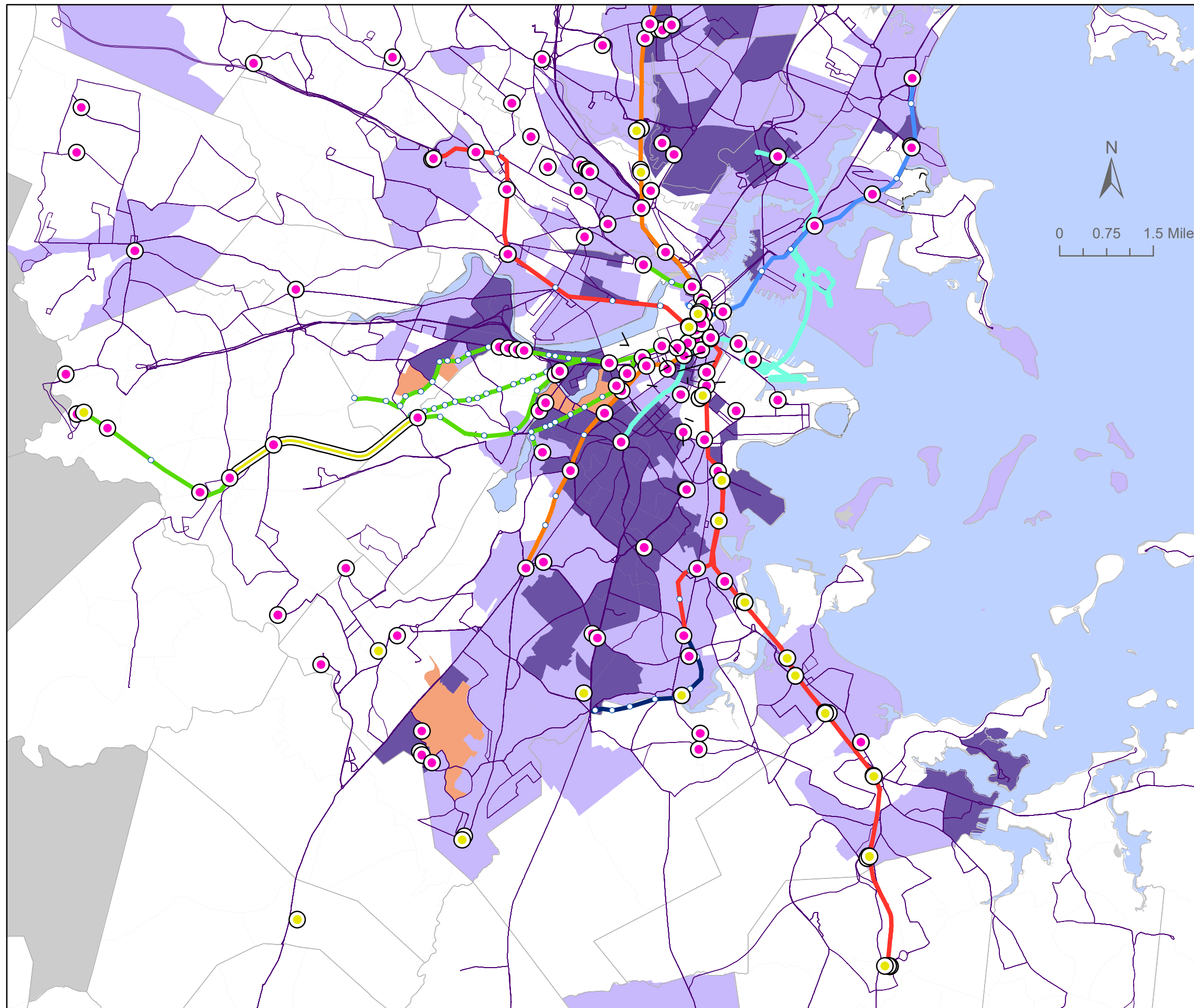
In the 175 municipalities of the MBTA commuter rail service area, 26.2 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 26.2 percent.

In the 175 municipalities of the MBTA commuter rail service area, the median household income in 2014 was \$72,358. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,415.



**FIGURE 3-5b**  
**MBTA 2020 Title VI Report**

**MBTA Capital Improvements:  
 Bus and Rapid Transit**



**Improvement Status**

- Completed in state fiscal year 2017–19
- Planned in state fiscal year 2020–24 Capital Investment Plan

**MBTA Transit**

- Rapid transit station
- Blue Line
- Green Line
- Orange Line
- Red Line
- Mattapan Line
- Silver Line
- Bus route

**Minority and Low-Income Classification**

- Minority and low-income tract
- Minority tract
- Low-income tract
- Nonminority, non-low-income tract
- Outside MBTA core service area

In the 59 municipalities of the MBTA core service area, 31.8 percent of the residents were members of minority groups in 2010. A minority census tract is defined as one in which the minority percentage exceeds 31.8 percent.

In the 59 municipalities of the MBTA core service area, the median household income in 2014 was \$71,999. A low-income census tract is defined as one in which the median household income is less than 60 percent of the area median household income, or \$43,199.







# CHAPTER 4

## DEMOGRAPHIC RIDERSHIP AND TRAVEL PATTERNS

The Federal Transit Administration (FTA) requires the Massachusetts Bay Transportation Authority (MBTA) to create demographic profiles, based on customer surveys, to compare minority and nonminority riders' trips and fare usage by fare type (FTA C 4702.1B, IV-5.b). The FTA also requires a profile of fare use by fare type for low-income riders. The MBTA Systemwide Passenger Survey conducted between October 2015 and May 2017 was used to create the profiles in this chapter, which are presented by mode.<sup>1</sup>

The systemwide survey elicited responses from riders on all five of the MBTA's public transit modes: bus, rail rapid transit (heavy and light rail), commuter rail, bus rapid transit (Silver Line), and commuter ferry.<sup>2</sup> However, because there was a low response rate on commuter ferry services and no minority responses on one of the routes, survey results for this mode are not presented in this analysis.

<sup>1</sup> The MBTA systemwide surveys were distributed on all modes. The surveys included questions about each respondent's most recent one-way MBTA trip. The results were tabulated for each mode used in each reported trip.

<sup>2</sup> Due to differences in how data was collected and reported, MBTA mode classifications in this chapter are different from the classifications in other chapters in this report. In other chapters, the Silver Line is assessed as part of the bus mode, and rail rapid transit is called heavy and light rail.

This chapter includes analyses comparing the following characteristics of minority and nonminority riders:

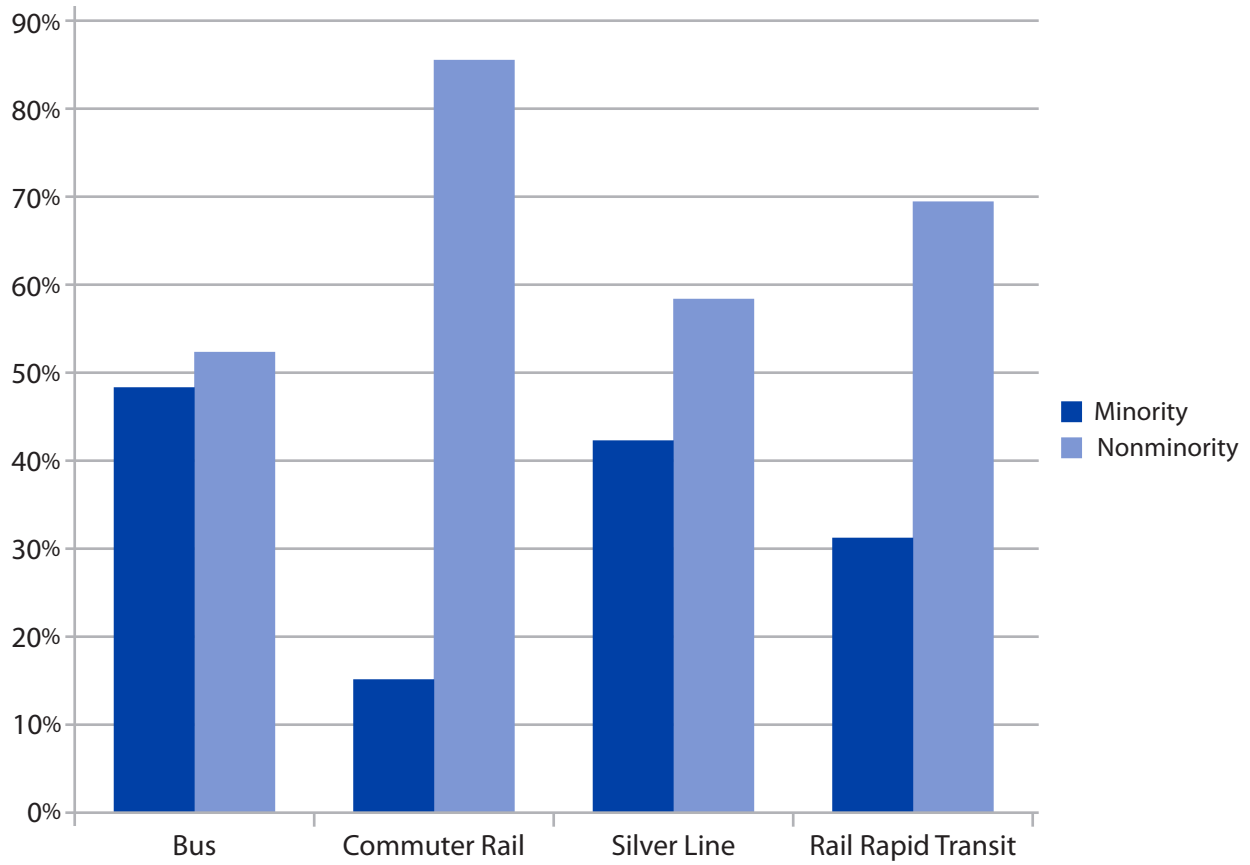
- Modal use
- Fare usage by fare type
- Frequency of use
- Transfer rates
- Estimation of transit dependency as represented by possession of a driver's license and household vehicle ownership

This chapter also includes an analysis of fare usage by fare type for low-income and non-low-income riders, as required by the FTA for fare equity analyses. The chapter concludes with a description of survey methodology and an analysis of the languages in which the survey was taken and the languages in which survey respondents prefer to receive information about the MBTA.

## **MODAL USE**

An analysis of the survey data shows that the proportion of minority riders varied by mode. The percentage of nonminority survey respondents was greater than the percentage of minority respondents for all modes. The highest proportion of minority respondents traveled by bus and the Silver Line, followed by rail rapid transit and then commuter rail. Figure 4-1 and Table 4-1 show the use of each mode by minority status.

**Figure 4-1  
Modal Use by Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

**Table 4-1  
Modal Use by Minority Status**

Mode	Minority	Nonminority
Bus	48%	52%
Commuter Rail	15%	85%
Silver Line	42%	58%
Rail Rapid Transit	31%	69%

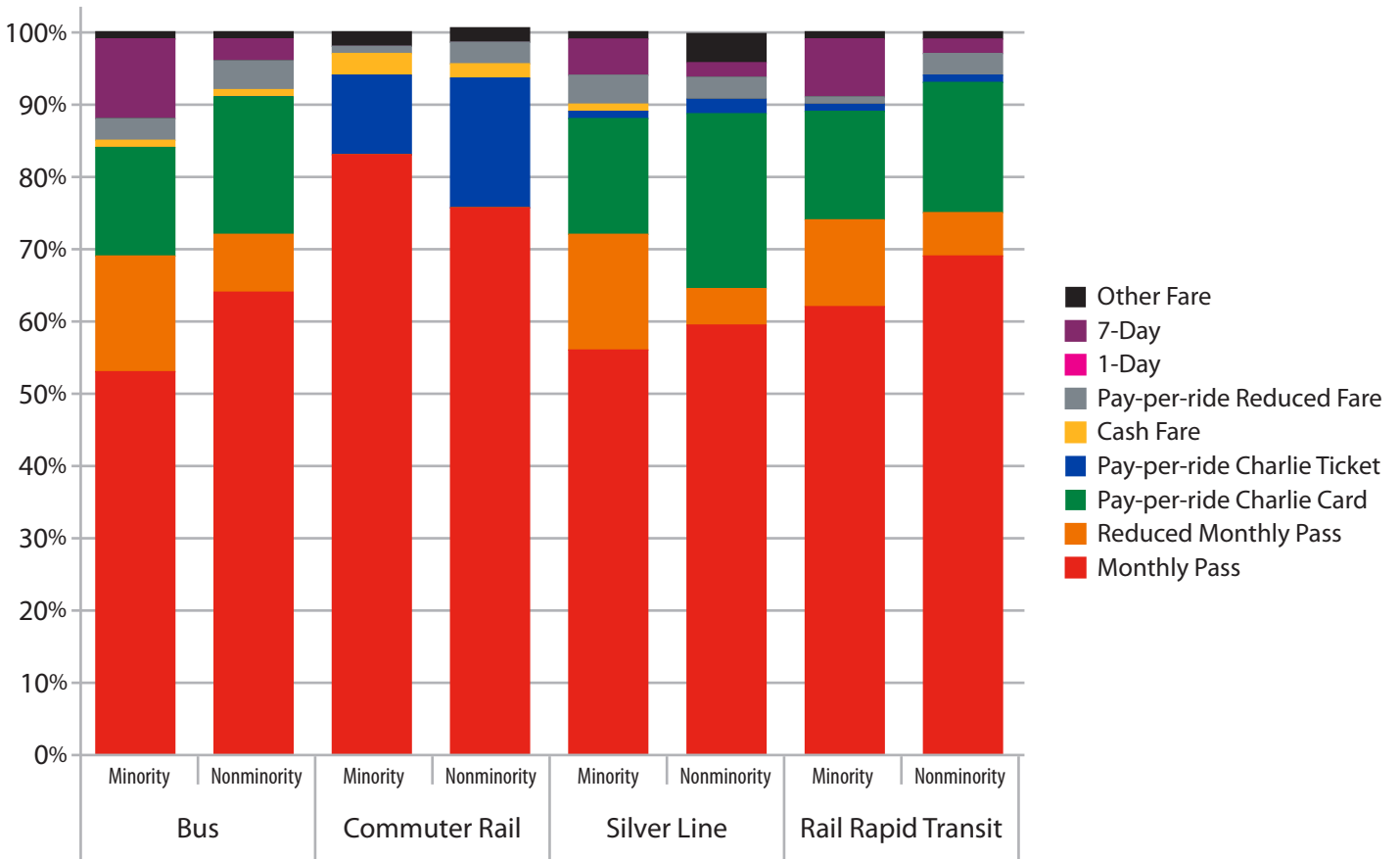
Source: 2015–17 MBTA Systemwide Passenger Survey.

## FARE TYPE USAGE

Figure 4-2 and Table 4-2 show the results of the analysis of fare usage according to fare type by mode for minority and nonminority riders. Figure 4-3 and Table 43 show the results of the analysis of fare usage according to fare type by mode for low-income and non-low-income riders. For all riders on the four modes analyzed, monthly pass usage accounted for the majority of fare product use.

As shown in Figure 4-2 and Table 4-2, minority riders were more likely than nonminority riders to use reduced-fare monthly passes or 7-day passes on all modes on which those passes are valid. Minority riders were less likely than nonminority riders to use adult monthly passes on bus, rail rapid transit, and the Silver Line, but more likely to use them on commuter rail.

**Figure 4-2**  
**Fare Type by Mode and Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

**Table 4-2  
Fare Type by Mode and Minority Status**

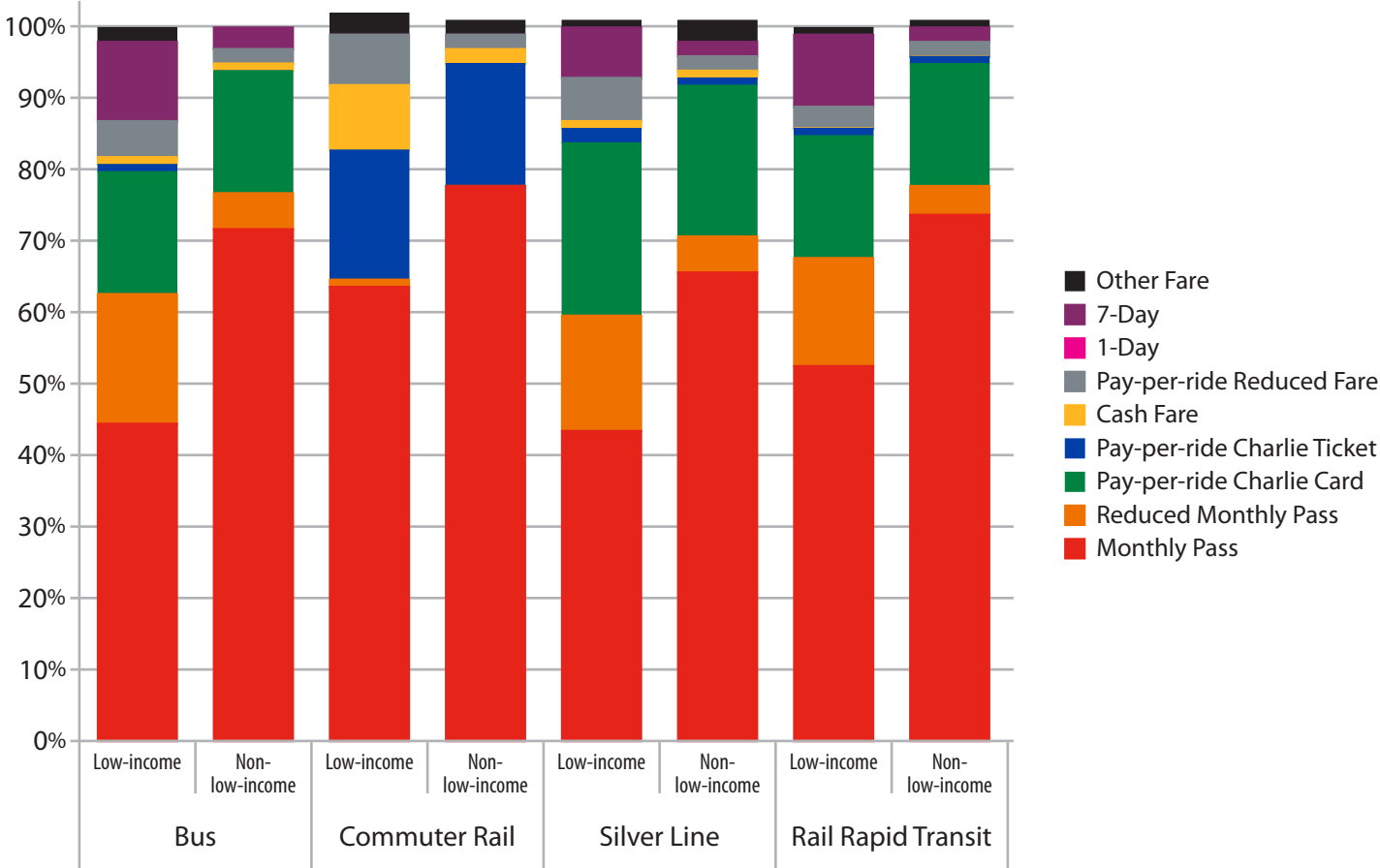
Mode	Minority Status	Monthly Pass	Reduced Monthly Pass	Pay-per-ride CharlieCard	Pay-per-ride CharlieTicket	Cash Fare	Pay-per-ride Reduced Fare	1-Day	7-Day	Other Fare
Bus	Minority	53%	16%	15%	0%	1%	3%	0%	11%	1%
Bus	Nonminority	64%	8%	19%	0%	1%	4%	0%	3%	1%
Commuter Rail	Minority	83%	0%	0%	11%	3%	1%	0%	0%	2%
Commuter Rail	Nonminority	76%	0%	0%	18%	2%	3%	0%	0%	2%
Silver Line	Minority	56%	16%	16%	1%	1%	4%	0%	5%	1%
Silver Line	Nonminority	59%	5%	24%	2%	0%	3%	0%	2%	4%
Rail Rapid Transit	Minority	62%	12%	15%	1%	0%	1%	0%	8%	1%
Rail Rapid Transit	Nonminority	69%	6%	18%	1%	0%	3%	0%	2%	1%

Note: The rows of figures in this table may not add up to 100 percent due to rounding. All calculations were performed using unrounded values.

Source: 2015–17 MBTA Systemwide Passenger Survey.

Fare product usage patterns differed significantly between low-income riders and non-low-income riders. On all modes, low-income riders were much less likely than non-low-income riders to use adult monthly passes, but more likely to use reduced-fare passes or 7-day passes. Low-income riders were also less likely than minority riders to use monthly passes on all modes.

**Figure 4-3**  
**Fare Type by Mode and Low-Income Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

**Table 4-3  
Fare Type by Mode and Low-Income Status**

Mode	Income Status	Monthly Pass	Reduced Monthly Pass	Pay-per-ride CharlieCard	Pay-per-ride CharlieTicket	Cash Fare	Pay-per-ride Reduced Fare	1-Day	7-Day	Other Fare
Bus	Low-income	44%	18%	17%	1%	1%	5%	0%	11%	2%
Bus	Non-low-income	71%	5%	17%	0%	1%	2%	0%	3%	0%
Commuter Rail	Low-income	63%	1%	0%	18%	9%	7%	0%	0%	3%
Commuter Rail	Non-low-income	77%	0%	0%	17%	2%	2%	0%	0%	2%
Silver Line	Low-income	43%	16%	24%	2%	1%	6%	0%	7%	1%
Silver Line	Non-low-income	65%	5%	21%	1%	1%	2%	0%	2%	3%
Rail Rapid Transit	Low-income	52%	15%	17%	1%	0%	3%	0%	10%	1%
Rail Rapid Transit	Non-low-income	73%	4%	17%	1%	0%	2%	0%	2%	1%

Note: The rows of figures in this table may not add up to 100 percent due to rounding. All calculations were performed using unrounded values.

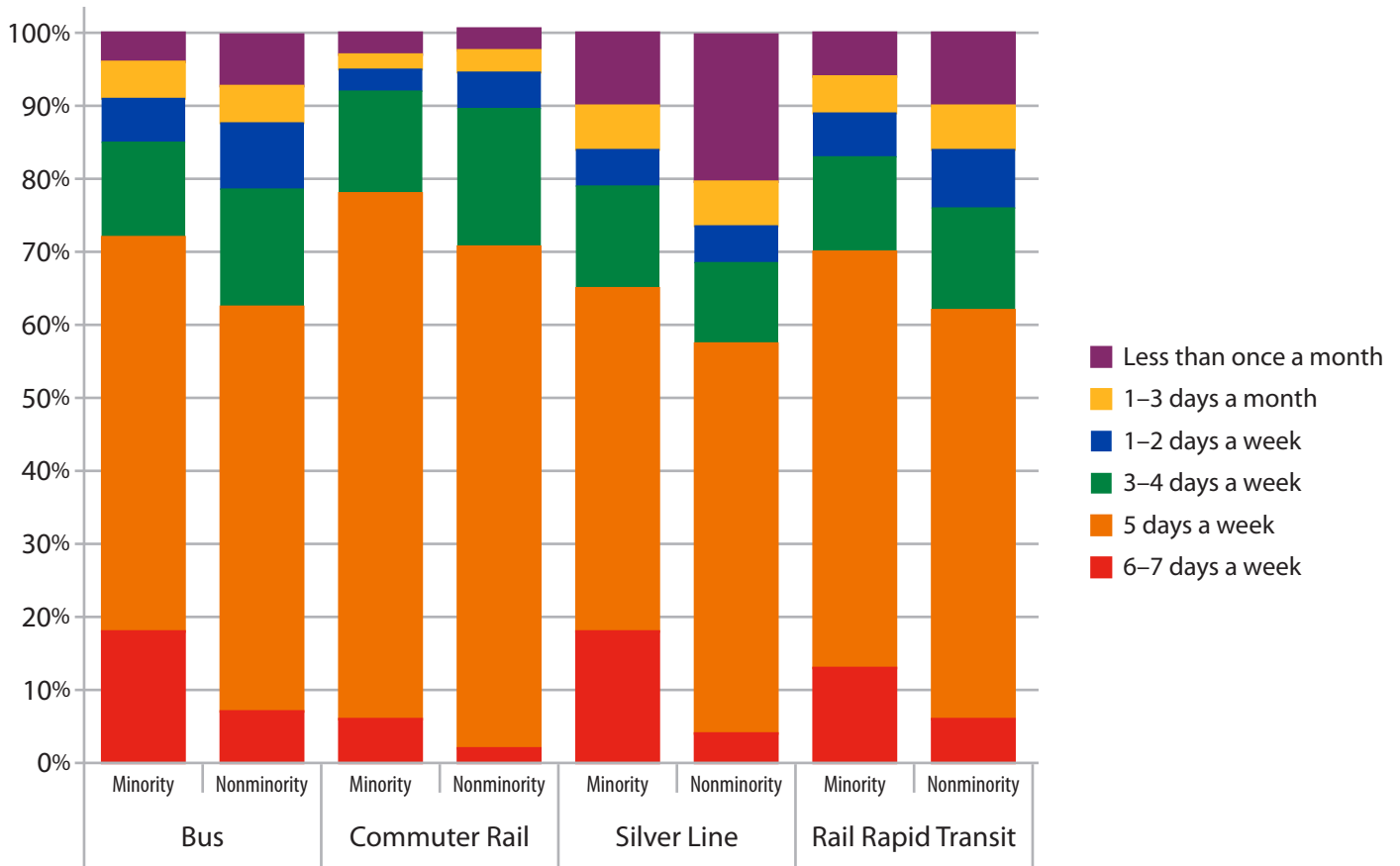
Source: 2015–17 MBTA Systemwide Passenger Survey.

## FREQUENCY OF USE

Figure 4-4 and Table 4-4 show the results of the analysis of frequency of use by mode for minority and nonminority riders. Overall, most riders, minorities and nonminorities alike, made their reported trip using the MBTA at least five days per week. The most “traditional” commuter travel occurred on the commuter rail; approximately 70 percent of commuter rail riders made their reported trip on the MBTA five days per week.

A higher percentage of minority riders than of nonminority riders reported using the MBTA six or seven days per week, across all modes. In addition, more minority riders than nonminority riders reported using the MBTA more than four days per week.

**Figure 4-4**  
**Frequency of Use by Mode and Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.



**Table 4-4  
Frequency of Use by Mode and Minority Status**

Mode	Minority Status	6–7 days a week	5 days a week	3–4 days a week	1–2 days a week	1–3 days a month	Less than once a month
Bus	Minority	18%	54%	13%	6%	5%	4%
Bus	Nonminority	7%	55%	16%	9%	5%	7%
Commuter Rail	Minority	6%	72%	14%	3%	2%	3%
Commuter Rail	Nonminority	2%	69%	19%	5%	3%	3%
Silver Line	Minority	18%	47%	14%	5%	6%	10%
Silver Line	Nonminority	4%	53%	11%	5%	6%	20%
Rail Rapid Transit	Minority	13%	57%	13%	6%	5%	6%
Rail Rapid Transit	Nonminority	6%	56%	14%	8%	6%	10%

Note: The rows of figures in this table may not add up to 100 percent due to rounding. All calculations were performed using unrounded values.

Source: 2015–17 MBTA Systemwide Passenger Survey.

## TRANSFER RATE

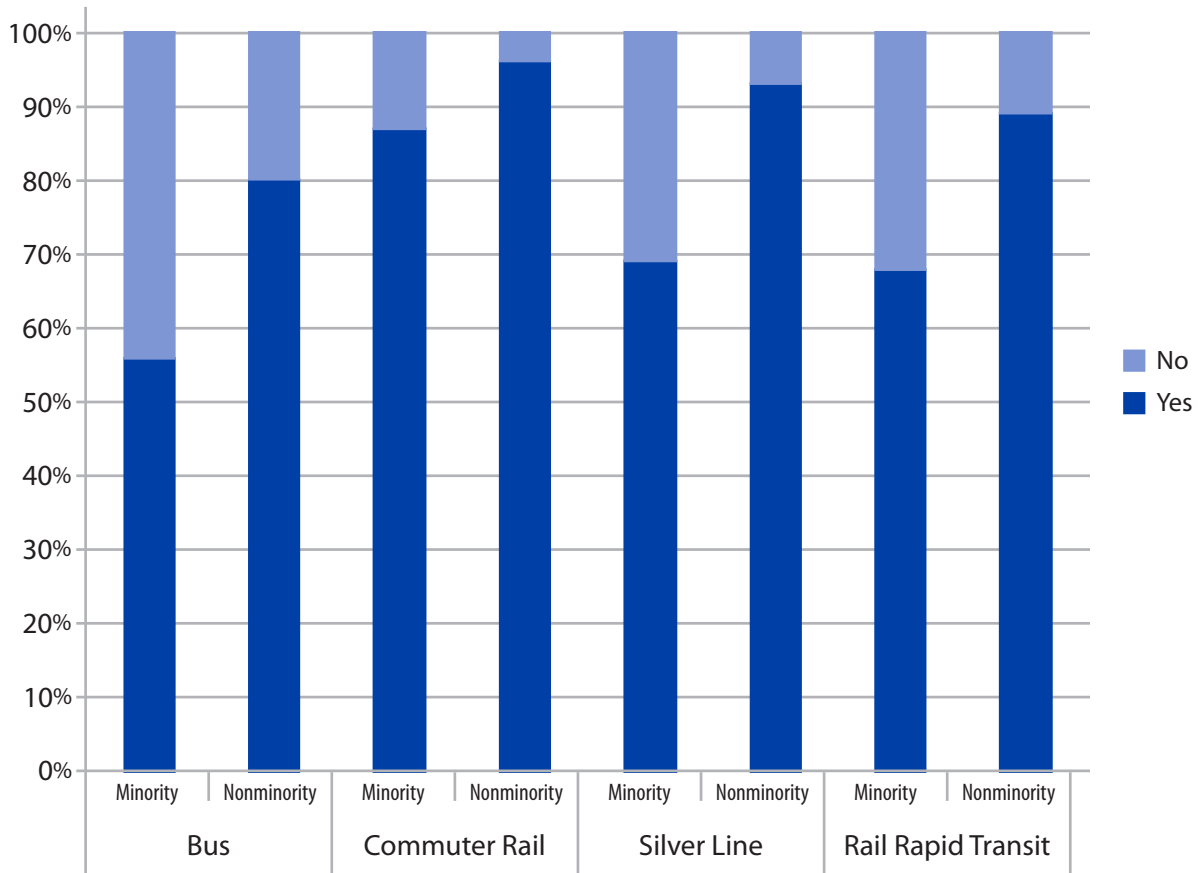
Transfer rate refers to the percentage of riders who transfer between MBTA services to complete a one-way trip. The survey showed a significant difference between minority and nonminority respondents in this measure. Overall, 47 percent of survey respondents made at least one transfer. For minority respondents the rate was 59 percent, compared with 42 percent for nonminority respondents. This finding is partly a reflection of the high percentage of trips taken by minority riders that begin or end on local bus routes and require the rider to transfer to a rail rapid transit line to reach downtown Boston.

## TRANSIT DEPENDENCY

Transit dependency is an important factor to consider in analyses for fare and service changes. The responses to two questions on the MBTA Systemwide Passenger Survey were used to compare the estimated level of transit dependency of minority and nonminority riders; the survey asked whether the respondent has a valid driver’s license and for the number of usable vehicles in the respondent’s household.

Figure 4-5 and Table 4-5 show the percentage of riders who possessed a valid driver's license sorted by mode and minority status. The majority of all survey respondents, regardless of mode used and minority status, reported that they possessed a driver's license. However, across all modes, minority riders were less likely to possess a driver's license than nonminority riders. Further, bus, Silver Line, and rail rapid transit riders were less likely to possess a driver's license than commuter rail riders, who were predominantly nonminority.

**Figure 4-5**  
**Riders Possessing a Driver's License by Mode and Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

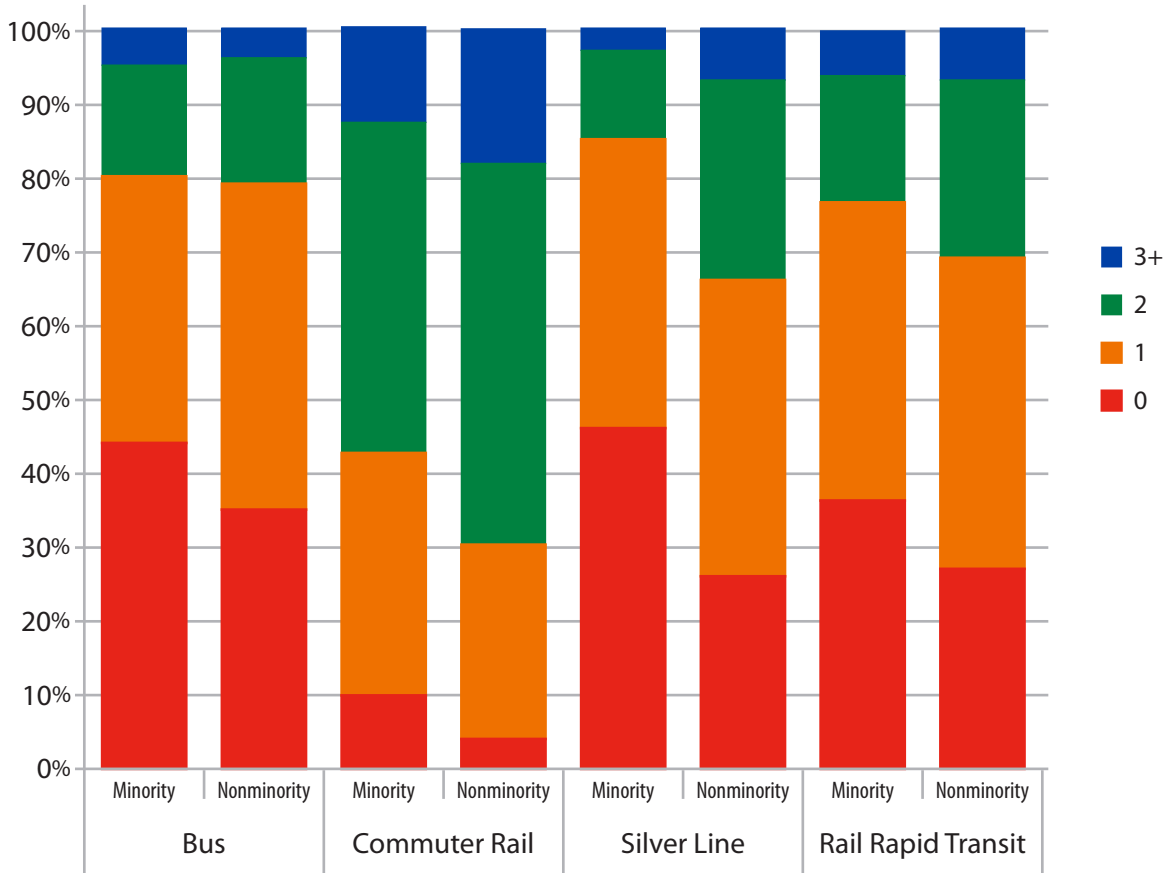
**Table 4-5**  
**Riders Possessing a Driver's License by Mode and Minority Status**

<b>Mode</b>	<b>Minority Status</b>	<b>Yes</b>	<b>No</b>
Bus	Minority	56%	44%
Bus	Nonminority	80%	20%
Commuter Rail	Minority	87%	13%
Commuter Rail	Nonminority	96%	4%
Silver Line	Minority	69%	31%
Silver Line	Nonminority	93%	7%
Rail Rapid Transit	Minority	67%	33%
Rail Rapid Transit	Nonminority	89%	11%

Source: 2015–17 MBTA Systemwide Passenger Survey.

Similar patterns were noted for household vehicle ownership. Figure 4-6 and Table 4-6 show the percentage of riders by mode and minority status who had zero, one, two, or three or more vehicles in their households. Minority riders had fewer vehicles per household than nonminority riders, and bus, Silver Line, and rail rapid transit riders had fewer vehicles per household than commuter rail riders.

**Figure 4-6**  
**Vehicles per Household by Mode and Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

**Table 4-6  
Vehicles per Household by Mode and Minority Status**

Mode	Minority Status	0	1	2	3+
Bus	Minority	44%	36%	15%	5%
Bus	Nonminority	35%	44%	17%	4%
Commuter Rail	Minority	10%	33%	45%	13%
Commuter Rail	Nonminority	4%	26%	51%	18%
Silver Line	Minority	46%	39%	12%	3%
Silver Line	Nonminority	26%	40%	27%	7%
Rail Rapid Transit	Minority	36%	40%	17%	6%
Rail Rapid Transit	Nonminority	27%	42%	24%	7%

Note: The rows of figures in this table may not add up to 100 percent due to rounding. All calculations were performed using unrounded values.

Source: 2015–17 MBTA Systemwide Passenger Survey.

## **SURVEY METHODOLOGY**

The MBTA survey distribution plan was designed to minimize the cost and length of time needed to obtain statistically significant results at the route and station level as required for Title VI analyses. This plan involved a two-phased approach: the survey was initially administered online (from October 2015 through February 2016) and, when the response rate to the online survey slowed, a paper version of the same survey was distributed at stations and stops and on board vehicles. This method reduced the expense of printing, postage, and labor for survey distribution and data entry. The MBTA and Central Transportation Planning Staff (CTPS) made extensive efforts throughout the MBTA service area to publicize the availability of the online form.

On both the online survey and the paper form, instructions at the beginning of the survey emphasized that respondents should only complete it once. Because the paper survey distribution began several months after the survey was launched online, the instructions on the paper survey emphasized that the survey should be completed once, either online or on paper. Since this was not an opinion survey and took some time to complete, there was little motivation for respondents to fill out more than one survey form intentionally.

The marketing and outreach materials were consistent in style and message throughout the survey period. Marketing materials were displayed throughout the MBTA system in two phases. The first set of materials advertised the online survey website. The second set of materials, which were displayed once the distribution of the paper survey had begun, directed people to fill out the survey either online or on paper if they had not already completed a survey.

The online survey was also available during the remainder of the survey distribution period as an option for respondents who did not want to complete and mail back the paper survey form, but it was only advertised in conjunction with the paper form.

To determine the sample sizes necessary to produce valid results for Title VI analyses, CTPS separated MBTA services into various units to determine the statistical requirements for achieving a 90 percent confidence level with a 10 percent confidence interval. The service units for heavy rail rapid transit and the Green Line Central Subway were individual stations. The service units for surface Green Line, Silver Line, and commuter rail lines were individual stops or groups of adjoining stops, depending on passenger volumes. And the service units for buses were routes or groups of routes serving the same neighborhood. The service units for ferries were routes.

Using the most recent ridership counts, CTPS calculated target numbers of completed surveys needed from each service unit to meet, at minimum, the statistical requirements for a 90 percent confidence level with a 10 percent confidence interval. Based on the response rates to past surveys, CTPS devised plans for survey distribution for each service unit to obtain the target number of responses.

The survey form called for the respondents to report all routes traveled and stations visited on their most recent MBTA trip. This allowed each survey form to be used as part of the response total for each of the reported service units. For example, a trip from a bus to the Blue Line to the Orange Line would count as a response for each of those services.

During the first five months, when only the online survey forms were available, CTPS tracked the responses received for each service unit and compared them with the initial target response totals for those units. The preliminary planning for paper survey distribution determined the number of forms that would need to be distributed on each service unit if there were no online responses. These targets were revised throughout the paper survey distribution phase to account for the number of responses already received either online or on paper. Distribution of paper surveys on each service unit was discontinued when the target number of responses was reached. Conversely, if the initial distribution plan was not generating the number of target responses from a service unit, survey distribution was intensified.

The distributors of the paper surveys were assigned to work at specific stations or on specific routes each day. (Surveys were not distributed on weekends, on major holidays, during the summer, or during school vacation weeks.) The distributors handed survey forms to passengers but did not conduct interviews. Except for supplemental distribution on service units with low initial response rates, survey distribution for any one service unit took place during only a short segment of the

overall distribution span from March 2016 to May 2017. The distribution span reflected the amount of time it would take to collect enough data based on the size of the MBTA system and the number of stations and routes for which statistically significant results were needed.

Because the online form was not independently publicized during the paper survey distribution phase, most of the online responses received starting in March 2016 were probably from passengers who had received paper forms but chose to respond using the online option referenced in the paper form instructions.

As a safeguard against individuals completing multiple forms, the IP addresses of the online forms were checked for duplications. Additional checks were made for forms with identical information in all or most of the survey fields. Forms determined to be duplicates were excluded.

## **SURVEY LANGUAGES AND PREFERRED LANGUAGES FOR INFORMATION**

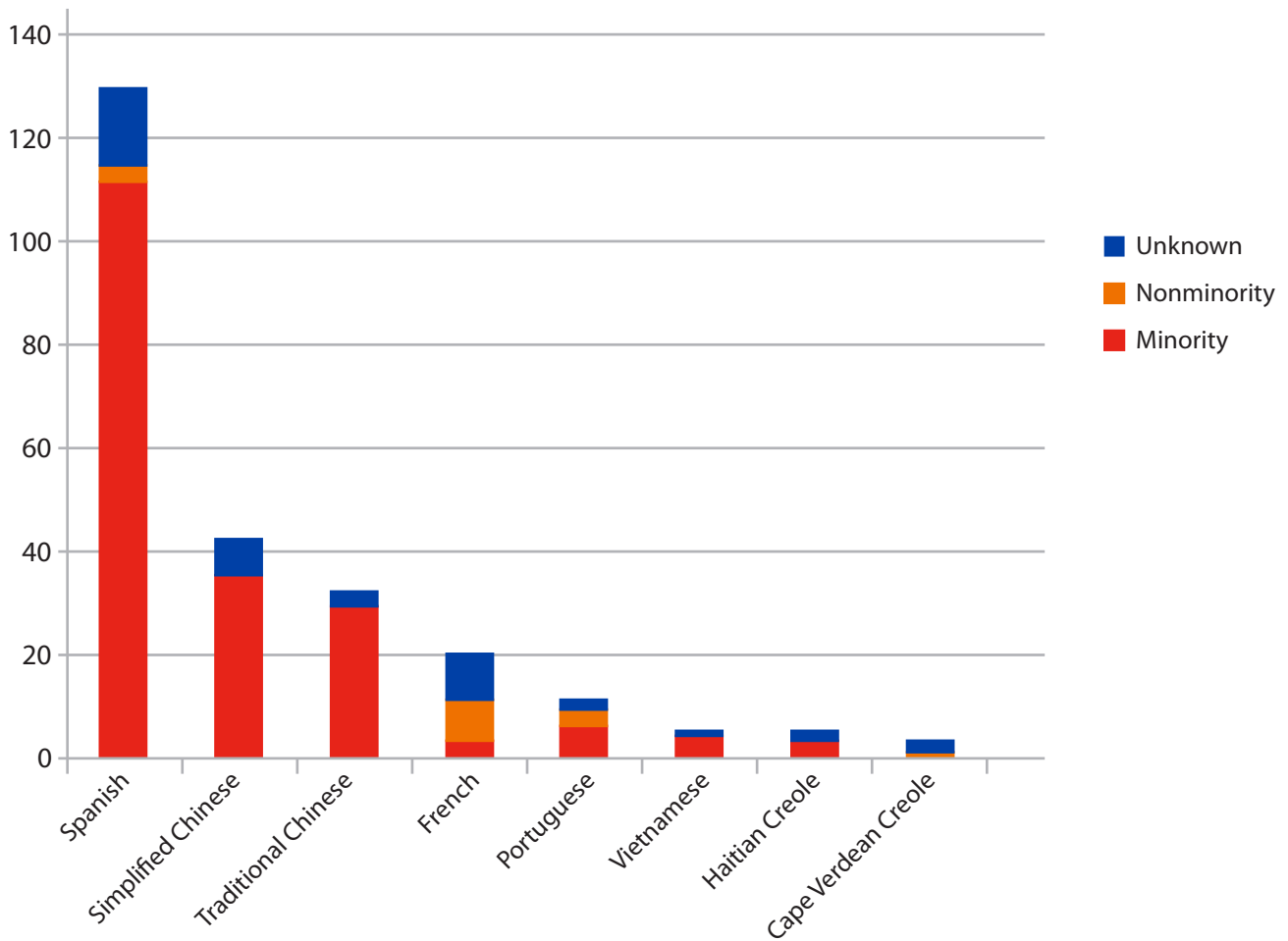
The survey form was available in eight languages in addition to English.<sup>3</sup> The majority of returned surveys (99.3 percent) were the English version. The Spanish version accounted for 0.37 percent, and the Simplified Chinese version accounted for 0.12 percent. The Traditional Chinese, French, Portuguese, Vietnamese, Haitian Creole, and Cape Verdean Creole versions each accounted for less than 0.1 percent.

Figure 4-7 shows the number of surveys returned in languages other than English by minority status. As shown in the figure, most of the non-English surveys were completed by minority riders.

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<sup>3</sup> The survey in Haitian Creole was only available online to accommodate respondents who use screen readers. Most adult Haitians read French (the language of instruction in schools until 1978, when Haitian Creole was introduced as the language of instruction in the first four grades) and speak Haitian Creole.

**Figure 4-7**  
**Number of Surveys Returned in Languages Other Than English by Minority Status**



Source: 2015–17 MBTA Systemwide Passenger Survey.

All versions of the survey form asked respondents whether they preferred to receive information about riding the MBTA in English or in another language and, if the latter, to specify which language they prefer. The percent of respondents who expressed a preference for English (98.6 percent) was slightly lower than the percent who took the survey on the English form (99.3 percent). The other most preferred languages were Spanish (0.7 percent) and Chinese (0.2 percent). Of 37 other languages specified, only seven were identified as preferable by five or more respondents: French, Portuguese, Haitian Creole, Russian, Arabic, Vietnamese, and German.





# CHAPTER 5

## SERVICE STANDARDS AND POLICIES

To guard against discrimination resulting from service design or operation, the Federal Transit Administration (FTA) requires that the Massachusetts Bay Transportation Authority (MBTA) adopt systemwide service standards and policies for each fixed-route mode of service. These standards and policies are detailed below.

### SYSTEMWIDE SERVICE STANDARDS (FTA C 4702.1B, IV-4.A)

FTA requires transit providers that operate fixed-route service to set quantitative systemwide service standards for vehicle load, vehicle headway, on-time performance, and service availability. Standards for these four performance indicators are found in the MBTA's Service Delivery Policy (see Appendix 5A).

This policy, first adopted in 1996, defines how the MBTA evaluates service quality and allocates transit service to meet the needs of the Boston region. The policy is consistent with the MBTA's enabling legislation and other external mandates, including the Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act of 1990 (ADA). Since 1996, the Service Delivery Policy has been revised six times: in 2002, 2004, 2006, 2008, 2010, and most recently in 2017.

#### The 2017 Service Delivery Policy

- establishes the aspects that define service availability and sets parameters for levels of provided service;

- establishes objectives that define the key performance characteristics of quality transit services;
- identifies quantifiable standards for measuring whether the MBTA's transit services achieve their objectives, within the context of federal, state, and local regulations;
- outlines a service planning process that applies the service standards in an objective, uniform, and accountable manner;
- sets the priorities for the service planning process by setting minimum levels and targets for the service standards; and
- involves the public in the service planning process in a consistent, fair, and thorough manner.

The 2017 Service Delivery Policy is designed to grow to take advantage of new data streams as they become available. The policy can make use of the capabilities offered by new technologies to collect and analyze data and is intended to be updated regularly as the MBTA expands its ability to collect and analyze data, build out metrics, and define service parameters and targets. In addition, as priorities for service change, the policy can be updated to reflect new priorities.

The 2017 Service Delivery Policy sets the quantifiable standards used to measure the MBTA's service objectives—including the four FTA-required standards for vehicle load, vehicle headway, on-time performance, and service availability—and four additional standards for span of service, platform accessibility, vehicle accessibility, and service operated. The standards are divided into two categories: service planning standards used in the service planning process to evaluate and allocate service, and accessibility standards that fall outside the service planning process. The service planning standards are evaluated in the Service Monitoring portion of the MBTA's Title VI Program.

Each standard has a number of components. The definition of each standard describes the conditions considered passing for that standard. The definition of a particular standard may vary depending on the type of service or time period of the evaluation. The pass/fail condition is measured at different levels of aggregation depending on the standard. For example, on-time performance of a bus is measured at each time point on the route.

All standards are designed such that a result of 100 percent is considered perfect performance. Improvement is always measured by an increase in the percentage. Depending on the standard, performance can be measured at the route, mode, or network level.

### **VEHICLE LOAD (FTA C 4702.1B, IV-4.A.(1))**

The MBTA assesses vehicle load using a set of passenger comfort standards. Passenger comfort is influenced by the number of people on the vehicle and whether or not a seat is available to each rider for all or most of the trip. The passenger comfort standards, which vary by mode and time of day analyzed, establish the maximum number of passengers that can be on a vehicle such that the ride is safe and comfortable. The MBTA's passenger comfort standards are detailed in the Service Delivery Policy (Appendix 5A, pages 25–28).

## Rail Service

The MBTA currently has limited data on the vehicle load of its subway, light rail, and commuter rail service because, until recently, it has lacked passenger counting mechanisms. To address this limitation, automated passenger counters (APCs) are being installed on all commuter rail coaches. New Green Line and Orange Line cars that began entering service in 2018 and 2019 have APCs installed, and new Red Line cars that are expected to begin entering service in 2020 will also have APCs. Once compiled, the data obtained from the APCs will allow the MBTA to establish a baseline and update its standards for vehicle load.

## Bus Service

APCs are currently installed on MBTA buses, so there is no lack of data for assessing vehicle load for this mode. Bus passenger comfort standards are different for high-volume and low-volume periods.

### *High-Volume Time Periods*

The maximum comfortable passenger-to-seat ratio for high-volume travel periods is 140 percent. All passengers are considered comfortable on buses with loads up to 140 percent of seated capacity, and no passengers are considered comfortable when the vehicle load exceeds 140 percent of seated capacity.

### *Low-Volume Time Periods*

The maximum comfortable passenger-to-seat ratio for low-volume travel periods is 125 percent. All passengers are considered comfortable on buses with loads up to 125 percent of seated capacity. Seated passengers are considered comfortable when loads are between 125 percent and 140 percent of seated capacity. No passengers are considered comfortable when the vehicle load exceeds 140 percent of seated capacity.

## **VEHICLE HEADWAY (FTA C 4702.1B, IV-4.A.(2))**

To ensure that customers have reasonable waiting times when accessing the transportation network, the MBTA establishes expected frequency of service levels for each mode, by time of day. The following provides a summary of the MBTA's frequency of service standards that are detailed in the 2017 Service Delivery Policy (pages 13–15).

The MBTA's frequency of service standards are measured using either headway (minutes between trips) or frequency (trips per time period), as summarized in Table 5-1. If Table 5-1 does not specify an expected frequency for a mode or time period, then there is no respective standard, and frequencies for these services are set based on demand.

**Table 5-1  
Service Frequency**

<b>Mode</b>	<b>Weekday Time Periods</b>	<b>Expected Frequency or Headway</b>
Bus—Local and Community	AM and PM peak	Every 30 minutes
	All other periods	Every 60 minutes
	Saturday and Sunday	Every 60 minutes
Bus—Commuter	AM peak	3 trips in the peak direction
	PM peak	3 trips in the peak direction
Bus—Key Bus Routes	AM and PM peak	Every 10 minutes
	Early AM and midday base/school	Every 15 minutes
	Evening and late evening	Every 20 minutes
	Saturday and Sunday	Every 20 minutes
Rapid Transit	AM and PM peak	Every 10 minutes
	All other periods	Every 15 minutes
	Saturday and Sunday	Every 15 minutes
Commuter Rail	AM peak	3 trips in the peak direction
	PM peak	4 trips in peak direction
	All other periods	Every 3 hours in each direction
	Saturday	Every 3 hours in each direction
Boat	AM and PM peak	3 trips in the peak direction
	Off-peak periods	Every 3 hours

Note: There is no frequency standard during the *sunrise* or *night* times or for supplemental bus service. *AM peak* and *PM peak* are defined differently for commuter rail service.

Source: Table 5 in the 2017 Service Delivery Policy.

The MBTA counts passenger trips taken on services that operate at the expected frequency as *passing* and trips taken on services that operate at less than the expected frequency as *failing*. This measure is weighted by ridership in each time period, which prioritizes meeting the expected frequency at peak periods and on routes and services with high ridership.

### **ON-TIME PERFORMANCE (FTA C 4702.1B, IV-4.A.(3))**

Reliability standards provide tools to evaluate the on-time performance of individual MBTA lines and routes. Reliability standards vary by mode and frequency of service because passengers using high-frequency services generally are more interested in regular vehicle arrivals than in strict adherence to published timetables, whereas passengers who use less-frequent services expect arrivals and departures to occur as published. The following provides a summary of the MBTA's reliability service standards that are detailed in the 2017 Service Delivery Policy (pages 20–25).

#### **Bus**

To determine whether a bus is on time at an individual timepoint, such as the beginning of a route, end of a route, or a scheduled point in between, the MBTA uses two different tests based on the scheduled frequency of the service:

- **Scheduled-Departure Service:** A trip is considered to provide scheduled-departure service when it operates with a headway longer than 15 minutes. For scheduled-departure services, passengers generally time their arrivals at bus stops to correspond with the specific published departure times.
- **Frequent Service:** A trip is considered to provide frequent service when it operates with a headway of 15 minutes or less. For frequent service, passengers can arrive at a stop without looking at a schedule and expect a reasonably short wait. Passengers use the services on Key Bus Routes as frequent services despite occasional longer than 15-minute headways; therefore these routes are always evaluated using the frequent-service definition even when their headways exceed 15 minutes.

Routes other than Key Bus Routes might operate entirely with frequent service, entirely with scheduled-departure service, or with a combination of both throughout the day. Because any given route may have both types of service, each trip is considered individually to determine whether it represents scheduled-departure service or frequent service, and each timepoint crossed on that trip is measured accordingly.

### *On-Time Test for Scheduled-Departure Timepoints*

To be considered on time at a timepoint, any trip evaluated using the scheduled- departure standard must meet the applicable condition cited below.

- **Origin timepoint:** The trip must depart its origin timepoint no later than three minutes after its scheduled departure time.
- **Mid-route timepoint:** The trip must leave the mid-route timepoint(s) between one minute before and six minutes after its scheduled departure time.
- **Destination timepoint:** The trip must arrive at its destination timepoint no later than five minutes after its scheduled arrival time.

### *On-Time Test for Timepoints on Frequent Services*

To be considered on time at a timepoint, any trip evaluated using the frequent service standard must meet the applicable condition cited below.

- **Origin or mid-route timepoint:** A trip must leave its origin timepoint or mid-route timepoint no later than the than the amount of time scheduled for headway plus three minutes after the previous trip departed that timepoint.
- **Destination timepoint:** The actual run time from the origin timepoint to the destination timepoint must be no more than 120 percent of the scheduled run time for the trip to be considered on time at the destination timepoint.

### *Bus Route Test*

Bus reliability for a specific route is calculated as the percentage of timepoints that pass the on-time tests.

## **Heavy and Light Rail**

Passengers on light rail and heavy rail do not rely on printed schedules; rather, they expect trains to arrive at consistent headways. Therefore, schedule adherence for light rail and heavy rail is measured as the proportion of a line's passengers who wait the amount of time of the scheduled headway, or less, for a train to arrive. For passengers boarding on the trunk section of the Green Line, the headway is defined as three minutes.

Until recently, the MBTA did not have the data to measure on-time performance on the Mattapan light-rail trolley line. Since the submission of the 2017 Title VI report, the MBTA finished installing a vehicle-tracking system on the trolley cars for the Mattapan High-Speed Line. While Mattapan trolley on-time performance is now being measured, at the time of the development of this Program submission, there was insufficient data upon which to perform an analysis that could identify possible disparities in this service standard. Going forward, the MBTA will include the results of this monitoring analysis with subsequent Title VI triennial submissions.

## Commuter Rail

Commuter rail passengers expect to arrive at their destination station at the time posted in the schedule. Therefore, schedule adherence for commuter rail is measured as the number of trains that arrive at the destination terminal no later than five minutes after the time published in the schedule.

## Commuter Boat

Commuter boat passengers expect to arrive at their destination dock at the time posted in the schedule. Therefore, schedule adherence for commuter boats is measured as the number of boats that arrive at the destination terminal no later than five minutes after the time published in the schedule.

### ***SERVICE AVAILABILITY (FTA C 4702.1B, IV-4.A.(4))***

An important aspect of providing the region with adequate access to transit services is the system's geographic coverage. The following provides a summary of the MBTA's coverage standards that are detailed in the 2017 Service Delivery Policy (pages 15–28).

The MBTA recognizes that coverage means different things to different markets. To address these different groups, the MBTA measures coverage in three ways:

- Base coverage
- Frequent service in dense areas coverage
- Low-income household coverage

The MBTA prioritizes high-frequency service in high-density areas and service to areas with high proportions of low-income households, while maintaining an acceptable level of base coverage. While the MBTA monitors the effect of proposed service modifications on all three components of the coverage standard, as part of its service planning process, only the base-coverage standard is evaluated for Title VI service monitoring.

To monitor its base level of coverage, the MBTA measures the percentage of the population that lives no more than 0.5 miles from a bus stop, rapid transit station, commuter rail station, or boat dock in the municipalities in the MBTA's service area, excluding municipalities that are members of another regional transit authority.

### ***SPAN OF SERVICE***

Span of service refers to the hours during which service is available. The MBTA has established span-of-service standards that define the expected hours that any given service will operate. The following provides a summary of the MBTA's span-of-service standards that are detailed in the 2017 Service Delivery Policy (pages 11–13).

The span-of-service standards, summarized in Table 5-2, vary by mode and by day of the week, reflecting the predominant travel flows in the region. The standards require that the first trip in the morning in the peak direction of travel must arrive in downtown Boston, or the route terminal if the route does not serve downtown Boston, at or before the beginning span-of-service time. At the end of the service day, the last trip in the evening in the peak direction of travel must depart downtown Boston, or the route terminal if the route does not serve downtown Boston, at or after the ending span-of-service time. If Table 5-2 does not specify an expected span of service for a mode or time period, that indicates that there is no respective standard and service hours are set based on demand.

**Table 5-2  
Span of Service**

<b>Mode</b>	<b>Day</b>	<b>Expected Span of Service</b>
Bus—Local	Weekday	7:00 AM – 7:00 PM
	Saturday <sup>1</sup>	8:00 AM – 6:30 PM
	Sunday <sup>1</sup>	10:00 AM – 6:30 PM
Bus—Community	Weekday	10:00 AM – 4:00 PM
Bus—Commuter	Weekday	7:00 AM – 9:00 AM
	Weekday	4:00 PM – 6:30 PM
Bus—Supplemental	Weekday	No minimum span
Bus—Key Bus Routes	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight
Heavy Rail	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight
Light Rail	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight



(Table 5-2 cont.)

Mode	Day	Expected Span of Service
Commuter Rail	Weekday	7:00 AM – 10:00 PM
	Saturday	8:00 AM – 6:30 PM
Boat	Weekday	7:00 AM – 6:30 PM
	Saturday <sup>2</sup>	8:00 AM – 6:30 PM

<sup>1</sup> This is a standard for high-density areas. There is no span-of-service standard for low-density areas on weekends.

<sup>2</sup> This service operates from Memorial Day to Columbus Day.

Note: The RIDE generally operates from 5:00 AM to 1:00 AM. The MBTA provides extended hours for trips starting and ending within 0.75 miles of a fixed-route service that operates outside of these hours.

Source: Table 3 in the MBTA's 2017 Service Delivery Policy.

The MBTA counts passenger trips taken on services that operate at least during the expected span as *passing* and trips taken on services that operate less than the expected span as *failing*. This measure is weighted by ridership to prioritize the objective of meeting the expected span of service on routes and services with high ridership.

## PLATFORM ACCESSIBILITY

If elevators are not available, some people may not be able to gain access to MBTA services. The following provides a summary of the MBTA's platform accessibility standard that is detailed in the 2017 Service Delivery Policy (pages 18–19).

The MBTA's goal is for people to be able to access the platforms in each station at all times service is offered. To this end, the MBTA measures the amount of time that platforms are accessible during service hours, i.e., the percentage of total platform-hours that are accessible. This percentage is measured separately for rapid transit stations, commuter rail stations, and commuter boat docks. Rapid transit stations include gated Silver Line Waterfront stations, but exclude surface-level stops on the Green Line and Silver Line.

## VEHICLE ACCESSIBILITY

The following provides a summary of the MBTA's vehicle accessibility standard that is detailed in the 2017 Service Delivery Policy (p.19):

*The MBTA should provide at least one ADA-compliant vehicle on each trip it operates. To this end, the MBTA measures the percentage of trips that are provided with at least one ADA-compliant vehicle.*

*A trip on the commuter rail is considered compliant if at least one ADA-compliant coach in the trainset can align at each high-level platform at stations served by the trip to load and unload passengers. ADA-compliant commuter rail coaches must include ADA-compliant restrooms. Trips on the Green Line are considered noncompliant if none of the vehicles in a train set is ADA-compliant. Bus trips are not measured since ramps can be deployed manually. Heavy rail and commuter boat trips are covered in the platform accessibility standard.*

## **SERVICE OPERATED**

The following provides a summary of the MBTA's service-operated standard that is detailed in the 2017 Service Delivery Policy (pages 24–25):

*The MBTA intends to operate all of the service it schedules. A multitude of factors—including equipment failure, lack of personnel, and unforeseen delays, such as medical and police emergencies—can sometimes prevent the MBTA from operating scheduled service. To this end, the MBTA measures the percentage of scheduled service that is actually provided for each bus route, light rail line, heavy rail line, commuter rail line, and commuter boat route. Planned heavy, light, and commuter rail outages where the MBTA offers substitute service do not count against this standard.*

## **SYSTEMWIDE SERVICE POLICIES (FTA C 4702.1B, IV-4.B)**

FTA guidance requires that the MBTA adopt systemwide service policies for the distribution of transit amenities and vehicle assignment for each mode to ensure service design and operations practices do not result in discrimination on the basis of race, color, or national origin. Service policies differ from service standards in that they are not necessarily based on a quantitative threshold.

## **DISTRIBUTION OF TRANSIT AMENITIES (FTA C 4702.1B, IV-4.B.(1))**

FTA Circular 4702.1B defines transit amenities as items of comfort, convenience, and safety that are available to the general riding public. FTA guidance requires the MBTA to set policy to ensure equitable distribution of transit amenities across the system. The following policies address how amenities are distributed within the MBTA's transit system.

## **Bus Stop Amenities**

The following provides a summary of the MBTA's policy on bus stop amenities detailed in Chapter 6 of the MBTA's *Bus Stop Planning & Design Guide* (pages 36–37)<sup>1</sup>:

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<sup>1</sup> <https://cdn.mbta.com/sites/default/files/engineering/001-design-standards-and-guidelines/2018-04-01-bus-stop-planning-and-design-guide.pdf>

The bus stop represents one of the MBTA's best marketing opportunities. A well designed and equipped bus stop improves operations, ridership, and transit's value to the community. Certain customer amenities can also play a significant role in attracting and retaining customers. Customer amenities are intended to improve customer comfort, as well as provide a sense of safety and security. These attributes can affect an individual's decision on whether or not to use transit. The following types of amenities can be provided at bus stops, depending on level of usage and/or type of service:

- **Customer shelters** provide comfort and protection from the elements.
- **Benches** provide a level of comfort for customers.
- **Trash and recycling receptacles** help to keep the bus stop area free of litter.
- **Signs, schedules, and maps** provide customer information.
- **Next bus arrival information** provides expected wait time for the next arriving bus.
- **Bicycle parking facilities** help to facilitate multimodal connections.

The decision to install amenities at a particular stop takes into account a number of factors, including the following:

- **Customer Utilization**—The level and type of customer usage plays a primary role in determining where amenities are warranted. Bus stop consolidation often results in customers having to walk further distances to access transit. In these cases, provision of certain amenities is desirable to offset the inconvenience.
- **Customer Transfer Activity**—High transfer activity generally means that customers may have to wait longer periods of time to make transit connections. Depending on the characteristics of the connection, additional amenities should be considered.
- **Transit Corridor Marketing Efforts**—Bus rapid transit (BRT) and Key Bus Route improvements both benefit from enhanced marketing and branding, which is often provided through the provision of amenities.
- **Title VI, Environmental Justice, and Community Equity**—Amenities need to be evenly and fairly distributed among bus stops in both minority and low-income communities to meet the requirements of Title VI of the 1964 Civil Rights Act, as defined in FTA C 4702.1B. Title VI and environmental justice principles mandate that MBTA services—including shelters and amenities—are distributed in such a manner that minority and low-income communities receive benefits in the same proportion as the total service area.

- **Proximity to Existing Sheltered Areas**—New amenities may not be needed if customers are able to take advantage of existing facilities located at the bus stop. For example, an existing storefront canopy or awning could provide shelter for waiting customers and preclude the need for a new freestanding shelter.
- **Customer and Community Requests**—Communities and individuals often make requests for amenities at specific stops. Often these requests reflect specific needs related to the proximity to elderly housing or medical facilities.
- **Installation and Maintenance Costs**—The benefits offered by each type of amenity must be weighed against the cost of installation and maintenance. Although the MBTA may carry the cost of purchasing and installing amenities, often a municipality or a third party will be asked to take on the responsibility for maintenance. Adopt-a-Stop programs can often be established to cover installation and/or maintenance costs.
- **Bus Stop Environment/Adjacent Land Use**—The characteristics of the surrounding neighborhood may influence the type or design of bus stop amenities. For example, neighborhoods may require street furniture that is consistent with the overall design of the streetscape. Design should consider the needs of the local environment and incorporate community input.

## Bus Shelter Placement

The following provides a summary of the MBTA's bus shelter policy. This text is a slightly modified excerpt from Chapter 7 of the MBTA's *Bus Stop Planning & Design Guide* (pages 47–50):

### *MBTA Shelter Policy*

*Given fiscal constraints and right-of-way constraints, the MBTA is not able to provide bus shelters at most of its 8,100 stops. To fairly distribute shelters systemwide, the following MBTA Shelter Policy provides guidance for the placement of bus shelters and establishes a procedure for evaluating shelter requests. This policy in no way establishes a requirement for placement, since all placements will be dependent on available resources. In areas or locations where the MBTA, or its contractors, are the primary suppliers of shelters at bus stops, placements must*

1. *conform with shelter eligibility standards;*
2. *pass a site suitability test;*
3. *meet the requirements of Title VI; and*
4. *comply fully with accessibility regulations.*

## *Shelter Eligibility Standards*

*Customer utilization is the primary consideration when determining if a bus stop is eligible for a shelter. All bus stops that meet the required number of boardings are eligible. Table 5-3 lists all criteria to be factored into an assessment of eligibility for each bus stop and the value associated with each criterion. A site must receive a total of 70 points to be considered eligible under this policy. The following criteria are considered:*

- **Customer Utilization** — *The number of customers boarding at a stop on an average weekday. Any bus stop that has more than 70 boardings is automatically eligible for a shelter. For bus stops with fewer boardings, a combination of the factors listed below are considered in determining eligibility. Stops that have fewer than 25 boardings are not eligible for a shelter.*
- **MBTA Initiatives to Strengthen Identity of Route or Bus Stop** — *The bus stop is located on a designated Key Bus Route or it serves a potentially highly transit dependent development.*
- **Demographics** — *The bus stop is in close proximity to medical facilities or senior housing, and/or is used by significant numbers of elderly persons and/or persons with disabilities.*
- **Minority and/or Low-Income Areas** — *The bus stop is in a Title VI or environmental justice community.*
- **Connectivity** — *The bus stop serves as a major transfer point to another transit or bus route.*
- **Frequency of Service** — *Bus stops on routes with less frequent service are more likely to qualify for a shelter, due to the longer time that customers may have to wait for a bus.*
- **Site Conditions** — *Bus stops that have an unusually high exposure to adverse weather elements.*

**Table 5-3  
Bus Shelter Eligibility**

<i>Eligibility Criteria</i>	<i>Points</i>
<i>70 or more average weekday boardings</i>	<i>70</i>
<i>25–69 average weekday boardings</i>	<i>50</i>
<i>MBTA initiative to strengthen route or stop identity</i>	<i>20</i>
<i>Facilities for seniors, disabled, medical or social services nearby</i>	<i>20</i>
<i>Minority and/or low-income area</i>	<i>15</i>
<i>Bus route transfer/connection point</i>	<i>5</i>
<i>Infrequent bus service</i>	<i>10</i>
<i>Poor site conditions at bus stop</i>	<i>10</i>

*Source: Table 7.1 in the MBTA's Bus Stop Planning & Design Guide.*

*For shelters that are procured, installed, and maintained by others, it is not necessary for the shelter to meet these eligibility standards. However, it is strongly recommended for transit equity purposes.*

### **Site Suitability Test**

*The following physical and practical requirements must be met before a bus stop can be considered for a shelter:*

- **Site ownership:** *Permission to install a shelter must be granted by the land owner. In most cases, the land owner is the municipality that owns the sidewalk. In some cases, property easements, license agreements, and/or land takings may be required if the sidewalk width is inadequate and the shelter must encroach on adjacent property.*
- **Abutter approval:** *Depending on the site ownership and proposed setback of the shelter, it may be necessary to notify the abutter and/or obtain their approval.*
- **Adequate physical space and clearances:** *This typically pertains to sidewalk widths and potential obstacles to an accessible and safe path of travel. There must be sufficient space for the shelter, as well as an accessible path of travel around the shelter and between other street furniture. The busier the sidewalk, the more space is required. In addition, shelters must be*

sufficiently set back from the curb to avoid being struck by vehicles. Where sidewalks are not sufficiently wide, options may include sidewalk widening or installation of a narrow shelter, curb extension, or bulb out.

- **Proximity to the bus stop:** The shelter should generally be located within the limits of the bus stop zone or no greater than 50 feet from the designated bus boarding area.
- **Community and municipal approval:** For advertising shelters, a license agreement between the municipality and the shelter company is generally required. A permit may also be required from the State Office of Outdoor Advertising (OOA).

### *Title VI Requirements*

*Title VI of the 1964 Civil Rights Act is defined in FTA C 4702.1B. Title VI and environmental justice principles mandate that MBTA services—including shelters and amenities—are distributed in such a manner that minority and low-income communities receive benefits in the same proportion as the total service area. The MBTA and CTPS periodically conduct a Title VI analysis to ensure compliance. At times there may be a disparity that needs to be addressed.*

### *Accessibility Requirements*

*Installation of a bus shelter may trigger specific accessibility requirements, including lengthening of the bus stop, building an accessible bus landing pad, and providing an accessible path of travel between the landing pad, the sidewalk, and the shelter.*

## **Benches at Bus Stops**

The following provides a summary of the MBTA's policy on benches at bus stops, as detailed in Chapter 6 of the MBTA's *Bus Stop Planning & Design Guide* (p. 38):

*Benches are the most common bus stop amenity and are generally the simplest and most desirable to provide, given their nominal cost and space requirements. Benches should be provided when any of the following conditions exist:*

- *The bus stop has at least 50 daily boardings.*
- *A shelter is warranted but unable to be installed.*
- *The stop serves a significant number of seniors or persons with disabilities.*

*Benches may also be warranted in the following situations:*

- *There is evidence of customers sitting on steps, walls, or other structures located on abutting private property.*
- *The stop is located on a low frequency bus route.*

## Provision of Information

### *Variable Message Signs*

The MBTA currently uses four different types of electronic message signs on the bus, rapid transit, and commuter rail systems. These include the following:

- Countdown or public address signs at stations count down the number of minutes until the next vehicle arrives at or departs from the station and display public-service announcements. These are present at all subway stations, most commuter rail stations, most BRT stations, and some above-ground light rail stations.
- Departure boards at stations list upcoming departures. These are present at three major commuter rail stations.
- In-vehicle signs display the next stop. These are present on all buses, all Blue and Green Line trains, one-third of Red Line trains, all new Orange Line trains, one-third of commuter rail coaches, and two new ferries. There are no Mattapan High-Speed Line trolleys that currently have in-vehicle message signs.
- Advertising displays show real-time information and service alerts. These are present at most subway stations.

### Countdown and Public Address Signs

#### *Subway*

The MBTA has installed variable message signs at rapid transit stations throughout the system. In accordance with the 2006 settlement agreement between the MBTA and the Boston Center for Independent Living (BCIL) regarding ADA accessibility of MBTA service and infrastructure,<sup>2</sup> signs are located at each set of fare gates and on inbound and outbound platforms. The exact locations and quantities of signs were determined through field observations of existing conditions and needs at each station.

All Red, Orange, and Blue Line stations are equipped with electronic message signs that display the number of minutes until the next two trains, as well as a train arrival announcement. The information displayed on these signs is triggered by the train's signal system. This system also shows and audibly plays public service announcements.

#### *Light Rail*

Consistent with the 2006 MBTA/BCIL settlement agreement regarding ADA accessibility of MBTA service and infrastructure, variable message signs were also installed on the Green Line D Branch from Riverside to Kenmore and Green Line Central Subway from Symphony to Lechmere, and the Mattapan High-Speed Line. These signs display and announce the time until the next two departures at most stations, with the exception of stations where trains originate. Because the Green Line trains do not have a fixed schedule like the other lines, it is difficult to predict the actual departure time from their origins. This system also shows and audibly plays public service announcements.

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<sup>2</sup> See <https://mbta.com/accessibility/history>



## *Bus*

The same variable message signs that are installed at subway and light rail stations are also present at the following bus-rail and bus-bus transfer points: Alewife, Davis, Dudley, Forest Hills, Harvard, Haymarket, Lechmere, Mattapan, Ruggles, Sullivan, and Wonderland. The World Trade Center and Courthouse underground BRT stations also have these signs, which show and announce the next departure for each route serving that stop and play public address messages.

Variable message signs that count down the minutes until the arrival of the next BRT vehicle are placed at 19 of the 23 stops on Silver Line Washington Street. The four stops without bus stop variable message signs are Tufts Medical Center (both directions), Chinatown, and Boylston. These signs display delay information for the Silver Line Washington Street only. They do not audibly announce information or play public address messages.

## *Commuter Rail*

In 1997, in conjunction with the opening of the Old Colony commuter rail lines to Middleborough/Lakeville and Kingston/Plymouth, PENTA light-emitting diode (LED) message boards were installed at all stations on those lines. Although these signs used the current technology of that period, they have limited display capability—only one message at a time can be shown, with no more than 99 characters per message. PENTA signs were also installed at the new stations on the Framingham/Worcester Line west of Framingham, and on the Newburyport/Rockport Line at the new stations in Ipswich, Rowley, and Newburyport.

A project to install new passenger information signs at all commuter rail stations (with the exception of Silver Hill, Plimptonville, and Foxboro) was initiated in 2000; at least one sign was added on each inbound platform, and an additional sign was added at stations with mini-high platforms. The PENTA signs were not replaced. The new signs can display multiple messages and have a capacity of as many as 1,600 characters. All signs are installed on the inbound platforms in order to serve the greatest number of customers as they travel inbound during the morning peak period.

The MBTA has implemented a Passenger Train Information System (PTIS), also known as the Next Train system, at all commuter rail stations except those that offer staffed information booths (South Station, North Station, and Back Bay Station). The PTIS uses state-of-the-art global-positioning-system (GPS) technology on trains moving along the line to generate automated messages regarding the arrival of the next train on LED signs located on the station platforms. If service is disrupted, the location information is supplemented by a console operator, who monitors the movement of the trains to send ad hoc messages manually to the signs as required. The system also generates automatic station announcements on board the train.

## *Departure Boards*

### *Bus*

At major bus stations, the MBTA has installed bus departure screens that notify riders when the next bus on each route is expected to depart. These are present at Ashmont, Central Square, Dudley, Forest Hills, Harvard, Haymarket, Maverick, Ruggles, Sullivan, and Wonderland Stations. The signs

utilize real-time bus tracking data and feature both visual and audio messages. They also display service alerts and elevator and escalator outages. A push-button activated sound system allows individuals with visual impairments to hear the message on the sign.

### *Commuter Rail*

North Station, South Station, and Back Bay Station on the commuter rail have departure boards that display and audibly announce upcoming scheduled departures, the arrival status (reporting if trains are on time, the number of minutes they are late, or if they are canceled), and the track on which the train will arrive/depart. These signs display the scheduled departure time until manually changed by a dispatcher.

### *In-Vehicle Signs*

#### *Subway and Light Rail*

Public address (PA) systems on the Blue Line, Green Line, approximately two-thirds of the Red Line vehicles, and all new Orange Line vehicles have variable message sign displays. These displays both show and announce the current stop, next stop, and indicate which side of the train the doors will open. They can also display other pre-programmed PA messages. These systems use radio frequency identification (RFID) tags on the tracks to trigger the announcements on the train. There are currently no variable message signs on Mattapan High-Speed Line vehicles. New vehicles are scheduled to enter service on the Red and Orange Lines between 2019 and 2023, bringing the same audio-visual announcement system to all vehicles on those lines. The Mattapan High-Speed Line runs historic streetcars, and currently there are no plans to replace or retrofit these vehicles.

#### *Bus*

All MBTA buses are equipped with a PA system that includes speakers, an overhead LED display in the bus, and signs on the front, right side, and rear of the bus. All are part of the TransitMaster Computer-aided Dispatch/Automatic Vehicle Location (CAD/AVL) system. The system announces the next stop and displays it on the interior LED sign. The exterior signs display the route and destination, which are also announced when the bus's doors open. The interior signs and speakers also make general announcements that are programmed centrally by operations staff.

#### *Commuter Rail*

All commuter rail coaches are equipped with automated stop announcements that are driven by PTIS, the same system that drives the station LED signs. The system makes audio announcements when the train is approaching each stop. Approximately 45 percent of the coaches have interior LED signs that also display this information to passengers. All new coach purchases are planned to include these interior LED signs. The system can also make general PA announcements.

#### *Ferry*

In 2017 and 2018, the MBTA accepted two new ferry boats for use on the route between Hingham, Hull, Logan Airport, and downtown Boston. The vessels are equipped with automated announcement systems that include LED signs on the exterior of the boat and LCD monitors inside

the boat that display the destination of the boat, the next stop, and any other public address messages. These messages are also announced over the boat’s speakers. On its other routes, the MBTA uses older vessels that are not equipped with next stop displays or audio announcements.

### Digital Advertising Screens

The MBTA is in the process of installing 700 digital advertising screens at most of its rapid transit stations and anticipates finishing the installation in spring 2020. These primarily display advertising content but can also display public service announcements from the MBTA in the normal rotation. In the event of an emergency or severe service disruption, the screens can also be “taken over” by the MBTA to solely display a service alert message.

The MBTA is working to add real-time information to these screens—such as upcoming train arrivals and pertinent service alerts—in places where such information is not already provided by the countdown clocks and PA announcements. The MBTA is also exploring new ways of delivering on-demand audio-equivalence for information that appears on digital signage, as it would be impractical or impermissible to meet the industry standard by providing PA announcements or push-button audio for every digital screen message in the system.

### Neighborhood Maps

The MBTA’s Neighborhood Map Program produces maps for wayfinding around transit stations. The objectives of the program include (1) providing route and schedule information for bus routes serving that station, (2) placing the transit station in the context of the surrounding neighborhood, and (3) highlighting the areas around the station that are within easy walking distance.

Two types of maps are placed at stations that have bus connections: (1) neighborhood maps, showing major landmarks, bus routes, the street network, the one-half-mile walking radius around the station, green space, pathways, and accessible station entrances; and (2) more detailed maps that show all bus routes that serve a particular station, along with service frequency information.

Where space allows, one or both maps are placed at stations with bus connections. The maps are also generally installed at new or renovated stations, regardless of whether or not a station has bus service. The MBTA has installed maps at all rapid transit transfer stations. On the commuter rail, the MBTA has installed maps at stations on the Fairmount Line and plans to add maps to nine other stations. Due to space constraints, maps are not located at many surface Green Line stops.

## Escalators

Escalators provide vital access to the system, particularly for persons with disabilities. In 2006, the MBTA and BCIL entered into a settlement agreement regarding ADA accessibility of MBTA services and infrastructure that set operational protocols and standards, as well as a proactive agenda for making the transit system more accessible. The MBTA uses the operability standard defined in Title 49 of the Code of Federal Regulations, Section 37.161, *Maintenance of accessible feature: General*:

- a) *“Public and private entities providing transportation services shall maintain in operative condition those features of facilities and vehicles that are required to make the vehicles and facilities readily accessible to and usable by individuals with disabilities. These features include, but are not limited to, lifts and other means of access to vehicles, securement devices, elevators, signage and systems to facilitate communications with persons with impaired vision or hearing.*
- b) *Accessibility features shall be repaired promptly if they are damaged or out of order. When an accessibility feature is out of order, the entity shall take reasonable steps to accommodate individuals with disabilities who would otherwise use the feature.*
- c) *This section does not prohibit isolated or temporary interruptions in service or access due to maintenance or repairs.”*

The MBTA contracts for the complete maintenance, service testing, and inspection of all transit system and facility escalators. The MBTA's contract imposes penalties if the contractor fails to comply with the ADA requirements. The MBTA has implemented a proactive maintenance program to keep equipment safe and operational. Maintenance specifications are defined to cover all equipment components. The MBTA's Maintenance Control Center (MCC) tracks all escalator service requests, which are transmitted to the MCC via MBTA personnel and field inspectors. The MCC transmits the service-request information to the escalator maintenance contractor via a computer terminal, and the contractor then dispatches maintenance personnel to perform repairs. The causes of equipment failures vary, as well as the length of time required to repair them.

## **VEHICLE ASSIGNMENT (FTA C 4702.1B, IV-4.B.(2))**

Vehicle assignment refers to the process by which vehicles are placed in garages and assigned to routes throughout the system. The policies used for vehicle assignment vary by mode and are governed by various operational characteristics and constraints.

### **Bus Vehicle Assignment**

The MBTA's bus fleet consists of 28 electric trackless trolleys; 175 compressed-natural-gas (CNG) vehicles; 499 emission-control-diesel (ECD) vehicles; 32 diesel-electric (dual-mode) vehicles; 302 hybrid vehicles; and 5 battery-powered electric buses. Since 2016, the MBTA has acquired 397 new buses to replace the oldest vehicles in the fleet.

In accordance with an administrative consent order issued in 2000 by the Massachusetts Department of Environmental Protection, the MBTA “insofar as possible, operates the lowest emission buses in the fleet in transit dependent, urban areas with highest usage and ridership as the buses enter the MBTA bus fleet.”

Table 5-4 provides additional information on the vehicles in the bus fleet.

**Table 5-4  
Bus Fleet Roster**

Propulsion	Active Vehicles	Year Built	Overhaul	Length	Width	Seats
Battery	5	2019	None	60'	102"	51
CNG Cummins ISLG	175	2016–17	None	40'	102"	36
Diesel Series 60 500 HP (dual-mode)	24	2004–05	None	60'	102"	47
	8	2005	None	60'	102"	38
Diesel Caterpillar C9	191	2004–05	2013–15	40'	102"	38
Diesel Cummins ISL	308	2006–08	None	40'	102"	39
Electric (trackless trolley)	28	2004	None	40'	102"	31
Hybrid	25	2010	None	60'	102"	57
	60	2014–15	None	40'	102"	37
	45	2016–17	None	60'	102"	53
	156	2016–17	None	40'	102"	36
	16	2019	None	40'	102"	36

Note: The MBTA has ordered 194 new 40-foot hybrid buses. Delivery of these buses began in 2019 and is expected to continue into 2020. These buses are intended to replace the diesel Caterpillar C9 buses that were built in 2004-05. All buses in the fleet are ramp accessible.

Source: MBTA.

The MBTA's policy is to maintain an average age of eight years or less for the bus fleet. In general, each bus is assigned to one of nine MBTA bus garages and operates only on routes emanating from the garage to which it is assigned. Individual vehicles within each garage are not assigned to specific routes but circulate among routes based on a number of operating constraints and equipment criteria. The following summarizes the guidelines used by inspectors when assigning vehicles in the current bus fleet to routes:

- **28 Electric Buses (Trackless Trolleys)**—The trackless trolley fleet currently consists of 28 vehicles. These vehicles are limited to use on three routes in Belmont, Cambridge, and Watertown where overhead catenary lines provide electric power.

- **175 CNG Buses**—These buses are housed at the Arborway and Cabot garages. They provide service on many routes in the urban core. Inspectors assign these buses daily, on a random basis, within each garage.
- **499 Diesel Buses**—The diesel buses are assigned to the suburban garages and to the Albany and Charlestown garages. These vehicles are garaged at the following facilities: Charlestown (127), Lynn (97), Quincy (84), Fellsway (76), and Albany (115).
- **32 Diesel-Electric (Dual-Mode) Buses**—All of the 60-foot, articulated dual-mode vehicles are designed for operation on the Waterfront portion of the Silver Line BRT service between South Station, South Boston, Logan Airport, and Chelsea.
- **302 Hybrid Buses**—One hundred thirty-five of the 40-foot hybrid buses are assigned to the Cabot garage, 91 are assigned to the Charlestown garage, and 6 are assigned to the private carrier that operates Routes 712 and 713 between Orient Heights Station and Point Shirley. Seventy 60-foot, articulated hybrid vehicles are assigned to the Southampton garage and operate on the following routes: Route 28, which operates between Mattapan Station and Ruggles Station via Dudley Station; Route 39, between Forest Hills Station and Back Bay Station; Silver Line 4 (SL4), between Dudley Station and South Station; and Silver Line 5 (SL5), between Dudley Station and Downtown Crossing. The MBTA has ordered 194 new 40-foot hybrid buses. Delivery of these vehicles began in 2019 and is expected to continue into 2020. These new hybrid buses are intended to replace older diesel buses.
- **5 Battery-powered Electric Buses**—These vehicles are assigned to the Southampton garage and can operate on all Silver Line routes.

## Light Rail Vehicle Assignment

The MBTA operates light rail vehicles on the Ashmont–Mattapan extension of the Red Line—the Mattapan High-Speed Line—and on all four branches of the Green Line: B–Boston College, C–Cleveland Circle, D–Riverside, and E–Heath Street. All Green Line vehicles can be operated on any Green Line branch.

There are 15 additional Type 9 Green Line vehicles on order for delivery in 2020. These will accommodate expanded Green Line service associated with the extension of the line to Somerville and Medford.

The Mattapan High-Speed Line has weight, curve, and power limitations that prevent the use of current Green Line light rail vehicles. Instead, President’s Conference Committee (PCC) cars are used for that line. All of the PCC cars have undergone extensive rehabilitation, including the replacement of major structural components. These cars were equipped in 2008, for the first time, with air conditioners.

Table 5-5 lists the vehicles in the light rail fleet.

**Table 5-5  
Light Rail Fleet Roster**

Type/Class of Vehicle	Fleet Size	Year Built	Overhaul	Builder	Length (feet)	Width (inches)	Seats
Green Line—Type 7 (1)	86	1986–88	2015–19	Kinki-Sharyo	72'	104"	46
Green Line—Type 7 (2)	17	1997	2018–19	Kinki-Sharyo	72'	104"	46
Green Line—Type 8	86	1999–2007	--	Breda	74'	104"	44
Green Line—Type 9	9	2018–19	--	CAF	74'	104"	44
Mattapan Line - "Wartime" PCC	8	1945–46	1978–83; 1999–2005	Pullman-Standard	46'	100"	41

Source: MBTA.

### Heavy Rail Vehicle Assignment

Heavy rail vehicles are operated on three subway lines: the Blue, Orange, and Red Lines. The specific operating environment of each line prevents one line's cars from operating on another line; therefore, each line has its own dedicated fleet.

Because there are no branches on the Blue Line and there is only one type of Blue Line car, no distribution guidelines are necessary for the line. The Blue Line introduced a new replacement fleet in 2009. Similarly, the Orange Line has no branches and a replacement of the entire Orange Line fleet is underway, so no distribution guidelines are necessary.

The Red Line has two branches (Ashmont and Braintree) and currently operates using three types of cars (Types 1, 2, and 3). There are no set distribution policies for the assignment of cars to the two Red Line branches. All three car types are put into service on both branches as available. Presently, the MBTA does not have a policy regarding the assignment of Red Line cars because the only difference between them is the number of doors (three or four). A new Red Line fleet is under construction, and the delivery of cars is expected between 2020 and 2023. Once the new fleet is in service, all older cars are expected to be retired.

Table 5-6 lists the vehicles that are currently in the heavy rail fleet.

**Table 5-6  
Heavy Rail Fleet Roster**

Type/Class of Vehicle	Fleet Size	Year Built	Builder	Length (feet, inches)	Width (inches)	Seats
Blue Line—No. 5	94	2007–09	Siemens	48' 06"	111"	35
Orange Line—No. 12	114	1979–81	Hawker-Siddeley	65'	111"	58
Orange Line—No. 14	12	2018–19	CRRC	65'	111"	44-50
Red Line—No. 1	68	1969–70	Pullman-Standard	69' 6"	122"	63
Red Line—No. 2	58	1987–89	Urban Transportation Development Corporation	69' 9"	120"	62
Red Line—No. 3	82	1993–94	Bombardier	69' 6"	120"	50

Source: MBTA.

### Commuter Rail Vehicle Assignment

Vehicle assignments for commuter rail are developed based on specific service standards. These standards require the provision of a minimum number of seats for each scheduled trip and one functioning toilet in each trainset, the maintenance of an appropriate train length to accommodate infrastructure constraints, and the provision of modified vehicles, when necessary, for a specific operating environment. The MBTA strives to assign its vehicles as equitably as possible within the equipment and operational constraints of the system.

The MBTA's Railroad Operations runs a 401-route-mile regional rail system in the Boston metropolitan area composed of 14 lines that serve 141 stations. The existing system consists of two separate rail networks: a five-route northern system, which operates from North Station to terminals at Rockport, Newburyport, Haverhill, Lowell, and Wachusett; and a ten-route southern system, which operates from South Station to terminals at Worcester, Needham, Franklin, Wickford Junction, Stoughton, Readville, Greenbush, Middleborough, Kingston, and Plymouth. Trains operate in a push-pull mode, with the locomotive leading (pull mode) when departing Boston and the control car leading (push mode) when arriving in Boston.

The commuter rail coach fleet is composed of five types of coaches and three types of locomotives, which are assigned to the 14 commuter rail routes. Both coaches and locomotives have a service life of 25 years. Table 5-7 lists the vehicles in the current fleet.



**Table 5-7  
Commuter Rail Fleet Roster**

Manufacturer	Fleet Size	Built	Classification	Rebuilt	Seats
Pullman	55	1978–79	BTC-1C	1995–96	114
MBB	9	1987–88	BTC-3	-	94
MBB	13	1987–88	CTC-3	-	96
Bombardier A	39	1987	BTC-1A	-	127
Bombardier B	50	1989–90	BTC-1B	-	122
Bombardier C	50	1989–90	CTC-1B	-	122
Kawasaki	50	1990–91	BTC-4	-	185
Kawasaki	23	1990–91	CTC-4	-	175
Kawasaki	14	1997–98	BTC-4A	-	182
Kawasaki	8	2001–02	BTC-4B	-	182
Kawasaki	33	2005–06	BTC-4C	-	178
Rotem	26	2012–14	CTC-5	-	173
Rotem	47	2012–14	BTC-4D	-	179

BTC = Blind Trailer Coach. CTC = Controller Trailer Coach. MBB = Messerschmitt-Bolkow-Blohm.

Source: MBTA.

Train consists are assembled as required based on minimum seating capacity to meet the morning and evening peak-period requirements. Presently, the MBTA commuter rail contract operator is contractually required to have 133 coaches in 24 North Side trains and 234 coaches in 39 South Side trains. Most train consists generally are not dedicated to a specific line, but are cycled throughout the system (either North or South Side). Every train consist must have a control coach. The following vehicle characteristics must also be considered when assigning vehicles:

- **Kawasaki Coaches (bi-level)**—There is no specific policy restricting the use of bi-level Kawasaki coaches in the commuter rail system. Currently they are used primarily in the South Side commuter rail system, since it carries approximately 65 percent of the total boardings of the system. The bi-level coaches offer substantially more seating than the single-level coaches. This allows Railroad Operations to maintain seating capacity while minimizing the

impacts of platform and layover facility constraints. The MBTA intends to purchase only bi-level coaches in future procurements in order to accommodate increasing ridership demands and to allow for greater flexibility when scheduling vehicle assignments.

- **Rotem Coaches (bi-level)**—The delivery and operation of bi-level Rotem coaches began in 2013 and was completed in 2014. There are 75 cars of which 47 are equipped with toilet facilities.
- **Messerschmitt-Bolkow-Blohm (MBB) Coaches**—The MBB fleet is slated to be reduced as the Rotem fleet enters service. Portions of the MBB fleet are in storage.
- **Old Colony Line Coaches**—The coaches used for service on the Old Colony lines (Middleborough/Lakeville, Kingston/Plymouth, and Greenbush) are equipped with power doors, as all of the stations on these lines have high-level platforms. A crew member can control the operation of the doors in the consist from any coach via the door control panel. Portions of the Kawasaki, Pullman, and MBB coach fleets have had the power doors activated to meet this requirement. All new Rotem coaches are equipped with power doors.
- **Advanced Civil Speed Enforcement System (ACSES)**—All control coaches and locomotives operating on the Providence Line must be equipped with a functioning ACSES. The Federal Railroad Administration mandates the use of an ACSES on Amtrak high-speed rail service, which shares the Providence Line corridor with the MBTA. All locomotives have an ACSES installed and functioning. The Bombardier control coaches do not yet have the ACSES installed; therefore, these coaches are limited to North Side service. There are more locomotives and control coaches equipped with the ACSES than are required to meet the daily Providence Line scheduled trips. This provides for greater flexibility in vehicle assignments.

All coaches in the commuter rail fleet are equipped with similar amenities, the exception being the coaches equipped with toilets; therefore, the primary variation among coaches is age. For the purpose of periodic monitoring, an assessment of compliance for vehicle assignment is completed each year based on the average age of a trainset for a specified time period.



# CHAPTER 6

## SERVICE MONITORING

The Federal Transit Administration (FTA) requires large transit agencies to monitor the performance of their systems relative to their systemwide service standards and policies. FTA also requires each transit agency to develop a policy for determining whether disparate impacts exist based on race, color, or national origin and to apply that policy to the results of the monitoring activities. Although the FTA requires monitoring at a minimum of every three years, the Massachusetts Bay Transportation Authority (MBTA) monitors its system every year to ensure that potential problems are found and rectified in a timely fashion. The framework for the MBTA’s Title VI service monitoring schedule is provided in Table 6-1.

**Table 6-1**  
**MBTA Title VI Service Monitoring Schedule**

Service Indicator	Department(s) Responsible for Providing Data	Planned Frequency of Compliance Assessment
Vehicle load	Office of Performance Management and Innovation	Annually
Vehicle headway	Central Transportation Planning Staff	Annually
On-time performance	Office of Performance Management and Innovation	Annually

(Table 6-1 cont.)

Service Indicator	Department(s) Responsible for Providing Data	Planned Frequency of Compliance Assessment
Service availability	Central Transportation Planning Staff	Annually
Span of service	Central Transportation Planning Staff	Annually
Platform accessibility	Engineering and Maintenance, Office of Performance Management and Innovation	Annually
Vehicle accessibility	Office of Performance Management and Innovation	Annually
Service operated	Service Planning	Annually
Bus shelter and bench placement	Advertising Department, Department of System-Wide Accessibility	Biennially—odd years
Bus shelter amenities and conditions	Central Transportation Planning Staff	Biennially—odd years
Rapid transit station amenities	Central Transportation Planning Staff	Biennially—even years
Rapid transit station conditions	Engineering and Maintenance	Biennially—even years
Commuter rail station amenities	Central Transportation Planning Staff	Biennially—even years
Commuter rail station conditions	Keolis Commuter Services	Biennially—even years
Faregate and fare-vending machine operability	Automated Fare Collection	Annually
Location of CharlieCard retail sales terminals	Automated Fare Collection	Annually
Escalator operability	Engineering and Maintenance	Annually
Vehicle assignment	Bus, Subway, and Railroad Operations	Annually

## MINORITY CLASSIFICATION

In order to compare the level of service provided to areas with predominantly minority customers with the level of service provided to areas with predominantly nonminority customers, the Central Transportation Planning Staff (CTPS) utilized three data sources to classify MBTA services:

- Ridership data from the MBTA 2015–17 Systemwide Passenger Survey was used to classify MBTA bus routes, rapid transit lines and stations, commuter rail lines and stations, and commuter boat lines and stations.
- Ridership data from the Rhode Island Department of Transportation (RIDOT) 2017 commuter rail passenger survey was used to classify MBTA commuter rail stations in Rhode Island.
- Population data from the 2010 United States Census was used to classify MBTA bus stops, rapid transit stations, and commuter rail stations that opened after 2017 and thus were not included in the MBTA 2015–17 Systemwide Passenger Survey.

## CLASSIFICATIONS BASED ON MBTA RIDERSHIP DATA

Minority classifications for most MBTA bus routes, rapid transit lines and stations, commuter rail lines and stations, and commuter boat lines were developed from responses to the 2015–17 MBTA Systemwide Passenger Survey.<sup>1</sup>

The 2015–17 MBTA Systemwide Passenger Survey was designed to obtain the highest levels of statistical reliability feasible given the constraints on the amount of resources available to the MBTA. After examining the costs for various degrees of survey distribution, the MBTA, in consultation with CTPS, set goals of obtaining enough valid survey responses to provide a confidence level of 90 percent with a confidence interval of 10 percent (90/10 standards). Achieving this standard typically required approximately 65 responses per route or station. CTPS determined that the cost to obtain the 90/10 standards for most bus stops was prohibitive.

MBTA passengers were given the option of completing a paper survey or filling out an equivalent online form. The MBTA and CTPS engaged in extensive efforts to publicize the availability of the online form, which preceded distribution of the paper survey, from late October through December 2015. The online form continued to be available throughout the entire paper survey distribution period from January 2016 to May 2017. Online surveys accounted for almost half (49 percent) of the usable surveys that were collected.

The survey called for respondents to report each link in their most recent MBTA trip. The information on each route or station accessed during the trip was included in the summarized results for each mode. For example, a trip on which a passenger started on a bus, transferred from the bus to a rail rapid transit vehicle, and then transferred from the rapid transit vehicle to a commuter rail train was

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<sup>1</sup> The following facilities were excluded: Blue Hill Avenue and Boston Landing commuter rail stations and the stops on the Silver Line SL3 route in Chelsea, all of which opened after the survey was completed; and Providence, T.F. Green, and Wickford Junction commuter rail stations, which were surveyed by the RIDOT.

counted in the results for the bus route, the rapid transit boarding and alighting stations, and the commuter rail boarding and alighting stations.

Minority classification of each MBTA service was based on the percentage of respondents accessing that service who were classified as minority relative to the systemwide average for all services. To account for differences in survey response rates among routes and stations, it was necessary to apply weight factors to the records.

For the MBTA bus system, control totals were derived from counts taken from on-board automatic passenger counters (APCs) during the fall of 2016, with the exception of the trackless trolley routes, which did not have APC-equipped vehicles at the time. Control totals for trackless trolley routes were based on CTPS manual counts conducted in winter 2016.

For gated rapid transit stations, control totals were based on the average of three weekdays in April 2017 from records produced by the MBTA's automated fare collection (AFC) system. For surface Green Line branches, control totals were also based on AFC records, but noninteraction factors were applied to account for passengers who display monthly or weekly passes but do not tap them at the farebox when boarding. Control totals for exit alightings were based on a CTPS model that infers exit locations for each trip from the sequential use of individual fare cards in the AFC records. Control totals for transfers were calculated from trips having entries and inferred exits on different lines. If more than one reasonable location existed for a specific line-to-line transfer combination, a location was inferred based on past manual counts.

For the MBTA commuter rail system, control totals by line were provided by Keolis Commuter Services, the contract operator of the system. Keolis conducted counts at the Boston terminal stations and Fare Zone 1A stations with rapid transit connections in 2016 and estimated total additional ridership that did not transfer to or from these stations using factors from manual station counts conducted by CTPS in 2012. To determine control totals for individual commuter rail stations, the manual station counts conducted by CTPS in 2012 were factored by the changes in corresponding line ridership from 2012 to 2016.

The control totals for the commuter boat system were based on weekday average boarding counts by line from 2015. These counts were provided by Boston Harbor Cruises, the contract operator of the system.

After combining the survey responses with their associated weight factors, the percentage of MBTA customers systemwide who were minority was determined to be 34.26 percent. Therefore, any MBTA bus route, rapid transit line or station, commuter rail line or station, or commuter boat line or station found to have a minority percentage greater than 34.26 percent was classified as minority; otherwise it was classified as nonminority. The classifications of all MBTA bus routes, rapid transit lines and stations, commuter rail lines and stations, and boat lines are provided in Appendix 6A, Tables 6A-1 through 6A-4.

## **CLASSIFICATIONS BASED ON RHODE ISLAND DEPARTMENT OF TRANSPORTATION RIDERSHIP DATA**

Minority classifications for the three MBTA commuter rail stations in Rhode Island were developed from responses to RIDOT's 2017 commuter rail passenger survey. In this survey, RIDOT conducted on-board surveys of passengers who boarded the MBTA's Providence commuter rail line at one of the three stations in Rhode Island. Based on the responses to this survey, the average percentage of minority customers who boarded MBTA commuter rail stations in Rhode Island was determined to be 18.8 percent. Any station found to have a minority percentage greater than 18.8 percent was classified as minority; otherwise it was classified as nonminority. The classifications of these stations are provided in Appendix 6A, Table 6A-5.

## **CLASSIFICATIONS BASED ON POPULATION DATA**

Minority classifications for all MBTA bus stops were determined based on the 2010 Census demographics of the immediate area around each stop. A circle with a 50-foot radius was mapped around each bus stop, and the entirety of all census tracts that fit at least partially within the circle were considered to be the surrounding census tracts for that stop. (The number of tracts that fell into the circle ranged from one to four tracts per stop.) For each bus stop's surrounding census tracts, the minority population was divided by the total population to yield a minority percentage associated with that stop. This percentage was compared to the average minority population of the MBTA core service area, which is comprised of the 59 municipalities that have access to MBTA bus and rapid transit services. Based on data from the 2010 Census, 31.8 percent of the population in the core service area was a member of a minority group. A bus stop in which the minority percentage of the population in the surrounding census tracts exceeded 31.8 percent was classified as minority; otherwise it was classified as nonminority.

The Silver Line SL3 route, which has five stops, opened after the completion of the 2015–17 MBTA Systemwide Passenger Survey. Minority classifications for these stops were determined by comparing the minority population within a one-quarter-mile radius around each stop to the minority population of the 59-municipality MBTA core service area, which is 31.8 percent. A stop with a minority population higher than 31.8 percent within a quarter mile was classified as minority; otherwise it was classified as nonminority. The classifications of these stops are provided in Appendix 6A, Table 6A-6.

Two commuter rail stations, Blue Hill Avenue and Boston Landing, opened after the completion of the 2015–17 MBTA Systemwide Passenger Survey. Minority classifications for these stations were determined by comparing the minority population within a one-mile radius around each station to the minority population of the 175-municipality MBTA commuter rail service area, which is 26.2 percent. A stop with a minority population higher than 26.2 percent within one mile was classified as minority; otherwise it was classified as nonminority. The classifications of these stops are provided in Appendix 6A, Table 6A-6.

## DISPARATE IMPACT THRESHOLD FOR SERVICE MONITORING

The MBTA's threshold for determining a potential disparate impact in service monitoring is 80 percent. For each service standard or policy, if the ratio of minority performance to nonminority performance falls below 0.80, then that service standard or policy would be determined to pose a potential disparate impact on minority customers. Although the MBTA did not explicitly include a statement about its threshold for service monitoring in its most recent Disparate Impact and Disproportionate Burden Policy, the 80 percent threshold is still in effect. This threshold is consistent with the MBTA's threshold for major service changes. A more detailed explanation can be found in the MBTA's Disparate Impact and Disproportionate Burden Policy (Appendix 6B).

## SERVICE MONITORING RESULTS (FTA C 4702.1B, IV-6)

The remainder of this chapter presents a summary of the results of the MBTA's monitoring program for its service standards and policies. These results were approved as part of the overall approval of the MBTA's Title VI program. (See Appendix 1B.) No service monitoring analyses were performed for commuter boat services because all commuter boat services are classified as nonminority.

Every performance metric in the MBTA Service Delivery Policy is monitored and reported in the service indicators that follow. Because the MBTA's performance metrics include some with one standard and others with more than one standard based on variables such as time of day and type of service, some indicators assess performance according to a single standard, while others assess an aggregation of performance according to the various standards for the performance metric.

For example, the MBTA has a single standard for commuter rail span of service on Saturdays—each commuter rail line will offer service between 8:00 AM and 6:30 PM. In order to identify a potential disparate impact, the MBTA compared the span of service of the one minority commuter rail line on Saturdays to the span of service of the 11 nonminority commuter rail lines on Saturdays. Because the MBTA assesses bus on-time performance on weekdays according to two different standards, one for frequent service routes and one for scheduled-departure routes, the MBTA combined performance on each of these standards into a systemwide average of the percentage of weekday bus timepoints that were on time (in state fiscal year 2019 that average was 63.4 percent). In order to identify a potential disparate impact, the MBTA compared the percentage of minority bus routes that met or exceeded the systemwide average to the percentage of nonminority bus routes that met or exceeded the systemwide average.

## SERVICE STANDARDS

The MBTA evaluates performance based on the following service standards: vehicle load, vehicle headway, on-time performance, service availability, span of service, platform accessibility, vehicle accessibility, and service operated. The analyses are performed by mode (bus, heavy and light rail, and commuter rail) and by service day (weekday, Saturday, and Sunday).



Table 6-2 presents a summary of the results of the MBTA's service standards monitoring program. The MBTA analyzed 44 indicators of service standards, of which 38 showed no disparate impact and six showed a potential disparate impact (five other indicators were not analyzed either due to lack of data or because rapid transit equipment is not interchangeable). The MBTA has either already addressed or has a plan to address the six indicators that showed a potential disparate impact. The text and tables that follow Table 6-2 present results and analysis for the six service standards indicators that showed a potential disparate impact. Appendix 6C presents results and analysis for service monitoring indicators that showed no disparate impact.

**Table 6-2**  
**Summary of Service Standards Monitoring Results**

Indicator/Mode	Result of Disparate Impact Analysis	Page
<b>Vehicle Load</b>		
Bus vehicle load—weekday	No disparate impact	6C-1
Bus vehicle load—Saturday	No disparate impact	6C-2
Bus vehicle load—Sunday	No disparate impact	6C-2
Heavy and light rail vehicle load—weekday	N/A*	6C-2
Heavy and light rail vehicle load—Saturday	N/A*	6C-2
Heavy and light rail vehicle load—Sunday	N/A*	6C-2
Commuter rail vehicle load—weekday	No disparate impact	6C-3
Commuter rail vehicle load—Saturday	No disparate impact	6C-4
Commuter rail vehicle load—Sunday	No disparate impact	6C-4
<b>Vehicle Headway</b>		
Bus vehicle headway—weekday	Potential disparate impact	6-10
Bus vehicle headway—Saturday	No disparate impact	6C-5
Bus vehicle headway—Sunday	No disparate impact	6C-5
Heavy and light rail vehicle headway—weekday	No disparate impact	6C-6
Heavy and light rail vehicle headway—Saturday	Potential disparate impact	6-11
Heavy and light rail vehicle headway—Sunday	No disparate impact	6C-6

(Table 6-2 cont.)

Indicator/Mode	Result of Disparate Impact Analysis	Page
Commuter rail vehicle headway—weekday	No disparate impact	6C-7
Commuter rail vehicle headway—Saturday	No disparate impact	6C-7
On-Time Performance		
Bus on-time performance—weekday	No disparate impact	6C-8
Bus on-time performance—Saturday	No disparate impact	6C-9
Bus on-time performance—Sunday	No disparate impact	6C-9
Heavy and light rail on-time performance—weekday	No disparate impact	6C-10
Heavy and light rail on-time performance—Saturday	No disparate impact	6C-10
Heavy and light rail on-time performance—Sunday	No disparate impact	6C-11
Commuter rail on-time performance—weekday	No disparate impact	6C-11
Commuter rail on-time performance—Saturday	No disparate impact	6C-12
Commuter rail on-time performance—Sunday	No disparate impact	6C-12
Service Availability		
Service availability—weekday	No disparate impact	6C-13
Service availability—Saturday	No disparate impact	6C-13
Service availability—Sunday	No disparate impact	6C-14
Span of Service		
Bus span of service—weekday	No disparate impact	6C-14
Bus span of service—Saturday	No disparate impact	6C-15
Bus span of service—Sunday	No disparate impact	6C-15
Heavy and light rail span of service—weekday	No disparate impact	6C-16

(Table 6-2 cont.)

Indicator/Mode	Result of Disparate Impact Analysis	Page
Heavy and light rail span of service—Saturday	No disparate impact	6C-16
Heavy and light rail span of service—Sunday	No disparate impact	6C-17
Commuter rail span of service—weekday	No disparate impact	6C-17
Commuter rail span of service—Saturday	No disparate impact	6C-18
Platform Accessibility		
Platform accessibility—gated rapid transit stations with elevators	Potential disparate impact	6-12
Platform accessibility—all gated rapid transit stations	No disparate impact	6C-19
Platform accessibility—commuter rail stations	No disparate impact	6C-19
Vehicle Accessibility		
Heavy and light rail vehicle accessibility	N/A**	6C-20
Commuter rail vehicle accessibility	N/A*	6C-20
Service Operated		
Bus service operated—weekday	No disparate impact	6C-21
Bus service operated—Saturday	No disparate impact	6C-21
Bus service operated—Sunday	No disparate impact	6C-22
Heavy and light rail service operated—all days	No disparate impact	6C-23
Commuter rail service operated—weekday	Potential disparate impact	6-13
Commuter rail service operated—Saturday	Potential disparate impact	6-14
Commuter rail service operated—Sunday	Potential disparate impact	6-15

N/A\* = Not available because the MBTA currently lacks the means to record data for these items.

N/A\*\* = Not applicable to heavy rail lines and the Mattapan Line because the lines have dedicated equipment that is not interchangeable. Not applicable to the Green Line because all branches are classified as nonminority.

## Vehicle Headway

### Bus

The MBTA uses its standards for bus frequency to assess scheduled bus vehicle headway. (See Appendix 5A, pages 13–15.)<sup>2</sup> To calculate how often each bus route met the frequency standard on weekdays, the number of passengers who rode buses that were meeting the frequency standard was divided by the total number of passengers riding the route. These individual route percentages were averaged to yield a systemwide average of 72.5 percent. Next, the performance of each route was compared to the average. Finally, the number of minority bus routes that exceeded the average was counted, and the number of nonminority routes that exceeded the average was counted. Table 6-3 shows that 48 out of 92 minority-classified routes (52.2 percent) performed better than average and 51 out of 64 nonminority-classified routes (79.7 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.65. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-3**  
**Bus Vehicle Headway—Weekday**

Route Classification	Number of Routes	Number of Routes Performing Above Average	Percentage of Routes Performing Above Average
Minority	92	48	52.2%
Nonminority	64	51	79.7%
Ratio of minority to nonminority			0.65
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertains to weekdays between September 2 and December 22, 2018.

Although a potential disparate impact is found for the weekday assessment using FTA’s required method of comparing service on a route-by-route basis, a supplemental analysis comparing the overall percentage of passengers on minority routes that pass the service frequency standard (79.8 percent) to the overall percentage of passengers on nonminority routes that pass the frequency standard (88.2 percent) results in a ratio of 0.90, which leads to a finding of no disparate impact. An

<sup>2</sup> As stated in the Service Delivery Policy, frequency of service standards are measured by either headway (minutes between trips) or frequency (trips per time period).

analysis conducted using this method is more reflective of the overall passenger experience, which is the philosophy under which the service standards in the MBTA's 2017 Service Delivery Policy were developed.

Furthermore, beginning in fall 2019, the MBTA launched an initiative called the Better Bus Project to update and modernize existing bus service. An analysis of bus vehicle headway data on weekdays from winter 2019–20 that incorporates changes initiated through the Better Bus Project shows that 55.6 percent of minority routes performed above average and 78.7 percent of nonminority routes performed above average, yielding a ratio of 0.71. Although this ratio is still below 0.80, it shows improvement over the ratio of 0.65 from fall 2018 shown in Table 6-3. In addition, a supplemental analysis of winter 2019–20 data comparing the overall percentage of passengers on minority routes that pass the service frequency standard (81.2 percent) to the overall percentage of passengers on nonminority routes that pass the frequency standard (89.9 percent) results in a ratio of 0.90, which leads to a finding of no disparate impact.

### Heavy and Light Rail

The MBTA uses its standards for rapid transit frequency to assess scheduled heavy and light rail vehicle headway. (See Appendix 5A, pages 13–15.) On Saturdays, the average rate at which heavy and light rail vehicle lines met their scheduled frequency was 87.5 percent. (The MBTA does not weight Saturday frequency by ridership because the Service Delivery Policy does not distinguish between peak and off-peak times on Saturdays.) Table 6-4 shows that two out of three minority-classified lines (66.7 percent) performed better than average and all five nonminority-classified lines performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 0.67. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-4**  
**Heavy and Light Rail Vehicle Headway—Saturday**

Line Classification	Number of Lines	Number of Lines Performing Above Average	Percentage of Lines Performing Above Average
Minority	3	2	66.7%
Nonminority	5	5	100.0%
Ratio of minority to nonminority			0.67
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The results are based on the MBTA's fall 2018 rapid transit schedule.

The standard in the Service Delivery Policy states that each rapid transit line will be scheduled to run every 15 minutes on Saturdays. As noted in the rapid transit schedule card for fall 2018, between 10:00 AM and 8:00 PM Mattapan Line trips are scheduled to depart every 12 minutes. However, on Saturdays before 10:00 AM and after 8:00 PM Mattapan Line trips are scheduled to depart every 26 minutes. Because Saturday is treated as one time period, every line meets the standard except for the Mattapan Line, which is one of three minority lines. This analysis methodology shows the line failing for the entire day even though the majority of passengers experience service that passes the standard. The MBTA is analyzing Saturday morning Mattapan Line ridership data to determine whether additional service is warranted.

## Platform Accessibility

### *Gated Rapid Transit Stations*

The MBTA measured the amount of time that platforms are accessible for all gated heavy rail, light rail, and Silver Line Waterfront stations. Assessing only stations that have platforms accessible by elevators, the average percentage of station platform hours that were accessible was 99.2 percent.<sup>3</sup> Table 6-5 shows that 13 out of 24 minority-classified stations (54.2 percent) performed better than average and 24 out of 33 nonminority-classified stations (72.7 percent) performed better than average. The ratio of above-average minority-classified stations to above-average nonminority-classified stations is 0.74. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-5**  
**Platform Accessibility—Gated Rapid Transit Stations with Elevators**

Station Classification	Number of Stations	Number of Stations Performing Above Average	Percentage of Stations Performing Above Average
Minority	24	13	54.2%
Nonminority	33	24	72.7%
Ratio of minority to nonminority			0.74
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to the period from July 1, 2018, to June 30, 2019.

<sup>3</sup> This systemwide average was calculated by (1) dividing the number of accessible platform hours by the number of open hours at each station to yield a percentage of accessible hours at that station and then (2) averaging those station percentages.

A number of the MBTA’s elevators are at the end of their useful life. Due to a robust maintenance program, systemwide elevator operability remains high. In order to continue to provide reliable vertical transportation, the MBTA has begun a rolling elevator replacement and modernization program. Units to be replaced are selected based on a number of factors, including age, ridership, and coordination with other station projects. Several elevators are currently under construction and dozens more are being designed. When an elevator is taken out of service to be replaced, an accessible shuttle is provided to mitigate the outage.

## Service Operated

### Commuter Rail

The MBTA aims to operate all of the service it schedules, and so it measures the percent of scheduled service that is actually provided on each commuter rail line to assess the amount of commuter rail service operated. (See Appendix 5A, page 24.) On weekdays, 99.9 percent of scheduled commuter rail service was operated. Table 6-6 shows that the one minority-classified line did not perform above the systemwide average and 10 out of 13 nonminority-classified lines (76.9 percent) performed above the systemwide average. The ratio of above-average minority lines to above-average nonminority lines is 0.00. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-6**  
**Commuter Rail Service Operated—Weekday**

Line Classification	Number of Lines	Number of Lines Performing Above Average	Percentage of Lines Performing Above Average
Minority	1	0	0.0%
Nonminority	13	10	76.9%
Ratio of minority to nonminority			0.00
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to weekdays between July 1, 2018, and June 30, 2019.

Although Table 6-6 shows a potential disparate impact, 99.7 percent of weekday service was operated on the one minority-classified line, which is only 0.2 percent less than the weekday average of 99.9 percent. Because there is only one minority-classified line, the percentage of above-average minority lines can only be 100 percent or zero percent.

On Saturdays, 99.8 percent of scheduled commuter rail service was operated. Table 6-7 shows that the one minority-classified line did not perform above the systemwide average and nine out of 12 nonminority-classified lines (75.0 percent) performed above the systemwide average. The ratio of above-average minority lines to above-average nonminority lines is 0.00. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-7**  
**Commuter Rail Service Operated—Saturday**

Line Classification	Number of Lines	Number of Lines Performing Above Average	Percentage of Lines Performing Above Average
Minority	1	0	0%
Nonminority	12	9	75.0%
Ratio of minority to nonminority			0.00
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to Saturdays between July 1, 2018, and June 30, 2019.

Although Table 6-7 shows a potential disparate impact, 99.0 percent of Saturday service was operated on the one minority-classified line, which is only 0.8 percent less than the Saturday average of 99.8 percent. Because there is only one minority-classified line, the percentage of above-average minority lines can only be 100 percent or zero percent.

On Sundays, 99.9 percent of scheduled commuter rail service was operated. Table 6-8 shows that the one minority-classified line did not perform above the systemwide average and six out of 11 nonminority-classified lines (54.5 percent) performed above the systemwide average. The ratio of above-average minority lines to above-average nonminority lines is 0.00. This ratio is less than 0.80, so a potential disparate impact is found.



**Table 6-8**  
**Commuter Rail Service Operated—Sunday**

Line Classification	Number of Lines	Number of Lines Performing Above Average	Percentage of Lines Performing Above Average
Minority	1	0	0.0%
Nonminority	11	6	54.5%
Ratio of minority to nonminority			0.00
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to Sundays between July 1, 2018, and June 30, 2019.

Although Table 6-8 shows a potential disparate impact, 99.7 percent of Sunday service was operated on the one minority-classified line, which is only 0.2 percent less than the Sunday average of 99.9 percent. Because there is only one minority-classified line, the percentage of above-average minority lines can only be 100 percent or zero percent.

Additionally, the MBTA has worked with Keolis to institute a protocol for advance-notice train cancellations for the minority line. Decisions regarding cancellations will be reviewed by the General Manager or his senior designee to ensure the prevention of any undue burden or impact to customers on any individual line. The revised decision-making protocol takes into account a variety of operational factors coupled with line demographic classifications and recent cancellation history.

## **SERVICE POLICIES**

The MBTA evaluates performance on its policies for distribution of transit amenities and vehicle assignment. Table 6-9 presents a summary of the results of the MBTA's service policies monitoring program. The MBTA analyzed 46 indicators of service policies, of which 43 showed no disparate impact and three showed a potential disparate impact. (One other indicator was not analyzed because rapid transit equipment is not interchangeable.) The MBTA has either already addressed or has a plan to address the three indicators that showed potential disparate impact. The text and tables that follow Table 6-9 present results and analysis for the three service policy indicators that showed a potential disparate impact. Appendix 6C presents detailed results and analysis for service monitoring indicators that showed no disparate impact.

**Table 6-9**  
**Summary of Service Policies Monitoring Results**

Indicator/Mode	Result of Disparate Impact Analysis	Page
<b>Bus Shelter and Bench Placement</b>		
Shelter placement—stops with more than 70 ADB	No disparate impact	6C-24
Shelter placement—stops with more than 25 ADB	No disparate impact	6C-24
Bench placement—stops with more than 50 ADB and no shelter	No disparate impact	6C-25
Bench placement—all stops with no shelter	No disparate impact	6C-26
<b>Bus Shelter —Amenities and Conditions</b>		
Shelter amenities—seating fixtures	No disparate impact	6C-26
Shelter amenities— bus maps	No disparate impact	6C-26
Shelter amenities—streetside signs	No disparate impact	6C-26
Shelter conditions—structure	No disparate impact	6C-27
Shelter conditions—vandalism	No disparate impact	6C-27
Shelter conditions—cleanliness	No disparate impact	6C-27
<b>Rapid Transit Station Amenities and Conditions</b>		
Gated rapid transit lobby amenities—trash receptacles	No disparate impact	6C-28
Gated rapid transit lobby amenities—recycling receptacles	No disparate impact	6C-28
Gated rapid transit lobby amenities—seating fixtures	No disparate impact	6C-28
Gated rapid transit lobby amenities—system map	No disparate impact	6C-28
Gated rapid transit lobby amenities—neighborhood map	No disparate impact	6C-28
Gated rapid transit platform amenities—trash receptacles	No disparate impact	6C-28
Gated rapid transit platform amenities—recycling receptacles	No disparate impact	6C-28

(Table 6-9 cont.)

Indicator/Mode	Result of Disparate Impact Analysis	Page
Gated rapid transit platform amenities—seating fixtures	No disparate impact	6C-28
Gated rapid transit platform amenities—system map	No disparate impact	6C-28
Gated rapid transit platform amenities—line map	No disparate impact	6C-28
Bus transfer maps at gated rapid transit stations	No disparate impact	6C-29
Distribution of VMS with bus arrival information	No disparate impact	6C-29
Gated rapid transit station conditions	Potential disparate impact	6-19
Surface rapid transit amenities—trash receptacles	No disparate impact	6C-29
Surface rapid transit amenities—recycling receptacles	No disparate impact	6C-29
Surface rapid transit amenities—seating fixtures	No disparate impact	6C-29
Surface rapid transit amenities—system map	No disparate impact	6C-29
Surface rapid transit amenities—line map	No disparate impact	6C-29
Surface rapid transit conditions	Potential disparate impact	6-20
Commuter Rail Station Amenities and Conditions		
Station amenities—trash receptacles	No disparate impact	6C-30
Station amenities—seating fixtures	No disparate impact	6C-30
Station amenities—system map	No disparate impact	6C-30
Station amenities—line schedule	No disparate impact	6C-30
Station amenities—Title VI notice	No disparate impact	6C-30
Station conditions	No disparate impact	6C-31
Variable Message Signs		
Operability of VMS at gated rapid transit stations	No disparate impact	6C-32
Operability of VMS at surface rapid transit stations	No disparate impact	6C-32
Operability of VMS at commuter rail stations	No disparate impact	6C-32

(Table 6-9 cont.)

Indicator/Mode	Result of Disparate Impact Analysis	Page
Automated Fare Collection		
Faregate operability	No disparate impact	6C-32
Availability of full-service FVMs	No disparate impact	6C-33
Availability of cashless and full-service FVMs	No disparate impact	6C-34
Populations served by CharlieCard retail sales terminals	No disparate impact	6C-34
Escalator Operability		
Escalator operability	No disparate impact	6C-35
Vehicle Assignment		
Bus vehicle age	No disparate impact	6C-36
Bus air conditioning operability	No disparate impact	6C-36
Heavy and light rail vehicle age	N/A**	6C-36
Commuter rail vehicle age	Potential disparate impact	6-21

ADB = Average daily boardings. FVM = Fare vending machines. VMS = Variable-message signs.

N/A\*\* = Not applicable to heavy rail lines and the Mattapan Line because the lines use dedicated equipment that is not interchangeable. Not applicable to the Green Line because all branches are classified as nonminority.

## Distribution of Transit Amenities

### *Gated Rapid Transit Station Conditions*

The MBTA regularly inspects all gated rapid transit stations in order to identify and correct cleanliness and maintenance issues as they arise. MBTA cleaning and maintenance staff review up to 21 items every time they inspect a station, including the condition of floors and furniture, staircases, escalators, elevators, and busways. (Some stations have fewer than 21 elements.) Staff score each item, yielding an overall score for each station every time it is inspected. An average score was calculated for each station, incorporating every time it was visited in state fiscal year 2018, and then those average scores were averaged, yielding a systemwide average station cleanliness of 93.6 percent.

Table 6-10 summarizes the disparate impact analysis for gated rapid transit station conditions. As shown in Table 6-10, 9 out of 25 minority-classified stations (36.0 percent) and 26 out of 39 nonminority-classified stations (66.7 percent) had average station condition scores that were higher

than the systemwide average. The ratio of above-average minority-classified stations to above-average nonminority-classified stations is 0.54. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-10**  
**Gated Rapid Transit Station Conditions**

Station Classification	Number of Stations	Number of Stations Performing Above Average	Percentage of Stations Performing Above Average
Minority	25	9	36.0%
Nonminority	39	26	66.7%
Ratio of minority to nonminority			0.54
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to the period between July 1, 2017, and June 30, 2018.

In addition to the analysis shown in Table 6-10, the MBTA conducted a supplemental analysis. For this supplemental analysis, all customers at minority-classified stations were designated as minority customers and all customers at nonminority-classified stations were designated as nonminority customers, and then the average cleanliness as seen by minority and nonminority customers was calculated. The supplemental analysis results in an average cleanliness score of 90.0 percent for minority customers and 93.6 percent for nonminority customers. The difference between these averages is 3.6 percent, suggesting that minority and nonminority passengers experience similarly clean conditions across the system.

In addition, the MBTA is in the process of developing a numerical standard for rapid transit station cleanliness. Once that standard is in place, future analyses of station conditions data will count how many stations meet or exceed the standard rather than counting how many stations exceed the average score across all stations. The MBTA is also commencing a new cleaning contract in spring 2020 that will further ensure that cleaning services are being conducted in an equitable manner.

### *Surface Rapid Transit Station Conditions*

The MBTA regularly inspects all surface rapid transit stations to identify and correct cleanliness and maintenance issues as they arise. Unlike gated stations, which are scored on 21 items, each stop is given one score: either one point for passing or zero points for failing. An average score was

calculated for each station, incorporating every time it was visited in state fiscal year 2018, and then those average scores were averaged, yielding a systemwide average surface rapid transit station cleanliness of 97.7 percent.

Table 6-11 summarizes the disparate impact analysis for surface rapid transit station conditions. As shown in Table 6-11, 7 out of 17 minority-classified stations (41.2 percent) and 33 out of 51 nonminority-classified stations (64.7 percent) had average station condition scores that were higher than the systemwide average. The ratio of above-average minority-classified stations to above-average nonminority-classified stations is 0.64. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-11**  
**Surface Rapid Transit Station Conditions**

Station Classification	Number of Stations	Number of Stations Performing Above Average	Percentage of Stations Performing Above Average
Minority	17	7	41.2%
Nonminority	51	33	64.7%
Ratio of minority to nonminority			0.64
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to the period between July 1, 2017, and June 30, 2018.

In addition to the analysis shown in Table 6-11, the MBTA conducted a supplemental analysis. For this supplemental analysis, all customers at minority-classified stations were designated as minority customers and all customers at nonminority-classified stations were designated as nonminority customers, and then the average cleanliness as seen by minority and nonminority customers was calculated. The supplemental analysis resulted in an average cleanliness score of 96.4 percent for minority customers and 98.4 percent for nonminority customers. The difference between these averages is 2 percent, suggesting that minority and nonminority passengers experience similarly clean conditions across the system.

In addition, the MBTA is in the process of developing a numerical standard for rapid transit station cleanliness. Once that standard is in place, future analyses of station conditions data will count how many stations meet or exceed the standard rather than counting how many stations exceed the average score across all stations. The new cleaning contract commencing in spring 2020 will further ensure that cleaning services are being conducted in an equitable manner.

## Vehicle Assignment

### Commuter Rail Vehicle Age

To assess commuter rail vehicle age on the minority-classified line and nonminority-classified lines the MBTA compared the average age of coaches on trains run on each line to the average age of coaches on trains run systemwide. The average age of commuter rail trains run systemwide was 25 years. Table 6-12 shows that the average age of coaches on the single commuter rail line that is classified as minority was not above the systemwide average, and on seven of the 11 commuter rail lines (63.6 percent) that are classified as nonminority the average age of coaches was below the systemwide average. The ratio of the percentage of below-average minority-classified lines to the percentage of below-average nonminority-classified lines is 0.00. This ratio is less than 0.80, so a potential disparate impact is found.

**Table 6-12**  
**Commuter Rail Vehicle Age**

Line Classification	Number of Lines	Number of Lines with Below-Average Coach Age	Percentage of Lines with Below-Average Coach Age
Minority	1	0	0.0%
Nonminority	11	7	63.6%
Ratio of minority to nonminority			0.00
Disparate impact threshold			0.80
Result of disparate impact analysis			Potential Disparate Impact

Note: The data pertain to vehicle assignments on August 16, 2018.

The results shown in Table 6-12 indicate a potential disparate impact in part because there is only one minority-classified line, so the percentage of above-average minority lines can only be 100 percent or zero percent. Also, the one minority line has relatively low ridership compared to other commuter rail lines, so the trainset that operates most frequently on the line is composed of lower-capacity single-level rail cars, all of which are older than the bi-level rail cars required to accommodate the ridership on many other lines. The MBTA has ordered 80 new bi-level rail cars to increase capacity and replace the oldest single-level cars, and it has issued a request for information for new train equipment that could be used on the minority line.







# CHAPTER 7

## REQUIREMENT TO EVALUATE SERVICE AND FARE CHANGES

### INTRODUCTION

As a transit provider that operates 50 or more fixed-route vehicles during peak service in an urbanized area of more than 200,000 in population, the Massachusetts Bay Transportation Authority (MBTA) is required to evaluate major service change and fare change proposals to identify possible disparate impacts on minority populations and/or disproportionate burdens on low-income populations in the service area. During this triennial reporting period, the MBTA performed the following analyses:

- A fare equity analysis for the State Fiscal Year (SFY) 2020 MBTA fare change was accepted by the MBTA Fiscal and Management Control Board (FMCB) on March 11, 2019.
- A service equity analysis for the Better Bus Project, which proposed implementing changes to several bus routes and hiring additional bus drivers to improve off-peak services on high-volume routes and improve reliability, was accepted by the FMCB on May 6, 2019.

In October 2019, the MBTA began a pilot discounted reverse-commute fare on certain commuter rail trains as part of a weekday commuter rail service pilot. The Federal Transit Administration (FTA) granted a six-month extension to the requirement to conduct a fare equity analysis for this reverse-commute fare change because it was part of a one-year service pilot program.

## MBTA DISPARATE IMPACT AND DISPROPORTIONATE BURDEN POLICY

FTA requires transit service providers to set several distinct policies that shape the evaluation process for these service and fare change equity analyses—including definitional policies and numeric threshold policies. As such, the MBTA conducts its analyses in accordance with established policies that define necessary terms, identify analysis thresholds, and detail data sources. The MBTA has incorporated each policy requirement into its comprehensive Disparate Impact and Disproportionate Burden (DI/DB) Policy, which is presented in Appendix 6B. The FMCB voted to accept the DI/DB Policy on January 30, 2017. (See Appendix 7A for documentation of the FMCB’s vote.)

The DI/DB Policy is composed of the following:

- Service Equity Analysis
  - The **Major Service Change Policy** defines those service change proposals that are considered “major” and would, therefore, require a disparate impact or disproportionate burden analysis to understand possible impacts on protected populations from the proposed service change.
  - The **Disparate Impact Policy** sets a threshold for identifying the potential of adverse effects of service changes to be experienced disparately by minority populations within the service area.
  - The **Disproportionate Burden Policy** sets a threshold for identifying the potential of adverse effects of service changes to be experienced disproportionately by low-income populations within the service area.
- Fare Equity Analysis
  - The **Disparate Impact Policy** sets a threshold for identifying the potential of adverse effects of fare changes to be experienced disparately by minority populations within the service area.
  - The **Disproportionate Burden Policy** sets a threshold for identifying the potential of adverse effects of fare changes to be experienced disproportionately by low-income populations within the service area.

The MBTA’s current DI/DB Policy is the result of an undertaking in 2016 to revise the 2014 version of the policy. Two key objectives for the 2016 revision process were (1) redefining what constitutes a “major service change” to distinguish between minor quarterly service adjustments and more significant changes advanced through projects such as the MBTA’s Better Bus Project, and (2) setting disparate and disproportionate impact thresholds that would not be susceptible to false positives attributable to margins of error in the data source, regardless of whether the data source is the US Census or most recent MBTA passenger survey.

The MBTA conducted an extensive public engagement process to set these policies, which included the following public meetings and outreach materials:

- Two stakeholder workshops representing diverse interests and communities served by the MBTA (37 organizations were invited and 16 participated)
- Four public meetings held in Roxbury, Lynn, Downtown Boston, and Mattapan (there were 101 attendees and 55 individual comments)
- MBTA webpage providing draft policy text, background information, and online comment opportunity
- Public meeting flyers emailed to over 3,600 contacts via GovDelivery
- Flyers distributed by hand to organizations and posted on community boards in Boston, specifically in Dudley Square, Codman Square, Fields Corner, and Mattapan

## **MBTA SERVICE AND FARE EQUITY ANALYSES, 2017–20 (FTA C 4702.1B, IV-7)**

The equity analyses performed by the MBTA during this triennial reporting period are detailed below.

### ***FARE EQUITY ANALYSIS: SFY 2020 MBTA FARE CHANGE***

The MBTA completed a fare equity analysis for the SFY 2020 MBTA fare change. The fare equity analysis for this change was accepted by the FMCB on March 11, 2019.

Before considering any systemwide changes in fares, the MBTA undertakes a comprehensive process to model the impacts of the changes. This modeling is done with the assistance of Central Transportation Planning Staff (CTPS) and examines the impacts of the systemwide fare change on ridership, revenue, and fare equity. To model the impacts of the SFY 2020 MBTA fare change, CTPS used an elasticity-based spreadsheet model known as the Fare Elasticity, Ridership, and Revenue Estimation Tool (FERRET) to estimate the projected ridership loss associated with the proposed fare increase and the net revenue change that would result from lower ridership and higher fares.

To estimate the impact of the fare change, CTPS took three steps. First, using FERRET, CTPS estimated that the SFY 2020 MBTA fare change would result in a 5.8 percent average fare increase, leading to a 4.1 percent increase in revenue and 1.2 percent decrease in ridership. Second, CTPS evaluated the effects of a new \$10.00 weekend commuter rail pass that offers riders unlimited travel on the commuter rail system for a single weekend. Third, CTPS included the effects of this new fare product as part of the larger fare change package. To complete this analysis, CTPS converted the benefit of the weekend pass into values that could be incorporated into FERRET's fare equity analysis methodology. Table 7-1 presents the existing and proposed average fares and the absolute and relative price changes for minority riders, low-income riders, and all riders.

**Table 7-1**  
**Existing and Proposed Average Fares and Price Changes**

<b>Rider Classification</b>	<b>Existing Average Fare</b>	<b>Proposed Average Fare</b>	<b>Absolute Price Change</b>	<b>Percentage Price Change</b>
Minority	\$1.39	\$1.42	\$0.04	2.63%
Low-income	\$1.25	\$1.27	\$0.02	1.67%
All riders	\$1.83	\$1.90	\$0.07	3.95%

Note: The values in this table are rounded to the nearest cent or the nearest hundredth of a percent. All calculations were performed using unrounded values.

Source: SFY 2018 Fare Elasticity, Ridership, and Revenue Estimation Tool (FERRET).

The ratio of the proposed average fare increase for minority riders (2.63 percent) to the proposed average fare increase for all riders (3.95 percent) is 0.67. This ratio is less than the disparate impact threshold of 1.10, so no disparate impact on minority riders is found.

Similarly, the ratio of the proposed average fare increase for low-income riders (1.67 percent) to the proposed average fare increase for all riders (3.95 percent) is 0.42. This ratio is less than the disproportionate burden threshold of 1.10, so no disproportionate burden on low-income riders is found.

The detailed fare equity analysis conducted by CTPS for the SFY 2020 MBTA fare change and the creation of a weekend commuter rail pass is provided in Appendix 7B. The FMCB’s approval is provided in Appendix 7C.

***SERVICE EQUITY ANALYSIS: BETTER BUS PROJECT***

The MBTA completed a service equity analysis for the MBTA’s Better Bus Project, a package of major service changes to be implemented beginning in fall 2019. The service equity analysis for the Better Bus Project was accepted by the FMCB on May 6, 2019.

In the spring of 2018, the MBTA launched its Better Bus Project to improve bus service by developing a package of suggested near-term changes to the bus network. During the Better Bus Project, planners evaluated the MBTA’s existing bus services, developed profiles of the existing bus routes, and conducted a market analysis. The MBTA held public meetings in Boston, Cambridge, Quincy, Lynn, Somerville, and Chelsea to get insight from riders about existing conditions. The MBTA also invited riders and other interested parties to provide comments via a feedback form on the project’s website.

Following the analysis and public process, the MBTA developed an initial set of near-term proposals for 63 of the MBTA's approximately 170 bus routes. The MBTA held public meetings about the initial proposals in Boston, Cambridge, Quincy, Lynn, Chelsea, and Watertown.

After reviewing public comments about the initial proposals, the MBTA developed an updated set of service change proposals, which affected 45 routes. Further, as part of the Better Bus Project, the MBTA planned to hire 45 new full-time bus operators beginning in fall 2019 to improve off-peak service on the routes (or corridors) with the highest weekly ridership and to improve bus reliability. All of these proposed changes were deemed "major service changes" according to the MBTA's definition.

CTPS used several datasets to perform an analysis, including population and household data from the 2010 Census, household incomes in the past 12 months from the 2010–14 American Community Survey, existing and proposed revenue vehicle hours by bus route, and existing and proposed bus route alignments. CTPS used three different methods to evaluate whether the service changes would lead to disparate impacts or disproportionate burdens: absolute change in service levels, relative change in service levels, and the ratio of the change in service levels relative to the share of the existing levels of service. Table 7-2 presents the results of the analysis of the change in revenue vehicle hours, and Table 7-3 presents the results of the analysis of the change in weekly route length.

**Table 7-2**  
**Summary of DI/DB Results Relating to Revenue Vehicle Hour Changes**

Analysis Method	Impacts on Minority Populations	Impacts on Low-Income Populations
Absolute change (in RVH) (protected/nonprotected*)	<b>No disparate benefit</b> Ratio: 665 / 550 > 80%	<b>No disproportionate benefit</b> Ratio: 549 / 666 > 80%
Relative change (protected/nonprotected)	<b>No disparate benefit</b> Ratio: 3.1% / 2.1% > 80%	<b>No disproportionate benefit</b> Ratio: 2.9% / 2.4% > 80%
Protected share of change/ protected share of existing	<b>No disparate benefit</b> Ratio: 55% / 45% > 80%	<b>No disproportionate benefit</b> Ratio: 45% / 41% > 80%

\* For impacts on minority populations, "protected" means minority populations and "nonprotected" means nonminority populations. For impacts on low-income populations, "protected" means low-income populations and "nonprotected" means non-low-income populations.

DI/DB = disparate impact and disproportionate burden. RVH = revenue vehicle hours.

Source: Central Transportation Planning Staff.

**Table 7-3**  
**Summary of DI/DB Results Relating to Route Length Changes**

Analysis Method	Impacts on Minority Populations	Impacts on Low-Income Populations
Absolute change (in miles) (protected/nonprotected*)	<b>No disparate impact</b> Ratio: -428 / -669 < 120%	<b>No disproportionate burden</b> Ratio: -426 / -671 < 120%
Relative change (protected/nonprotected)	<b>No disparate impact</b> Ratio: -6.3% / -6.6% < 120%	<b>No disproportionate burden</b> Ratio: -6.5% / -6.4% < 120%
Protected share of change/ protected share of existing	<b>No disparate impact</b> Ratio: 39% / 40% < 120%	<b>No disproportionate burden</b> Ratio: 39% / 39% < 120%

\* For impacts on minority populations, “protected” means minority populations and “nonprotected” means nonminority populations. For impacts on low-income populations, “protected” means low-income populations and “nonprotected” means non-low-income populations.

DI/DB = disparate impact and disproportionate burden.

Source: Central Transportation Planning Staff.

The results of the service equity analysis indicated that implementation of the Better Bus Project proposals would not result in disparate impacts to minority populations, disparate benefits to nonminority populations, disproportionate burdens to low-income populations, or disproportionate benefits to non-low-income populations.

The detailed service equity analysis conducted by CTPS for the implementation of the Better Bus Project is provided in Appendix 7D. The FMCB’s approval is provided in Appendix 7E.

## REVERSE COMMUTE FARE PILOT

In October 2019, the MBTA began offering a discounted fare for reverse commuting on commuter rail trains as part of a new weekday commuter rail service pilot. The discounted fare applies to certain trains traveling between Zone 1A stations and Foxboro Station. Those Zone 1A stations are South Station, Back Bay, Ruggles, and all of the Fairmount Line stations except for Readville. FTA generally requires transit agencies to conduct an equity analysis for fare changes that last more than six months, but in this case FTA granted the MBTA an extension of an additional six months because the length of the service pilot is one year. FTA’s waiver is provided as Appendix 7F. If the MBTA makes a determination to continue the service or fare pilot for longer than one year, an equity analysis will be done for the fare and service components.



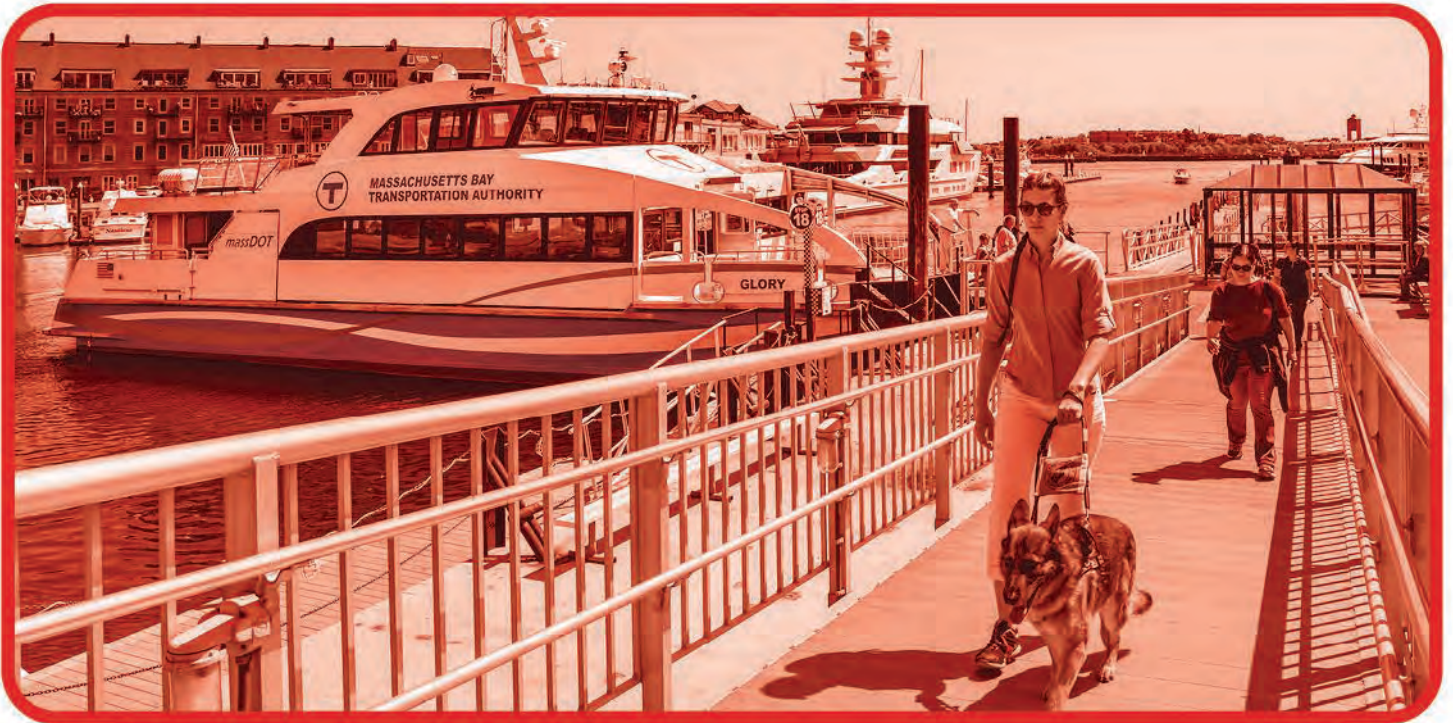
# MBTA TITLE VI PROGRAM APPENDICES

APRIL 2020



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# APPENDIX 1A

## DEFINITIONS FROM FTA TITLE VI

### CIRCULAR 4702.1B



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# Definitions

The following terms and definitions are drawn from the Federal Transit Administration (FTA) Title VI Circular 4702.1B and are helpful for understanding the facts, analyses, and other components within this report. Many of these terms are incorporated in the Massachusetts Bay Transportation Authority's (MBTA) nondiscrimination policies and are used throughout this document.

- **Direct Recipient:** An entity that receives funding directly from FTA. For purposes of Title VI, a direct recipient is distinguished from a primary recipient in that a direct recipient does not extend financial assistance to subrecipients, whereas a primary recipient does.
- **Discrimination:** Any action or inaction, whether intentional or unintentional, in any program or activity of a federal-aid recipient, subrecipient, or contractor that results in disparate impact, disparate treatment, or perpetuating the effects of prior discrimination based on race, color, or national origin.
- **Disparate Impact:** A facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient's policy or practice lacks a substantial legitimate justification and where there exist one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.
- **Disproportionate Burden:** A neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.
- **Disparate Treatment:** Actions that result in circumstances where similarly situated persons are intentionally treated differently (i.e. less favorably) than others because of their race, color, or national origin.
- **Equity Analysis:** A study in which a transit provider evaluates, before implementation, any proposed service change that exceeds the provider's major service change threshold, as well as any proposed fare change. The objective of the analysis is to determine whether those changes will have a disparate impact on minority populations within the transit provider's service area. Low-income populations, while not a protected class under Title VI, are protected by FTA within its implementation of

Executive Order 12898 pertaining to environmental justice. As such, FTA requires transit providers to evaluate whether any proposed major service or any fare change would have a disproportionate burden on low-income populations.

- **Fixed Route:** Refers to public transportation service provided in vehicles operated along a pre-determined route according to a fixed schedule.
- **Limited English Proficient:** Refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes individuals who reported to the US Census that they speak English less than very well, not well, or not at all.
- **Low-Income Person:** An individual whose household income is less than 60 percent of the median household income of the MBTA service area.
- **Low-Income Population:** Any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed or transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FTA program, policy, or activity.
- **Minority Persons include the following:**
  1. American Indian and Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliations or community attachment.
  2. Asian, which refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
  3. Black or African American, which refers to people having origins in any of the Black racial groups of Africa.
  4. Hispanic or Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
  5. Native Hawaiian or Other Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam,

Samoa, or other Pacific Islands.

- **Minority Populations:** Any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed or transient populations (such as migrant workers or Native Americans) who will be similarly affected by a proposed US Department of Transportation program, policy, or activity.
- **Minority Transit Route:** A fixed route on which the percentage of riders who identify as minority persons exceeds the systemwide average of such of riders as determined by the 2015–17 MBTA Systemwide Passenger Survey.
- **National Origin:** The particular nation in which a person was born or where the person’s parents or ancestors were born.
- **Recipient:** Any public or private entity that receives federal financial assistance from FTA, whether directly from FTA or indirectly through a primary recipient. This term includes subrecipients, direct recipients, designated recipients, and primary recipients. The term does not include any ultimate beneficiary under any such assistance program.
- **Service Standard/Policy:** An established service performance measure or policy used by a transit provider or other recipient as a means to plan or distribute services and benefits within its service area.
- **Subrecipient:** An entity that receives federal financial assistance from FTA through a primary recipient.
- **Title VI Program:** A document developed by an FTA recipient (e.g. the MBTA) to demonstrate how the recipient is complying with Title VI requirements. Direct and primary recipients must submit their Title VI Programs to FTA every three years. The Title VI Program must be approved by the recipient’s board of directors or appropriate governing entity or official(s) responsible for policy decisions prior to submission to FTA.



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# APPENDIX 1B

## APPROVAL OF THE MBTA TITLE VI PROGRAM



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# APPENDIX 2A

## TITLE VI NONDISCRIMINATION NOTICE



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# Notice of Nondiscrimination Rights and Protections to Beneficiaries

## Federal "Title VI/Nondiscrimination" Protections

The Massachusetts Bay Transportation Authority (MBTA) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of **race, color, or national origin** (including **limited English proficiency**), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Transit Administration prohibit discrimination on the basis of **age, sex, and disability**. These protected categories are contemplated within the MBTA Title VI Program consistent with federal interpretation and administration. Additionally, the MBTA provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

## State Nondiscrimination Protections

The MBTA also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on **race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry**. Likewise, the MBTA complies with the Governor's Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on **race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status** (including Vietnam-era veterans), or **background**.

## Additional Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

MBTA Customer Communications  
10 Park Plaza Room 5610  
Boston, MA 02116

617-222-3200  
TTY: 617-222-5416  
www.mbta.com

### Complaint Filing

To file a complaint alleging a violation of Title VI or related federal nondiscrimination law, contact the MBTA Title Specialist (via MBTA Customer Communications) within 180 days of the alleged discriminatory conduct.

To file a complaint alleging a violation of the state's Public Accommodation Law, contact the Massachusetts Commission Against Discrimination within 300 days of the alleged discriminatory conduct at:

Massachusetts Commission Against Discrimination (MCAD)  
One Ashburton Place, 6th Floor  
Boston, MA 02109  
617-994-6000  
TTY: 617-994-6196

### Translation

**English:** If this information is needed in another language, please contact the MBTA Title VI Specialist at 617-222-3200.

**Portuguese:** Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MBTA pelo telefone 617-222-3200.

**Spanish:** Si necesita esta información en otro idioma, por favor contacte al especialista de MBTA del Título VI al 617-222-3200.

**Chinese Simplified: (mainland & Singapore):** 如果需要使用其它语言了解信息，请联系麻纱湾区交通局（MBTA）《民权法案》第六章专员，电话617-222-3200。

**Chinese Traditional: (Hong Kong & Taiwan):** 如果需要使用其它语言了解信息，請聯繫麻省灣區交通局（MBTA）《民權法案》第六章專員，電話617-222-3200。

**Russian:** Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь со специалистом по Титулу VI MBTA по тел:617-222-3200.

**Haitian Creole:** Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Espesyalis MBTA Title VI la nan nimewo 617-222-3200.

**Vietnamese:** Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Chuyên viên Luật VI của MBTA theo số điện thoại 617-222-3200.





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# APPENDIX 2B

## LIST OF POSTING LOCATIONS OF THE TITLE VI NONDISCRIMINATION NOTICE



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	Notification	Quantity
<b>Red Line</b>		
Alewife	Yes	2
Davis	Yes	2
Porter	Yes	1
Harvard	Yes	3
Central	Yes	2
Kendall/MIT	Yes	2
Charles/MGH	Yes	1
Park Street	Yes	1
Downtown Crossing	Yes	3
South Station	Yes	2
Broadway	Yes	1
Andrew	Yes	1
JFK/UMass	Yes	1
Savin Hill	Yes	1
Fields Corner	Yes	1
Shawmut	Yes	1
Ashmont	Yes	1
North Quincy	Yes	2
Wollaston	Yes	1
Quincy Center	Yes	1
Quincy Adams	Yes	1
Braintree	Yes	1

<b>Orange Line</b>		
Oak Grove	Yes	1
Malden Center	Yes	1
Wellington	Yes	1
Assembly	Yes	2
Sullivan Square	Yes	1
Community College	Yes	1
North Station	Yes	3
Haymarket	Yes	2
State Street	Yes	3
Downtown Crossing	Yes	4
Chinatown	Yes	2
Tufts Medical Center	Yes	2
Back Bay	Yes	1
Massachusetts Avenue	Yes	2
Ruggles	Yes	4
Roxbury Crossing	Yes	1
Jackson Square	Yes	2
Stony Brook	Yes	2
Green Street	Yes	2

Forest Hills	Yes	2
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<b>Blue Line</b>		
Wonderland	Yes	1
Revere Beach	Yes	1
Beachmont	Yes	1
Suffolk Downs	Yes	2
Orient Heights	Yes	2
Wood Island	Yes	2
Airport	Yes	2
Maverick	Yes	1
Aquarium	Yes	1
State Street	Yes	3
Government Center	Yes	1
Bowdoin	Yes	1

<b>Green Line</b>		
Lechmere	Yes	1
Science Park/West End	Yes	1
North Station	Yes	1
Haymarket	Yes	2
Government Center	Yes	1
Park Street	Yes	1
Boylston	Yes	2
Arlington	Yes	1
Copley	Yes	2
Hynes Convention Center	Yes	1
Kenmore	Yes	1
Prudential	Yes	1
Symphony	Yes	1
Northeastern University	No	0
Museum of Fine Arts	No	0
Longwood Medical Area	No	0
Brigham Circle	No	0
Fenwood Road	No	0
Mission Park	No	0
Riverway	No	0
Back of the Hill	No	0
Heath	No	0
Fenway	No	0
Longwood	Yes	1
Brookline Village	Yes	1
Brookline Hills	No	0
Beaconsfield	No	0
Reservoir	Yes	1

Chestnut Hill	No	0
Newton Centre	No	0
Newton Highlands	No	0
Eliot	No	0
Waban	No	0
Woodland	No	0
Riverside	Yes	1
Saint Marys Street	No	0
Hawes Street	No	0
Kent Street	No	0
Saint Paul Street	No	0
Coolidge Corner	No	0
Summit Avenue	No	0
Brandon Hall	No	0
Fairbanks Street	No	0
Washington Square	No	0
Tappan Street	No	0
Dean Road	No	0
Englewood Avenue	No	0
Cleveland Circle	No	0
Blandford Street	No	0
Boston University East	No	0
Boston University Central	No	0
Boston University West	No	0
Saint Paul Street	No	0
Pleasant Street	No	0
Babcock Street	No	0
Packards Corner	No	0
Harvard Avenue	No	0
Griggs Street	No	0
Allston Street	No	0
Warren Street	No	0
Washington Street	No	0
Sutherland Road	No	0
Chiswick Road	No	0
Chestnut Hill Avenue	No	0
South Street	No	0
Boston College	Yes	1

<b>Silver Line</b>		
Dudley Square	Yes	1
South Station	Yes	1
Courthouse	Yes	2
World Trade Center	Yes	2
Silver Line Way	No	0
Airport Terminals	No	0

Eastern Avenue	Yes	1
Box District	Yes	1
Bellingham Square	Yes	1
Chelsea	Yes	1

<b>Mattapan Line</b>		
Cedar Grove	Yes	1
Butler	Yes	1
Milton	No	0
Central Avenue	No	0
Valley Road	Yes	1
Capen Street	Yes	1
Mattapan	No	0



# APPENDIX 2C

## TITLE VI COMPLAINT FORM



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Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, MassDOT Secretary & CEO  
Steve Poftak, General Manager



## Discrimination Complaint Form

Please provide the following information in order for us to process your complaint. This form is available in alternate formats and multiple languages. Should you require these services or any other assistance in completing this form, please let us know.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Numbers: (Home) \_\_\_\_\_ (Work) \_\_\_\_\_ (Cell) \_\_\_\_\_

Email Address: \_\_\_\_\_

### Please indicate the nature of the alleged discrimination:

Categories protected under *Title VI of the Civil Rights Act of 1964*:

Race  Color  National Origin (including limited English Proficiency)

Additional categories protected under related Federal and/or State laws/orders:

Disability  Age  Sex  Sexual Orientation  Religion  Ancestry

Gender  Ethnicity  Gender Identity  Gender Expression  Creed

Veteran's Status  Background

### Who do you allege was the victim of discrimination?

You  A Third Party Individual  A Class of Persons

### Name of individual and/or organization you allege is discriminating:

---

**Do you consent** to the investigator sharing your name and other personal information with other parties to this matter when doing so will assist in investigating and resolving your complaint?

Yes  No







# APPENDIX 2D

## TRANSLATIONS OF TITLE VI COMPLAINT PROCEDURES



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## إجراءات تقديم الشكاوى

## مقدمة

يصف هذا الفصل إجراءات قسم النقل في ولاية ماساتشوستس للتعامل مع الباب السادس الخاص بالشكاوى المقدمة على أساس التمييز وتنظيمها. إن هذه الإجراءات مُعدة لتوفير الإجراءات الواجب اتخاذها فيما يخص المشتكين والجهات التي تستجيب للشكاوى. تم تحديث الإجراءات التي يتم وصف تفاصيلها هنا في 2017 كجزء من جهد تعاوني بين وحدة الباب السادس التابعة لمكتب التنوع والحقوق المدنية وفريق التحقيقات. وانطلاقاً من روح توحيد الإجراءات والشفافية، عمل كادر موظفي مكتب التنوع والحقوق المدنية من أجل جعل إجراءات تقديم الشكاوى في كل مجالات برنامج الالتزام بعدم التمييز على المستوى الفدرالي وعلى مستوى الولاية (مثل الباب السادس والباب السابع) متنسقة وممكنة بحيث يسهل على العامة من الناس فهم العملية.

## الغرض ومدى التطبيق

إن هدف هذا الفصل هو وضع الإجراءات الخاصة بالتعامل مع وتنظيم كل من الشكاوى المتعلقة بالتمييز التي يتم تقديمها بشكل مباشر لقسم النقل في ولاية ماساتشوستس وشكاوى التمييز التي لدى قسم النقل في ولاية ماساتشوستس سلطة التعامل معها وفقاً للباب السادس من قانون الحقوق المدنية لعام 1964 (الباب السادس) وسلطات الولاية والسلطات الفدرالية ذات العلاقة والتي لها صلة بعدم التمييز، بما في ذلك قانون الأمريكيين ذوي الإعاقات.

تصف الإجراءات العملية الإدارية التي تهدف إلى تحديد حالات التمييز وانهاؤها في البرامج والأنشطة التي يتم تمويلها على المستوى الفدرالي. ولا توفر الإجراءات سبيلاً لإغاثة المشتكين الذين يسعون للحصول على تعويضات فردية، بما في ذلك التعويضات الجزائية بسبب اضرار والمكافآت التعويضية، وهي لا تمنع المشتكين من تقديم الشكاوى لدى وكالات أخرى تابعة للولاية أو وكالات فدرالية، كما لا تحرم المشتكين من حق السعي للحصول على خدمات محامي خاص للتعامل مع أعمال التمييز المزعومة.

تنطبق الإجراءات المذكورة في هذه الوثيقة على قسم النقل في ولاية ماساتشوستس والتابعين له من المتلقين الفرعيين للأموال الفدرالية والمقاولين والمقاولين الفرعيين في إدارتهم الخاصة بالبرامج والأنشطة التي يتم تمويلها فدرالياً.

وكجزء من جهودهم للائتمان للباب السادس، يتم تشجيع المتلقين الفرعيين للمساعدة المالية الفدرالية من خلال قسم النقل في ولاية ماساتشوستس على اعتماد إجراءات تقديم الشكاوى هذه. ومن خلال القيام بذلك، فإن هؤلاء المتلقين الفرعيين يعترفون بالتزامهم بتوفير الفرصة للعامة من الناس لتقديم شكوى يزعمون فيها حصول انتهاكات بحق متطلبات عدم التمييز في كل جوانب برامج وخدمات وأنشطة المنظمة. ووفقاً للمبادئ التوجيهية الفدرالية، فإن المتلقين الفرعيين للأموال المتعلقة بمشاريع النقل يفهمون بأن لديهم سلطة التعامل مع الشكاوى المتعلقة بالباب السادس وسوف يبلغون المتلقين الرئيسيين وقسم النقل في ولاية ماساتشوستس بالشكاوى التي يتلقونها ونتائج التحقيقات بالطريقة التي يتم فيها التعامل مع الأمور. ويفهم كذلك المتلقون الفرعيون للأموال المتعلقة بمشاريع الطرق السريعة بأن ليس لديهم سلطة التحقيق في الشكاوى التي تتعلق بانتهاكات للباب السادس التي يتم تقديمها ضد منظماتهم (حيث تكون منظماتهم هي المستجيب أو الطرف الذي يُزعم قيامه بانتهاك الباب السادس). ويتم إحالة جميع المطالبات إلى قسم النقل في ولاية ماساتشوستس لتحديد السلطة التحقيقية المناسبة. ويحتفظ المتلقون الفرعيون للأموال المتعلقة بمشاريع الطرق السريعة بحق النظر في مزاعم انتهاك القسم السادس كمسألة تتعلق بالتأمين و/أو الائتمان للسياسة الداخلية، غير أنه لا يُسمح لهم اتخاذ القرارات حول انتهاكات محتملة للباب السادس. ويشجع قسم النقل في ولاية ماساتشوستس جميع المتلقين الفرعيين على التواصل مع الموظف المختص بالباب السادس التابع لمكتب التنوع والحقوق المدنية، ومدير البرامج الفدرالية و/أو مدير قسم التحقيقات عندما/إذا يتم تسلم الشكاوى وذلك لضمان التعامل السليم مع القضية.

## التعريفات

المشتكي (Complainant) – الشخص الذي يقدم شكوى لدى قسم النقل في ولاية ماساتشوستس.

الشكاوى (Complaint) – بيان مكتوب أو مطبوع الكترونياً يخص مزاعماً بحصول تمييز يحتوي على طلب من المكتب المتلقي للشكاوى لكي يتخذ إجراءً معيناً. وعندما يتم تقديم الشكاوى من قبل شخص ذي إعاقة، فإن مصطلح شكوى يشمل تنسيقات بديلة لاستيعاب حالة الإعاقة لدى المشتكي.

**التمييز (Discrimination)**- هو الفعل أو عدم اتخاذ فعل معين، سواء كان مقصودا ام غير مقصود، يتعرض من خلاله شخص في الولايات المتحدة لمعاملة لا تتسم بالمساواة أو تأثير مُتباين تحت أي برنامج أو نشاط يتلقى المساعدة الفدرالية وذلك فقط بسبب العرق أو اللون أو الأصل الوطني أو لأسباب تغطيها سلطات أخرى لعدم التمييز، مثل النوع الاجتماعي والعمر والإعاقة.

**الإدارات العاملة (Operating Administrations)**- وكالات تابعة لوزارة النقل الأمريكية، بما في ذلك الإدارة الفدرالية للطرق السريعة، والإدارة الفدرالية للنقل، والإدارة الفدرالية لسكك الحديد، والإدارة الوطنية لسلامة الطرق السريعة التي تموّل برامج وأنشطة النقل.

**الجهة المستجيبة للشكوى (Respondent)**- الشخص أو الوكالة أو المؤسسة أو المنظمة التي يُزعم قيامها بعملية تمييز.

## تقديم الشكاوى

يشرح هذا القسم بالتفصيل إجراءات قسم النقل في ولاية ماساتشوستس للتعامل مع شكاوى التمييز التي تتعلق بالباب السادس (القائمة على العرق أو اللون أو الأصل الوطني، بما في ذلك اللغة) وشكاوى التمييز القائمة على أساس الاحكام الإضافية لعدم التمييز (القائمة على أساس العمر والجنس والإعاقة). يجعل القانون الفدرالي واللوائح الفدرالية التي تحكم الباب السادس لقانون الحقوق المدنية لعام 1964 (الباب السادس) عاتق سلطة التنسيق الكلي للتحقيق في شكاوى الحقوق المدنية، من مسؤوليات وزارة العدل الأمريكية، التي تعمل بالتعاون مع الوكالات الفدرالية التي تنفذ هذه المسؤوليات. وفي مجال النقل، فإن هذه السلطة التحقيقية هي من مسؤوليات وزارة النقل الأمريكية ووكالاتها الخاصة بوسائل النقل المختلفة، بما في ذلك الإدارة الفدرالية للطرق السريعة، والإدارة الفدرالية للنقل. وبالتنسيق مع متطلبات وزارة النقل الأمريكية، وضعت الإدارة الفدرالية للطرق السريعة والإدارة الفدرالية للنقل لوائحها وإرشادات تطلب من المتلقين الرئيسيين والمتلقين الفرعيين للمساعدات المالية الفدرالية ان يضعوا إجراءات للتعامل مع الشكاوى التي تتعلق بالباب السادس التي يتم تقديمها لدى هذه المنظمات.

تم تصميم الإجراءات التي يتم شرحها ادناه، والتي هي على غرار إجراءات الشكاوى التي تم التوصية بها والتي أصدرتها وزارة العدل الأمريكية، لتوفير فرصة مناسبة للتعامل مع الشكاوى مع احترام الإجراءات الواجبة لكل من المشتكين والجهات المستجيبة للشكوى. وبالإضافة إلى عملية الحل الرسمي للشكاوى والتي يتم شرحها بالتفصيل هنا، فإن قسم النقل في ولاية ماساتشوستس تتخذ خطوات اكيدة لمتابعة الحل غير الرسمي لأي أو جميع شكاوى الباب السادس، عندما يكون ذلك مناسباً.

## عملية تقديم الشكاوى

### 1. من يمكن له أن يقدم شكوى؟

أي شخص من عامة الناس، بالإضافة إلى جميع عملاء قسم النقل في ولاية ماساتشوستس، ومقدمي الطلبات، والمقاولين، والمتلقين الفرعيين الذين يعتقدون أنه تم إساءة معاملتهم هم أو طرف ثالث أو مجموعة اشخاص أو تم معاملتهم بشكل غير منصف بسبب عرقهم أو لونهم أو أصلهم الوطني (بما في ذلك محدودية الكفاءة في استخدام اللغة الإنجليزية) والذي يُعد انتهاكا للباب السادس لقانون الحقوق المدنية لعام 1964، والقوانين الفدرالية أو قوانين الولاية وانظمتها ذات العلاقة، أو سياسة منع المضايقة والتمييز التابعة لقسم النقل في ولاية ماساتشوستس. ووفقا للباب السادس وسياسة منع المضايقة والتمييز، فإن الانتقام من عامة الناس على أساس العرق أو اللون أو الأصل الوطني هو امر محظور أيضا.

### 2. كيف أقدم الشكاوى؟

يمكن تقديم الشكاوى لدى الكيانات التالية:

اخصائي الباب السادس التابع لقسم النقل في ولاية ماساتشوستس  
مكتب التنوع والحقوق المدنية التابع لقسم النقل في ولاية ماساتشوستس  
الهاتف:

البريد الالكتروني:

**The MassDOT Title VI Specialist**  
MassDOT Office of Diversity and Civil Rights  
Phone: or for Relay Service.  
Email:

مكتب التنوع والحقوق المدنية التابع لقسم النقل في ولاية ماساتشوستس – وحدة التحقيقات  
مساعد سكرتير التنوع والحقوق المدنية، قسم النقل في ولاية ماساتشوستس  
البريد الالكتروني:

**The MassDOT Office of Diversity and Civil Rights – Investigations Unit**  
Assistant Secretary of Diversity & Civil Rights, MassDOT  
Email:

الإدارة الفدرالية للطرق السريعة  
الإدارة الفدرالية للطرق السريعة  
وزارة النقل الأمريكية  
البريد الالكتروني:  
الهاتف:

**The Federal Highway Administration**  
Federal Highway Administration  
U.S. Department of Transportation  
Office of Civil Rights  
Email:  
Phone:

الإدارة الفدرالية للنقل  
الإدارة الفدرالية للنقل  
وزارة النقل الأمريكية  
مكتب الحقوق المدنية  
ومنه إلى: الفريق المختص بالشكاوى

**The Federal Transit Administration**  
Federal Transit Administration  
U.S. Department of Transportation  
Office of Civil Rights  
Attention: Complaint Team

يرجى ملاحظة ما يلي:

- عندما تستلم الإدارة الفدرالية للنقل شكوى حول الباب السادس فيما يخص قسم النقل في ولاية ماساتشوستس، أو متلقي فرعي أو مقاول، فإنه يجوز لها أن تطلب من قسم النقل في ولاية ماساتشوستس ان يُجري التحقيق في المسألة.
- إذا تم تقديم شكوى ما لقسم النقل في ولاية ماساتشوستس تتعلق بالباب السادس وتدعي حصول انتهاك من قبل شعبة الطرق السريعة التابعة لقسم النقل في ولاية ماساتشوستس، فإنه يتم إحالة الشكوى إلى المكتب المحلي التابع للإدارة الفدرالية للطرق السريعة الذي بدوره يقوم بإحالة الشكوى لمكتب الحقوق المدنية التابع لمقر الإدارة الفدرالية للطرق السريعة ليتم التعامل مع ذلك.
- إذا تسلّم قسم النقل في ولاية ماساتشوستس شكوى ما تتعلق بالباب السادس تم تقديمها ضد متلقي فرعي من شعبة الطرق السريعة في قسم النقل في ولاية ماساتشوستس، فإنه يجوز لقسم النقل في ولاية ماساتشوستس التعامل مع الشكوى والتحقيق في شأنها، أو يجوز له إحالتها لمكتب الحقوق المدنية التابع لمقر الإدارة الفدرالية للطرق السريعة.

### 3. مالذي يجب عليّ تقديمه مع الشكوى؟

يتوفر نموذج الشكوى المتعلقة بالباب السادس/ عدم التمييز بشكل الكتروني على موقع الباب السادس لقسم النقل في ولاية ماساتشوستس (<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>)، أو على شكل أوراق مطبوعة يمكن الحصول عليها من اخصائي الباب السادس التابع لقسم النقل في ولاية ماساتشوستس والمذكور أعلاه. و عوضا عن ذلك، فإنه يجوز للمشتكي ان يقدم الشكوى على شكل رسالة كطريقة بديلة ويجب ان تحتوي على مايلي:

- اسمك، وتوقيعك، ومعلومات الاتصال الحالية الخاصة بك (مثل، رقم الهاتف والعنوان).
- اسم الجاني المزعوم ورقم بطاقته (إذا كان معروفا ومنطبقا).
- وصف لكيفية حصول التصرف المحظور، مع ذكر الزمان والمكان.
- وصف بالتفاصيل يظهر لماذا تعتقد أنه تم التعامل معك بصورة مختلفة.
- أسماء ومعلومات الاتصال الخاص بأي شهود.
- أي معلومات أخرى تعتقد أن لها علاق بشكواك.

أ. في حال عدم تمكن المشتكي من توفير بيان مكتوب، فإنه يمكن تقديم شكوى شفوية إلى مكتب التنوع والحقوق المدنية. يُجري محقق مختص بالحقوق المدنية مقابلة مع المشتكي. ويقوم مُحقق الحقوق المدنية بمساعدة الشخص، إذا تطلب الامر ذلك، لتحويل الشكوى الشفهية إلى شكوى مكتوبة. ويجب ان يوقع المشتكي على جميع الشكاوى.

ب. يجوز تقديم الشكاوى مجهولة المصدر بنفس الطريقة. ويتم التحقيق في الشكاوى مجهولة المصدر بنفس طريقة الشكاوى الأخرى.

ج. يتم قبول الشكاوى بأي لغة مُعترف بها، وتتوفر نماذج لتقديم الشكاوى بعدة لغات.

### 4. كم هي الفترة الزمنية التي يمكن لي خلالها تقديم الشكوى؟

أ. يجب تقديم الشكوى التي تدعى حصول انتهاك للباب السادس و/ أو سياسة منع المضايقة والتمييز التابعة لقسم النقل في ولاية ماساتشوستس في موعد أقصاه مائة وثمانين (180) يوماً من تاريخ الانتهاك المزعوم.

ب. يجب تقديم الشكاوى التي تدعى حصول انتهاكات لقانون الولاية أو القانون الفدرالي ضمن الإطار الزمني التي يضعه القانون الفرعي، أو اللوائح أو السوابق القضائية.

## 5. كيف سيتم التعامل مع الشكوى الخاصة بي؟

عندما يتم تسلم شكوى ما، فإنه يتم تعيينها لمحقق مختص بالحقوق المدنية. ويعمل هذا المحقق على:

أ. تحديد الولاية القضائية:

يملك مكتب التنوع والحقوق المدنية الولاية القضائية إذا كانت الشكوى:

(1) تنطوي على بيان أو سلوك ينتهك ما يلي:

- التعهد والالتزام القانونيان لقسم النقل في ولاية ماساتشوستس المعنيين بمنع التمييز أو التحرش أو الانتقام على أساس الميزات المحمية فيما يتعلق بأي مجال من مجالات الخدمة العامة للوكالة،
- الالتزام الذي قطعه المتلقون الفرعيون والمقاولون العاملون مع قسم النقل التابع لولاية ماساتشوستس للالتزام بسياسات قسم النقل، و

(2) إذا تم تقديمه في الوق المناسب.

ب. التأكيد باستلام الشكوى وتقديم قرار فيما يخص الولاية القضائية خلال عشرة (10) أيام عمل من تاريخ استلام الشكوى.

- إذا قرر المحقق المختص بالحقوق المدنية أن الشكوى لا ترتقي لتشكل انتهاكاً للحقوق المدنية، فإنه يقوم بإبلاغ المشتكي والموظف المختص بالباب السادس بشكل خطي فيما يخص النتائج ويتم إغلاق القضية.

ج. إجراء تحقيق مكثف بالمزاعم المذكورة في الشكوى وذلك وفقاً للإجراءات الداخلية للشكاوى الخاصة بقسم النقل في ولاية ماساتشوستس.

## 6. ماذا يحصل للتوصل إلى النتائج وتقديم التوصيات؟

في نهاية التحقيق، يُرسل المحقق واحدة من الرسائل الثلاثة التالية إلى المشتكي والجهة المستجيبة للشكوى وذلك بناءً على النتائج التي تم التوصل إليها:

أ. رسالة تحتوي على حل للمشكلة توضح الخطوات التي اتخذتها أو ستتخذها الجهة المستجيبة للشكوى للائتمان للباب السادس.



ب. رسالة تخص التوصل إلى النتائج يتم إصدارها عندما يتم التأكد ان الجهة المستجيبة للشكوى تمتثل للباب السادس. وتشمل هذه الرسالة توضيحا يبين سبب كون الجهة المستجيبة للشكوى ممتثلة، وتقدم اشعارا بحقوق المشتكي بتقديم استئناف.

ج. رسالة تخص التوصل النتائج عندما يتم التأكد من ان الجهة المستجيبة للشكوى لا تمتثل للباب السادس. وتشمل هذه الرسالة كل انتهاك يتم الإشارة إليه بناء على اللوائح المعمول بها، ووصف مختصر بالنتائج/ التوصيات، وعواقب عدم الامتثال الطوعي، وعرض للمساعدة في وضع خطة لحل المشكلة من خلال الامتثال، إذا كان ذلك مناسباً.

#### 7. هل يمكن لي ان أقدم استئنافا بحق نتائج ما؟

إذا لم يوافق المشتكي أو الجهة المستجيبة للشكوى على نتائج المحقق فيمكن له/ لها/ لهم تقديم استئناف لمساعد السكرتير الخاص بالتنوع والحقوق المدنية. ويجب على الجهة المقدمة للاستئناف ان توفر أية معلومات جديدة لم تكن متوفرة أثناء سير التحقيق الأصلي والتي من شأنها ان تجعل قسم النقل في ولاية ماساتشوستس يعيد النظر في قراراته. يجب تقديم طلب الاستئناف وأية معلومات جديدة خلال ستين (60) يوماً من تاريخ ارسال رسالة النتائج. وبعد مراجعة هذه المعلومات، سيجيب قسم النقل في ولاية ماساتشوستس أما من خلال اصدار رسالة مُنقحة تحتوي على قرار أو من خلال إعلام الجهة المُقدمة للاستئناف أن الرسالة الاصلية الخاصة بالقرار أو النتائج تبقى سارية المفعول.

## 投诉程序

## 简介

本章说明麻州交通部（MassDOT）对《民权法案》第六章（Title VI）歧视投诉的处理及裁定程序。设置这些程序的目的是为投诉方和被投诉方提供正当程序。在多样性及民权办公室《民权法案》第六章工作组与调查组共同努力下，本章详解的投诉过程在 2017 年得以更新。多样性及民权办公室职员本着一致和透明的精神尽力使投诉程序在联邦、州反歧视责任项目领域（如第六章和第七章）之间保持连贯、可行，并以清晰的方式展示出来，让公众能方便理解投诉过程。

## 目的及适用性

本章为两类歧视投诉的处理和裁决确立程序。这两类投诉分别是（一）直接向麻州交通部提交的歧视投诉，（二）根据 1964 年《民权法案》第六章和相关州、联邦反歧视机构包括《美国残疾人法案》的规定，麻州交通部有代理权处理的投诉。

这些程序阐明识别、消除联邦资助项目和活动中歧视现象的管理过程。这些程序不为寻求个人解决方式（包括处罚性赔偿或薪资酬金）的投诉人提供抚慰手段；不禁止投诉人向其它州或联邦机构提出投诉；也不否认投诉人寻求私人法律顾问解决受控歧视行为的权利。

本文所述程序适用于麻州交通部及其次级承接单位、承包商和分包人管理的联邦资助项目和活动。

为了遵守《民权法案》第六章，我们鼓励通过麻州交通部获得联邦财政资助的次级承接单位采纳此投诉程序。如采纳，次级承接单位承认有义务为公众提供机会投诉其机构项目、服务和活动中违反反歧视要求的行为。根据联邦规定，运输类资助的次级承接单位理解其有权处理《民权法案》第六章投诉，且会通知其上级承接单位（麻州交通部）收到的投诉和问题处理调查结果。公路类资助的次级承接单位应明白其无权调查针对其机构（即该单位是被控违反《民权法案》第六章的被投诉方或一方）的《民权法案》第六章投诉。所有此类投诉需转给麻州交通部，由麻州交通部决定合适的调查机构。公路类资助的次级承接单位保留将违反《民权法案》第六章指控作为保证和（或）内部政策承诺的权利，但无权裁定被指控行为是否可能违反《民权法案》第六章。麻州交通部鼓励所有次级承接单位在收到《民权法案》第六章投诉时与多样性及民权办公室《民权法案》第六章专员、联邦项目管理和（或）调查部门负责人沟通，以保证问题得到恰当处理。

## 术语解释

**投诉方 (Complainant)**：向麻州交通部提出投诉的一方。

**投诉 (Complaint)**：有关歧视指控的书面或电子陈述，其中包括一份送达至接收办公室采取行动的请求。如投诉书由残障人士提交，术语“投诉书”涵盖顾及投诉人残障的替代格式的投诉。

**歧视 (Discrimination)**：无论故意还是无意，在美国的个人仅因种族、肤色、国籍，或其它反歧视机构规定的情形，如性别、年龄，或残障等而受到任何获联邦资助项目或活动的 unfair 对待或完全不同影响的行为或无作为。

**业务管理机构 (Operating Administrations)**：受资助项目或活动的美国交通部各机构，包括联邦公路管理局、联邦运输管理局、联邦铁路管理局和全美公路交通安全管理局。

**被投诉方 (Respondent)**：被控有歧视行为的人员、代理、机构，或组织。

## **提交投诉**

本节具体说明麻州交通部处理《民权法案》第六章歧视投诉（基于种族、肤色，或国籍，包括语言）以及基于（年龄、性别和残障）其它联邦反歧视规定的歧视投诉的程序。涉及《民权法案》第六章的联邦法律法规将民权投诉调查的全部协调权授予美国司法部，而后者与有义务遵守法案的联邦机构紧密协作。在交通领域，此调查权被赋予美国交通部及其各类交通管理机构，包括联邦公路管理局和联邦运输管理局。根据美国交通部的规定，联邦公路管理局、联邦运输管理局建立规章制度要求获联邦财政资助单位及其次级承接单位建立处理针对本机构的《民权法案》第六章投诉程序。

下述程序的制定以美国司法部设立并推荐的投诉程序为模型，其目的是在尊重正当程序的基础上为投诉和被投诉双方解决投诉问题提供公平机会。除以下正式的投诉解决过程，可能的话，麻州交通部也会采取积极措施寻求对任何、所有《民权法案》第六章相关投诉的非正式解决方法。

## **投诉过程**

### **1. 谁可提出投诉？**

任何公众，连同麻州交通部所有客户、申请人、承包商，或次级承接单位，都可提出投诉，如果他们认为自己、第三方，或一群人因其种族、肤色，或国籍（包括有限的英文水平）而受到不当对待或不公正对待，从而违反了 1964 颁布的《民权法案》第六章、相关联邦、州法律法规，或麻州交通部制定的反歧视骚扰预防政策。《民权法案》第六章和反歧视骚扰预防政策也禁止因种族、肤色，或国籍对公众进行报复的行为。

### **2. 如何提出投诉？**

可向以下机构或人员提交投诉：

**The MassDOT Title VI Specialist**（麻州交通部《民权法案》第六章专员）  
MassDOT Office of Diversity and Civil Rights（麻州交通部多样性及民权办公室）  
电话：  
电子邮件：

**The MassDOT Office of Diversity and Civil Rights - Investigations Unit  
(麻州交通部多样性及民权办公室调查组)**

Assistant Secretary of Diversity & Civil Rights, MassDOT (麻州交通部多样性及民权助理秘书)

电子邮件:

**The Federal Highway Administration (联邦公路管理局)**

Federal Highway Administration (联邦公路管理局)

U. S. Department of Transportation (美国交通部)

Office of Civil Rights (民权办公室)

电子邮件:

电话:

**The Federal Transit Administration (联邦运输管理局)**

Federal Transit Administration (联邦运输管理局)

U. S. Department of Transportation (美国交通部)

Office of Civil Rights (民权办公室)

Attention: Complaint Team (投诉组(收))

请注意:

- 联邦运输管理局收到对麻州交通部、次级承接单位, 或承包商《民权法案》第六章歧视投诉时, 联邦运输管理局可能要求麻州交通部调查该投诉。
- 如果提交给麻州交通部的《民权法案》第六章歧视投诉指控麻州交通部的公路科违反该法案, 投诉将被转交给当地联邦公路管理局办公室, 该办公室然后把投诉转交给联邦公路管理局总部的民权办公室处理。
- 如果提交给麻州交通部的《民权法案》第六章歧视投诉指控麻州交通部公路科的次级承接单位违反该法案, 麻州交通部可能调查处理该投诉或提出让联邦公路管理局总部的民权办公室处理。

### 3. 投诉需包括什么内容?

《民权法案》第六章/反歧视投诉表可从麻州交通《民权法案》第六章网站上下载(网址:

<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>), 或从麻州交通部《民权法案》第六章专员处(联系方式见上文)获取。投诉人或可以其它格式的通信提交, 通信应包括以下信息:

- 您的姓名、签名和当前的联系方式(即电话号码和邮寄地址);

- 被投诉者姓名和徽章号码（如果知道的话、合适的话）；
- 描述被投诉行为如何、何时、何处发生；
- 详细描述你为什么觉得受到不同对待；
- 任何证人的姓名和联系方式；
- 任何其它与你投诉相关的信息。

- A. 如果投诉人不能提供书面陈述，可向多样性及民权办公室提交口头投诉。投诉人将接受民权调查员的访谈。必要的话，民权调查员会协助该投诉人把口头投诉转写为书面形式。所有的投诉必须由投诉人签字。
- B. 匿名投诉可以同样的方式提交。匿名投诉将与其它投诉一样以相同的方式被调查。
- C. 以任何认可的语言提交的投诉都会被受理。有多种语言投诉表可获取。

4. 我必须多久以后提交投诉？

- A. 指控违反《民权法案》第六章和/或麻州交通部反歧视骚扰预防政策的投诉不应迟于事件发生后一百八十（180）天内提交。
- B. 控告违反州或联邦法律的投诉应在法律法规，或判例法规定的时间范围内提交。

5. 我的投诉将如何被处理？

收到的投诉会分配给民权调查员。该调查员将：

A. 决定管辖权：

多样性及民权办公室有管辖权，如果该投诉：

1) 涉及违反以下情况的声明或行为：

- 麻州交通部为预防在公众服务中因受保护因素而发生歧视、骚扰或报复的法律义务和承诺；或者，
- 与麻州交通部共事的次级承接单位和承包商遵守麻州交通部政策的承诺；并且，

2) 适时提交投诉。

- B. 确认收到投诉，在收到投诉十（10）个工作日内告知管辖权的决定。

- 如果民权调查员裁定投诉不具有构成违反民权的可能性，调查员将书面通知投诉人和《民权法案》第六章专员其决定，该投诉将结案。

C. 根据麻州交通部内部投诉程序对投诉中的指控进行全面调查。

#### 6. 调查结果及处理意见？

调查结束后，民权调查员将根据调查结果给投诉人和被投诉者传达以下三种信函之一：

- A. 解释被投诉者已经或将要采取什么措施遵守《民权法案》第六章的信函。
- B. 调查发现被投诉方遵守了《民权法案》第六章的调查结果的信函。此函将包括解释被投诉者为什么被认为遵守了《民权法案》第六章，并告知投诉者有申诉的权利。
- C. 调查发现被投诉方没有遵守《民权法案》第六章的调查结果的信函。此函将包括每一项违反适用法规的行为，简要描述调查结果/处理意见，没有达成自觉遵守法律法规的后果；如合适的话，此函将提出协助制定改正方案。

#### 7. 我可以申诉调查结果吗？

如果投诉者或被投诉方不同意民权调查员的调查结果，可向多样性及民权助理秘书申诉。申诉方须提供**任何最初调查过程中未轻易获得的新信息**，以便让麻州交通部重新考虑其**结论**。申诉请求和新的信息须在调查结果通知传达后六十（60）日内提交。麻州交通部收到申诉请求后，将发出修改版裁决函或告知申诉方原先的裁决函或调查结果函依旧有效。

## 投訴程式



## 簡介

本章說明麻州交通部（MassDOT）對《民權法案》第六章（Title VI）歧視投訴的處理及裁定程式。設置這些程式的目的是為投訴方和被投訴方提供正當程式。在多樣性及民權辦公室《民權法案》第六章工作組與調查組共同努力下，本章詳解的投訴過程在 2017 年得以更新。多樣性及民權辦公室職員本著一致和透明的精神盡力使投訴程式在聯邦、州反歧視責任專案領域（如第六章和第七章）之間保持連貫、可行，並以清晰的方式展示出來，讓公眾能方便理解投訴過程。

## 目的及適用性

本章為兩類歧視投訴的處理和裁決確立程式。這兩類投訴分別是（一）直接向麻州交通部提交的歧視投訴，（二）根據 1964 年《民權法案》第六章和相關州、聯邦反歧視機構包括《美國殘疾人法案》的規定，麻州交通部有代理權處理的投訴。

這些程式闡明識別，消除聯邦資助專案和活動中歧視現象的管理過程。這些程式不為尋求個人解決方式（包括處罰性賠償或薪資酬金）的投訴人提供撫慰手段；不禁止投訴人向其他州或聯邦機構提出投訴；也不否認投訴人尋求私人法律顧問解決受控歧視行為的權利。

本文所述程式適用於麻州交通部及其次級承接單位、承包商和分包人管理的聯邦資助專案和活動。

為了遵守《民權法案》第六章，我們鼓勵通過麻州交通部獲得聯邦財政資助的次級承接單位採納此投訴程式。如採納，次級承接單位承認有義務為公眾提供機會投訴其機構專案、服務和活動中違反反歧視要求的行為。根據聯邦規定，運輸類資助的次級承接單位理解其有權處理《民權法案》第六章投訴，且會通知其上級承接單位（麻州交通部）收到的投訴和問題處理調查結果。公路類資助的次級承接單位應明白其無權調查針對其機構（即該單位是被控違反《民權法案》第六章的被投訴方或一方）的《民權法案》第六章投訴。所有此類投訴需轉給麻州交通部，由麻州交通部決定合適的調查機構。公路類資助的次級承接單位保留將違反《民權法案》第六章指控作為保證和（或）內部政策承諾的權利，但無權裁定被指控行為是否可能違反《民權法案》第六章。麻州交通部鼓勵所有次級承接單位在收到《民權法案》第六章投訴時與多樣性及民權辦公室《民權法案》第六章專員、聯邦專案管理人和（或）調查部門負責人溝通，以保證問題得到恰當處理。

## 術語解釋

**投訴方 (Complainant)**：向麻州交通部提出投訴的一方。

**投訴 (Complaint)**：有關歧視指控的書面或電子陳述，其中包括一份送達至接收辦公室採取行動的請求。如投訴書由殘障人士提交，術語“投訴書”涵蓋顧及投訴人殘障的替代格式的投訴。

**歧視 (Discrimination)**：無論故意還是無意，在美國的個人僅因種族、膚色、國籍，或其他反歧視機構規定的情形，如性別、年齡，或殘障等而受到任何獲聯邦資助專案或活動的不公對待或完全不同影響的行為或無作為。

**業務管理機構 (Operating Administrations)**：受資助專案或活動的美國交通部各機構，包括聯邦公路管理局、聯邦運輸管理局、聯邦鐵路管理局和全美公路交通安全管理局。

**被投訴方 (Respondent)**：被控有歧視行為的人員、代理、機構，或組織。

## **提交投訴**

本節具體說明麻州交通部處理《民權法案》第六章歧視投訴（基於種族、膚色，或國籍，包括語言）以及基於（年齡、性別和殘障）其他聯邦反歧視規定的歧視投訴的程式。涉及《民權法案》第六章的聯邦法律法規將民權投訴調查的全部協調權授予美國司法部，而後者與有義務遵守法案的聯邦機構緊密協作。在交通領域，此調查權被賦予美國交通部及其各類交通管理機構，包括聯邦公路管理局和聯邦運輸管理局。根據美國交通部的規定，聯邦公路管理局、聯邦運輸管理局建立規章制度要求獲聯邦財政資助單位及其次級承接單位建立處理針對本機構的《民權法案》第六章投訴程式。

下述程式的制定以美國司法部設立並推薦的投訴程式為模型，其目的是在尊重正當程式的基礎上為投訴和被投訴雙方解決投訴問題提供公平機會。除以下正式的投訴解決過程，可能的話，麻州交通部也會採取積極措施尋求對任何、所有《民權法案》第六章相關投訴的非正式解決方法。

## **投訴過程**

### **1. 誰可提出投訴？**

任何公眾，連同麻州交通部所有客戶、申請人、承包商，或次級承接單位，都可提出投訴，如果他們認為自己、第三方，或一群人因其種族、膚色，或國籍（包括有限的英文水準）而受到不當對待或不公正對待，從而違反了1964頒佈的《民權法案》第六章、相關聯邦、州法律法規，或麻州交通部制定的反歧視騷擾預防政策。《民權法案》第六章和反歧視騷擾預防政策也禁止因種族、膚色，或國籍對公眾進行報復的行為。

### **2. 如何提出投訴？**

可向以下機構或人員提交投訴：

**The MassDOT Title VI Specialist**（麻州交通部《民權法案》第六章專員）  
MassDOT Office of Diversity and Civil Rights（麻州交通部多樣性及民權辦公室）  
電話：  
電子郵件：

**The MassDOT Office of Diversity and Civil Rights - Investigations Unit  
(麻州交通部多樣性及民權辦公室調查組)**

Assistant Secretary of Diversity & Civil Rights, MassDOT (麻州交通部多樣性及民權助理秘書)

電子郵件:

**The Federal Highway Administration (聯邦公路管理局)**

Federal Highway Administration (聯邦公路管理局)

U.S. Department of Transportation (美國交通部)

Office of Civil Rights (民權辦公室)

電子郵件:

電話:

**The Federal Transit Administration (聯邦運輸管理局)**

Federal Transit Administration (聯邦運輸管理局)

U.S. Department of Transportation (美國交通部)

Office of Civil Rights (民權辦公室)

Attention: Complaint Team (投訴組(收))

請注意:

- 聯邦運輸管理局收到對麻州交通部、次級承接單位，或承包商《民權法案》第六章歧視投訴時，聯邦運輸管理局可能要求麻州交通部調查該投訴。
- 如果提交給麻州交通部的《民權法案》第六章歧視投訴指控麻州交通部的公路科違反該法案，投訴將被轉交給當地聯邦公路管理局辦公室，該辦公室然後會把投訴轉交給聯邦公路管理局總部的民權辦公室處理。
- 如果提交給麻州交通部的《民權法案》第六章歧視投訴指控麻州交通部公路科的次級承接單位違反該法案，麻州交通部可能調查處理該投訴或提出讓聯邦公路管理局總部的民權辦公室處理。

3. 投訴需包括什麼內容？

《民權法案》第六章/反歧視投訴表可從麻州交通《民權法案》第六章網站上下載（網址：

<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>），或從麻州交通部《民權法案》第六章專員處（聯繫方式見上文）獲取。投訴人或可以其他格式的通信提交，通信應包括以下資訊：

- 您的姓名、簽名和當前的聯繫方式（即電話號碼和郵寄地址）；

- 被投訴者姓名和徽章號碼（如果知道的話、合適的話）；
- 描述被投訴行為如何、何時、何處發生；
- 詳細描述你為什麼覺得受到不同對待；
- 任何證人的姓名和聯繫方式；
- 任何其他與你投訴相關的資訊。

- A. 如果投訴人不能提供書面陳述，可向多樣性及民權辦公室提交口頭投訴。投訴人將接受民權調查員的訪談。必要的話，民權調查員會協助該投訴人把口頭投訴轉寫為書面形式。所有的投訴必須由投訴人簽字。
- B. 匿名投訴可以同樣的方式提交。匿名投訴將與其它投訴一樣以相同的方式被調查。
- C. 以任何認可的語言提交的投訴都會被受理。有多種語言投訴表可獲取。

4. 我必須多久以後提交投訴？

- A. 指控違反《民權法案》第六章和/或麻州交通部反歧視騷擾預防政策的投訴不應遲於事件發生後一百八十（180）天內提交。
- B. 控告違反州或聯邦法律的投訴應在法律法規，或判例法規定的時間範圍內提交。

5. 我的投訴將如何被處理？

收到的投訴會分配給民權調查員。該調查員將：

A. 決定管轄權：

多樣性及民權辦公室有管轄權，如果該投訴：

1) 涉及違反以下情況的聲明或行為：

- 麻州交通部為預防在公眾服務中因受保護因素而發生歧視、騷擾或報復的法律義務和承諾；或者，
- 與麻州交通部共事的次級承接單位和承包商遵守麻州交通部政策的承諾；並且，

2) 適時提交投訴。

- B. 確認收到投訴，在收到投訴十（10）個工作日內告知管轄權的決定。

- 如果民權調查員裁定投訴不具有構成違反民權的可能性，調查員將書面通知投訴人和《民權法案》第六章專員其決定，該投訴將結案。

C. 根據麻州交通部內部投訴程式對投訴中的指控進行全面調查。

#### 6. 調查結果及處理意見？

調查結束後，民權調查員將根據調查結果給投訴人和被投訴者傳達以下三種信函之一種：

- A. 解釋被投訴者已經或將要採取什麼措施遵守《民權法案》第六章的信函。
- B. 調查發現被投訴方遵守了《民權法案》第六章的調查結果的信函。此函將包括解釋被投訴者為什麼被認為遵守了《民權法案》第六章，並告知投訴者有申訴的權利。
- C. 調查發現被投訴方沒有遵守《民權法案》第六章的調查結果的信函。此函將包括每一項違反適用法規的行為，簡要描述調查結果/處理意見，沒有達成自覺遵守法律法規的後果；如合適的話，此函將提出協助制定改正方案。

#### 7. 我可以申訴調查結果嗎？

如果投訴者或被投訴方不同意民權調查員的調查結果，可向多樣性及民權助理秘書申訴。申訴方須提供**任何最初調查過程中未輕易獲得的新資訊**，以便讓麻州交通部重新考慮其**結論**。申訴請求和新的資訊須在調查結果通知傳達後六十（60）日內提交。麻州交通部收到申訴請求後，將發出修改版裁決函或告知申訴方原先的裁決函或調查結果函依舊有效。

## ***Procédures de plainte***

## **Introduction**

Ce chapitre décrit les procédures suivies par le Département des Transports dans l'état du Massachusetts [MassDOT] concernant l'application et les arrangements adaptés aux plaintes de discrimination portées en vertu du Titre VI. Ces procédures prévues sont conçues pour les plaignants et les intimés dans le but d'adhérer aux termes de la loi, selon les règlements officiels. Les procédures décrites ci-inclus ont été mises à jour en 2017 dans le cadre d'un effort de collaboration entre l'équipe du bureau de la diversité et des droits civils [Office of Diversity and Civil Rights, ODCR] Titre VI et l'équipe d'enquêtes. Dans un esprit de transparence et d'uniformité, le personnel ODCR s'efforce de faire en sorte que les procédures de plainte engagées à travers les secteurs, ou programmes, dont les obligations de non-discrimination fédérale et étatique sont en vigueur (telles que les Titres VI et VII) soient aussi cohérentes que possible et présentées de telle façon que les membres du public puissent facilement en comprendre le processus.

## **But et applicabilité**

Le présent chapitre vise à établir les procédures d'application et d'arrangements de ces deux formes de plaintes contre la discrimination déposées directement auprès de MassDOT ainsi que les plaintes de discrimination que MassDOT a l'autorité déléguée de traiter en vertu du Titre VI de la loi sur les droits civiques de 1964 (Titre VI) et autres autorités d'états et fédérales de non-discrimination, y compris la loi sur les Américains avec handicap (Disability Act, ADA).

Les procédures décrivent un processus administratif visant à identifier et à éliminer la discrimination dans les programmes et les activités financées par le gouvernement fédéral. Les procédures ne prévoient pas de recours pour les plaignants cherchant des voies de recours individuels, y compris dommages - intérêts punitifs ou rémunération compensatoire ; ils n'interdisent pas aux plaignants de porter plainte auprès d'autres organismes publics ou fédéraux ; ils ne refusent pas non plus aux plaignants le droit de demander un conseil privé pour traiter les actes de discrimination allégués.

Les procédures décrites dans le présent document s'appliquent à MassDOT et à ses sous bénéficiaires, contractants et sous-contractants dans l'administration des programmes et activités financées par le gouvernement fédéral.

Dans le cadre de leurs efforts pour se conformer au Titre VI, les sous bénéficiaires de l'aide financière fédérale par l'intermédiaire de MassDOT sont encouragés à adopter ces procédures de plainte. Ce faisant, ces sous bénéficiaires reconnaissent leur obligation d'accorder aux membres du public l'occasion de déposer des plaintes alléguant des violations aux exigences de non-discrimination dans l'ensemble des programmes, services et activités de l'organisation. Conformément aux directives fédérales, les sous bénéficiaires de fonds liés au transport en commun comprennent qu'ils ont le droit de traiter les plaintes du Titre VI et informeront leur destinataire, MassDOT, des plaintes reçues et des résultats des enquêtes au fur et à mesure que les affaires sont traitées. Les sous bénéficiaires de fonds liés aux transports en commun comprennent également qu'ils n'ont pas l'autorisation d'enquêter sur les allégations de

violation du Titre VI déposées contre leur organisation (lorsque leur organisation est l'intimée ou parti allégué d' avoir enfreins le Titre VI). Toutes ces réclamations seront transmises à MassDOT afin de déterminer l'autorité d'enquête appropriée. Les sous bénéficiaires du financement routier se réservent le droit d'examiner les allégations de violation du Titre VI comme une question d'assurance et/ou de conformité à la politique interne, mais ils sont dans l'impossibilité de prendre des décisions quant à d'éventuelles violations du Titre VI. MassDOT encourage tous les sous bénéficiaires à communiquer avec ODCR, le spécialiste du Titre VI, le gestionnaire des programmes fédéraux et/ou le gestionnaire des enquêtes quand / si les plaintes concernant l'article VI sont reçues afin d'assurer une gestion correcte.

### **Définitions**

Plaignant [Complainant] – une personne qui dépose une plainte auprès de MassDOT.

Plainte [Complaint] – Déclaration écrite ou électronique concernant une allégation de discrimination qui contient une demande d'intervention auprès de l'office récepteur. Lorsqu'une personne handicapée dépose une plainte, le terme « plainte » englobe d'autres formats pour accommoder l'invalidité du plaignant.

Discrimination [Discrimination]– Cet acte ou inaction, intentionnel ou non, par lequel une personne aux États-Unis, uniquement en raison de la race, la couleur, l'origine nationale ou des bases couvertes par d'autres autorités de non-discrimination, tels que le sexe, l'âge ou invalidité, a été soumis à un traitement inégal ou a des effets disparates dans le cadre de tout programme ou activité bénéficiant d'une aide fédérale.

Administrations [Operating Administrations] – agences du Département des Transports des États-Unis, dont l'agence responsable des autoroutes [Federal Highway Administration, FHWA], l'agence responsable des routes [Federal Transit Administration, FTA], l'administration fédérale du réseau ferroviaire [Federal Rail Administration, FRA] et l'administration nationale de la sécurité routière [National Highway Traffic Safety Administration, NHTSA], qui assurent le financement des transports, programmes ou activités.

Intimé [Respondent] – la personne, organisme, institution ou organisation accusée de discrimination.

### **Dépôt de plaintes**

Cette section détaille les procédures du Département des Transports dans l'état du Massachusetts [MassDOT] traitant des plaintes de discrimination fondées sur l'article VI (sur la base de la race, de la couleur ou de l'origine nationale, y compris la langue) et des plaintes alléguant une discrimination sur la base de dispositions fédérales non discriminatoires supplémentaires (sur la base de l'âge, le sexe et le handicap). La loi fédérale et les règlements fédéraux régissant le Titre VI du code civil de 1964 (Titre VI) place l'autorité générale de coordination des enquêtes sur les plaintes de droits civiques au ministère de la Justice des États-Unis, qui travaille en collaboration avec les organismes fédéraux qui effectuent cette responsabilité. Dans le secteur des transports, cette autorité d'enquête relève du Département



américain des Transports (US DOT) et de ses agences pour les différents modes de transport, y compris la Federal Highway Administration (FHWA) et la Federal Transit Administration (FTA). En coordination avec les exigences de MassDOT, la FHWA et la FTA ont établi des règlements et directives qui exigent les bénéficiaires et sous bénéficiaires de l'aide financière fédérale d'établir des procédures de traitement des plaintes du Titre VI déposées avec ces organisations.

Les procédures de plainte recommandées et décrites ci-dessous, modélisés sur les procédures promulguées par le ministère de justice américaine [US Department of Justice, Us DOJ] sont conçues pour offrir une possibilité équitable de faire face aux plaintes tout en respectant la loi, selon les procédures prévues pour les deux partis concernés : plaignants et intimés. En outre le processus de résolution de plainte formelle décrits dans les présentes, MassDOT prend des mesures positives pour poursuivre le règlement à l'amiable de toutes les plaintes du Titre VI, lorsque cela est possible.

### **Le processus de plainte**

#### **1. Qui peut déposer une plainte ?**

**TOUT** membre du public, ainsi que tous les clients MassDOT, postulants, entrepreneurs ou sous bénéficiaires qui croient eux-mêmes, un tiers, ou une classe de personnes a avoir été maltraités ou traités injustement en raison de leur race, couleur ou origine nationale ( y compris une maîtrise limitée de l'anglais) en violation du Titre VI de la loi de 1964, les droits civils, les lois et ordonnances fédérales et étatiques, ou de la politique de prévention et de la lutte contre la discrimination et le harcèlement [Anti-Discrimination Harassment Prevention, ADHP] de MassDOT. Les représailles contre un membre du public sur la base de la race, de la couleur ou de l'origine nationale sont également interdites en vertu du Titre VI et de la politique de l'ADHP.

#### **2. Comment puis-je déposer une plainte ?**

Une plainte peut être déposée aux services suivants:

##### **Spécialiste du Titre VI MassDOT [MassDOT Title VI Specialist]**

MassDOT Bureau de la diversité et des droits civils [MassDOT Office of Diversity and Civil Rights]

Téléphone : ou pour service de relais.

Messagerie :

##### **Bureau de la diversité et des droits civils de MASSDOT- unité des enquêtes [MassDOT Office of Diversity and Civil Rights – Investigations Unit]**

Secrétaire-adjoint de diversité & droits civils MassDOT[Assistant Secretary of Diversity & Civil Rights, MassDOT]

Messagerie :

**Administration fédérale des autoroutes [ Federal Highway Administration]**

Administration fédérale des autoroutes [ Federal Highway Administration]

U.S. Département des Transports [ U.S. Department of Transportation]

Bureau des droits civils [Office of Civil Rights]

Messagerie :

Téléphone :

**Administration Fédérale des réseaux nationaux [Federal Transit Administration]**

Administration Fédérale des réseaux nationaux [Federal Transit Administration]

U.S. Département des Transports [U.S. Department of Transportation]

Bureau des droits civils [Office of Civil Rights]

Attention : Équipe de plainte

Veillez noter :

- Lorsque FTA reçoit une plainte en vertu du Titre VI concernant MassDOT, un sous bénéficiaire ou un entrepreneur, FTA peut demander à MassDOT d'examiner l'affaire .
- Si une plainte en vertu du Titre VI est déposée auprès de MassDOT et qui allègue une violation de la division des autoroutes de MassDOT, celle-ci sera transmise au bureau local de la division FHWA qui la transmettra ensuite pour résolution au bureau des droits civils [Office of Civil Rights, HCR) au siège de la FHWA .
- Si MassDOT reçoit une plainte en vertu du Titre VI contre un sous bénéficiaire de la division des autoroutes MassDOT, MassDOT peut alors traiter la plainte et enquêter sur celle-ci, ou consulter le HCR pour une enquête.

**3. Que dois-je inclure dans une plainte ?**

Un formulaire de plainte au Titre VI/non-discrimination est disponible en version électronique sur le site internet MassDOT Titre VI

(<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) ou en version sur papier auprès du spécialiste MassDOT Titre VI, identifié ci-dessus. Alternativement, un plaignant peut soumettre une correspondance dans un format alternatif qui devrait inclure :

- Votre nom, votre signature et vos coordonnées actuelles (p. ex. numéro de téléphone et adresse postale) ;
- Le nom et numéro de badge (s'il est connu et applicable) de l'auteur présumé ;
- Une description de comment, quand, où, la conduite interdite alléguée a eu lieu ;
- Une description détaillée des raisons pour lesquelles vous croyez avoir été traité différemment ;

- Noms et coordonnées des témoins ; et
  - Toute autre information que vous jugez pertinente à votre plainte.
- A. Dans les cas où le plaignant est incapable de fournir une déclaration écrite, une plainte verbale peut être déposée auprès du bureau de la diversité et des droits civils (ODCR). Les plaignants seront interviewés par un enquêteur de droits civils [Civil Rights Investigator, CRI]. Si nécessaire, le CRI aidera la personne à convertir la plainte verbale en écriture. Toutes les plaintes doivent être signées par le plaignant.
  - B. Les plaintes anonymes peuvent être déposées de la même manière. Les plaintes anonymes font l'objet d'une enquête similaire à toute autre plainte.
  - C. Les plaintes seront acceptées dans toutes les langues reconnues. Des formulaires de plainte multilingues sont disponibles.

#### 4. **Combien de temps est-ce que je dois déposer une plainte ?**

- A. Une plainte alléguant une violation du Titre VI et/ou de la politique ADHP de MassDOT doit être déposée dans un délai de cent quatre-vingts (180) jours civils suivant la date de l'incident allégué.
- B. Les plaintes alléguant des violations des lois nationales ou fédérales doivent être déposées dans des délais fixés par les ordonnances, réglementations ou droit jurisprudentiel.

#### 5. **Comment ma plainte sera-t-elle traitée?**

Lorsqu'une plainte est reçue, elle est assignée à un enquêteur des droits civiques (CRI) qui procédera par :

- A. Déterminer la juridiction :

ODCR a compétence si la plainte :

- 1) comporte un énoncé ou une conduite transgressive :

- L'obligation légale de MassDOT et son engagement pour prévenir la discrimination, le harcèlement ou les représailles sur la base d'une caractéristique protégée concernant tout aspect du service au public de l'agence ; ou
- L'engagement pris par les sous bénéficiaires et prestataires travaillant avec MassDOT d'adhérer aux politiques de MassDOT ; ET

- 2) est déposée sans délais.

- B. Accuser réception de la plainte et fournir une détermination juridictionnelle dans les dix 10 jours ouvrables suivant la réception de la plainte.
- Si le CRI détermine qu'une plainte n'a pas le potentiel d'établir une violation des droits civils, alors le CRI doit aviser le plaignant et le spécialiste du Titre VI par écrit de ses conclusions et l'affaire doit être classée.
- C. Mener une enquête approfondie sur les allégations contenues dans la plainte conformément aux procédures internes de traitement des plaintes MassDOT.

## 6. Conclusions et recommandations ?

À l'issue de l'enquête, le CRI transmettra au plaignant et à l'intimé, l'une des trois lettres suivantes fondé sur les constatations :

- A. Une lettre de résolution expliquant les étapes que le défendeur a prises ou prendra pour se conformer au Titre VI.
- B. Une lettre de constatation qui est émise lorsque l'intimé s'avère être conforme aux normes du Titre VI. Cette lettre inclura une explication des raisons pour lesquelles l'intimé s'est avéré conforme et fournira un avis sur les droits d'appel du plaignant.
- C. Une lettre de conclusion qui est émise lorsque l'intimé est jugé être en non conformité. Cette lettre comportera chaque violation référée aux règlements applicables, une brève description des constatations et des recommandations, les conséquences d'un défaut de conformité volontaire et une offre d'assistance à l'élaboration d'un plan correctif de conformité, le cas échéant.

## 7. Puis-je contester une conclusion ?

Si le plaignant ou l'intimé n'accepte pas les conclusions de CRI, il/elle peut faire appel auprès du secrétaire adjoint à la diversité & droits civils. La partie appelante doit fournir **toute nouvelle information qui n'était pas disponible au cours de l'enquête initiale et qui conduirait MassDOT à reconsidérer ses décisions**. La demande pour un appel et toute nouvelle information doivent être soumis dans les soixante (60) jours de la date à laquelle la lettre de constatation a été transmise. Après avoir examiné cette information, MassDOT répondra soit en publiant une lettre révisée de la résolution, soit en informant la partie appelante que la lettre originale de résolution ou de conclusion reste en vigueur.

***Pwoseddi pou Pote Plent***

## **Entwodiksyon**

Chapit sa a dekri pwosedi MassDOT sèvi yo, pou trete ak pran desizyon sou plent moun pote pou diskriminasyon dapre Tit 6 [Title VI] la. Pwosedi sa yo fèt yon jan pou fè pleyan ak defandè yo jwenn yon solisyon dapre yon metòd ekitab. Metòd ki dekri la yo te korije an 2017, kòm yon pati nan travay kolaborasyon ant inite ODCR pou Tit 6 la ak ekip ki responsab pou mennen ankèt yo. Nan yon lespri inifòmite ak transparans, anplwaye ODCR yo te travay pou rive fè chapit nan pwosedi pou plent nan tout pwogram kont diskriminasyon nan gouvènman federal ansanm ak nan Eta yo (tankou Tit 6 ak Tit 7) kenbe menm lespri a, epi pou yo prezante nan yon jan ki pèmèt moun nan piblik la konprann yo fasil.

## **Objektif ak Posibilite pou Aplikasyon**

Objektif chapit sa a, se pou tabli pwosedi pou trete ak pran desizyon sou toude kalite plent pou diskriminasyon sa yo: plent dirèk yo pote devan MassDOT, ak plent MassDOT resevwa delegasyon otorite pou li trete dapre Tit 6 nan Lwa sou Dwa Sivik 1964 la [Civil Rights Act of 1964 (Title VI)], ansanm ak otorite li resevwa dapre règleman Eta ak gouvènman federal la, tankou Lwa pou Moun Andikape nan Etazini yo [Americans with Disabilities Act (ADA)].

Pwosedi sa yo dekri pwosesis administratif ki fèt pou idantifye ak eliminen diskriminasyon nan pwogram ak nan aktivite gouvènman federal la finanse. Pwosedi sa yo pa louvri chimen pou pèmèt moun ki pote plent yo jwenn konpansasyon pèsonnèl, tankou sanksyon poutèt abi yo fè yo, ni konpansasyon lajan; yo pa anpeche moun ki pote plent yo ale pote plent bay lòt ajans nan Eta a, oswa lòt ajans gouvènman; yo pa anpeche moun ki pote plent yo non plis, pou yo pran yon avoka prive, pou ede yo regle ka diskriminasyon yo vle rapòte.

Pwosedi ki dekri nan dokiman sa a aplikab pou MassDOT ak filyal li yo, kontraktè li yo, ak soutretan li yo nan jan y ap mennen pwogram ak aktivite gouvènman federal la finanse.

Nan travay y ap fè dapre Tit 6 la, soutretan ki resevwa asistans federal nan men MassDOT yo dwe sèvi avèk pwosedi sa yo, pou trete plent moun pote. Lè yo fè sa, soutretan yo rekonnèt obligasyon yo genyen pou bay moun nan piblik la yon chans pou yo pote plent kont sa yo kwè ki vyolasyon prensip kont diskriminasyon yo nan tout pwogram, sèvis, ak aktivite ògànizasyon yo ap fè. Dapre direktiv gouvènman federal la, soutretan k ap administre finansman ki anrapò avèk transpò yo byen konprann yo gen otorite pou yo trete plent moun pote dapre Tit 6 la, epi pou yo fè MassDOT, ki reprezante yo, konnen plent yo resevwa, ansanm ak rezilta pandan ankèt ap mennen sou ka sa yo. Soutretan k ap administre finansman ki anrapò avèk transpò sou granwout yo byen konprann yo pa gen otorite pou mennen ankèt sou reklamasyon ki fèt kont pwòp ògànizasyon yo dapre Tit 6 (sa ki vle di, lè se pwòp ògànizasyon yo ki defandè oswa ki akize dèske li te patisipe nan vyolasyon kont Tit 6 la). Tout reklamasyon konsa yo dwe transfere bay MassDOT, pou li decide ki kote ki pral gen otorite pou mennen ankèt la. Soutretan k ap administre finansman ki anrapò avèk transpò sou granwout yo toujou gen dwa pou yo konsidere deklarasyon vyolasyon dapre Tit 6 yo tankou yon kesyon kontwòl ak/oswa obsèvasyon règleman entèn, men yo pa gen dwa pran okenn desizyon sou ka ki kapab se vyolasyon dapre Tit 6 la. MassDOT ankouraje tout soutretan yo kominike avèk Espesyalis ODCR

pou Tit 6 la, avèk Direktè Pwogram Federal yo, ak/oswa avèk Direktè Envestigasyon an si yo resevwa yon plent dapre Tit 6 la, pou yo kapab sèten ka a trete yon jan ki kòrèk.

### **Definisyon:**

Pleyan [*Complainant*] – Se yon moun ki pote yon plent bay MassDOT.

Plent [*Complaint*] – Se yon deklarasyon ekri oubyen elektwonik sou sa yo rapòte kòm yon ka diskriminasyon, ki genyen yon demann pou biwo ki resevwa plent lan pran yon aksyon. Lè moun ki pote plent lan se yon moun andikape, sa yo rele plent lan kapab fèt tou nan yon fòm altènatif ki koresponn avèk andikap pleyan an genyen an.

Diskriminasyon [*Discrimination*] – Se aksyon oubyen inaksyon, kit li fèt avèk oubyen san entansyon, kote yon moun ki nan Etazini sibi yon tretman ki pa menm ak lòt moun, oswa resevwa yon lòt kalite sèvis nan nenpòt pwogram oswa nenpòt aktivite ki resevwa asistans federal, sèlman poutèt ras moun lan, koulè li, peyi li soti, oswa poutèt lòt rezon ki kouvri dapre lòt règleman kont diskriminasyon, tankou si moun lan se gason oubyen fi, laj li, oubyen andikap li genyen.

Administrasyon pou Operasyon [*Operating Administrations*] – Se ajans nan Depatman Transpò Etazini [U.S. Department of Transportation], tankou Administrasyon Federal pou Granwout [Federal Highway Administration (FHWA)], ak Administrasyon Federal pou Transpò [Federal Transit Administration (FTA)], ak Administrasyon Federal pou Wout Tren [Federal Rail Administration (FRA)], ak Administrasyon Nasyonnal pou Sekirite nan Sikilasyon sou Granwout [National Highway Traffic Safety Administration (NHTSA)], ki finanse pwogram oswa aktivite pou transpò.

Defandè [*Respondent*] – Se moun, oswa ajans, oswa enstitisyon, oswa ògànizasyon yo di ki fè diskriminasyon an.

### **Pou Depoze yon Plent**

Seksyon sa a esplike an detay pwosedi Depatman Transpò Massachusetts la [Massachusetts Department of Transportation (MassDOT)] sèvi pou trete plent pou diskriminasyon dapre Tit 6 la (diskriminasyon ki fèt poutèt ras yon moun, peyi li soti, oswa tou lang li pale) ak plent pou diskriminasyon yo di ki fèt dapre lòt dispozisyon federal ankò (tankou laj, si moun lan se gason oubyen fi, oubyen andikap li genyen). Lwa ak règleman federal ki gouvènè Tit 6 nan Lwa sou Dwa Sivik 1964 la [Title VI of the Civil Rights Act of 1964 (Title VI)] mete responsablite pou kowòdinasyon jeneral pou ankèt sou plent pou dwa sivik yo nan men Depatman Lajistis Etazini [United States Department of Justice], ki travay an kolaborasyon avèk ajans federal ki egzekite responsablite sa yo. Nan sektè transpò a, otorite pou mennen ankèt konsa chita nan men Depatman Transpò Etazini [US Department of Transportation (US DOT)] ansanm ak ajans li yo pou diferan mòd transpò, tankou Administrasyon Federal pou Granwout [Federal Highway Administration (FHWA)], ak Administrasyon Federal pou Transpò [Federal Transit Administration (FTA)]. An konfòmite avèk sa USDOT mande yo, FHWA ak FTA tabli règleman ak

direktiv ki egzije benefisyè ak soutretan pou asistans federal yo, pou yo defini pwosedi pou trete plent moun pote devan yo dapre Tit 6.

Pwosedi pi ba la yo, ki ekri dapre pwosedi pou plent ki rekòmande epi ki adopte nan Depatman Lajistis Etazini [US Department of Justice (US DOJ)], fèt yon jan pou pèmèt moun jwenn yon chans nòmal pou fè konnen plent yo, ki aplike yon metòd ekitab ni pou pleyan an, ni pou defandè a. Anplis pwosedi fòmèl pou rezoud plent ki dekri la a, MassDOT pran aksyon afimatif pou jwenn solisyon enfòmèl pou tout plent ki pote dapre Tit 6, lè sa posib.

### **Pwosesis pou Pote Plent lan**

#### **1. Kimoun ki kapab depoze yon plent?**

**NENPÒT** moun nan piblik la, ansanm ak tout kliyan, demandè enskripsyon, kontraktè, oswa benefisyè segondè MassDOT ki kwè yomenm, oswa yon moun yo konnen, oswa yon klas moun te resevwa move sèvis oswa yon tretman ki pa ekitab poutèt ras yo, koulè yo, oswa peyi kote yo soti (sa ki vle di tou, moun ki pa pale angle byen) an vyolasyon Tit 6 nan Lwa sou Dwa Sivik 1964 la [Title VI of the Civil Rights Act of 1964], anrapò avèk lwa ak direktiv nan Eta a, oswa avèk règleman MassDOT pou Prevansyon kont Pèsekisyon poutèt Diskriminasyon [Discrimination Harassment Prevention (ADHP)]. Tit 6 ak Règleman ADHP yo defann tou pou fè vanjans kont yon moun nan piblik la poutèt ras, koulè, oswa peyi kote moun lan soti.

#### **2. Kouman pou mwen depoze yon plent?**

Ou ka depoze yon plent devan youn nan kote sa yo:

##### **The MassDOT Title VI Specialist (Espesyalis pou Tit 6 nan MassDOT)**

MassDOT Office of Diversity and Civil Rights (Biwo MassDOT pou Divèsite ak Dwa Sivik)  
10 Park Plaza, Suite 3800 Boston, MA 02116  
Telefòn: (857) 368-8580, oswa 7-1-1 pou Relay Service (Sèvis Relè).  
Adrès elektwonik: [MassDOT.CivilRights@state.ma.us](mailto:MassDOT.CivilRights@state.ma.us)

##### **The MassDOT Office of Diversity and Civil Rights - Investigations Unit (Biwo MassDOT pou Divèsite ak Dwa Sivik - Inite pou Ankèt)**

Assistant Secretary of Diversity & Civil Rights, MassDOT (Sekretè Adjwen pou Divèsite ak Dwa Sivik, MassDOT)  
10 Park Plaza, Suite 3800 Boston, MA 02116  
Adrès elektwonik: [odcrcomplaints@dot.state.ma.us](mailto:odcrcomplaints@dot.state.ma.us)

##### **The Federal Highway Administration (Administrasyon Federal pou Granwout)**

Federal Highway Administration (Administrasyon Federal pou Granwout)  
U.S. Department of Transportation (Dapatman Transpò Etazini)  
Office of Civil Rights (Biwo pou Dwa Sivik)  
1200 New Jersey Avenue, SE



8th Floor E81-105  
Washington, DC 20590  
Adrès elektwonnik: CivilRights.FHWA@dot.gov  
Telefòn: 202-366-0693

**The Federal Transit Administration (Administrasyon Federal pou Transpò)**

Federal Transit Administration (Administrasyon Federal pou Transpò)  
U.S. Department of Transportation (Dapatman Transpò Etazini)  
Office of Civil Rights (Biwo pou Dwa Sivik)  
Attention (Atansyon): Ekip pou Plent  
East Building, 5th Floor - TCR  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Remak:

- Lè FTA resevwa yon plent dapre Tit 6, ki anrapò avèk MassDOT, oswa avèk yon soutretan, oswa avèk yon kontraktè, FTA kapab mande pou MassDOT mennen yon ankèt sou zafè a.
- Si yo depoze yon plent dapre Tit 6 devan MassDOT pou fè rapò sou yon vyolasyon Divizyon pou Granwout [Highway Division] MassDOT la komèt, lè sa a yo pral voye plent lan bay Biwo Divizyon FHWA lokal la, ki pral voye li bay Biwo Katye Jenneral pou Dwa Sivik FHWA a [Headquarters Office of Civil Rights (HCR)] pou li trete plent lan.
- Si MassDOT resevwa yon plent dapre Tit 6 ki depoze kont yon soutretan nan Divizyon pou Granwout MassDOT la, lè sa a MassDOT kapab trete plent lan ak mennen yon ankèt oubyen voye li nan HCR pour yo fè yon ankèt.

**3. Kisa mwen dwe mete nan yon plent?**

Ou ka jwenn yon fòmilè elektwonnik pou Plent kont diskriminasyon dapre Tit 6 nan pòtay Entènèt MassDOT la (<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) oswa yon fòmilè sou papyè nan biwo Espesyalis MassDOT pou Tit 6 ki nonmen pi wo a. Osinon, ou ka remèt yon plent nan yon lèt ki ekri nan yon lòt fòm, ki dwe genyen:

- Non, siyati, ak enfòmasyon ki valab kounye a si pou yo kontakte w (tankou nimewo telefòn ak adrès potal ou);
- Non ak nimewo idantifikasyon (si li genyen, epi si ou konnen li) moun ou kwè ki fè vyolasyon an;
- Yon deskripsyon ki di kouman, kilè, ak ki kote aksyon ou kwè ki vyolasyon an rive;
- Yon deskripsyon detaye ki di pou kisa ou kwè yo pa te trete w menm jan ak tout moun;
- Non ak enfòmasyon pou kontakte nenpòt ki temwen ou ka bay; epi

- Nenpòt ki lòt enfòmasyon ou kwè ki kapab anrapò avèk plent ou pote a.
- A. Si moun k ap pote plent lan pa kapab bay yon deklarasyon ekri, li ka pote yon plent nan bouch nan Biwo pou Divèsite ak Dwa Sivik la [Office of Diversity & Civil Rights (ODCR)]. Pleyan yo pral gen yon entèvyou avèk yon Anketè Dwa Sivik [Civil Rights Investigator (CRI)]. Si pleyan an bezwen sa, CRI ka ede l mete plent nan bouch li a sou papye. Pleyan an dwe siyen tout plent li pote.
- B. Plent anonim yo kapab fèt menm jan an. Plent anonim yo pral pase nan yon anketè menm jan ak nenpòt ki lòt plent.
- C. Yo kapab aksepte plent ki pote nan nenpòt ki lang yo rekonnèt. Ou ka jwenn fòmilè pou plent ki nan plizyè lang.

#### 4. **Konbyen tan mwen genyen pou mwen depoze yon plent?**

- A. Si ou vle depoze yon plent pou rapòte sa ou kwè ki yon vyolasyon prensip nan Tit 6 ak/oswa nan ADHP MassDOT la, ou dwe depoze li anvan san katreven (**180**) jou pase apre dat vyolasyon ou kwè ki rive a.
- B. Si yon plent ap fèt kont yon aksyon ki sanble yon vyolasyon lwa Eta oswa lwa federal yo, li dwe depoze pandan tan ki tabli nan règ, ak nan règleman, oswa nan lwa sou ka konsa yo.

#### 5. **Kouman yo pral trete yon plent mwen pote?**

Lè yo resevwa yon plent, yo mete ka a nan men yon Anketè Dwa Sivik [Civil Rights Investigator (CRI)]. CRI a pral

- A. Pran desizyon sou dwa jiridiksyon:

ODCR gen dwa jiridiksyon si pleyan an:

1) ankòz nan yon deklarasyon oswa nan yon aksyon ki vyole:

- obligasyon legal ak angajman MassDOT nan anpeche diskriminasyon, pèsekisyon, oswa vanjans poutèt youn nan karakteristik ki gen pwoteksyon nenpòt ki jan, nan sèvis Ajans lan fè pou piblik la; oswa
- angajman soutretan ak kontraktè yo pran, nan travay y ap fè avèk MassDOT pou respekte prensip MassDOT; EPI

2) plent lan depoze anvan tan an pase pou sa.

- B. Fè konnen li resevwa plent lan, epi deside sou jiridiksyon konpetan an anvan dis (10) jou pase apre li resevwa plent lan.
- Si CRI a wè yon plent pa gen posibilite pou li montre gen yon vyolasyon dwa sivik ki rive, CRI a ap fè pleyan an ak Espesyalis pou Tit 6 la konnen sa nan yon lèt, epi zafè a ap rete kanpe la.
- C. Mennen yon ankèt total sou deklarasyon ki nan plent lan, dapre pwosedi entèn MassDOT sou plent yo.

## 6. **Konklizyon ak Rekòmandasyon**

Lè ankèt la fini, CRI pral voye bay pleyan an ak bay defandè a youn nan twa lèt sa yo, sou konklizyon li jwenn yo:

- A. Yon lèt rezolisyon, ki pral esplike ki aksyon defandè a pran oubyen pral pran pou satisfè sa Tit 6 la mande.
- B. Yon lèt sou konklizyon, si yo wè defandè a satisfè sa Tit 6 la mande. Lèt sa a pral esplike pou kisa yo wè defandè a satisfè kondisyon ki nesèsè yo, epi l ap fè pleyan an konnen dwa li pou mande yon apèl.
- C. Yon lèt sou konklizyon, si yo wè defandè a pa satisfè kondisyon ki nesèsè yo. Lèt sa a pral genyen ladan yon referans pou chak vyolasyon, k ap montre règleman ki aplikab la; yon deskripsyon kout sou konklizyon ak rekòmandasyon yo, ak konsekans k ap genyen si yon moun pa pote koreksyon an volontèman; epi yon pwopozisyon pou asistans nan tabli yon plan pou koreksyon an, si sa nesèsè.

## 7. **Èske mwen ka mande yon apèl kont konklizyon an?**

Si yon pleyan oswa yon defandè pa dakò avèk konklizyon CRI la, li ka fè yon apèl devan Sekretè Adjwen pou Divèsite ak Dwa Sivik la [Assistant Secretary of Diversity & Civil Rights]. Moun ki fè apèl la dwe bay tout **nouvo enfòmasyon yo pa te kapab jwenn fasil pandan yo t ap mennen premye ankèt la, ki ta kapab lakòz MassDOT retounen gade desizyon yo pran an**. Lè gen yon demann apèl k ap fèt, yo dwe prezante demann lan, ansanm ak nouvo enfòmasyon yo, anvan swasant (60) jou pase apre dat yo te voye lèt ki gen desizyon an. Lè li fin gade enfòmasyon sa yo, MassDOT ap reponn swa nan yon lèt kote li korije desizyon an, swa nan yon notifikasyon pou fè moun ki fè apèl la konnen desizyon oswa konklizyon an ap rete menm jan.

## ***Procedure di ricorso***

## **Introduzione**

Questo capitolo tratta delle procedure del Dipartimento dei Trasporti del Massachusetts (MassDOT) riguardanti l'esame e la disposizione del Titolo VI sulle denunce per discriminazione. Tali procedure sono finalizzate ad offrire un processo equo ai querelanti ed ai querelati. Le procedure qui di seguito dettagliate sono state aggiornate nel 2017 e sono il frutto della collaborazione tra l'unità dell'Ufficio per la Diversità e i Diritti Civili (Office of Diversity and Civil rights – ODCR) addetta al Titolo VI e la squadra investigativa. In uno spirito di uniformità e trasparenza, il personale dell'Ufficio per la Diversità e i Diritti Civili (ODCR) ha lavorato per rendere coerenti e attuabili le procedure di ricorso nell'ambito dei programmi federali e statali sugli obblighi di non discriminazione (quali il Titolo VI e il Titolo VII) e per presentarle in modo che siano più comprensibili per i cittadini.

## **Scopo e Applicabilità**

Questo capitolo ha lo scopo di stabilire le procedure relative all'esame e alla disposizione delle denunce relative a un trattamento discriminatorio, sia di quelle presentate direttamente presso il Dipartimento dei Trasporti del Massachusetts (Massachusetts Department of Transport, MassDOT) sia di quelle per cui il Dipartimento dei Trasporti del Massachusetts (MassDOT) ha autorità delegata ai sensi del Titolo VI della Legge degli Stati Uniti sui Diritti Civili del 1964 (Titolo VI) e delle autorità statali e federali competenti in materia di non discriminazione, inclusa la Legge degli Stati Uniti sui Disabili (Americans with Disabilities Act, ADA).

Le procedure delineano un iter amministrativo finalizzato ad identificare ed eliminare la discriminazione nei programmi e nelle attività finanziate a livello federale. Le procedure non offrono ai querelanti, in cerca di ricorsi individuali, una riparazione giudiziaria o legale, inclusi danni punitivi o indennizzo; non impediscono ai querelanti di presentare le denunce presso altre agenzie federali o statali; e non negano neanche ai querelanti il diritto di rivolgersi a un difensore di fiducia affinché si occupi di presunti atti di discriminazione.

Le procedure descritte in questo documento si applicano al Dipartimento dei Trasporti del Massachusetts (MassDOT) e ai suoi beneficiari secondari, appaltatori e subappaltatori per ciò che riguarda la gestione dei programmi e delle attività finanziate a livello federale.

Nel quadro delle azioni rivolte all'adeguamento con il Titolo VI, i beneficiari secondari che ricevono assistenza finanziaria federale tramite MassDOT sono incoraggiati ad adottare queste procedure di ricorso. In tal modo, i suddetti beneficiari secondari riconoscono l'obbligo di offrire ai cittadini la possibilità di presentare denunce di presunte violazioni dei requisiti di non discriminazione nei programmi, servizi ed attività dell'organizzazione. Conformemente a quanto stabilito dall'orientamento federale, i beneficiari secondari dei fondi relativi ai trasporti

riconoscono la loro autorità nell'esame dei ricorsi ai sensi del Titolo VI e notificheranno al loro beneficiario, MassDOT, i ricorsi presentati e l'esito delle indagini riguardanti la gestione dei casi. I beneficiari secondari dei fondi relativi alle autostrade riconoscono inoltre di non avere autorità per esaminare le richieste di violazione presentate contro la loro organizzazione (laddove l'organizzazione è la parte convenuta oppure la parte accusata di aver violato il Titolo VI). Tutte le rivendicazioni verranno inoltrate a MassDOT al fine di determinare l'autorità investigativa competente. I beneficiari secondari dei finanziamenti relativi alle autostrade conservano il diritto di considerare le dichiarazioni di violazione del Titolo VI come una questione di Assicurazione e/o di adempimento della politica interna ma non gli è consentito di prendere decisioni riguardo alle possibili violazioni del Titolo VI. MassDOT incoraggia tutti i beneficiari secondari a contattare lo Specialista del Titolo VI dell'Ufficio per la Diversità e i Diritti Civili (ODCR), il Direttore dei Programmi Federali e/o il Direttore delle Indagini quando/se le denunce sono presentate al fine di garantirne il corretto svolgimento.

### **Definizioni**

Ricorrente (*Complainant*) – Persona che presenta una denuncia presso MassDOT.

Denuncia (*Complaint*) – Dichiarazione scritta o elettronica riguardante un'accusa di discriminazione in cui viene richiesto all'ufficio ricevente di adottare provvedimenti. Laddove la denuncia sia presentata da una persona con disabilità, il termine denuncia include formati alternativi che si adattino alla disabilità del ricorrente.

Discriminazione (*Discrimination*) – Atto o inazione, intenzionale o meno, attraverso cui una persona negli Stati Uniti esclusivamente per motivi di razza, colore, paese di origine, o categorie protette da altre autorità competenti in materia di non discriminazione, quali sesso, età o disabilità, viene sottoposta ad una disparità di trattamento o ad un diverso impatto in qualunque programma o attività finanziata a livello federale.

Amministrazioni Operanti (*Operating Administrations*) – Agenzie del Dipartimento degli Stati Uniti dei Trasporti, incluso l'Amministrazione Federale delle Autostrade (Federal Highway Administration, FHWA), l'Amministrazione Federale dei Trasporti (Federal Transit Administration, FTA), l'Amministrazione Federale delle Ferrovie (Federal Rail Administration, FRA) e l'Amministrazione Nazionale per la Sicurezza Stradale (National Highway Traffic Safety Administration, NHTSA), che finanzia i programmi e le attività sui trasporti.

Convenuto (*Respondent*) – La persona, agenzia, istituzione od organizzazione accusate di discriminazione.

### **Presentazione dei ricorsi**

Questa sezione descrive le procedure del Dipartimento dei Trasporti del Massachusetts (MassDOT) per presentare ricorsi relativi al Titolo VI sulla discriminazione (sulla base di razza, colore, paese di origine, inclusa la lingua) e i ricorsi di presunta discriminazione sulla base di

ulteriori disposizioni federali di non discriminazione (sulla base di età, sesso e disabilità). La legge federale e le normative che disciplinano il Titolo VI delle Legge degli Stati Uniti sui Diritti Civili del 1964 (Titolo VI) assegnano al Dipartimento di Giustizia degli Stati Uniti l'autorità di coordinamento generale nell'ambito dell'indagine sui ricorsi riguardanti i diritti civili, in collaborazione con le agenzie federali che svolgono tale funzione. Nel settore dei trasporti, l'autorità investigativa competente è il Dipartimento dei Trasporti degli Stati Uniti (US Department of Transportation, US DOT) e le sue agenzie suddivise nelle varie modalità di trasporto, incluso l'Amministrazione Federale delle Autostrade (Federal Highway Administration, FHWA) e l'Amministrazione Federale dei Trasporti (Federal Transit Administration, FTA). In coordinamento con i requisiti del Dipartimento dei Trasporti degli Stati Uniti (USDOT), l'Amministrazione Federale delle Autostrade (FHWA) e l'Amministrazione Federale dei Trasporti (FTA) hanno stabilito delle normative ed un orientamento per cui i beneficiari ed i beneficiari secondari che ricevono assistenza finanziaria federale sono obbligati a stabilire delle procedure per l'esame delle denunce presentate a tali organizzazioni.

Le procedure, come successivamente indicato, basate sulle procedure raccomandate emanate dal Dipartimento di Giustizia degli Stati Uniti (US DOJ), si propongono di garantire eque opportunità affinché i ricorsi presentati rispettino il principio del giusto processo per il querelante e per il convenuto. Oltre al processo di risoluzione dei casi di reclamo qui dettagliato, e quando possibile, MassDOT adotta misure concrete per cercare una risoluzione informale di tutte e di ciascuna denuncia del Titolo VI.

## **Procedura di ricorso**

### **1. Chi può presentare ricorso?**

**OGNI** cittadino, oltre ai clienti, richiedenti, appaltatori o beneficiari secondari che creda di essere stato oggetto, lui stesso, di maltrattamenti, una parte terza o una categoria di persone o di essere stato trattato ingiustamente a causa della sua razza, colore od origine nazionale (inclusa limitata padronanza della lingua inglese) in violazione a quanto stabilito dal Titolo VI della Legge degli Stati Uniti sui Diritti Civili del 1964, le relative leggi ed ordinamenti federali e statali, o dalla Politica Antidiscriminatoria di Prevenzione delle Molestie di MassDOT (MassDOT's Anti-Discrimination Harassment Prevention (ADHP) Policy). La politica ADHP e il Titolo VI proibiscono ogni forma di ritorsione nei confronti di un cittadino sulla base della razza, origine nazionale o colore.

### **2. Come si presenta un ricorso?**

Un ricorso può essere presentato presso:

**Specialista del Titolo VI di MassDOT**

Ufficio per la Diversità e i Diritti Civili MassDOT

**The MassDOT Title VI Specialist**

MassDOT Office of Diversity and Civil Rights

Telefono: o per Servizi di Relè

Indirizzo E-mail:

**Ufficio per la Diversità e i Diritti Civili MassDOT – Unità Investigativa**

Sottosegretario per la Diversità e i Diritti Civili, MassDOT

**The MassDOT Office of Diversity and Civil Rights – Investigations Unit**

Assistant Secretary of Diversity & Civil Rights, MassDOT

Indirizzo E-mail:

**Amministrazione Federale delle Autostrade**

**The Federal Highway Administration**

Federal Highway Administration

U.S. Department of Transportation

Office of Civil Rights

Indirizzo E-mail:

Telefono:

**Amministrazione Federale dei Trasporti**

**The Federal Transit Administration**

Federal Transit Administration

U.S. Department of Transportation

Office of Civil Rights

Attention: Complaint Team

All'attenzione di: Servizio dei reclami

Si segnala inoltre che:

- Quando si presenta un ricorso del Titolo VI all'Amministrazione Federale dei Trasporti (FTA) nei confronti di MassDOT, un beneficiario secondario o un appaltatore, l'FTA può richiedere che la questione sia esaminata da MassDOT.
- Se un ricorso del Titolo VI presentato presso MassDOT sostiene che ci sia stata una violazione da parte della Divisione Autostrade, in questo caso il ricorso verrà inoltrato all'Ufficio Divisione locale FHWA che a sua volta lo inoltrerà alla Sede Centrale dei Diritti Civili FHWA affinché venga esaminato.
- Se un ricorso del Titolo VI nei confronti di un beneficiario secondario della Divisione Autostrade di MassDOT viene presentato presso MassDOT, in questo



caso MassDOT può esaminare e studiare il ricorso o rivolgersi a HCR per le attività di indagine.

## **2. Cosa devo inserire nel ricorso?**

Un Modulo di Denuncia per Discriminazione/Titolo VI è disponibile in formato elettronico sul sito di MassDOT Titolo VI (<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) o in supporto cartaceo presso lo Specialista del Titolo VI di MassDOT, sopra indicato. In alternativa, il querelante può presentare la documentazione in formato alternativo che preveda:

- Nome, firma e informazione di contatto attuale (ovvero numero di telefono e indirizzo postale);
  - Nome e numero di tesserino (se conosciuti e se del caso) del presunto autore;
  - Una descrizione di come, quando e dove sia avvenuta la presunta infrazione;
  - Una descrizione dettagliata del perché lei ritenga di essere stato trattato diversamente;
  - Nomi e informazioni di contatto di qualunque testimone; e
  - Ogni altra informazione lei ritenga utile ai fini della sua denuncia.
- A. Qualora il querelante non sia in grado di presentare una dichiarazione scritta, una denuncia verbale può essere rilasciata all'Ufficio per la Diversità e i Diritti Civili (ODCR). I querelanti verranno intervistati da un Inquirente per i Diritti Civili (CRI). Se necessario, l'Inquirente per i Diritti Civili (CRI) aiuterà la persona a mettere per iscritto la denuncia verbale. Tutte le denunce devono essere firmate dal querelante.
- B. Le denunce anonime possono essere presentate allo stesso modo. Le denunce anonime vanno esaminate esattamente come ogni altra denuncia.
- C. Le denunce verranno accettate in ogni lingua riconosciuta. Sono disponibili moduli multilingue.

## **4. Per quanto tempo devo presentare un ricorso?**

- A. Una denuncia di presunta violazione del Titolo VI e/o della Politica ADHP di MassDOT deve essere presentata entro **(180)** giorni dalla data della presunta violazione.
- B. Le denunce di presunte violazioni della legge statale o federale devono essere presentate nel rispetto dei tempi stabiliti dallo statuto, norma o giurisprudenza.

## **5. In che modo verrà gestito il mio ricorso?**

Quando si presenta un ricorso, questo viene assegnato ad un Inquirente per I Diritti Civili (CRI). Il CRI dovrà:

A. Determinare la competenza giurisdizionale:

ODCR ha giurisdizione se il ricorso:

1) Comporta una dichiarazione o condotta che viola:

- L'obbligo legale e l'impegno di MassDOT di prevenire ogni forma di discriminazione, molestia e ritorsione sulla base di una categoria protetta con riferimento ad ogni aspetto del servizio che l'Agenzia offre al pubblico; o
- L'impegno preso dai beneficiari secondari e dagli appaltatori che lavorano per MassDOT di rispettare le politiche di MassDOT; E

2) Viene presentato al momento opportuno.

B. Notifica l'avvenuto ricevimento della denuncia e indica la competenza giurisdizionale entro dieci (10) giorni lavorativi dal ricevimento della denuncia.

- Se il CRI decide che la denuncia non ha il potenziale di stabilire una violazione dei diritti civili, allora il CRI dovrà notificare per iscritto al querelante e allo Specialista del Titolo VI i suoi risultati e il caso dovrà essere chiuso.

C. Condurre un'indagine approfondita delle accuse contenute nella denuncia in conformità con le Procedure di Denuncia Interne di MassDOT.

## 6. Conclusioni e Raccomandazioni?

Una volta terminata l'indagine, il CRI invierà al querelante e al convenuto una delle tre seguenti lettere in base alle sue conclusioni:

A. Una lettera di risoluzione in cui vengono spiegate le misure che il convenuto ha adottato o dovrà adottare per adempiere con quanto stabilito dal Titolo VI.

B. Una lettera di constatazione che viene inviata quando il convenuto è giudicato conforme al Titolo VI. Questa lettera spiegherà perché il convenuto è giudicato conforme e comunicherà al querelante i suoi diritti di appello.

C. Una lettera di constatazione che viene inviata quando il convenuto è giudicato inadempiente. Questa lettera comprenderà ciascuna violazione con riferimento alla

normativa vigente, una breve descrizione delle conclusioni/raccomandazioni, le conseguenze del mancato raggiungimento di una adesione volontaria, e un'offerta di assistenza nella definizione di un piano di azioni correttive, se del caso.

#### 7. **Posso presentare appello contro una Costatazione?**

Se un querelante o un convenuto non sono d'accordo con le conclusioni del CRI, in questo caso lui/lei/loro possono presentare appello al Sottosegretario per la Diversità e i Diritti Civili. La parte che ha presentato ricorso deve apportare **elementi nuovi, che non erano disponibili nel corso della prima indagine e che portebbero MassDOT a riconsiderare le sue decisioni**. La richiesta di appello e ogni nuovo elemento deve essere presentato entro sessanta (60) giorni dalla data in cui è stata trasmessa la lettera di costatazione. Dopo aver riesaminato questi elementi, MassDOT risponderà con l'invio di una nuova lettera di risoluzione oppure informando la parte che ha presentato ricorso che la lettera originale di risoluzione o di costatazione resta valida.

## ***Procedimentos de Queixa***

## **Introdução**

Este capítulo descreve os procedimentos do MassDOT [Departamento de Transporte do Massachusetts] para o processamento e disposição de queixas de discriminação do Título VI. Estes procedimentos são projetados para proporcionar o devido processo legal para os autores da queixa e os respondentes. Os processos detalhados aqui foram atualizados em 2017 como parte de um esforço colaborativo entre a unidade do Título VI do ODCR [Escritório de Diversidade e Direitos Civis] e a equipe de Investigações. Num espírito de uniformidade e transparência, os funcionários do ODCR trabalharam para fazer os procedimentos de queixa em todas as áreas de obrigações federais e estaduais de não-discriminação (tais como Título VI e Título VII) tão consistentes quanto praticáveis e apresentados de tal maneira que os membros do público possam facilmente entender o processo.

## **Objetivo e Aplicabilidade**

O objetivo deste capítulo é estabelecer procedimentos para o processamento e disposição de ambas as queixas de discriminação apresentadas diretamente ao MassDOT e as queixas de discriminação que o MassDOT tem autoridade delegada para processar sob o Título VI da Lei de Direitos Civis [Civil Rights Act] de 1964 (Título VI) e relacionadas a autoridades estaduais e federais de não-discriminação, incluindo a Lei dos Americanos Portadores de Deficiência [Americans with Disabilities Act – ADA].

Os procedimentos descrevem um processo administrativo cujo objetivo é identificar e eliminar a discriminação em programas e atividades com financiamento federal. Os procedimentos não oferecem um meio de assistência para os autores de queixa que busquem reparações individuais, incluindo indenizações punitivas ou remuneração compensatória; eles não proíbem os autores de queixa de apresentarem queixas a outras agências estaduais ou federais; eles também não negam aos autores de queixa o direito de buscar assessoria jurídica privada para abordar atos alegados de discriminação.

Os procedimentos descritos neste documento são aplicáveis ao MassDOT e seus sub-beneficiários, contratantes, e sub-contratantes na sua administração de programas e atividades com financiamento federal.

Como parte dos seus esforços para cumprir o Título VI, os sub-beneficiários de assistência federal através do MassDOT são incentivados a adotar estes procedimentos de queixa. Assim fazendo, estes sub-beneficiários reconhecem sua obrigação em permitir que os membros do público tenham uma oportunidade de prestar queixas alegando violações de requerimentos de não-discriminação nos programas, serviços e atividades da organização. De acordo com a orientação federal, sub-beneficiários de fundos relacionados ao transporte compreendem que eles têm autoridade para processar queixas do Título VI e irão informar o seu recipiente, o MassDOT, de queixas recebidas e do resultado das investigações conforme as questões forem tratadas. Sub-beneficiários de fundos relacionados à rede rodoviária devem compreender ademais que eles não têm autoridade de investigar alegações de violação do Título VI apresentadas contra a sua organização (caso sua organização seja a respondente ou a parte alegada de ter violado o Título VI). Todas as reivindicações deste tipo serão encaminhadas ao

MassDOT para determinar a autoridade investigativa apropriada. Sub-beneficiários de financiamento da rede rodoviária mantém o direito de considerar as alegações de violação do Título VI como uma questão de Garantia (Fiabilidade) e/ou de cumprimento de política interna, mas são impedidos de fazer determinações sobre possíveis violações do Título VI. O MassDOT incentiva todos os sub-beneficiários a se comunicarem com um Especialista em Título VI do ODCR [Escritório de Diversidade e Direitos Civis], o Administrador de Programas Federais, e/ou o Administrador de Investigações quando/se queixas do Título VI forem recebidas para assegurar tratamento adequado.

## **Definições**

*Autor(a) da Queixa [Complainant]* – Uma pessoa que apresenta uma queixa ao MassDOT.

*Queixa [Complaint]* – Declaração escrita ou eletrônica referente à alegação de discriminação que contenha um pedido para que o escritório recebedor tome as medidas. Quando uma queixa for apresentada por uma pessoa com deficiências, o termo queixa abrange formatos alternativos para acomodar a deficiência do(a) autor(a) da queixa.

*Discriminação [Discrimination]* – Aquele ato ou inação, quer intencional ou não, através do qual uma pessoa nos Estados Unidos tenha sido sujeita a tratamento desigual ou impacto diferente sob qualquer programa ou atividade que receba assistência federal unicamente devido à raça, cor, origem nacional, ou bases abrangidas por outras autoridades de não-discriminação, tais como gênero, idade ou deficiência.

*Administrações Operacionais [Operating Administrations]* – Agências do Departamento de Transporte dos Estados Unidos [U.S. Department of Transportation], incluindo a Administração Rodoviária Federal [Federal Highway Administration – FHWA], a Administração Federal de Trânsito [Federal Transit Administration – FTA], a Administração Ferroviária Federal [Federal Rail Administration – FRA], e a Administração Nacional de Trânsito Rodoviário [National Highway Traffic Safety Administration – NHTSA], que financia programas ou atividades de transporte.

*Respondente [Respondent]* – A pessoa, agência, instituição, ou organização que tenha alegadamente exercido discriminação.

## **Apresentação de Queixas**

Esta seção detalha os procedimentos do Departamento de Transporte do Massachusetts (MassDOT) para procedimentos para processar queixas de discriminação do Título VI (na base de raça, cor, ou origem nacional, incluindo idioma) e queixas alegando discriminação baseada em provisões federais adicionais de não-discriminação (na base de idade, sexo e deficiência). A lei federal e as regulamentações governando o Título VI da Lei de Direitos Civis de 1964 (Título VI) coloca a autoridade geral de coordenação para a investigação de queixas de direitos civis no Departamento de Justiça dos Estados Unidos, o qual trabalha colaborativamente com agências federais que se encarregam desta responsabilidade. No setor de transporte, esta autoridade

investigativa, compete ao Departamento de Transporte dos Estados Unidos [US Department of Transportation – US DOT] e suas agências para os diferentes meios de transporte, incluindo a Administração Rodoviária Federal [Federal Highway Administration – FHWA] e a Administração Federal de Trânsito [Federal Transit Administration – FTA]. Em coordenação com os requerimentos do USDOT, a FHWA e a FTA estabeleceram regulamentações e recomendações e requerem que os beneficiários e os sub-beneficiários de assistência financeira estabeleçam procedimentos para processar queixas do Título VI apresentadas a estas organizações.

Os procedimentos descritos abaixo, modelados em procedimentos recomendados de queixa promulgados pelo Departamento de Justiça dos Estados Unidos (US DOJ), são projetados para proporcionar uma oportunidade justa para ter queixas apresentadas que respeitem os processos legais para os autores da queixa e os respondentes. Além do processo formal de resolução de queixas detalhado aqui, o MassDOT toma medidas afirmativas para buscar a resolução informal de quaisquer e todas as queixas do Título VI, quando possível.

## **O Processo de Queixa**

### **1. Quem pode apresentar uma queixa?**

**QUALQUER** membro do público, bem como todos os clientes, requerentes, contratantes, ou sub-beneficiários que acreditem que eles próprios, terceiros, ou uma classe de pessoas tenham sido maltratados ou tratados injustamente por cause de sua raça, cor, ou origem nacional (incluindo proficiência limitada em inglês) em violação do Título VI da Lei de Direitos Civis de 1964, de leis federais e estaduais relacionadas, ou da Política de Anti-Discriminação e Prevenção de Assédio do MassDOT [Anti-Discrimination Harassment Prevention (ADHP) Policy]. A retaliação contra um(a) membro(a) do público baseada em raça, cor, ou origem também é proibida sob o Título VI e a política ADHP.

### **2. Como eu apresento uma queixa?**

Uma queixa pode ser apresentada com os seguintes:

#### **The MassDOT Título VI Specialist [O Especialista no Título VI do MassDOT]**

MassDOT Office of Diversity and Civil Rights [Escritório de Diversidade e Direitos Civis do MassDOT]

Telefone: ou para Serviço de Retransmissão.

Email:

#### **The MassDOT Office of Diversity and Civil Rights – Investigations Unit [Escritório de Diversidade e Direitos Civis do Departamento de Transporte do Massachusetts]**

Assistant Secretary of Diversity & Civil Rights, MassDOT [Secretário Assistente de Diversidade & Direitos Civis]

Email:

**The Federal Highway Administration [Administração Rodoviária Federal]**

Federal Highway Administration

U.S. Department of Transportation [Departamento de Transporte dos Estados Unidos]

Office of Civil Rights [Escritório de Direitos Civis]

Email:

Telefone:

**The Federal Transit Administration [Administração Federal de Trânsito]**

Federal Transit Administration [Administração Federal de Trânsito]

U.S. Department of Transportation [Departamento de Transporte dos Estados Unidos]

Office of Civil Rights

Attention: Complaint Team

Atenção:

- Quando a FTA recebe uma queixa do Título VI relacionada ao MassDOT, um sub-beneficiário, ou um contratante, a FTA pode solicitar que a questão seja investigada pelo MassDOT.
- Se uma queixa do Título VI for apresentada ao MassDOT que alegue uma violação da Divisão Rodoviária do MassDOT, então ela será encaminhada para o Escritório da Divisão local da FHWA [Administração Rodoviária Federal] que irá então encaminhar a queixa à Sede do Escritório de Direitos Civis da FHWA [Headquarters Office of Civil Rights – HCR] para processamento.
- Se uma queixa do Título VI for recebida pelo MassDOT e for apresentada contra um sub-beneficiário do da Divisão Rodoviária do MassDOT [Highway Division], então o MassDOT poder processar e investigar a queixa ou pode remeter ao HCR [Headquarters Office of Civil Rights] para investigação.

**3. O que eu preciso incluir em uma queixa?**

Um formulário de Não Discriminação do Título VI [Title VI/Nondiscrimination Complaint form] está disponível eletronicamente no site/sítio do MassDOT Title VI

(<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) ou o

documento impresso pelo Especialista em Título VI do MassDOT [Title VI Specialist],

identificado acima. Alternativamente, um(a) sub-autor(a) de queixa pode submeter

correspondência em formatos alternativos que devem incluir:

- Seu nome, assinatura, e informação de contato atual (por exemplo, por número de telefone e endereço postal);
- O nome e número do crachá (se conhecido e aplicável) do perpetrador alegado;
- Uma descrição de como, quando, onde, a conduta proibida alegada ocorreu;
- Uma descrição detalhada de porquê você crê que foi tratado de maneira diferente;



- Nomes e informação de contato de quaisquer testemunhas; e
  - Qualquer outra informação que você creia que seja relevante à sua queixa.
- A. Em casos nos quais o(a) autor(a) da queixa for incapaz de prover uma declaração escrita, uma queixa verbal pode ser feita ao Escritório de Diversidade & Direitos Civis (ODCR). Os(as) autores da queixa serão entrevistados por um Investigador de Direitos Civis [Civil Rights Investigator – CRI]. Se necessário, o CRI ajudará a pessoa a converter a queixa verbal em escrita. Todas as queixas precisam ser assinadas pelo(a) autor(a) da queixa.
  - B. Queixas anônimas podem ser apresentadas da mesma maneira. Queixas anônimas serão investigadas da mesma maneira como qualquer outra queixa.
  - C. Queixas serão aceitas em qualquer idioma reconhecido. Formulários de queixa em múltiplos idiomas estão disponíveis. Queixas serão aceitas em qualquer idioma reconhecido. Formulários de queixa estão disponíveis em múltiplos idiomas.

#### 4. **Quanto tempo eu tenho para apresentar uma queixa?**

- A. Uma queixa alegando violação do Título VI e/ou da Política ADHP do MassDOT deve ser apresentada no mais tardar cento e oitenta **(180)** dias da data da violação alegada.
- B. Queixas alegando violações de lei estadual ou federal precisam ser apresentadas dentro dos prazos estabelecidos por estatuto, regulamentação ou jurisprudência.

#### 5. **Como minha queixa será tratada?**

Quando uma queixa é recebida, ela é atribuída a um Investigador de Direitos Civis [Civil Rights Investigator – CRI]. O CRI irá

- A. Determinar a Jurisdição:

O ODCR tem jurisdição se a queixa:

- 1) envolver uma declaração ou conduta que viole:

- A obrigação legal do MassDOT e o compromisso de prevenir a discriminação, o assédio ou retaliação com base numa característica protegida com respeito a qualquer aspecto do serviço da Agência ao público;
- O compromisso feito por sub-beneficiários e contratantes que trabalham com o MassDOT para aderir às políticas do MassDOT; E

- 2) for apresentada à tempo.

- B. Acusar a recepção da queixa e provê determinação jurisdicionais dentro de dez (10) dias úteis do recebimento da queixa.
- Se o CRI determinar que qualquer queixa não tenha o potencial de estabelecer uma violação dos direitos civis, então o CRI irá notificar por escrito o(a) autor(a) da queixa e o Especialista no Título VI da sua conclusão e a questão será encerrada.
- C. Conduzir uma investigação minuciosa das alegações contidas na queixa de acordo com os Procedimentos Internos de Queixa [Internal Complaint Procedures] do MassDOT.

## 6. Conclusões e Recomendações?

Na conclusão da investigação, o CRI [Investigador dos Direitos Civis] irá transmitir para o(a) autor(a) da queixa e o respondente uma das três seguintes cartas baseado nas conclusões:

- A. Uma carta de resolução que explica as medidas que o respondente tomou ou tomará para estar em conformidade com o Título VI.
- B. Uma carta de conclusão que é emitida quando o respondente for considerado em conformidade com o Título VI. Esta carta incluirá uma explicação do porquê o respondente foi considerado estar em conformidade, e proverá a notificação dos direitos do(a) autor(a) da queixa de recorrer.
- C. Uma carta de conclusão que é emitida quando for constatado que o respondente não está em conformidade. Esta carta incluirá cada violação relacionada às regulamentações aplicáveis, uma breve descrição das conclusões/recomendações, as consequências da falha em promover a conformidade voluntária, e um oferecimento de assistência em elaborar um plano de correção para a conformidade, se for apropriado.

## 7. Posso apresentar um recurso contra a conclusão?

Se um(a) autor(a) de queixa ou um respondente não concordar com as conclusões do CRI então ele/ela/eles podem apresentar um recurso para o(a) Secretário(a) Assistente de Diversidade & Direitos Civis [Assistant Secretary of Diversity & Civil Rights]. A parte apresentando o recurso precisa fornecer **novas informações que não estavam prontamente disponíveis durante o curso da investigação original que levariam o MassDOT a reconsiderar suas determinações**. A apresentação de recurso e qualquer informação nova precisa ser submetido dentro de sessenta (60) dias da data da quando a carta de conclusão foi transmitida. Depois de revisar esta

informação, o MassDOT responderá através da emissão uma carta de resolução revisada ou informando a parte que apresentou o recurso que a carta original de resolução e conclusão se mantém em vigor.

## *Процедуры подачи жалоб*

## **Введение**

В этой главе описываются процедуры организации MassDOT по обработке и ликвидации жалоб относительно дискриминации в соответствии с Титулом VI. Эти процедуры предназначены для обеспечения надлежащей правовой процедуры для истцов и ответчиков. Процессы, подробно описанные в настоящем документе, были обновлены в 2017 году в рамках совместных усилий подразделения ODCR Титула VI и Группы Расследований. В духе единообразия и открытости сотрудники ODCR работали над тем, чтобы процедуры подачи жалоб в рамках программных областей недискриминационного характера на федеральном и штатном уровнях (такие как Титул VI и Титул VII) были настолько последовательными, насколько это возможно и представлялись таким образом, чтобы члены общественности могли легко понять данный процесс.

## **Цель и применимость**

Цель этой главы заключается в том, чтобы установить процедуры обработки и распоряжения как дискриминационными жалобами, поданными непосредственно в организацию MassDOT, так и дискриминационными жалобами, которые может обрабатывать MassDOT, имеющий делегированные полномочия, согласно Титулу VI Закона о гражданских правах 1964 года (Титул VI) и связанных с ним правовых документов по недискриминации на уровне штата и федеральном уровне, включая Закон об американцах с инвалидностью (ADA).

Эти процедуры описывают административный процесс, направленный на выявление и ликвидацию дискриминации в программах и мероприятиях, финансируемых из федерального бюджета. Эти процедуры не предоставляют возможности для оказания помощи истцам, обращающимся за индивидуальными средствами правовой защиты, включая штрафные убытки или компенсационное вознаграждение; они не запрещают истцам подавать жалобы в другие штатные или федеральные агентства; и они не отказывают истцам в праве искать частных адвокатов для рассмотрения актов предполагаемой дискриминации.

Процедуры, описанные в этом документе, применяются к MassDOT и его субподрядчикам, контрактникам и субконтрактникам при их администрировании программ и мероприятий, финансируемых из федерального бюджета.

В рамках своих усилий по соблюдению Титула VI субподрядчикам, получающим федеральную финансовую помощь через MassDOT, советуют принять данные процедуры рассмотрения жалоб. При этом эти субподрядчики признают свое обязательство предоставлять членам общественности возможность подавать жалобы, в которых утверждается нарушение требований о недискриминации в рамках программ, услуг и мероприятий организации. В соответствии с федеральным руководством, субподрядчики, получающие гранты, связанные с транзитом, понимают, что они имеют право обрабатывать жалобы по Титулу VI и сообщать MassDOT о полученных жалобах и результатах расследований по мере рассмотрения этих вопросов. Субподрядчики, получающие финансирование, связанное с автомагистралями, понимают, что они не имеют права расследовать жалобы на нарушение Титула VI, поданные против их организации (если их организация является ответчиком или стороной, предположительно нарушившей Титул VI). Все такие претензии будут направлены в MassDOT для определения соответствующих следственных органов. Данные субподрядчики сохраняют

за собой право рассматривать заявления о нарушении Титула VI в качестве вопроса в рамках обеспечения и / или соблюдения внутренней политики, но не могут принимать решения о возможных нарушениях Титула VI. MassDOT советует всем субподрядчикам связываться со специалистом ODCR по Титулу VI , менеджером федеральных программ и / или менеджером расследований, когда / если были получены жалобы по Титулу VI для обеспечения надлежащего их рассмотрения.

### **Определения**

*Истец* (Complainant) - лицо, подающее жалобу в MassDOT.

*Жалоба* (Complaint) - Письменное или электронное заявление, касающееся утверждения о дискриминации, в котором содержится просьба в соответствующую инстанцию о принятии соответствующих мер. В тех случаях, когда жалоба подана лицом с инвалидностью, термин жалоба включает в себя альтернативные пути для учета инвалидности истца при разрешении данной жалобы.

*Дискриминация* (Discrimination) - это действие или бездействие, будь то преднамеренное или непреднамеренное, посредством которого лица в Соединенных Штатах подвергаются неравному или различному обращению в рамках любой программы или деятельности, получающей федеральную помощь, исключительно по признаку расы, цвета кожи, национального происхождения или по дополнительным защищаемым категориям, таким как пол, возраст или инвалидность.

*Рабочие инстанции* (Operating Administrations) - агентства Министерства транспорта США, в том числе Федеральная администрация автомобильных дорог (FHWA), Федеральная администрация транзита (FTA), Федеральное управление железных дорог (FRA) и Национальная администрация безопасности дорожного движения (NHTSA), которые финансируют транспортные программы или мероприятия.

*Ответчик* (Respondent) - лицо, агентство, учреждение или организация, которые предположительно участвуют в дискриминации.

### **Подача жалоб**

В этом разделе описываются процедуры Департамента Транспорта штата Массачусетс (MassDOT) для обработки жалоб на дискриминацию по Титулу VI (по признаку расы, цвета кожи или национального происхождения, включая язык) и жалоб на возможную дискриминацию на основе дополнительных федеральных положений о недискриминации (на основе возраста, пола и инвалидности). Федеральный закон и правила, регулирующие Титул VI Закона о гражданских правах 1964 года (Титул VI), определяют Министерство юстиции Соединенных Штатов в качестве общего координационного органа для расследования жалоб на нарушение гражданских прав. Данный орган работает совместно с федеральными агентствами, на которые возложена эта ответственность. В транспортном секторе такие полномочия принадлежат Департаменту транспорта США (US DOT) и его агентствам для различных видов транспорта, включая Федеральную администрацию автомобильных дорог (FHWA) и Федеральную администрацию транзита (FTA). В соответствии с требованиями Департамента транспорта США, FHWA и FTA установили правила и рекомендации, которые требуют, чтобы подрядчики и субподрядчики, получающие федеральную финансовую помощь, устанавливали процедуры обработки поданных в эти организации жалоб в соответствии с Титулом VI.

Описанные ниже процедуры, составленные по образцу рекомендуемых процедур подачи жалоб, обнародованных Министерством юстиции США (US DOJ), призваны обеспечить справедливую возможность рассмотрения жалоб с соблюдением надлежащей правовой процедуры как для истцов, так и для ответчиков. В дополнение к формальному процессу рассмотрения жалоб, подробно описанному в данном документе, MassDOT предпринимает позитивные шаги для обеспечения неофициального разрешения любых жалоб по Титулу VI, когда это возможно.

## **Процесс подачи жалоб**

### **1. Кто может подать жалобу?**

**ЛЮБОЙ** человек, включая всех клиентов MassDOT, заявителей, подрядчиков или субподрядчиков, которые считают, что они сами, третье лицо или класс лиц подвергались жестокому обращению или к ним относились несправедливо по причине их расы, цвета кожи или национального происхождения (включая ограниченный уровень владения английским языком) в нарушение Титула VI Закона о гражданских правах 1964 года, соответствующих федеральных законов и законов штата, а также Политики MassDOT по Предотвращению Дискриминации и Домогательств (ADHP). Месть против любого человека по признаку расы, цвета кожи или национального происхождения также запрещена согласно Титулу VI и политике ADHP.

### **2. Как подать жалобу?**

Жалоба может быть подана следующим образом:

**Специалист MassDOT по Титулу VI**  
Управление Разнообразия и Гражданских Прав MassDOT  
Телефон: или для службы ретрансляции.  
Эл. адрес:  
**The MassDOT Title VI Specialist**  
MassDOT Office of Diversity and Civil Rights  
Phone: or for Relay Service.  
Email:

**Управление Разнообразия и Гражданских Прав MassDOT - Отдел расследований**  
Помощник секретаря по вопросам разнообразия и гражданских прав, MassDOT  
Эл. адрес:  
**The MassDOT Office of Diversity and Civil Rights – Investigations Unit**  
Assistant Secretary of Diversity & Civil Rights, MassDOT  
Email:

**Федеральная администрация автомобильных дорог**

Федеральная администрация автомобильных дорог

Министерство транспорта США

Управление по Гражданским правам

Эл. адрес:

Телефон:

**The Federal Highway Administration**

Federal Highway Administration

U.S. Department of Transportation

Office of Civil Rights

Email:

Phone:

**Федеральная администрация транзита**

Федеральная администрация транзита

Министерство транспорта США

Управление по Гражданским правам

Внимание: команда по рассмотрению жалоб

**The Federal Transit Administration**

Federal Transit Administration

U.S. Department of Transportation

Office of Civil Rights

Attention: Complaint Team

Пожалуйста, обратите внимание:

- Когда FTA получает жалобу по Титулу VI относительно MassDOT, субподрядчика или подрядчика, FTA может запросить, чтобы вопрос был исследован самой организацией MassDOT.
- Если жалоба по Титулу VI подана в MassDOT и заявляет о нарушении со стороны Отдела автомобильных дорог MassDOT, она будет отправлена в местное отделение отдела FHWA, которое затем направит жалобу в Главное управление по гражданским правам FHWA (HCR) для ее обработки.
- Если жалоба по Титулу VI получена MassDOT и подана против субподрядчика Отдела автомобильных дорог MassDOT, MassDOT может обработать и расследовать жалобу или обратиться к HCR для расследования.

**3. Что мне нужно включить в жалобу?**

Форма жалобы по Титулу VI / недискриминация доступна в электронном виде на сайте MassDOT Title VI

(<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) или в печатном виде у специалиста по Титулу VI MassDOT, указанного выше. В качестве альтернативы, истец может отправить корреспонденцию в альтернативном формате, которая должна включать следующее:



- Ваше имя, подпись и текущая контактная информация (например, номер телефона и почтовый адрес);
- Имя и идентификационный номер (если известно и применимо) предполагаемого нарушителя;
- Описание того, как, когда, где произошло предполагаемое запрещенное поведение;
- Подробное описание того, почему вы считаете, что к вам относились несправедливо;
- Имена и контактная информация любых свидетелей; а также
- Любая другая информация, которая, по вашему мнению, имеет отношение к вашей жалобе.

А. В случаях, когда истец не может представить письменное заявление, может быть подана устная жалоба в Управление по вопросам разнообразия и гражданских прав (ODCR). Истцы будут опрошены следователем по гражданским правам (CRI). В случае необходимости, CRI поможет человеку преобразовать вербальную жалобу в письменной форме. Все жалобы должны быть подписаны истцом.

В. Анонимные жалобы могут быть поданы таким же образом. Анонимные жалобы расследуются таким же образом, как и любая другая жалоба.

С. Жалобы принимаются на любом признанном языке. Доступны многоязычные формы жалоб.

#### **4. Как скоро я должен подать жалобу?**

А. Жалоба, в которой утверждается нарушение Титула VI и/или политики ADHP от MassDOT, должна быть подана не позднее, чем через сто восемьдесят (180) дней с даты предполагаемого нарушения.

Б. Жалобы, в которых утверждается нарушение государственного или федерального закона, должны быть поданы в сроки, установленные уставом, постановлением или прецедентным правом.

#### **5. Как будет обрабатываться моя жалоба?**

Когда жалоба получена, она выносится на рассмотрение следователя по гражданским правам (CRI). CRI предпримет следующие действия:

А. Определит юрисдикцию:

ODCR имеет юрисдикцию, если жалоба:

1) включает в себя заявление или поведение, которое нарушает:

- Юридическое обязательство и задачи MassDOT по предотвращению дискриминации, преследований или актов мести в рамках любой из программ данной организации; или
- Обязательство, данное субподрядчиками и подрядчиками, работающими с MassDOT, придерживаться политики MassDOT; А ТАКЖЕ

2) своевременно подана.

Б. Подтвердит получение жалобы и обеспечит юрисдикционное определение в течение десяти (10) рабочих дней с момента получения жалобы.

• Если CRI определяет, что жалоба не является результатом нарушения гражданских прав, тогда он должен письменно известить об этом истца и специалиста по Титулу VI, и дело будет закрыто.

В. Проведет тщательное расследование утверждений, содержащихся в жалобе, в соответствии с внутренними процедурами MassDOT по рассмотрению жалоб.

#### **6. Выводы и рекомендации?**

По завершении расследования CRI передаст истцу и ответчику одно из следующих трех писем, основанное на результатах:

А. Письмо с резолюцией, в котором объясняются шаги, предпринятые или принимаемые ответчиком для соблюдения Титула VI.

Б. Письмо о результатах, которое выдается, когда установлено, что действия ответчика не нарушают положения Титула VI. Данное письмо указывает, почему ответчик был признан невиновным, и уведомляет об апелляционных правах истца.

В. Письмо о результатах, которое выдается, когда действия ответчика нарушают положения Титула VI. Это письмо будет содержать информацию о каждом нарушении со ссылками на соответствующие правила, краткое описание выводов / рекомендаций, последствия неспособности добиться добровольного соблюдения и предложение помощи в разработке исправительного плана для соблюдения Титула VI, если это необходимо.

#### **7. Могу ли я подать апелляцию?**

Если истец или ответчик не согласны с выводами CRI, то он / она / они могут обратиться к помощнику секретаря по вопросам разнообразия и гражданских прав. Апелляционная сторона должна предоставить любую новую информацию, которая не была доступна в ходе первоначального расследования, что приведет MassDOT к пересмотру своих решений. Запрос на апелляцию и предоставление любой новой информации должен быть представлен в течение шестидесяти (60) дней с даты, когда было отправлено письмо с результатами. После рассмотрения этой информации MassDOT ответит либо с помощью пересмотренного письма с разрешением, либо путем информирования апелляционной стороны о том, что первоначальное письмо с резолюцией или определенными выводами остается в силе.

## ***Procedimiento de quejas***

## **Introducción**

Este capítulo describe los procedimientos del MassDOT para tramitar y disponer de las quejas por discriminación relativas al inciso VI. Estos procedimientos están diseñados para ofrecer un debido proceso a los denunciantes y los denunciados. Los procesos detallados en el presente documento se actualizaron en 2017 como parte de un esfuerzo colaborativo entre la unidad del inciso VI de la “Oficina de Diversidad y Derechos Civiles” (*Office of Diversity and Civil Rights*, ODCR) y el equipo de investigaciones. En aras de lograr uniformidad y transparencia, el personal de la ODCR trabajó para conseguir que los procedimientos de queja en los programas estatales y federales con obligaciones de no discriminación (como el inciso VI y el inciso VII) sean tan consecuentes como viables y se presenten de manera tal que los miembros del público puedan comprender fácilmente el trámite.

## **Propósito y aplicabilidad**

El propósito de este capítulo es establecer procedimientos para el trámite y la disposición de las quejas por discriminación presentadas directamente ante el MassDOT y de las quejas por discriminación que el MassDOT esté autorizado para tramitar según el inciso VI de la Ley de Derechos Civiles de 1964 y las leyes contra la discriminación estatales y federales relacionadas, incluida la Ley sobre Estadounidenses con Discapacidades (*Americans with Disabilities Act*, ADA).

Los procedimientos describen un trámite administrativo orientado a detectar y eliminar la discriminación en actividades y programas financiados con fondos federales. Los procedimientos no ofrecen una posibilidad de reparación judicial para los denunciantes que buscan compensaciones individuales, por ejemplo, una indemnización por daños y perjuicios o una remuneración compensatoria; tampoco prohíben a los denunciantes presentar quejas ante otros organismos federales o estatales, ni tampoco les niegan a los denunciantes el derecho de buscar asesoramiento particular para abordar los actos de presunta discriminación.

Los procedimientos descritos en este documento atañen al MassDOT y a sus receptores indirectos, contratistas y subcontratistas en su administración de actividades y programas financiados con fondos federales.

Como parte de sus esfuerzos para cumplir con el inciso VI, se invita a los receptores indirectos de ayuda económica a través del MassDOT a adoptar estos procedimientos de queja. Al hacerlo, estos receptores indirectos reconocen su obligación de brindar a los miembros del público una oportunidad de presentar quejas alegando infracciones de las normas contra la discriminación en programas, servicios y actividades de la organización. De acuerdo con la legislación federal, los receptores indirectos de fondos relacionados con el transporte público entienden que tienen la autoridad para tramitar quejas relativas al inciso VI e informarán a su receptor, el MassDOT, de las quejas recibidas y de los resultados de las investigaciones a medida que se gestionan los asuntos. Los receptores indirectos de fondos relacionados con las carreteras entienden además que no tienen autoridad para investigar quejas por infracción del inciso VI presentadas contra su organización (donde su organización es la denunciada o la parte que presuntamente transgredió el inciso VI). Todas estas quejas se enviarán al MassDOT para

determinar la autoridad investigadora pertinente. Los receptores indirectos de fondos para carreteras conservan el derecho de tener en cuenta denuncias de infracción del inciso VI como cuestión de cumplimiento de seguridad o de políticas internas, pero están excluidas de tomar determinaciones con respecto a posibles infracciones del inciso VI. El MassDOT invita a todos los receptores indirectos a comunicarse con el especialista en el inciso VI de la ODCR, el administrador de programas federales o el administrador de investigaciones cuando se reciban quejas relativas al inciso VI a fin de garantizar una gestión adecuada.

## **Definiciones**

Denunciante (*Complainant*): una persona que presenta una queja ante el MassDOT.

Queja (*Complaint*): una declaración escrita o electrónica relacionada con una acusación de discriminación que contiene una solicitud a la oficina receptora de tomar medidas. Cuando la queja la presenta una persona con una discapacidad, el término *queja* abarca formatos alternativos para adaptarse a la discapacidad del denunciante.

Discriminación (*Discrimination*): toda acción o inacción, ya sea intencional o no intencional, por medio de la cual una persona en los Estados Unidos, únicamente debido a la raza, al color, a la nacionalidad o a otros fundamentos abarcados por otras leyes contra la discriminación, como el género, la edad o la discapacidad, ha sido sometida a un trato desigual o a consecuencias dispares en el marco de un programa o actividad que recibe ayuda económica federal.

Administraciones a cargo (*Operating Administrations*): entes del Departamento de Transporte de Estados Unidos, incluida la “Administración Federal de Carreteras” (*Federal Highway Administration, FHWA*), la “Administración Federal del Transporte Público” (*Federal Transit Administration, FTA*), la “Administración Federal Ferroviaria” (*Federal Rail Administration, FRA*), y la “Administración Nacional de Seguridad del Tráfico en las Carreteras” (*National Highway Traffic Safety Administration, NHTSA*), que financian programas o actividades de transporte.

Denunciado (*Respondent*): una persona, un ente, una institución o una organización acusada de haber discriminado.

## **Presentación de quejas**

Esta sección detalla los procedimientos del Departamento de Transporte de Massachusetts (MassDOT) para tramitar quejas por discriminación según el inciso VI (sobre la base de la raza, el color o la nacionalidad, incluido el idioma) y quejas por presunta discriminación según las disposiciones federales adicionales de no discriminación (sobre la base de la edad, el sexo y la discapacidad). Las leyes y las normas federales que rigen el inciso VI de la Ley de Derechos Civiles de 1964 (inciso VI) ubica a la autoridad de coordinación general para la investigación de quejas relativas a los derechos civiles en el Departamento de Justicia de los Estados Unidos, que trabaja colaborativamente con entes federales que ejercen esta responsabilidad. En el sector del transporte, esta autoridad de investigación se deposita en el Departamento de Transporte de los EE. UU. (US DOT) y sus organismos para los diferentes medios de transporte, incluidas la “Administración Federal de Carreteras” (FHWA) y la “Administración Federal del Transporte

Público” (FTA). En colaboración con las reglamentaciones del USDOT, la FHWA y la FTA han establecido normas y pautas que exigen a los receptores directos e indirectos de ayuda económica federal establecer procedimientos para el trámite de quejas relativas al inciso VI presentadas ante estas organizaciones.

Los procedimientos descritos a continuación, elaborados sobre la base de los procedimientos de queja recomendados y promulgados por el Departamento de Justicia de los EE. UU. (US DOJ), están diseñados para brindar una oportunidad justa de presentar quejas que respeten el debido proceso tanto para los denunciantes como para los denunciados. Además del trámite de resolución formal de la queja detallado en el presente documento, el MassDOT toma medidas afirmativas para conseguir la resolución informal de todas las quejas relativas al inciso VI, cuando sea posible.

## **El trámite de queja**

### **1. ¿Quiénes pueden presentar una queja?**

**Cualquier** miembro del público así como todos los usuarios, solicitantes, contratistas o receptores indirectos del MassDOT que crean que ellos mismos, un tercero o un grupo de personas fueron maltratados o tratados injustamente debido a su raza, color o nacionalidad (incluido el dominio limitado del idioma inglés) en infracción del inciso VI de la Ley de Derechos Civiles de 1964, de disposiciones y leyes estatales y federales relacionadas o de la política de prevención contra el acoso y la discriminación del MassDOT. Las represalias contra un miembro del público sobre la base de la raza, el color o la nacionalidad también están prohibidas según el inciso VI y la política de prevención contra el acoso y la discriminación.

### **2. ¿Cómo presento una queja?**

Se puede presentar una queja ante:

#### **El especialista en el inciso VI del MassDot**

Oficina de Diversidad y Derechos Civiles del MassDOT

Teléfono o servicio de retransmisión

Correo electrónico:

#### **The MassDOT Title VI Specialist**

MassDOT Office of Diversity and Civil Rights

Phone: or for Relay Service.

Email:

#### **Unidad de Investigaciones de la Oficina de Diversidad y Derechos Civiles del MassDOT**

Subsecretario de Diversidad y Derechos Civiles, MassDOT

Correo electrónico:

**The MassDOT Office of Diversity and Civil Rights – Investigations Unit**

Assistant Secretary of Diversity & Civil Rights, MassDOT

Email:

**Administración Federal de Carreteras**

Administración Federal de Carreteras

Departamento de Transporte de Estados Unidos

Oficina de Derechos Civiles

Correo electrónico:

Teléfono:

**The Federal Highway Administration**

Federal Highway Administration

U.S. Department of Transportation

Office of Civil Rights

Email:

Phone:

**Administración Federal del Transporte Público**

Administración Federal del Transporte Público

Departamento de Transporte de Estados Unidos

Oficina de Derechos Civiles

A la atención de: Equipo de quejas

**The Federal Transit Administration**

Federal Transit Administration

U.S. Department of Transportation

Office of Civil Rights

Attention: Complaint Team

Por favor, tenga en cuenta:

- Cuando la FTA recibe una queja relativa al inciso VI con respecto al MassDOT, a un receptor indirecto o a un contratista, la FTA puede solicitar que el asunto sea investigado por el MassDOT.
- Si se presenta ante el MassDOT una queja relativa al inciso VI que alega una infracción por parte de la División de Carreteras del MassDOT, esta se derivará a la oficina de la División de la FHWA, que luego la reenviará a la sede central de la Oficina de Derechos Civiles de la FHWA para que la tramiten.
- Si el MassDOT recibe una queja relativa al inciso VI presentada contra un receptor indirecto de la División de Carreteras del MassDOT, el MassDOT puede

tramitar e investigar la queja o puede derivarla a la sede central de la Oficina de Derechos Civiles para su investigación.

### 3. **¿Qué necesito incluir en una queja?**

Hay un formulario de queja contra la discriminación según el inciso VI que está disponible electrónicamente en el sitio web del inciso VI de MassDOT.

(<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) o en una copia en papel que puede pedírsela al especialista en el inciso VI del MassDOT mencionado anteriormente. Alternativamente, un denunciante puede enviar correspondencia en formato alternativo, que debe incluir:

- Su nombre, su firma y los datos de contacto actuales (p. ej.: número de teléfono y dirección de correo postal);
  - El nombre y el número de placa (si lo sabe y si corresponde) del presunto responsable;
  - Una descripción de cómo, cuándo y dónde la supuesta conducta prohibida tuvo lugar;
  - Una descripción detallada de por qué cree usted que se lo trató de manera diferente;
  - Los nombres y los datos de contacto de testigos; y
  - Cualquier otra información que considere relevante para su queja.
- A. En los casos en los que el denunciante no pueda entregar una declaración escrita, puede presentar una queja verbal en la “Oficina de Diversidad y Derechos Civiles” (ODCR). Los denunciantes serán entrevistados por un investigador de derechos civiles. Si es necesario, este investigador ayudará a la persona a transformar la queja verbal en queja escrita. Todas las quejas deben estar firmadas por el denunciante.
- B. Las quejas anónimas pueden presentarse de la misma manera. Estas se investigarán de la misma manera que cualquier otra queja.
- C. Las quejas se aceptarán en cualquier idioma reconocido. Hay formularios de queja plurilingües disponibles.

### 4. **¿Cuánto tiempo tengo para presentar una queja?**

- A. Una queja por presunta infracción del inciso VI o de la política de prevención contra el acoso y la discriminación del MassDOT deberá presentarse antes de transcurridos ciento ochenta (**180**) días desde la fecha de la presunta infracción.
- B. Las quejas por supuestas infracciones de las leyes estatales o federales deben presentarse dentro de los plazos establecidos por la ley, norma o jurisprudencia.

### 5. **¿Cómo se gestionará mi queja?**



Cuando se recibe una queja, esta se asigna a un investigador de derechos civiles. El investigador:

A. Determinará la jurisdicción:

La ODCR tiene jurisdicción si la queja:

1) Implica una declaración o conducta que transgrede:

- La obligación legal y el compromiso del MassDOT de prevenir la discriminación, el acoso o las represalias sobre la base de una característica protegida en relación con cualquier aspecto del servicio que presta este organismo al público; o
- El compromiso asumido por los receptores indirectos y los contratistas que trabajan con el MassDOT de acatar las políticas del MassDOT; y

2) Se presenta dentro del plazo estipulado.

B. Acusará recibo de la queja y brindará una resolución jurisdiccional dentro de los diez (10) días hábiles de recibida la queja.

- Si el investigador de derechos civiles determina que una queja determinada no puede demostrar una infracción de los derechos civiles, entonces el investigador de derechos civiles deberá avisar al denunciante y al especialista en el inciso VI por escrito de su resolución y el asunto quedará cerrado.

C. Realizará una investigación profunda de las acusaciones contenidas en la queja de acuerdo con los procedimientos internos de queja del MassDOT.

## 6. Resoluciones y recomendaciones

Al final de la investigación, el investigador de derechos civiles despachará al denunciante y al denunciado una de las siguientes tres cartas basadas en la resolución:

A. Una carta de resolución que explica las medidas que ha tomado o tomará el denunciado para cumplir con el inciso VI.

B. Una carta de resolución que se emite cuando se resuelve que el denunciado cumple con el inciso VI. Esta carta incluirá una explicación de por qué se descubrió que el denunciado no transgredió el inciso VI y contendrá un aviso de los derechos de apelación del denunciante.

- C. Una carta de resolución que se emite cuando se resuelve que el denunciado ha transgredido el inciso VI. Esta carta incluirá cada infracción referida a las normas pertinentes, una breve descripción de las resoluciones o recomendaciones, las consecuencias de no lograr un cumplimiento voluntario y una oferta de ayuda para elaborar un plan reparador de cumplimiento, si correspondiera.

## 7. ¿Puedo apelar una resolución?

Si un denunciante o un denunciado no está de acuerdo con la resolución del investigador de derechos civiles, entonces este puede apelar al subsecretario de diversidad y derechos civiles. La parte que apela debe **proporcionar toda información nueva que no estaba inmediatamente disponible durante el transcurso de la investigación original que llevaría al MassDOT a reconsiderar sus decisiones**. La solicitud de una apelación y la información nueva deben entregarse dentro de los sesenta (60) días posteriores a la fecha de despacho de la carta de resolución. Después de revisar esta información, el MassDOT responderá emitiendo una carta de resolución revisada o informando a la parte que apela que la carta de resolución original sigue vigente.

## ***Quy trình khiếu nại***

## **Giới thiệu**

Chương này mô tả quy trình MassDOT tiếp nhận và xử lý những đơn khiếu nại phân biệt đối xử quy định tại Tiêu đề VI. Quy trình này được thiết kế nhằm cung cấp thủ tục tố tụng hợp pháp cho người khiếu nại và bị đơn. Những quy trình chi tiết trong tài liệu này được cập nhật năm 2017 nhờ nỗ lực hợp tác giữa đơn vị Tiêu đề VI của ODCR và Đội điều tra. Trên tinh thần thống nhất và minh bạch, các nhân viên ODCR đã nỗ lực làm nhất quán tối đa các quy trình khiếu nại trong các lĩnh vực chương trình bắt buộc không phân biệt đối xử của liên bang và tiểu bang (như là Tiêu đề VI và Tiêu đề VII) và trình bày các quy trình này một cách dễ hiểu cho công chúng.

## **Mục đích và Phạm vi áp dụng**

Mục đích của chương này là để xây dựng quy trình tiếp nhận và xử lý cả những khiếu nại phân biệt đối xử nộp trực tiếp cho MassDOT và những khiếu nại phân biệt đối xử mà MassDOT được ủy quyền xử lý theo Tiêu đề VI của Đạo luật Dân quyền năm 1964 (Tiêu đề VI) và những điều luật không phân biệt đối xử có liên quan của tiểu bang và liên bang, bao gồm Đạo luật Người Mỹ khuyết tật (ADA).

Quy trình mô tả quá trình hành chính hướng đến phát hiện và loại bỏ phân biệt đối xử trong các chương trình và hoạt động được liên bang tài trợ. Quy trình này không phải là một cứu cánh cho những người khiếu nại tìm kiếm giải pháp mang tính cá nhân bao gồm những thiệt hại mang tính trừng phạt hay tiền đền bù; quy trình này không cấm người khiếu nại nộp đơn khiếu nại lên các cơ quan tiểu bang hay liên bang khác, cũng không từ chối quyền của bên khiếu nại tìm kiếm tư vấn riêng để giải quyết các hành vi phân biệt đối xử bị cáo buộc.

Quy trình được miêu tả trong tài liệu này áp dụng đối với MassDOT và các đơn vị phụ thuộc, các nhà thầu chính và nhà thầu phụ trong việc điều hành những chương trình và hoạt động được liên bang tài trợ.

Với nỗ lực tuân thủ Tiêu đề VI, các đơn vị phụ thuộc nhận sự hỗ trợ tài chính từ liên bang thông qua MassDOT được khuyến khích áp dụng các quy trình khiếu nại này. Như vậy, các đơn vị phụ thuộc này công nhận tính bắt buộc phải tạo cho công chúng cơ hội nộp hồ sơ khiếu nại đối với những cáo buộc vi phạm phân biệt đối xử trong các chương trình, dịch vụ và hoạt động của tổ chức. Theo hướng dẫn của liên bang, các đơn vị phụ thuộc nhận những khoản hỗ trợ liên quan đến giao thông hiểu rằng họ có quyền xử lý những khiếu nại theo Tiêu đề VI và sẽ thông báo cho đơn vị tiếp nhận, MassDOT, về những khiếu nại nhận được và kết quả điều tra khi vấn đề được giải quyết. Các đơn vị phụ thuộc nhận những khoản hỗ trợ liên quan đến đường cao tốc cũng hiểu rằng họ không có thẩm quyền điều tra những khiếu nại về vi phạm Tiêu đề VI dành cho chính tổ chức của họ (khi đơn vị họ là bị đơn bị cáo buộc vi phạm Tiêu đề VI). Tất cả những khiếu nại như vậy sẽ được chuyển đến MassDOT để quyết định đơn vị thích hợp có thẩm quyền điều tra. Các đơn vị phụ thuộc nhận những khoản hỗ trợ liên quan đến đường cao tốc có quyền xem xét những cáo buộc vi phạm Tiêu đề VI vì mục đích Đảm bảo và/hoặc tuân thủ chính sách nội bộ nhưng không được đưa kết luận đối với những vi phạm có thể có đối với Tiêu đề VI. MassDOT khuyến khích tất cả những đơn vị phụ thuộc liên lạc với Chuyên viên Tiêu đề VI của

ODCR, Quản lý Chương trình Liên Bang, và/hoặc Quản lý Điều tra khi/nếu những khiếu nại liên quan đến Tiêu đề VI được tiếp nhận để đảm bảo có xử lý phù hợp.

### **Định nghĩa**

*Người khiếu nại (Complainant)* – Người nộp đơn khiếu nại với MassDOT.

*Đơn khiếu nại (Complaint)* – Đơn viết tay hay đơn điện tử liên quan đến cáo buộc phân biệt đối xử yêu cầu cơ quan tiếp nhận xử lý. Trong trường hợp người nộp đơn khiếu nại là người khuyết tật, đơn khiếu nại bao gồm những hình thức thay thế để phù hợp với tình trạng khuyết tật của người khiếu nại.

*Phân biệt đối xử (Discrimination)* – Hành động hoặc không phải là hành động, dù cố ý hay không cố ý, đối với một người đang ở Mỹ, chỉ vì chủng tộc, sắc tộc, dân tộc, hay những cơ sở được quy định bởi các cơ quan chống phân biệt đối xử khác như là giới tính, tuổi tác hay khuyết tật, bị đối xử bất bình đẳng hay phân biệt trong bất kỳ chương trình hay hoạt động nhận sự hỗ trợ từ liên bang.

*Những cơ quan điều hành (Operating Administrations)* – Các cơ quan của Bộ Giao thông Hoa Kỳ bao gồm Cơ quan Quản lý Cao tốc Liên bang (FHWA), Cơ quan Quản lý Giao thông Liên bang (FTA), Cơ quan Quản lý Đường sắt Liên bang (FRA), và Cơ quan Quản lý An toàn Giao thông Cao tốc (NHTSA) hỗ trợ tài chính cho các chương trình và hoạt động giao thông.

*Bị đơn (Respondent)* – Cá nhân, cơ quan, tổ chức bị cáo buộc có liên quan đến phân biệt đối xử.

### **Nộp hồ sơ khiếu nại**

Phần này miêu tả chi tiết quy trình Ban Giao thông Massachusetts (MassDOT) xử lý những đơn khiếu nại phân biệt đối xử quy định tại Tiêu đề VI (trên cơ sở chủng tộc, sắc tộc, hoặc dân tộc, bao gồm ngôn ngữ) và những khiếu nại cáo buộc phân biệt chủng tộc liên quan đến những điều khoản bổ sung về không phân biệt đối xử của liên bang (trên cơ sở tuổi tác, giới tính và khuyết tật). Luật và quy định của liên bang quy định Tiêu đề VI của Đạo luật Dân quyền 1964 (Tiêu đề VI) quy định Bộ Tư Pháp Hoa Kỳ là cơ quan có quyền điều phối chung việc điều tra các khiếu nại dân quyền; Bộ Tư Pháp Hoa Kỳ sẽ phối hợp với các cơ quan liên bang khác thực hiện trách nhiệm này. Trong khối giao thông, quyền điều tra này thuộc về Bộ Giao thông Hoa Kỳ (US DOT) và các cơ quan quản lý của nó cho những loại hình giao thông khác nhau, bao gồm Cơ quan Quản lý Cao tốc Liên bang (FHWA) và Cơ quan Quản lý Giao thông liên bang (FTA). Dựa theo những quy định của USDOT, FHWA và FTA đã thiết lập những quy định và hướng dẫn yêu cầu các đơn vị tiếp nhận và đơn vị tiếp nhận phụ thuộc nhận hỗ trợ tài chính từ liên bang xây dựng quy trình xử lý để xử lý những khiếu nại Tiêu đề VI được nộp cho những tổ chức này.

Quy trình miêu tả dưới đây, phỏng theo quy trình khiếu nại được đề xuất do Bộ Tư Pháp Hoa Kỳ (US DOJ) ban hành, được thiết kế để tạo cơ hội công bằng cho những khiếu nại được thực hiện theo quy trình tố tụng hợp pháp cho người khiếu nại và bị đơn. Ngoài quy trình giải quyết khiếu nại chính thức nêu chi tiết ở đây, MassDOT cũng có các bước rõ ràng để thực hiện giải quyết không chính thức bất kỳ và tất cả những khiếu nại tại Tiêu đề VI, khi có thể.

## **Quy trình Khiếu nại**

### **1. Ai có thể nộp đơn khiếu nại?**

**BẮT KỲ** người dân, cùng với tất cả các khách hàng, ứng viên, nhà thầu, hay đơn vị tiếp nhận phụ thuộc của MassDOT nếu tin rằng bản thân họ, một bên thứ ba, hoặc một lớp người bị ngược đãi hay bị đối xử không công bằng vì chủng tộc, sắc tộc hay dân tộc (bao gồm trình độ tiếng Anh hạn chế), vi phạm Tiêu đề VI của Đạo luật Dân quyền 1964, luật và lệnh liên quan của liên bang và tiểu bang, hay Chính sách Chống quấy rối và phân biệt (ADHP) của MassDOT. Hành vi trả thù một người dân trên cơ sở chủng tộc, sắc tộc hay dân tộc cũng bị cấm theo Tiêu đề VI và chính sách ADHP.

### **2. Tôi nộp đơn khiếu nại bằng cách nào?**

Đơn khiếu nại có thể nộp cho các đơn vị sau đây:

#### **Chuyên viên Tiêu đề VI của MassDOT**

Văn phòng phụ trách Đa dạng và Dân quyền của MassDOT

#### **The MassDOT Title VI Specialist**

MassDOT Office of Diversity and Civil Rights

Điện thoại: hoặc cho Dịch vụ Chuyển tiếp .

Email:

#### **Văn phòng phụ trách Đa dạng và Dân quyền – Đơn vị điều tra**

Trợ lý thư ký phụ trách Đa dạng và Dân quyền, MassDOT

#### **The MassDOT Office of Diversity and Civil Rights – Investigations Unit**

Assistant Secretary of Diversity & Civil Rights, MassDOT

Email:

#### **Cơ quan Quản lý Cao tốc Liên bang**

Cơ quan Quản lý Cao tốc Liên bang

Bộ Giao thông Hoa Kỳ

Văn phòng Dân quyền

#### **The Federal Highway Administration**

Federal Highway Administration

U.S. Department of Transportation

Office of Civil Rights

Email:

Điện thoại:

**Cơ quan Quản lý Giao thông Liên bang**

Cơ quan Quản lý Giao thông Liên bang

Bộ Giao thông Hoa Kỳ

Văn phòng Dân quyền

Gửi đến: Đội phụ trách Khiếu nại

**The Federal Transit Administration**

Federal Transit Administration

U.S. Department of Transportation

Office of Civil Rights

Attention: Complaint Team

**Lưu ý:**

- Khi FTA nhận đơn khiếu nại về Tiêu đề VI liên quan đến MassDOT, một đơn vị phụ thuộc hay nhà thầu, FTA có thể yêu cầu MassDOT điều tra vấn đề này.
- Nếu đơn khiếu nại về Tiêu đề VI được nộp cho MassDOT và cáo buộc Bộ phận Cao tốc của MassDOT, thì đơn khiếu nại sẽ được chuyển đến Văn phòng FHWA địa phương, văn phòng này sau đó sẽ chuyển đơn khiếu nại đến Văn phòng Chính về Dân quyền (HCR) của FHWA để xử lý.
- Nếu đơn khiếu nại về Tiêu đề VI được nộp cho MassDOT và cáo buộc một đơn vị phụ thuộc của Bộ phận Cao tốc của MassDOT, thì MassDOT có thể xử lý và điều tra khiếu nại này hoặc chuyển đến cho HCR điều tra.

**3. Đơn khiếu nại của tôi bao gồm những gì?**

Mẫu đơn khiếu nại Tiêu đề VI/Không phân biệt đối xử có sẵn ở dạng điện tử trên trang web Tiêu đề VI MassDOT

(<http://www.massdot.state.ma.us/OfficeofCivilRights/TitleVI/FileAComplaint.aspx>) hoặc dưới dạng giấy do Chuyên viên Tiêu đề VI của MassDOT, được nêu trên, cung cấp. Hoặc, người khiếu nại có thể nộp các thông tin trao đổi ở dạng khác và phải bao gồm:

- Tên, chữ ký và thông tin liên hệ hiện tại của quý vị (số điện thoại và địa chỉ bưu điện);
- Tên và số hiệu (nếu biết và nếu có) của người bị cáo buộc;
- Mô tả cách thức, thời gian và địa điểm xảy ra của hành động phân biệt đối xử bị cáo buộc đó;
- Mô tả chi tiết tại sao quý vị tin rằng mình bị đối xử khác hơn;
- Tên và thông tin liên hệ của bất kỳ nhân chứng nào; và
- Bất kỳ thông tin nào khác quý vị tin là có liên quan đến khiếu nại của mình.

- A. Trong trường hợp người khiếu nại không thể viết đơn khiếu nại, khiếu nại bằng lời nói có thể được thực hiện cho Văn phòng phụ trách Đa dạng và Dân quyền (ODCR). Người khiếu nại sẽ được Điều tra viên Dân quyền (CRI) phỏng vấn. Nếu cần thiết, Điều tra viên Dân quyền sẽ hỗ trợ người đó chuyển khiếu nại bằng lời nói sang đơn khiếu nại viết. Tất cả các đơn khiếu nại phải được người khiếu nại ký tên.
- B. Những đơn khiếu nại vô danh có thể được nộp tương tự. Những đơn khiếu nại vô danh sẽ được điều tra tương tự như bất kỳ đơn khiếu nại nào khác.
- C. Đơn khiếu nại được chấp nhận ở bất kỳ ngôn ngữ được công nhận nào. Chúng tôi có mẫu đơn khiếu nại ở nhiều ngôn ngữ.

#### 4. Bao lâu tôi có thể nộp đơn khiếu nại?

- A. Đơn khiếu nại cáo buộc vi phạm Tiêu đề VI và/hay chính sách ADHP của MassDOT phải được nộp không quá một trăm tám mươi **(180)** ngày từ ngày hành vi vi phạm bị cáo buộc xảy ra.
- B. Đơn khiếu nại cáo buộc các vi phạm luật tiểu bang và liên bang phải được nộp trong khung thời gian theo quy định trong quy chế, quy định, hoặc hồ sơ luật.

#### 5. Đơn khiếu nại của tôi sẽ được giải quyết như thế nào?

Khi được nhận, đơn khiếu nại sẽ được giao cho một Điều tra viên Dân quyền (CRI). Điều tra viên Dân quyền này sẽ

- A. Xác định thẩm quyền:

ODCR có thẩm quyền nếu đơn khiếu nại:

- 1) liên quan đến tuyên bố hoặc hành vi vi phạm:

- Nghĩa vụ và cam kết pháp lý của MassDOT chống phân biệt đối xử, quấy rối hay trả thù trên cơ sở một yếu tố được bảo vệ liên quan đến bất kỳ mặt nào của dịch vụ của Cơ quan đối với công chúng; hoặc
- Cam kết của các đơn vị phụ thuộc và nhà thầu làm việc với MassDOT tuân thủ chính sách của MassDOT; VÀ

- 2) được nộp đúng hạn.

- B. Xác nhận việc nhận đơn khiếu nại và xác định thẩm quyền trong vòng mười (10) ngày làm việc kể từ khi nhận được đơn khiếu nại.



- Nếu Điều tra viên Dân quyền xác định đơn khiếu nại không có khả năng thiết lập một vi phạm dân quyền, thì Điều tra viên Dân quyền này sẽ thông báo cho người nộp đơn khiếu nại và Chuyên viên Tiêu đề VI bằng văn bản để báo cáo kết quả và đóng lại trường hợp khiếu nại.

C. Thực hiện một cuộc điều tra thấu đáo những cáo buộc nêu trong đơn khiếu nại theo Quy trình khiếu nại nội bộ của MassDOT.

## 6. Kết quả điều tra và đề nghị?

Kết thúc điều tra, Điều tra viên Dân quyền sẽ gửi cho người khiếu nại và bị đơn một trong ba thư dưới đây tùy vào kết quả điều tra:

- A. Một lá thư phân giải để giải thích các bước mà bị đơn đã hay sẽ thực hiện để tuân thủ theo Tiêu đề VI.
- B. Một lá thư thông báo kết quả sẽ được ban hành khi bị đơn được xác định tuân thủ Tiêu đề VI. Thư này sẽ bao gồm một phần giải thích tại sao bị đơn được xác định tuân thủ Tiêu đề VI, và thông báo về quyền kháng cáo của người khiếu nại.
- C. Một lá thư thông báo kết quả sẽ được ban hành khi bị đơn được xác định là không tuân thủ. Thư này sẽ bao gồm mỗi vi phạm được tham chiếu với quy định ban hành, mô tả ngắn gọn kết quả điều tra/đề nghị xử lý, kết quả của việc không tự giác tuân thủ, và đề nghị hỗ trợ trong việc đưa ra một kế hoạch sửa chữa cho việc tuân thủ, nếu thích hợp.

## 7. Tôi có thể kháng cáo kết quả điều tra không?

Nếu người khiếu nại hoặc bị đơn không đồng ý với kết quả điều tra của Điều tra viên Dân quyền, họ có thể kháng cáo lên Trợ lý Thư ký Văn phòng Đa dạng và Dân quyền. Bên kháng cáo phải cung cấp bất kỳ **thông tin mới nào chưa được đưa ra trong quá trình điều tra ban đầu mà thông tin này sẽ làm cho MassDOT xem xét lại các quyết định của mình**. Yêu cầu kháng cáo và bất kỳ thông tin mới nào phải được nộp trong vòng sáu mươi (60) ngày kể từ ngày thư thông báo kết quả được gửi ra. Sau khi xem xét thông tin này, MassDOT sẽ hồi đáp hoặc qua thư phân giải có chỉnh sửa hoặc qua thông báo với bên kháng cáo rằng thư phân giải hoặc kết quả điều tra ban đầu vẫn giữ nguyên hiệu lực.



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# APPENDIX 2E

## LIST OF TITLE VI COMPLAINTS



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# Title VI Complaints, Lawsuits, and Investigations

Intake Date	Basis	Action Taken	Summary	Status
4/5/2017	Race	Referral to Area	A bus operator was alleged to have refused to board a customer based on race. The operator denied the allegation. Insufficient evidence.	Closed
4/15/2017	Race	Referral to Area	A bus operator was alleged to have refused to stop the bus for a family to disembark based on their race and to have driven the bus four or five stops beyond their desired stop. Video evidence did not support the allegation. The operator denied the allegation. Insufficient evidence.	Closed
4/19/2017	Race	Referral to Area	A bus operator was alleged to have treated boarding passengers differently based on race. The operator denied the allegation. Video evidence was inconclusive. A maintenance report shows that the fare box was faulty. Insufficient evidence.	Closed
4/25/2017	Race	Referral to Area for courtesy rule violation  Reinstruction of operator	A customer was allegedly denied access to a bathroom by a customer service agent allegedly due to race. The customer service agent denied it was due to race and erroneously claimed to have discretion as to whether customers may use the bathroom. Insufficient evidence of denial due to race.	Closed
4/26/2017	Race	Referral to Area	A bus operator was alleged to have closed the door and pulled away before a customer arrived due to race. The operator denied the allegation. Insufficient evidence.	Closed
4/27/2017	Race	Referral to Area	A person claimed that buses on Route 23 (a minority route) are "overcrowded, raggedy, and old" and that these buses are only used on minority routes.	Closed
5/10/2017	Race	Referral to Area	A bus operator was alleged to have used a racial slur against a passenger. The operator denied the allegation. No available video angles show the bus operator. Insufficient evidence.	Closed
5/11/2017	Race	Referral to Area  Operator issued	A bus operator was alleged to have made a racially derogatory remark. The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
		written warning for courtesy rule violation		
5/11/2017	Race	Referral to Area	A bus operator was alleged to have screamed at a customer and then to have spoken in Spanish to an English-speaking customer. The operator denied the allegation. Insufficient evidence.	Closed
6/6/2017	Race	Referral to Area	A bus operator was alleged to have called a customer a racial slur. The operator denied the allegation. Insufficient evidence.	Closed
6/13/2017	Race	Referral to Area	A bus operator was alleged to have been rude to a customer due to his race and to have denied him the opportunity to pay, saying that his money was no good. The operator denied the allegation. Insufficient evidence.	Closed
6/29/2017	Race	Referral to Area	A bus operator was alleged to have violently taken money out of child's hand to put it into the fare box and to have called the child's mother a racial slur. The operator denied the allegation. Conflicting witness statements were made. The operator denied making the slurs and negative comments. Insufficient evidence.	Closed
7/23/2017	Race	Referral to Area	A bus operator was alleged to have allowed customers of his race to board for free while denying free rides to passengers of other races. The operator denied the allegation. Insufficient evidence.	Closed
7/27/2017	Color	Referral to Area	A complainant reported that a trolley operator on the Green Line C Branch allowed other passengers to board but not the complainant due to skin color. The operator denied the allegation. Insufficient evidence.	Closed
8/7/2017	National Origin	Referral to Area	A bus operator allegedly made derogatory comments to two passengers who were short on fare. The operator denied the allegation. Insufficient evidence.	Closed
9/12/2017	National Origin	Referral to Area. Operator disciplined for courtesy rule violation.	A third-party complainant observed a customer service agent being hostile to a customer who did not speak English. The customer service agent denied the allegation. Video was unable to show the offensive statements referencing national origin. Video does show the customer service agent moving the customer away from the fare box.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
9/22/2017	Race	Referral to Area	A passenger alleged that he was prevented from boarding a Green Line D Branch trolley due to race. The operator denied the allegation. A witness statement supports the operator. The passenger had climbed over a fence to board the trolley. The passenger was eventually permitted to ride the trolley.	Closed
10/17/2017	Race	Referral to Area	A bus customer alleged that a bus operator used a racial slur when his ticket did not work. The operator denied the allegation. Insufficient evidence.	Closed
10/26/2017	Race	Referral to Area	A bus customer alleged a bus operator bypassed her because of her race. Video review showed that bus operator had serviced the stop and the customer tried to board the bus after it had re-entered traffic and was stopped at a traffic light. Insufficient evidence.	Closed
11/28/2017	Race	Referral to Area	A subway customer alleged that a customer service agent accused the customer of not paying the fare because of the customer's race. The agent denied the allegation. Insufficient evidence.	Closed
12/1/2017	Race	Referral to Area	A bus customer alleged that a bus operator denied a group of customers who were racial minorities from boarding a bus and that the operator would not allow two Black youths with a hoverboard from boarding at another stop. The operator denied the allegation. MBTA policy prohibits carrying of hoverboards on bus. Insufficient evidence.	Closed
2/2/2018	National Origin	Referral to Area	A bus customer alleged that a bus operator mistreated her because she did not speak English. The operator denied the allegation. Video review did not support allegation. Insufficient evidence.	Closed
2/8/2018	Race	Referral to Area	A bus customer alleged that a bus operator made disparaging comments about a Black passenger and about the "Germantown crowd" (a diverse part of Quincy). The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
2/17/2018	Race	Referral to Area	A bus customer alleged that a bus operator complained that immigrants are taking over and that the MBTA hires more Blacks than Whites. The operator denied the allegation. Insufficient evidence.	Closed
2/27/2018	Race	Referral to Area	A bus customer alleged that a bus operator charged all the Latino passengers but not the White passengers. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
2/28/2018	Race	Referral to Area	A bus customer alleged that a bus operator did not stop for a Latino customer but did stop to pick up a White customer. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
3/2/2018	Race	Referral to Area  Operator to be disciplined for other rules violations	A bus customer alleged that a bus operator yelled at her to get off the bus to accommodate a passenger in a wheeled mobility device who was displacing the customer from her seat. The customer alleged that the operator made racist and disparaging comments about her not speaking English. The operator denied the allegation. Video was not available. Insufficient evidence.	Closed
3/15/2018	Race	Referral to Area	A bus customer alleged that a bus operator directed a racial slur at her as she boarded the bus. The operator denied the allegation. A witness statement supported bus operator. Insufficient evidence.	Closed
4/7/2018	Race	Cause Finding: Letter placed in file preventing promotion opportunities for two years	A bus customer alleged that a bus operator yelled "go back to Africa!" at her when she did not want to move after the operator asked her to move. A witness statement and video surveillance evidence corroborated the customer's allegation. The investigation showed sufficient evidence for a Cause Finding.	Closed



<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
4/27/2018	Race	Referral to Area	A bus customer reported that she ran in front of the bus to force it to stop so she could board, and she alleged that the bus operator called her "stupid" and told her "go back to your country." The customer also alleged that the operator used vulgar language against her when the customer asked the operator for her badge number. The operator denied the allegation. No video available. Insufficient evidence.	Closed
5/7/2018	Race	Referral to Area  Operator to be disciplined for other rules violations	A bus customer alleged that a bus operator failed to allow him to board because of his race as the operator allowed others to get on bus who were ahead of the customer in line. The operator denied the allegation. Video review did not support the customer's allegation. Insufficient evidence.	Closed
5/23/2018	Race	Referral to Area	A bus customer alleged that a bus operator bypassed him because of his race. Video review did not support the allegation. Insufficient evidence.	Closed
5/31/2018	Race	Referral to Area	A bus customer alleged that a bus operator treated a dark-skinned customer less favorably than a white customer related to the paying of the bus fare. No video was available. Insufficient evidence.	Closed
6/5/2018	Race	Referral to Area	A bus customer alleged that a bus operator made two customers leave the bus for speaking Spanish. The customer also alleged that the operator bypassed one of the customers later the same day and questioned one of the customers about fare payment on a subsequent date. The operator denied the allegations. Insufficient evidence.	Closed
7/3/2018	Race	Referral to Area	A bus customer's mother alleged that her daughter and her daughter's boyfriend were kicked off the bus by a bus operator even though they had paid their fare and then were subsequently arrested by MBTA Police because of their race. The operator denied the allegation. The police report was reviewed. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
7/24/2018	Race	Referral to Area	A bus customer alleged that a bus operator called him a racial slur when stepping off the bus. The operator denied the allegation. Insufficient evidence.	Closed
8/13/2018	National Origin	Referral to Area  Operator to be disciplined for other rules violations	A bus customer alleged that a bus operator commented about not needing to learn to speak Spanish and assimilate because she was an American. A witness alleged the bus operator said that the customer needs to "learn the language to ride the bus." The operator denied the allegation. Insufficient evidence.	Closed
8/27/2018	Race	Referral to Area	A bus customer alleged that a bus operator said that Chinese people are lazy and made the customer disembark from the bus between bus stops. The operator denied the allegations. There was no video evidence. Insufficient evidence.	Closed
8/29/2018	Race	Referral to Area	A bus customer alleged that a bus operator took a customer's fare card and closed the bus door on customer's foot because the customer was a Black and gay woman. The operator denied the allegation. No video available. Insufficient evidence.	Closed
8/30/2018	Race	Referral to Area	A bus customer alleged that a bus operator used a racial slur towards the customer. The operator denied the allegations. Insufficient evidence.	Closed
9/5/2018	Race	Referral to Area	A bus customer who works as a RIDE vendor alleged that as he was attempting to use his work ID to board the bus, a bus operator kicked him off and used derogatory language toward him. The operator denied the allegation. Video review showed an altercation but the video did not have audio. Insufficient evidence.	Closed
9/19/2018	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her daughter and friend because of their ethnicity. The operator denied the allegation. Video review did not support the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
9/20/2018	Race	Referral to Area	A bus customer alleged that a bus operator said, "You people always get on the bus and try to cheat." The customer alleged the comment made reference to the customer being African-American. The operator denied the allegation. Insufficient evidence.	Closed
9/25/2018	National Origin	Referral to Area	A bus customer alleged that a bus operator used vulgar and derogatory language against the customer. The operator denied the allegation. Insufficient evidence.	Closed
9/26/2018	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her because of her race and when the customer caught up to the bus the operator said that she was going to bypass her next time she sees her. The operator denied the allegation. Insufficient evidence.	Closed
9/28/2018	Race	Referral to Area	A bus customer alleged that a bus operator would not let racial minority passengers on the bus. The operator denied the allegation. Video was unavailable. Insufficient evidence.	Closed
10/3/2018	Race	Referral to Area	A bus customer alleged that a bus operator made comments about how a customer did not speak English and should speak English like other customers on the bus. The operator denies allegations. No surveillance video was available. There was no witness information to support the allegations. Insufficient evidence.	Closed
10/6/2018	Race	Referral to Area	A bus customer alleged that a subway customer service agent racially profiled him when the operator stopped him after the customer went through the fare gate. Video review did not support the allegations. The customer service agent denied the allegations. Insufficient evidence.	Closed
10/9/2018	Race	Referral to Area	A bus customer alleged that a bus operator did not respond to her question when she asked why the Route 92 bus did not go to the mall on Columbus Day when it was on a weekday schedule. The customer alleged that the reason was possibly due to race. The operator denied the allegations. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
10/29/2018	Race	Referral to Area	A bus customer alleged that a bus operator began yelling at customer about running to the bus and then kicked her off for "no apparent reason" due to the customer's race. The operator denied the allegation. An undercover evaluation of the operator did not reveal any supporting evidence. Insufficient evidence.	Closed
10/29/2018	Race	Referral to Area	A bus customer alleged that a bus operator jumped in her face screaming, "What is wrong with you people?" The operator denied the allegation. No video was available. Insufficient evidence.	Closed
11/5/2018	National Origin	Referral to Area	A bus customer alleged that a bus operator verbally harassed a young woman who was not fluent in English. The operator denied the allegation. Insufficient evidence.	Closed
11/7/2018	Race	Referral to Area	A bus customer alleged that a bus operator was "aggressively racist" towards Asian passengers who boarded the bus. The operator denied the allegation. Video review contradicts the customer's allegation. Insufficient evidence.	Closed
11/8/2018	Race	Referral to Area	A bus customer alleged that a bus operator was rude to her when she was loading money on her CharlieCard because of her race. The operator denied the allegation. Video review did not support the allegation. An undercover evaluation of the operator did not reveal any supporting evidence. Insufficient evidence.	Closed
11/13/2018	Race	Referral to Area	A bus customer alleged that a bus operator said, "Why don't you Black people ever say 'thank you'? Y'all ignorant." Insufficient evidence.	Closed
11/15/2018	Race	Referral to Area  Agent to be disciplined for other rules violations	A subway customer alleged a customer service agent called him racial slur. The agent denied the allegations. The customer submitted a video that did not include the alleged statement. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
11/15/2018	Race	Referral to Area	A bus customer alleged that a bus operator discriminated against a Black male customer by telling him he was in the way and pressuring him to get off the bus. The operator denied the allegation. An undercover evaluation of the operator did not reveal any supporting evidence. Insufficient evidence.	Closed
11/20/2018	Race	Referral to Area	A bus customer reported to a bus inspector that a bus operator was rude to her allegedly due to her age and race. Then when the customer tried to board the operator's bus on her next trip the operator would not permit her to board claiming a safety concern. The operator denied the allegation. An undercover evaluation of the operator did not reveal any supporting evidence. Insufficient evidence.	Closed
11/21/2018	Race	Referral to Area	A bus customer alleged that a bus operator refused to lower the bus for her stroller due to her race, but the operator did so for another family. The operator denied the allegation. Insufficient evidence.	Closed
11/27/2018	Race	Referral to Area	A bus customer reported that a bus operator determined to change a typical local bus run to an express run. The customer was removed from the bus, allegedly due to her race. The operator denied the allegation. Research showed that the bus the customer boarded was in fact an express bus and the operator properly enforced the rules regarding local service. Insufficient evidence.	Closed
11/29/2018	Race	Referral to Area	A bus customer alleged that a bus operator racially "harassed him" by accusing him of not paying after his card did not work. The operator denied the allegation. Insufficient evidence.	Closed
12/3/2018	Race	Referral to Area	A bus customer alleged that a bus operator was rude to her and her family because they are "mixed race." The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
12/12/2018	National Origin	Referral to Area	A subway customer alleged that a customer service agent told another customer to learn to speak English because "we are in America and people in America need to speak English." The agent denied the allegations. No video was available. Insufficient evidence.	Closed
12/12/2018	National Origin	Referral to Area	A customer of The RIDE (a door-to-door, shared-ride paratransit service) alleged that a RIDE driver picks her up late and she is always the last one dropped off. She alleged that this treatment is due to her "national heritage." The driver denied the allegations. Insufficient evidence.	Closed
12/13/2018	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her due to her race. The operator denied the allegation. Insufficient evidence.	Closed
12/13/2018	National Origin	Referral to Area  Retraining of customer service agent	A subway customer alleged that a transit ambassador was rude to another customer who only spoke Spanish. The transit ambassador denied the allegation. Insufficient evidence.	Closed
12/18/2018	Race	Referral to Area	A bus customer, the complainant, alleged that a bus operator allowed "Spanish" customers to board the bus without fares, while the operator asked the complainant to get off the bus and catch a different bus route, allegedly, because the complainant had insufficient fare. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
12/19/2018	Race	Referral to Area	A bus customer alleged that she was mistreated by a bus operator because the operator told her to get in the back of bus with her stroller and called her "Lil black girl!" The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
12/21/2018	National Origin	Referral to Area	A bus customer alleged that a bus operator told her "no radio" in reference to her phone and then stopped the bus and came towards her, almost hitting her, as she was sitting in the rear of the bus. The customer alleged the treatment was due to her national origin. The operator denied the allegation. Insufficient evidence.	Closed
12/26/2018	Race	Referral to Area	A bus customer alleged that a bus operator mistreated him because he was speaking Spanish while he was trying to help his mother add money to her fare card. The operator denied the allegations. Insufficient evidence.	Closed
12/31/2018	Color	Referral to Area	A bus customer alleged that a bus operator stopped at a bus stop where he and five other men of color were waiting, opened the door, looked at them, and then closed it and left without picking them up. The operator denied the allegation. Video review did not support the allegation. Insufficient evidence.	Closed
1/15/2019	National Origin	Referral to Area	A bus customer alleged that a bus operator made statements about her accent and the US-Mexico border. The operator denied the allegation. Insufficient evidence.	Closed
1/31/2019	Race	Referral to Area	A bus customer alleged that a bus operator was disrespectful to her and would not stop at her requested bus stop due to her race. The operator denied the allegation. An undercover evaluation of the operator and the bus stop did not support the customer's allegation. Insufficient evidence.	Closed
2/11/2019	Race	Referral to Area	A commuter rail customer alleged that he was stopped from leaving a commuter train and forced to jump off the train because commuter rail conductors were discriminating against him due to his race. A witness statement did not corroborate the allegation. The conductors denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
2/12/2019	Color	Referral to Area	A bus customer (dark skinned) alleged that a bus operator said "because you live in the suburbs does not mean you lose your common sense." The operator denied the allegation. Insufficient evidence.	Closed
2/28/2019	Race	Referral to Area	A bus customer alleged that a bus operator kicked her off of the bus due to her race. The operator denied the allegation. Insufficient evidence.	Closed
2/28/2019	Race	Referral to Area	A subway customer alleged that a transit ambassador deliberately led her to a CharlieCard machine that took her money without giving her the pass she was buying. The customer alleged that the treatment was due to her race. The ambassador denied the allegations. Video review showed the ambassador providing extensive assistance to the customer and following all protocols for addressing the situation. Insufficient evidence.	Closed
3/13/2019	Race	Referral to Area	A subway customer alleged a customer service agent questioned a customer about whether the customer belonged in the station due to race. The agent denied the allegation. Insufficient evidence.	Closed
3/13/2019	Race	Referral to Area	A bus customer alleged that a bus operator did not allow two young Black girls to ride the bus without money and kicked them off after she offered to pay. The customer alleged that the treatment was due to their race. The operator denied the allegation. Video review showed that the girls left quickly from the bus and that the bus left the stop before the customer attempted to intervene. Insufficient evidence.	Closed
3/15/2019	Race	Referral to Area	A bus customer alleged that a bus operator did not lower the lift on the bus for a Black customer and a Hispanic customer but did so for a White customer. The operator denied the allegation. Insufficient evidence.	Closed
3/17/2019	Race	Referral to Area	A bus customer alleged that a bus operator was rude to her when boarding and called her a racist name. The operator denied the allegation. Insufficient evidence.	Closed



<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
3/19/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed him due to his race. The operator denied the allegation. Video was unavailable. Insufficient evidence.	Closed
3/19/2019	Race	Referral to Area	A bus customer alleged that a bus operator boarded other passengers but closed door in her face. The operator denied the allegation. Research showed that the bus the customer attempted to board was an express bus while customer was seeking local service. Insufficient evidence.	Closed
3/21/2019	Race	Referral to Area	A bus customer alleged that a bus operator was rude and did not let his wife and child sit down while he paid their fare. The customer alleged that the treatment was due to their race. The operator denied the allegation. Insufficient evidence.	Closed
3/23/2019	Race	Referral to Area	A bus customer alleged that a bus operator removed the customer from the bus and when the customer asked if the operator was racist the operator stated he has a "colored brother." The operator denied the allegations. Insufficient evidence.	Closed
3/27/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her and another Black customer because she had dreadlocks on her hair. The operator denied the allegation. Insufficient evidence.	Closed
3/29/2019	Race	Referral to Area	A bus customer alleged that a bus operator made a comment about "you people" when they got into an argument about her monthly pass not working.	Closed
4/5/2019	Race	Referral to Area	A bus customer alleged that after telling the bus operator the bus smells, the operator said, "You people are stinking it up." The customer alleged the comment was made to a Latino customer on a bus that serves a mostly Latino community. The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
4/6/2019	National Origin	Cause Finding: Letter placed in file preventing promotion opportunities for two years	A bus customer alleged that a bus operator said to another customer, "I don't know how you do it in your country but you need to pay." An investigation showed sufficient evidence for a Cause Finding.	Closed
4/10/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her due to her race. The operator denied the allegation. Video review showed that the operator already served the stop, a fact acknowledged by customer who tried to board bus when stopped at red light. Insufficient evidence.	Closed
4/10/2019	National Origin	Referral to Area	A trolley customer alleged that a motorperson yelled and screamed at the customer when she had a problem with her fare card and humiliated her because she was an immigrant. The motorperson denied the allegation. Insufficient evidence.	Closed
4/16/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her due to her race. The operator denied the allegation. Video was unavailable. Insufficient evidence.	Closed
4/16/2019	Race	Referral to Area	A bus customer alleged that a bus operator lied to a Black customer about whether a bus was the next to leave the station and subsequently provided the correct information to a White customer. The operator denied the allegation. Insufficient evidence.	Closed
4/18/2019	National Origin	Referral to Area	A bus customer alleged that a bus operator made a very racist comment because she was speaking Spanish and told her to "shut up" in a "very ugly way." The operator denied the allegation. Insufficient evidence.	Closed
4/19/2019	Race	Cause Finding: Trolley operator received a three day suspension	A trolley customer alleged that a trolley operator used a racial slur, "zipperhead," when yelling at a customer blocking the track. Video review submitted via Twitter confirmed the use of the slur.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
4/24/2019	Race	Referral to Area	A commuter rail customer alleged that a train conductor harassed the customer when collecting fares due to the customer's race. The conductor denied the allegation. Insufficient evidence.	Closed
5/1/2019	Race	Referral to Area	A bus customer alleged that a bus operator said, "Hispanics are very stupid." The customer alleged that the operator made the statement after accusing the customer of talking very loudly on the bus and telling her to get off. The operator denied the allegations. Insufficient evidence.	Closed
5/2/2019	Race	Referral to Area	A trolley customer alleged that a trolley operator bypassed him and his friends and later called the customer and his friends "white trash." The operator denied the allegation. No video was available. Insufficient evidence.	Closed
5/3/2019	Race	Referral to Area	A bus customer alleged that a bus operator stops short or too far past a bus stop to make customers walk several feet to get on bus and that this happens only to Black customers. Also, the customer alleged that the bus display is not operating properly and next bus stop information is not shown. The operator denied the allegations. Insufficient evidence.	Closed
5/3/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed two Hispanic customers due to their race. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
5/7/2019	Race	Referral to Area	A bus customer alleged that a bus operator refused to board her due to her race. The operator denied the allegation. Research showed that the bus the customer attempted to board was an express bus while customer was seeking local service. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
5/10/2019	National Origin	Referral to Area	A bus customer alleged that a bus operator stopped the bus a little further down road to pick up a second passenger. After boarding, the second passenger questioned the operator and was told by the operator to stop talking, allegedly, because the operator has a problem with "Spanish people." The operator denied the allegation. Insufficient evidence.	Closed
5/12/2019	Race	Referral to Area	A bus customer alleged that when a bus operator was asked why passengers were not allowed to board the bus at the back doors the operator said, "typical Black people." The operator denied the allegation. Insufficient evidence.	Closed
5/21/2019	Race	Referral to Area	A bus customer alleged that a bus operator yelled at her to move behind the restricted yellow line at the front of bus, called Transit Police on her, and referred to the customer as "these people" due to her race. The operator denied the allegation. Insufficient evidence.	Closed
5/21/2019	Race	Referral to Area	A bus customer alleged that a bus operator participated in a conversation with another bus customer in which derogatory statements about race were made. The operator denied the allegation. Insufficient evidence.	Closed
5/23/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed him due to his race. The operator denied the allegation. Insufficient evidence.	Closed
5/31/2019	Race	Referral to Area	A bus customer alleged that a bus operator removed him from the bus due to his race. The operator denied the allegation. Insufficient evidence.	Closed
6/12/2019	Race	Referral to Area	A bus customer alleged that a bus operator treated another bus customer disparately due to their race. The operator denied the allegation. Insufficient evidence.	Closed
6/17/2019	Race	Referral to Area	A bus customer alleged that a bus operator targeted him due to his race. The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
6/20/2019	Race	Referral to Area	A bus customer alleged that a bus operator subjected her and her boyfriend to harassment and disparate treatment based on their race.	Closed
6/20/2019	Race	Referral to Area	A bus customer alleged that a bus operator removed him from the bus due to his race. The operator denied the allegation. Insufficient evidence.	Closed
7/10/2019	Race	Referral to Area	A White bus customer alleged that a bus operator allowed three people of color to bypass the fare box but he was told to pay due to his race. The operator denied the allegation. Video was not available. Insufficient evidence.	Closed
7/10/2019	Race	Referral to Area	A bus customer alleged that a bus operator treated a White bus customer disparately due to her race. The operator denied the allegation. Insufficient evidence.	Closed
7/10/2019	Race	Referral to Area	A bus customer alleged that a bus operator denied the customer from boarding the bus due to the customer's race. The operator denied the allegation. Insufficient evidence.	Closed
7/11/2019	Race	Referral to Area	A mother alleged that her teenage son and his two friends, who attempted to enter the subway without paying, were treated like "gang members" by the customer service agent and MBTA Police, and that the situation resulted in her son receiving stitches. The agent denied the allegation. Video review contradicted the mother's complaint. Police were not involved. Insufficient evidence.	Closed
7/12/2019	National Origin	Referral to Area	A bus customer alleged that a bus operator was rude to people who were speaking languages other than English on their phones.	Closed
7/12/2019	Race	Referral to Area	A bus customer alleged that a bus operator mistreated her due to her race. The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
7/13/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed the customer due to race. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
7/16/2019	Race	Referral to Area	A bus customer alleged that a bus operator was rude to the customer due to race. The operator denied the allegation. Insufficient evidence.	Closed
7/19/2019	Race	Referral to Area	A bus customer alleged that a bus operator closed the door on her daughter due to her race. The operator denied the allegation. Insufficient evidence.	Closed
7/21/2019	Race	Referral to Area	A bus customer alleged that a bus operator bypassed her because of her race.	Closed
7/24/2019	Race	Referral to Area	A bus customer alleged that a bus operator said to a group of Hispanic customers, "Do you speak English?" and "If you don't speak English, don't get on the bus." The operator denied the allegation. Insufficient evidence.	Closed
7/26/2019	Race	Referral to Area	A commuter rail customer alleged that a train conductor subjected customers, who are people of color and immigrants, to disparate treatment by giving more scrutiny to their commuter rail tickets than to those of other customers. The conductor denied the allegation. Insufficient evidence.	Closed
7/26/2019	Ethnicity	Referral to Area	A bus customer alleged that a bus operator was rude to them due to their ethnicity.	Closed
7/31/2019	Race	Referral to Area	A bus customer alleged that a bus operator called another customer a racial slur. The operator denied the allegation. Insufficient evidence.	Closed
8/4/2019	Race	Referral to Area	A subway customer alleged that a train operator did not let her on the train due to her race.	Closed
8/7/2019	Race	Referral to Area	A commuter rail customer alleged that a train conductor subjected a Black customer to negative treatment due to the customer's race. The conductor denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
8/12/2019	Race	Referral to Area	A bus customer alleged that a bus operator failed to pick up six or seven young men who were Hispanic but then picked up a White woman at the next bus stop. The operator denied the allegation. No video was available. Insufficient evidence.	Closed
8/16/2019	Race	Referral to Area	A bus customer alleged that a bus operator stopped short of a bus stop, and when the customer questioned the operator as to why the bus stopped short, the operator replied with derogatory language and a racial slur.	Closed
8/20/2019	Race	Referral to Area	A commuter rail customer alleged that a train conductor spoke to her in a rude manner, due to her race, and asked for her pass to ride.	Closed
8/25/2019	Race	Referral to Area	A bus customer alleged that a bus operator allowed three Hispanic women to board the bus without paying after requiring a White man to pay. The customer alleged that the White man had to pay due to his race. The operator stated that the fare box stopped taking dollar bills. Insufficient evidence.	Closed
8/27/2019	Race	Referral to Area	A customer who used the MBTA's website alleged that the website is racist because the trip planner only showed stops between his departure and destination stops, cutting off southern Route 39 bus stops. Research showed that other sections of the website show all Route 39 bus stops, but the trip planning function logically only displays stops between chosen departure and destination stops.	Closed
8/28/2019	Race	Referral to Area	A bus customer alleged that a bus operator harassed two customers who are minorities. The operator denied the allegation. Insufficient evidence.	Closed
8/29/2019	Race	Referral to Area	A bus customer alleged that a bus operator made derogatory comments about a customer with a disability and their caretaker due to their respective racial differences. The operator denied the allegation. Insufficient evidence.	Closed

<b>Intake Date</b>	<b>Basis</b>	<b>Action Taken</b>	<b>Summary</b>	<b>Status</b>
8/29/2019	Race	Referral to Area	A bus customer alleged that a bus operator was rude to her due to her race. The operator denied the allegation. Insufficient evidence.	Closed
8/30/2019	National Origin	Referral to Area	A bus customer alleged that a bus operator said, in reference to a documentary the customer was listening to in Spanish, "This is America, please shut that off."	Closed
9/4/2019	Race	Referral to Area	A bus customer alleged that a bus operator discriminates against non-Hispanic customers. The operator denied the allegation. Insufficient evidence.	Closed
9/10/2019	Color	Referral to Area	A bus customer alleged that a bus operator removed her from the bus due to the color of her skin and lied that the customer "flipped the finger" at the operator.	Closed
9/25/2019	Race	Referral to Area	A commuter rail customer alleged that a train conductor was rude to him due to his race.	Closed
9/26/2019	Race	Referral to Area	A bus customer alleged that a bus operator removed her from the bus due to her race.	Closed





# APPENDIX 2F

## PUBLIC ENGAGEMENT PLAN



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# APPENDIX 2G

## LIST OF PUBLIC MEETINGS



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# MBTA Public Meetings during the Title VI 2017-20 Triennial Cycle

The Massachusetts Bay Transportation Authority (MBTA) conducts a variety of meetings about projects, funding, and management of the authority, as well as meetings about accessibility, ridership, oversight, and planning. The tools used for outreach include the MBTA Public Engagement Plan (PEP), which provides general information and specific steps that meeting planners must take to ensure that their meetings are inclusive and accessible to all members of the public.

Project managers organize the majority of MBTA meetings about projects with support from private consultants or the Office of Government and Public Affairs. These meetings are required by the PEP, which sets the protocols for outreach, identifying potential language access needs, and ensuring meeting accessibility. The PEP also defines the principles for diplomacy and response to community input. These project-level meetings are typically held in the project area, and the PEP directs meeting planners to tailor outreach strategies to the specific communities where outreach will occur. Strategies include contacting local community leaders, multilingual information sharing based on languages found in the area or reached by the project, and selecting local accessible meeting locations. The Office of Diversity and Civil Rights (ODCR) assists meeting planners and consults as needed, particularly on complex projects.

The schedule for standing MBTA leadership meetings is fixed annually. The Fiscal and Management Control Board (FMCB) meets twice monthly. Specific topics, agenda items, and advance materials are provided as soon as possible and at least 48 hours before each meeting. Meeting notices are disseminated primarily via the MBTA website's monthly calendar. Local news media further disseminate these meeting announcements, reaching diverse constituencies across the service area. FMCB meetings are also live streamed via the web to reach members of the public who are not able to attend in person.

## PUBLIC MEETINGS LIST

- Access Advisory Committee to the MBTA (AACT) Executive Board Meetings – 14
- AACT General Membership Meetings – 15
- AACT Transit Accessibility Summits – 2
- Automatic Fare Collection (AFC) 2.0 Focus Groups – 4
- AFC 2.0 Policy Development Working Group Meetings – 2
- AFC 2.0 Public Advisory Meetings – 2
- Back Bay Station Ventilation Project Community Presentation
- Better Bus Project Open Houses – 14
- Better Bus Project Outreach Presentations – 3

- Better Bus Project Street Team Events – 30
- Blue Hill Avenue Station Construction Informational Session
- Boston City Council Public Forum
- Cabot Yard and Maintenance Facility Improvements Contractor Forum
- Capital Investment Plan Public Meetings – 23
- Capital Programs Committee Meetings – 21
- Chelsea Commuter Rail Station Public Meeting
- Community Meetings – 9
- East Street Bridge Rehabilitation Public Meeting
- Fare Proposal Public Meetings – 5
- Finance and Audit Committee Meetings – 20
- FMCB Meetings – 71
- FMCB and Massachusetts Department of Transportation (MassDOT) Board of Directors Joint Meetings – 29
- FMCB Special Budget Meetings – 2
- Gloucester Drawbridge Replacement Community Meeting
- Green Line Extension (GLX) Public Meetings – 4
- GLX to Mystic Valley Parkway Public Meeting
- Green Line Transformation Public Meeting – 5
- Green Line Transformation: B Branch Station Consolidation Public Meeting
- Green Line Transformation: D Branch Track and Signal Replacement Public Meetings – 2
- Harvard Busway Public Information Sessions – 4
- Judge King’s Semi-Annual Updates on Compliance with the MBTA/Boston Center for Independent Living Accessibility Settlement – 6
- Lynn Transit Action Plan Advisory Committee Meetings – 3
- Lynn Transit Action Plan Public Information Meeting
- Mattapan Trolley Line Public Meetings – 6
- MBTA Bus Technician Open House
- Natick Center Commuter Rail Station Accessibility Improvements Public Meetings – 2
- Newton Commuter Rail Stations Accessibility Improvements Workshops and Site Visits – 7
- Newton Highlands Accessibility Improvements Public Meetings – 2
- North Quincy Garage Construction Public Meeting
- North-South Rail Link Public Meeting
- Oak Grove Station Improvements Public Meeting – 2
- Positive Train Control (PTC) on the Haverhill Line Public Meetings – 2
- PTC on the Lowell Line Public Meeting
- PTC on the Needham Line Public Meeting
- PTC on the Newburyport/Rockport Line Public Meetings – 3

- PTC on the Newburyport/Rockport Line and Beverly Commuter Rail Bridge Public Meetings – 3
- Public Engagement Plan Meetings – 3
- Public Hearing on 703 CMR 3.00: Proposed Regulations on Authority Employees Compensated by Someone Other Than the Commonwealth or the Authority
- Public Viewing of a Mock-up of the New Red Line Cars
- Quincy Adams Garage Renovation Public Meeting
- Quincy Center Garage Demolition Public Meeting
- Rail Vision Advisory Committee Meetings – 7
- Rail Vision Open Houses – 2
- Red Line Test Track Public Meetings – 2
- Rider Oversight Committee (ROC) Meetings – 11
- Riders' Transportation Access Group (R-TAG) Meetings – 9
- Roberts Street Bridge Rehabilitation Public Meeting
- Senior CharlieCard Events – 10
- Silver Line 3 (SL3) Public Meetings – 2
- South Boston Bus Improvements Open House
- South Coast Rail Construction Phase 1 Contractor Forum
- South Coast Rail Draft Supplemental Environmental Impact Report Public Meeting
- South Shore Bus Garages Public Meetings – 2
- South Station Pre-Construction Open House
- Sullivan Square Station Lower Busway and Parking Lot Reconstruction Public Meeting
- Symphony Station Accessibility Project Public Meetings – 2
- Water Transportation Working Group
- Winchester Center Commuter Rail Station Public Meetings – 2
- Wollaston Community Advisory Committee Meetings – 9
- Wollaston Station Improvements Public Meetings – 4
- Worcester Union Station Improvements Public Meeting



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# APPENDIX 2H

## LANGUAGE ASSISTANCE PLAN



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**LANGUAGE  
ASSISTANCE PLAN:**

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**PROVIDING ACCESS TO  
PROGRAMS AND  
SERVICES FOR PEOPLE  
WITH LIMITED ENGLISH  
PROFICIENCY**

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Revised March 2020

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The purpose of the MBTA's Title VI Program is to ensure that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. This includes taking reasonable steps to provide meaningful access to programs and services for people with limited English proficiency.

Meaningful access goes beyond offering translation and interpretative services to limited-English-proficient (LEP) riders. It also includes informing customers and potential customers how to request multilingual assistance in the language groups the MBTA knows it serves. This assistance is available beyond simply riding the network as the MBTA encourages public input and engagement on projects, reaches out to understand community impacts, and tries to work with the feedback received to operate effectively.

This Language Assistance Plan (LAP) is monitored on an ongoing basis and is updated every three years to improve its effectiveness in accordance with federal regulations and according to the changing needs of the region's diverse communities.

The Federal Transit Administration (FTA) defines LEP individuals as:

Limited English Proficient (LEP) persons refers to persons for whom English is not their primary language and who have a limited ability to read, write, speak, or understand English. It includes people who reported to the US Census that they speak English less than very well, not well, or not at all.

The MBTA uses this definition, decennial US Census data, the US Census American Community Survey (ACS), feedback from project management staff as well as front line operations staff, and additional local information such as information from community-based organizations (CBOs), to update the Language Assistance Plan.

This Plan structures the MBTA's multi-faceted approach to providing vital information to LEP individuals and communities. Whether or not a document (or the information it solicits) is "vital" may depend upon the importance of the program, information, encounter, or service involved, and the consequence to the LEP person if the information in question is not accurate or timely. Consistent with federal guidance, the MBTA considers information regarding access to the programs, services, and activities provided by the Authority to be "vital information," for the purposes of language access, as well as the information that instructs the public how to participate in the Authority's decision making processes and to be notified of and express concerns regarding their civil rights.

The US Department of Transportation guidance outlines four factors that agencies should apply to the various kinds of contacts they have with the public to assess

language needs and decide what reasonable steps they should take to ensure meaningful access for LEP persons:

- **LEP Population Size:** The number or proportion of LEP persons likely to be served in our programs. This includes:
  - a. How LEP persons interact with our programs, activities, and services;
  - b. Identification of LEP communities and assessment of LEP persons from each language group to determine appropriate language services for each group;
  - c. The literacy skills of LEP populations in their native languages to determine whether translation of documents will be an effective practice; and
  - d. Whether LEP persons are underserved due to language barriers.
- **Frequency of Contact:** The frequency with which LEP persons come into contact with our programs, activities, and services. This includes assessments of:
  - a. MBTA service use
  - b. Pass and ticket purchases through vending machines, outlets, websites, and over the phone
  - c. Public meeting participation
  - d. Customer service interactions
  - e. Ridership surveys
  - f. Operator surveys
- **Importance:** The nature and importance of the program, activity, or service provided to people's lives. This is informed through:
  - a. Feedback from LEP groups about effective means of providing meaningful information about services, programs, and public outreach
  - b. Information obtained from public, facilitated meetings with LEP persons and stakeholders
  - c. Analysis of surveys to determine the needs of LEP persons respective to different regions and communities

- d. Analysis of programs, activities, and services to ensure they are providing meaningful access to LEP persons
- **Resources:** The resources available for LEP outreach and the costs associated with that outreach. This means addressing cost and resource issues by investigating:
  - a. Technological advances
  - b. Reasonable business practices
  - c. The sharing of language assistance materials and services among and between recipients, advocacy groups, LEP populations, and federal agencies

The first two of the four factors are used to identify individuals who need language assistance. The third factor determines what needs to be translated, and the fourth factor identifies translation resources and costs. The MBTA has followed FTA guidance in completing a four-factor analysis to identify and document the number and geographic distribution of potential LEP customers within the MBTA's 175-municipality service area and to evaluate the need for language assistance.

I. Identification of LEP individuals for whom language assistance may be needed
---

## **Factor 1: The Number and Proportion of Persons in the Service Population Who Are LEP**

### **Quantitative Analysis**

Data from the 2010–14 ACS five-year estimates were used to analyze the number of LEP persons living in the MBTA service area. The US Census table, “Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over” was used to estimate the number of LEP people for all census tracts within the MBTA's 175-town service area. To calculate the number of people with limited English proficiency, the counts of people who self-reported to speak English less than “very well” were summed.

The total LEP population in the MBTA's 175-town service area is 446,974 people, or approximately 9.81 percent of the total population above the age of five. The largest single group of LEP persons is composed of Spanish speakers, which represent 37.8 percent of the LEP population of the service area; approximately 168,863 people in the

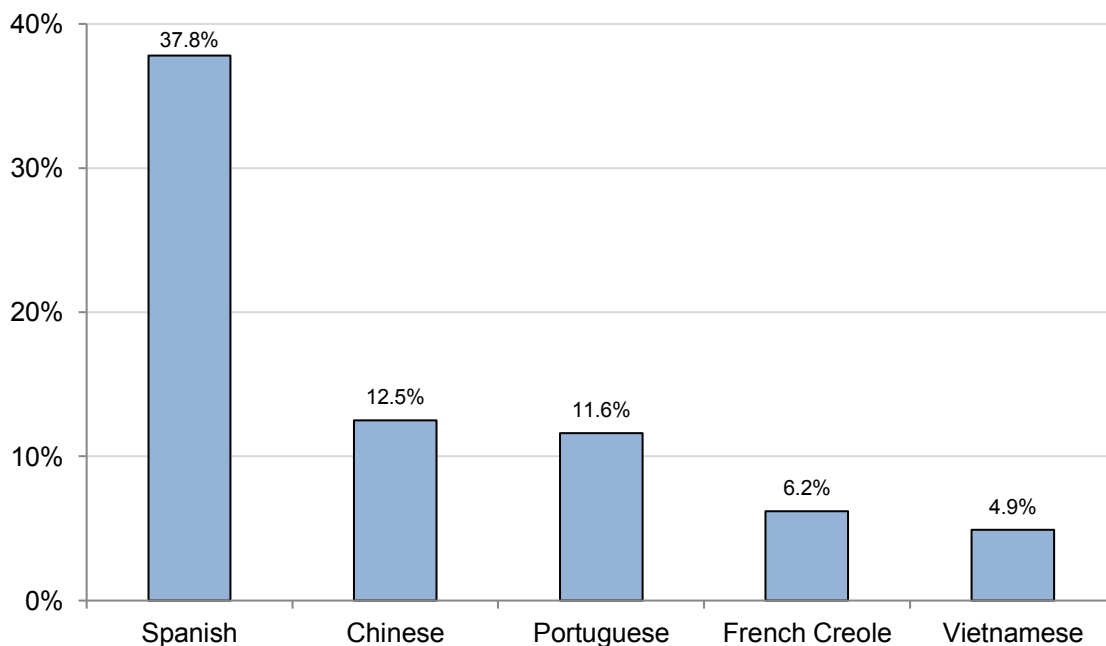
service area are limited-English Spanish speakers. The top five language groups of LEP persons within the service area make up nearly 73 percent of the total LEP population:

- Spanish/Creole (168,863)
- Chinese (55,757)
- Portuguese/Portuguese Creole (51,817)
- French Creole (27,818)
- Vietnamese (21,960)

Given that the majority of LEP individuals in the MBTA service area belong to one of these top five language groups, this element of the Four Factor Analysis includes further details about each. This includes identifying country of origin and dialect details that may help inform translation and interpretation decisions, geolocating these populations within the MBTA service area, and tracking recent shifts among these populations. Additional language groups that fall outside the top five are also identified in this Four Factor Analysis, and the strategies for reaching them are described in detail – see below.

Figure 1 presents the percentage of total LEP persons that each of the top five languages represent in the MBTA’s 175-town service area.

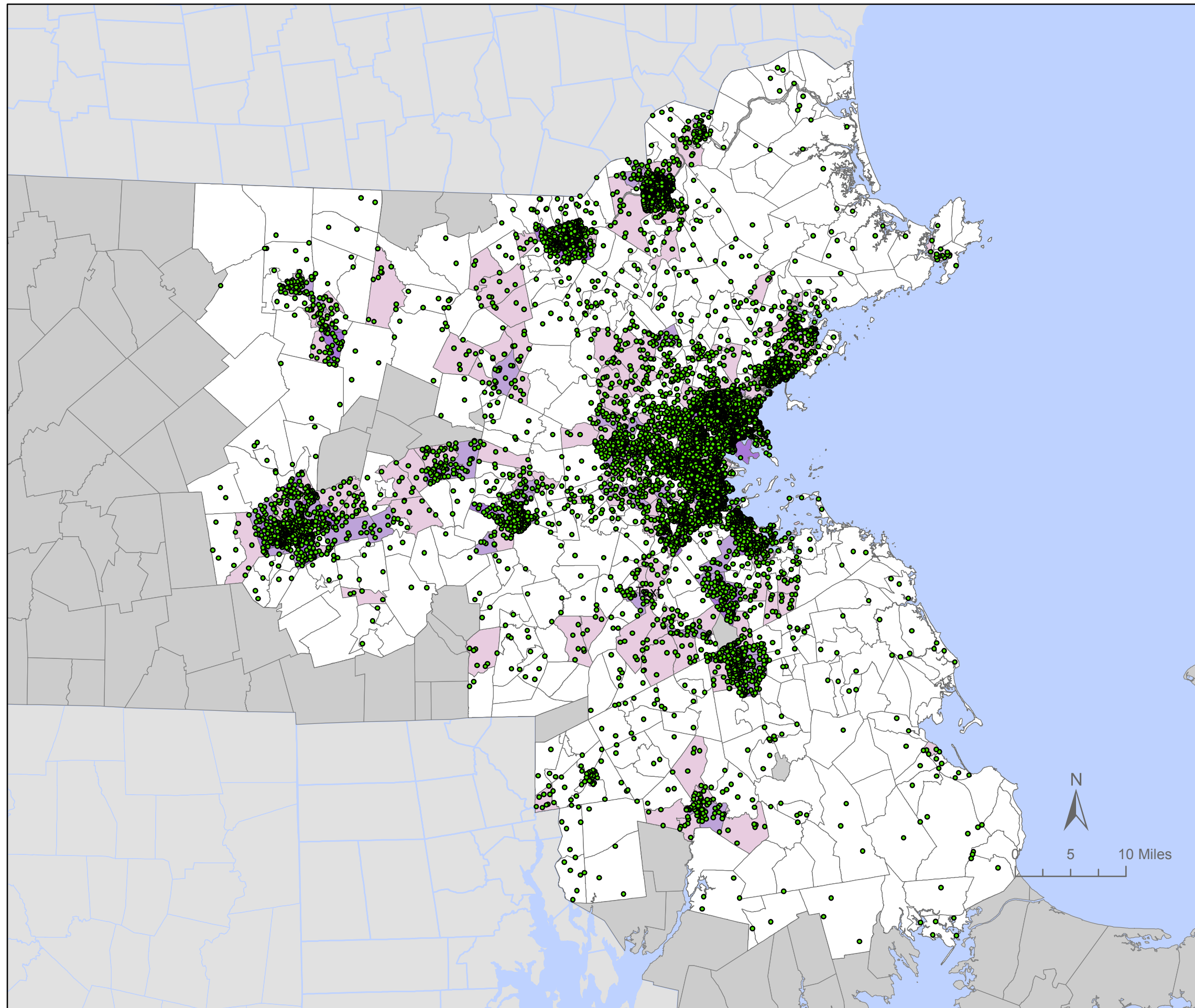
**Figure 1**  
**Percentage of Total LEP Persons in the MBTA Service Area by Language for the Top Five Languages Spoken**



Source: 2010–14 ACS five-year estimates

The MBTA mapped the ACS data to provide a geographic representation of where concentrations of LEP persons live and to show what languages are spoken at home in those areas. Figures 2a and 2b show the percentage of LEP persons by census tract, regardless of the language spoken at home. Figure 2a shows the percentage of LEP persons in the 175 municipalities of the MBTA commuter rail service area, and Figure 2b shows the percentage of LEP persons in the 59 municipalities of the MBTA's core service area, where the majority of MBTA transit services are located. Most of the areas with the highest LEP percentages are urban areas.





**FIGURE 2-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**All LEP Individuals**  
**MBTA Commuter Rail**  
**Service Area**

**All speakers who speak**  
**English "less than very well"**  
 ■ (1 dot = 50 speakers)

**Percentage of all tract residents**  
**Speaking English "less than very well"**

- 5 percent or less
- > 5 to 9.81 percent
- > 9.81 to 15 percent
- > 15 to 30 percent
- > 30 percent
- Outside MBTA commuter rail service area

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as "well", "not well", or "not at all" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.

**FIGURE 2-B**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**All LEP Individuals**  
**MBTA Core Service Area**

■ **All speakers who speak**  
**English less than "very well"**  
(1 dot = 50 speakers)

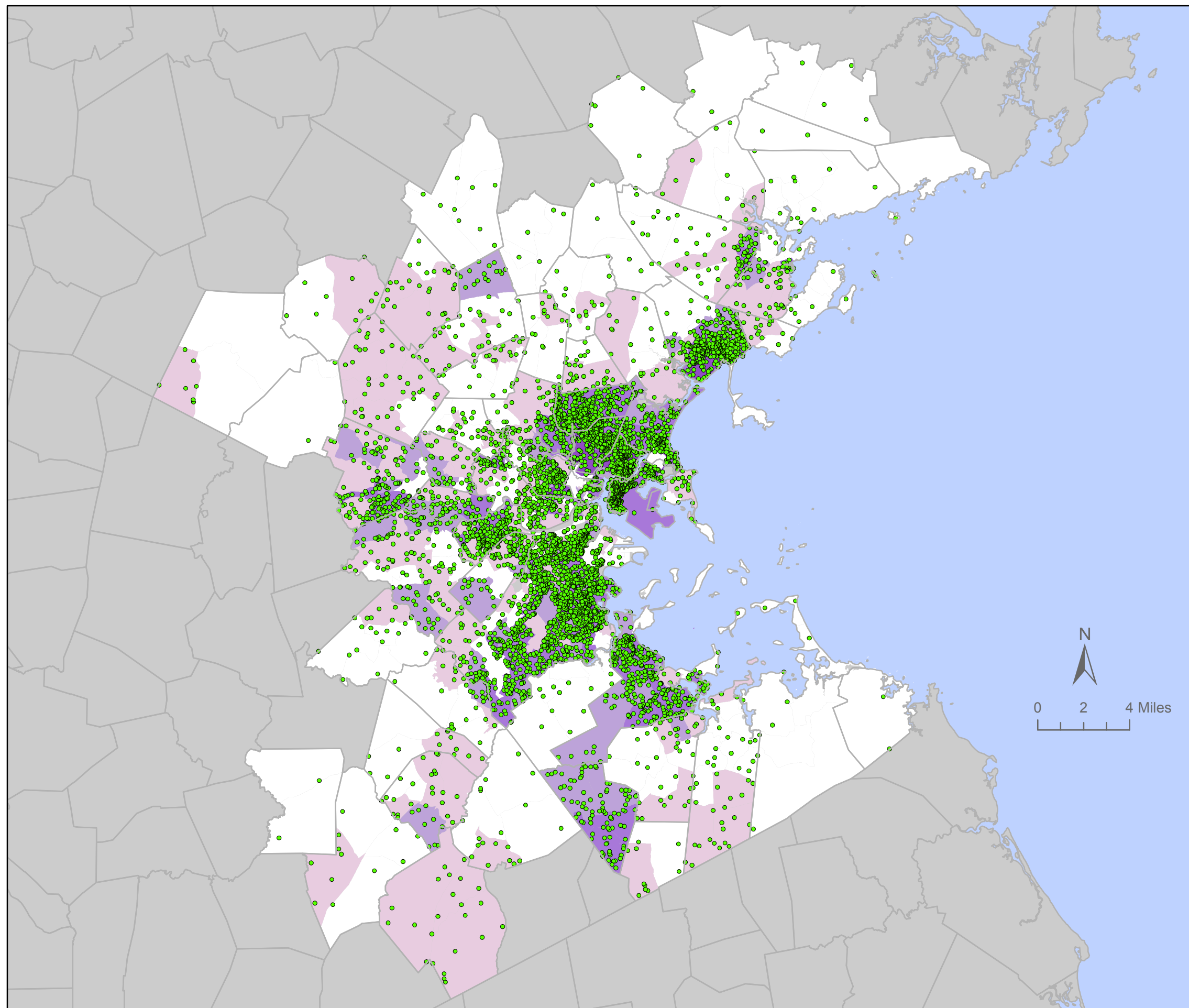
**Percentage of census tract residents**  
**speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA core service area is 11.8 percent.



To identify locations containing large concentrations of LEP individuals that belong to the top five language groups, municipalities were selected that had an overall LEP population larger than five percent of the total population, and where any of the top five language groups comprised more than 25 percent of the municipality's LEP population, or more than 1,000 persons. As the following information shows, it is apparent that some languages are spoken primarily in and around Boston, while others are more broadly distributed.

### **Spanish-Speaking LEP Populations**

The Spanish-speaking population is the largest LEP population in the MBTA's 175-town service area. Spanish is also the language spoken by the largest group of LEP people in many of the largest municipalities of the MBTA service area.

#### *Dialects and Countries of Origin*

Spanish-speaking individuals in the MBTA service area come from a variety of regions, predominantly from Puerto Rico and the Dominican Republic, in addition to a range of countries in Central and South America. This population speaks a variety of regional dialects, each of which has its own idiomatic expressions, slang, and colloquialisms, although these different dialects of written and spoken Spanish are generally understood between most speakers.

#### *Service Coverage*

Spanish-speaking LEP individuals are served by nearly every line of the MBTA system. The largest four of these populations in the MBTA service area are in Boston, Lawrence, Worcester, and Lynn. Boston is well served by numerous bus routes, and it is a terminus point for all MBTA rapid transit lines as well as the commuter rail lines. Lynn is served by numerous MBTA bus routes and by the Newburyport/Rockport commuter rail line. Worcester is served by the Worcester commuter rail line, and Lawrence is served by the Haverhill commuter rail line.

#### *Recent Population Changes*

Lowell, Lynn, Brockton, and Haverhill have all seen significant increases in their Spanish-speaking LEP populations between 2011 and 2014, which is depicted both in the maps and tables below. Worcester, Boston, and Lawrence have all seen declines in their populations of Spanish-speaking LEP people.

#### *Population Data by Municipality*

Tables 1a and 1b provide a list of municipalities containing relatively large concentrations of Spanish-speaking LEP individuals, as identified using the previously described methodology. Table 1a provides information on the total number of Spanish-

speaking individuals in each municipality along with their percentage of the municipality's total population and LEP population. Table 1b provides information on the changes in Spanish-speaking LEP population for each municipality. Figure 3a displays the concentration of Spanish-speaking LEP individuals in the 175 municipalities of the MBTA commuter rail service area, and Figure 3b displays the concentration of Spanish-speaking LEP individuals in the 59 municipalities of the MBTA's core service area. Municipalities outlined in Figures 3a and 3b are those identified as containing relatively large concentrations of Spanish-speaking individuals. Figures 4a and 4b show the change in Spanish-speaking LEP population in both MBTA service areas.

**Table 1a**  
**Representation of the Spanish-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2014 Spanish-Speaking LEP Population</b>	<b>Spanish-Speaking LEP Population - Percentage of Total Population</b>	<b>Spanish-Speaking LEP Population - Percentage of LEP Population</b>
Boston	42,887	7.3%	43.4%
Lawrence	24,715	35.3%	92.8%
Worcester	13,999	8.3%	47.4%
Lynn	12,348	14.8%	65.1%
Chelsea	11,622	36.2%	85.3%
Lowell	6,414	6.5%	30.6%
Revere	6,086	12.5%	54.1%
Everett	3,981	10.3%	34.6%
Framingham	3,680	5.8%	34.5%
Waltham	3,128	5.4%	43.4%
Brockton	2,962	3.4%	18.3%
Methuen	2,848	6.4%	63.7%
Haverhill	2,614	4.6%	70.3%
Somerville	2,225	3.1%	25.3%
Fitchburg	2,205	5.9%	70.8%
Leominster	2,134	5.6%	61.7%
Malden	1,880	3.4%	12.4%
Salem	1,775	4.5%	59.4%
Marlborough	1,607	4.5%	38.1%
Cambridge	1,236	1.2%	15.5%
Peabody	1,017	2.1%	29.4%
Attleboro	896	2.2%	39.5%
Dedham	445	1.9%	37.4%
Shirley	381	5.5%	71.6%
Westborough	312	1.8%	29.9%
Holbrook	256	2.5%	47.5%

Source: 2010–14 ACS five-year estimates

**Table 1b**  
**Changes in Spanish-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2011 Spanish-Speaking LEP Population</b>	<b>2014 Spanish-Speaking LEP Population</b>	<b>Absolute Change in Spanish-Speaking LEP Population</b>	<b>Percentage Change in Spanish-Speaking LEP Population</b>
Boston	43,313	42,887	-426	-1.0%
Lawrence	25,126	24,715	-411	-1.6%
Worcester	16,318	13,999	-2,319	-14.2%
Lynn	11,529	12,348	819	7.1%
Chelsea	11,269	11,622	353	3.1%
Lowell	5,100	6,414	1,314	25.8%
Revere	6,223	6,086	-137	-2.2%
Everett	3,539	3,981	442	12.5%
Framingham	3,542	3,680	138	3.9%
Waltham	3,235	3,128	-107	-3.3%
Brockton	2,305	2,962	657	28.5%
Methuen	2,841	2,848	7	0.2%
Haverhill	2,123	2,614	491	23.1%
Somerville	2,244	2,225	-19	-0.8%
Fitchburg	2,581	2,205	-376	-14.6%
Leominster	2,260	2,134	-126	-5.6%
Malden	1,804	1,880	76	4.2%
Salem	2,176	1,775	-401	-18.4%
Marlborough	1,443	1,607	164	11.4%
Cambridge	1,065	1,236	171	16.1%
Peabody	919	1,017	98	10.7%
Attleboro	749	896	147	19.6%
Dedham	249	445	196	78.7%
Shirley	341	381	40	11.7%
Westborough	227	312	85	37.4%
Holbrook	98	256	158	161.2%

Source: 2010–14 ACS five-year estimates

**FIGURE 3-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Spanish Speakers**  
**MBTA Commuter Rail**  
**Service Area**

■ Spanish speakers who speak English less than "very well"  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

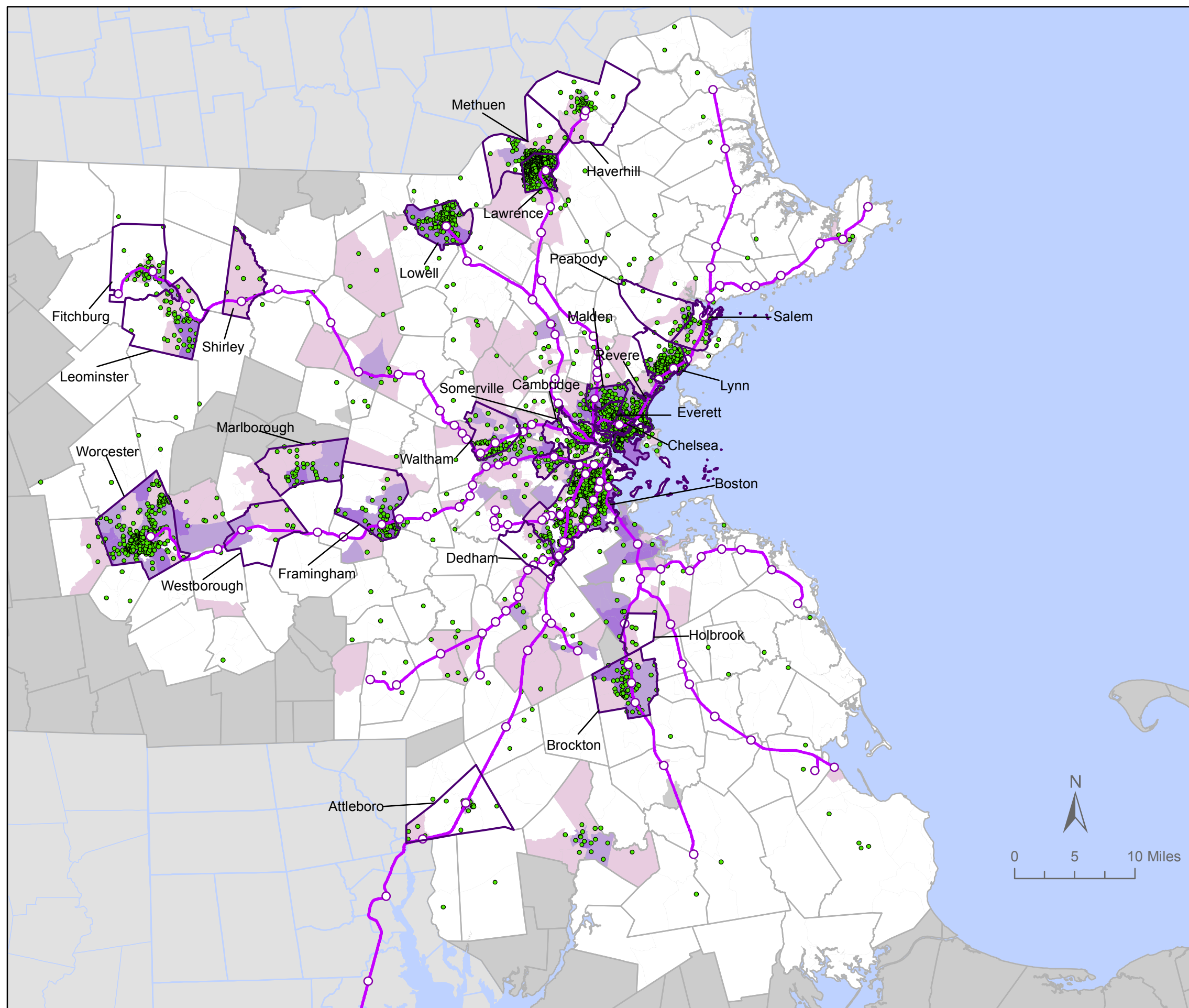
- 0.0% - 5.0%
- 5.1% - 9.8%
- 9.9% - 15.0%
- 15.1% - 30.0%
- 30.1% - 72.2%
- Outside MBTA commuter rail service area
- Significant Spanish-speaking populations

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Significant populations are identified in this map where the general LEP population in a municipality is over 5% and the Spanish-speaking population is either over 1,000 individuals or over 25% of the municipality's LEP population.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.



**FIGURE 3-B**  
MBTA Language  
Assistance Plan

**Limited English Proficiency:  
Spanish Speakers  
MBTA Core Service Area**

■ Spanish speakers who speak  
English less than "very well"  
(1 dot = 50 speakers)

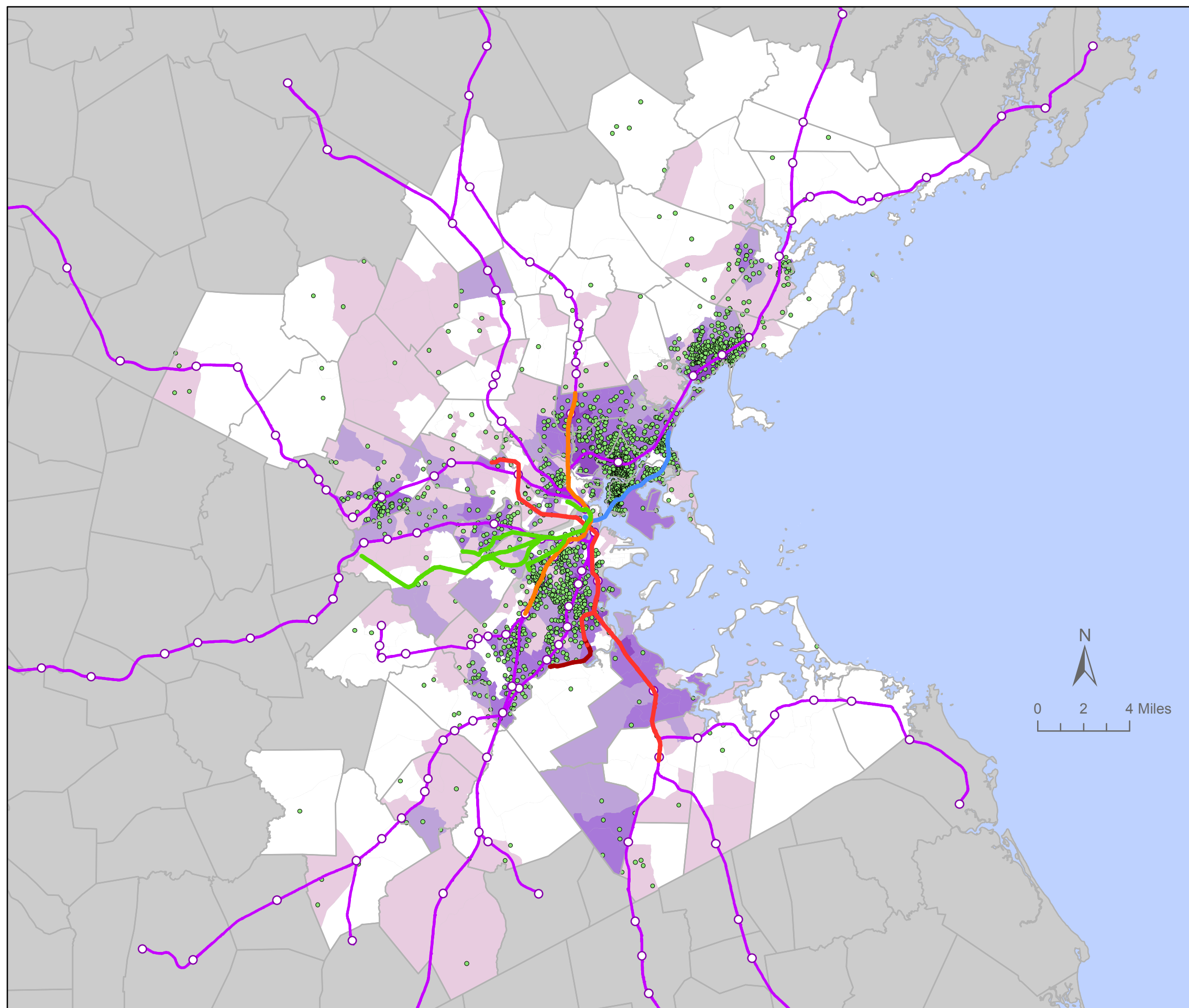
**Percentage of census tract residents  
speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

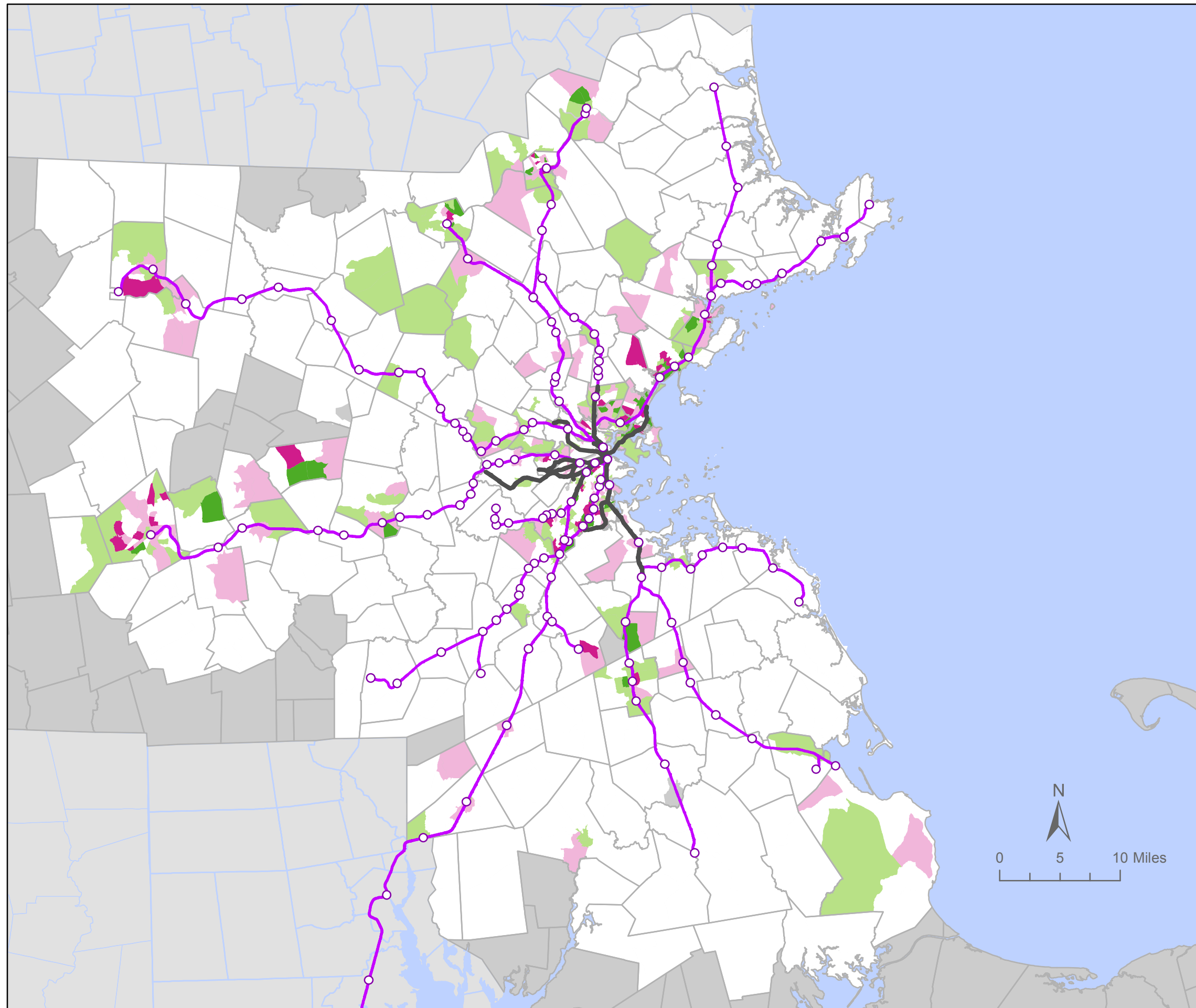
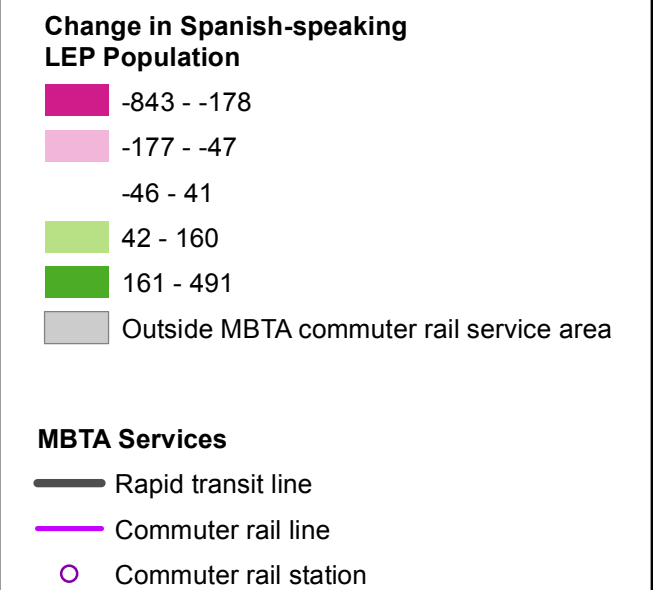
The percentage of LEP persons in the MBTA core service area is 11.8 percent.





**FIGURE 4-A**  
**MBTA Language**  
**Assistance Plan**

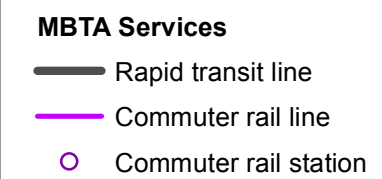
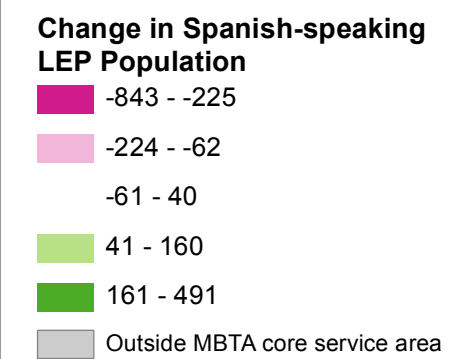
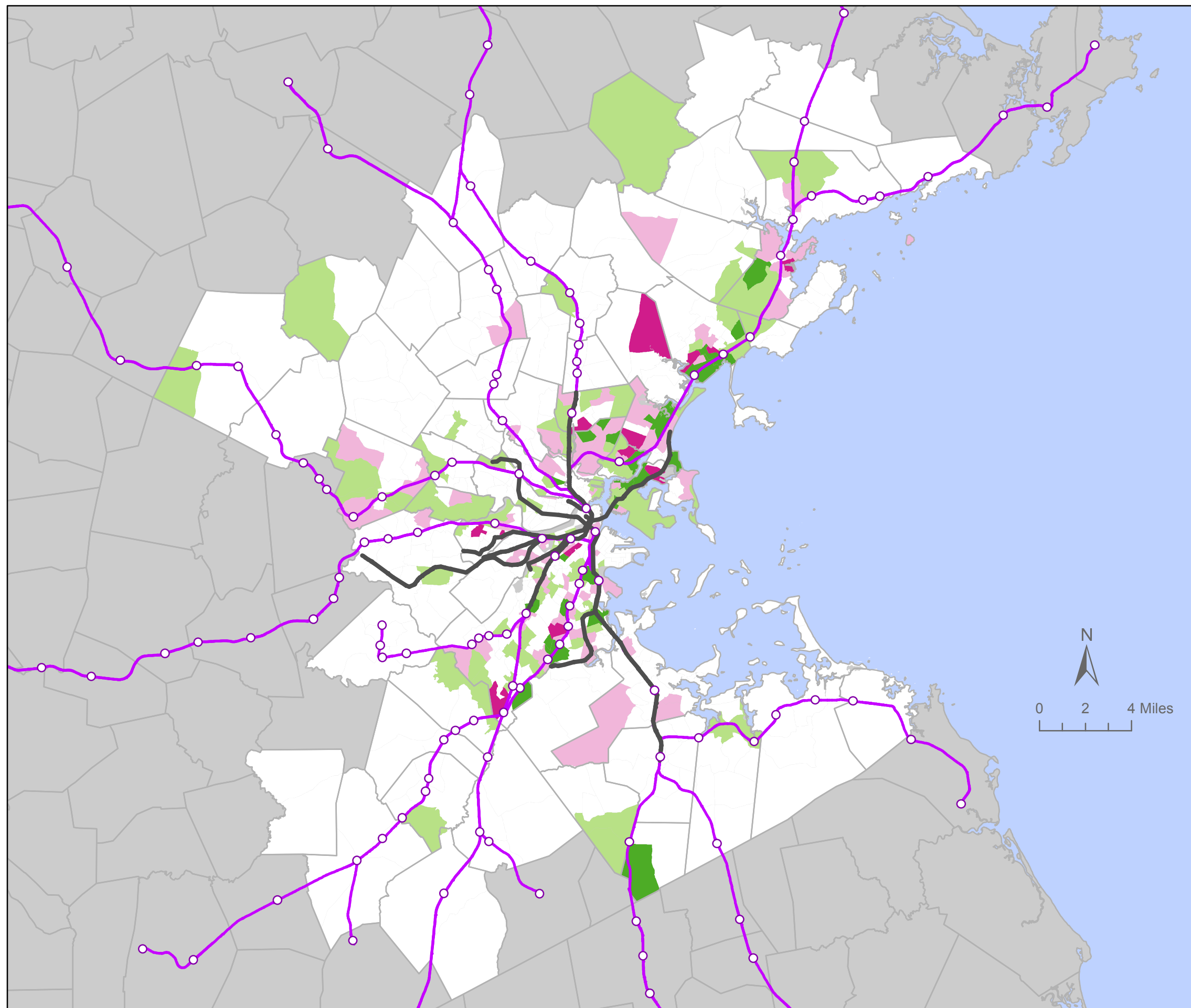
**Limited English Proficiency:**  
**Change in Spanish**  
**Speakers**  
**MBTA Commuter Rail**  
**Service Area**



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

**FIGURE 4-B**  
MBTA Language  
Assistance Plan

**Limited English Proficiency:  
Change in Spanish  
Speakers  
MBTA Core Service Area**



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

## **Chinese-Speaking LEP Populations**

The Chinese-speaking population is the second largest LEP population in the MBTA's 175-town service area. Chinese is the top language of LEP people in several municipalities that are adjacent to Boston, and it is a significant proportion of the LEP languages in Boston and some of its suburbs.

### *Dialects and Countries of Origin*

The Chinese-speaking population in Massachusetts is comprised of speakers of the dialects Cantonese, Mandarin, Taiwanese, Fukien, and Shanghai. Two different writing systems, Traditional Chinese and Simplified Chinese, are used within the Chinese-speaking population and do not correspond directly to spoken dialects.

### *Service Coverage*

The largest four Chinese-speaking LEP populations in the MBTA service area are in Boston, Quincy, Malden, and Newton. Boston is well served by numerous bus routes, and it is a terminus point for all the rapid transit lines as well as the commuter rail lines. Quincy is served by numerous bus routes, four Red Line stops (North Quincy, Wollaston, Quincy Center, and Quincy Adams), and the Quincy Center commuter rail station, which serves as a stop for the Middleborough/Lakeville, Plymouth/Kingston, and Greenbush commuter rail lines. Malden is served by several bus routes, the Orange Line at Malden Center and Oak Grove, and the Haverhill commuter rail line at Malden Center. Newton is served by buses; seven stops on the D branch of the Green Line; and the Newtonville, West Newton, and Auburndale stops on the Worcester commuter rail line.

### *Recent Population Changes*

Boston, Quincy, Malden, and Newton have all seen significant increases in their Chinese-speaking LEP populations between 2011 and 2014, depicted both in the maps and tables below. Populations of Chinese-speaking LEP people have declined slightly in Brookline and Cambridge.

### *Population Data by Municipality*

Tables 2a and 2b provide a list of municipalities containing relatively large concentrations of Chinese-speaking LEP individuals, as identified using the previously described methodology. Table 2a provides information on the total number of Chinese-speaking individuals in each municipality along with their percentage of the municipality's total population and LEP population. Table 2b provides information on the changes in Chinese-speaking LEP population for each municipality. Figure 5a displays the concentration of Chinese-speaking LEP individuals in the 175 municipalities of the

MBTA commuter rail service area, and Figure 5b displays the concentration of Chinese-speaking LEP individuals in the 59 municipalities of the MBTA's core service area. Municipalities outlined in Figures 5a and 5b are those identified as containing relatively large concentrations of Chinese-speaking individuals. Figures 6a and 6b show the change in Chinese-speaking LEP population in both MBTA service areas.

**Table 2a**  
**Representation of the Chinese-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2014 Chinese-Speaking LEP Population</b>	<b>Chinese-Speaking LEP Population - Percentage of Total Population</b>	<b>Chinese-Speaking LEP Population - Percentage of LEP Population</b>
Boston	14,119	2.4%	14.3%
Quincy	10,586	12.1%	65.5%
Malden	5,856	10.5%	38.5%
Newton	2,171	2.7%	34.3%
Brookline	1,556	2.8%	30.0%
Cambridge	1,485	1.5%	18.6%
Worcester	1,353	0.8%	4.6%
Waltham	1,002	1.7%	13.9%
Lexington	875	2.9%	41.0%
Belmont	676	2.9%	32.9%
Braintree	641	1.9%	33.1%
Acton	609	2.9%	41.0%
Winchester	595	3.0%	55.5%
Andover	521	1.7%	29.3%
Westford	506	2.4%	45.3%
Sharon	451	2.7%	40.1%
Westborough	277	1.6%	26.5%
Boxborough	131	2.7%	46.3%

**Table 2b**  
**Changes in the Chinese-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2011 Chinese-Speaking LEP Population</b>	<b>2014 Chinese-Speaking LEP Population</b>	<b>Absolute Change in Chinese-Speaking LEP Population</b>	<b>Percentage Change in Chinese-Speaking LEP Population</b>
Boston	13,353	14,119	766	5.7%
Quincy	8,016	10,586	2,570	32.1%
Malden	4,776	5,856	1,080	22.6%
Newton	1,670	2,171	501	30.0%
Brookline	1,687	1,556	-131	-7.8%
Cambridge	1,685	1,485	-200	-11.9%
Worcester	1,144	1,353	209	18.3%
Waltham	929	1,002	73	7.9%
Lexington	926	875	-51	-5.5%
Belmont	460	676	216	47.0%
Braintree	584	641	57	9.8%
Acton	452	609	157	34.7%
Winchester	469	595	126	26.9%
Andover	498	521	23	4.6%
Westford	344	506	162	47.1%
Sharon	244	451	207	84.8%
Westborough	241	277	36	14.9%
Boxborough	111	131	20	18.0%

**FIGURE 5-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Chinese Speakers**  
**MBTA Commuter Rail**  
**Service Area**

■ Chinese speakers who speak English less than "very well"  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

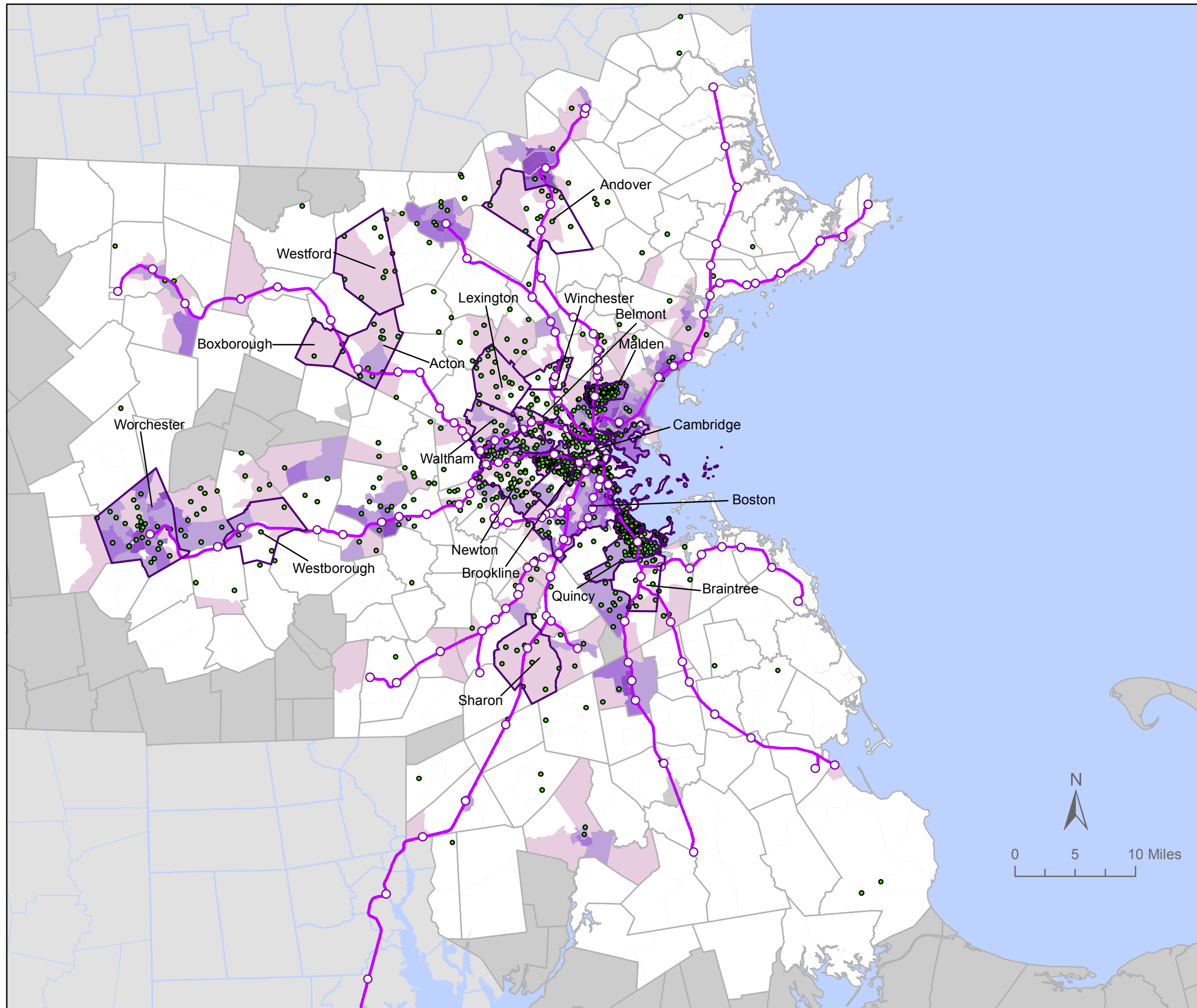
- 0.0% - 5.0%
- 5.1% - 9.8%
- 9.9% - 15.0%
- 15.1% - 30.0%
- 30.1% - 72.2%
- Outside MBTA commuter rail service area
- Significant Chinese-speaking populations

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Significant populations are identified in this map where the general LEP population in a municipality is over 5% and the Chinese-speaking population is either over 1,000 individuals or over 25% of the municipality's LEP population.

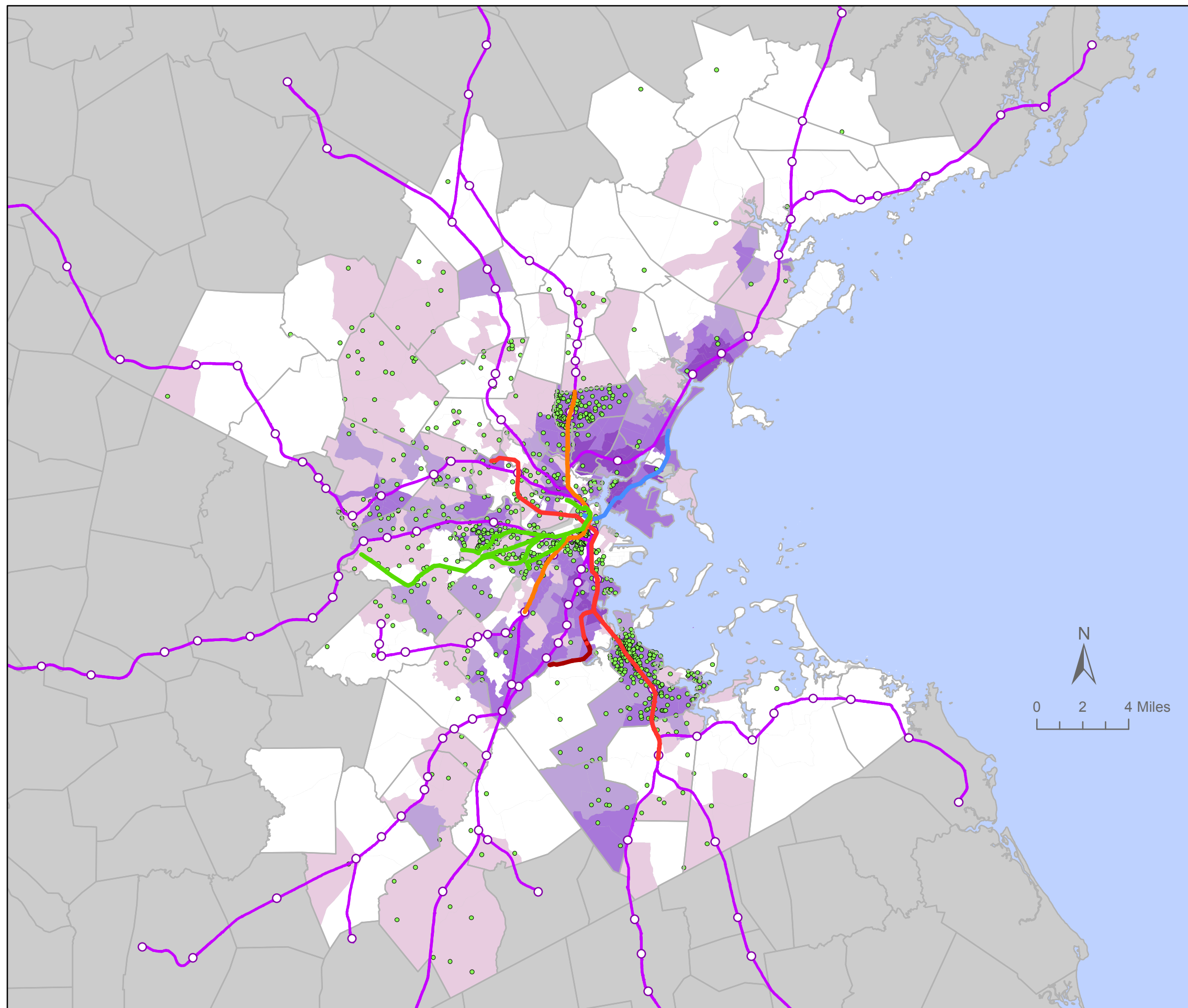
Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.



**FIGURE 5-B**  
**MBTA Language**  
**Assistance Plan**

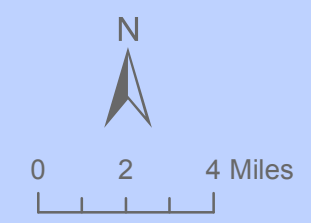
**Limited English Proficiency:**  
**Chinese Speakers**  
**MBTA Core Service Area**



■ Chinese speakers who speak English less than "very well"  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area



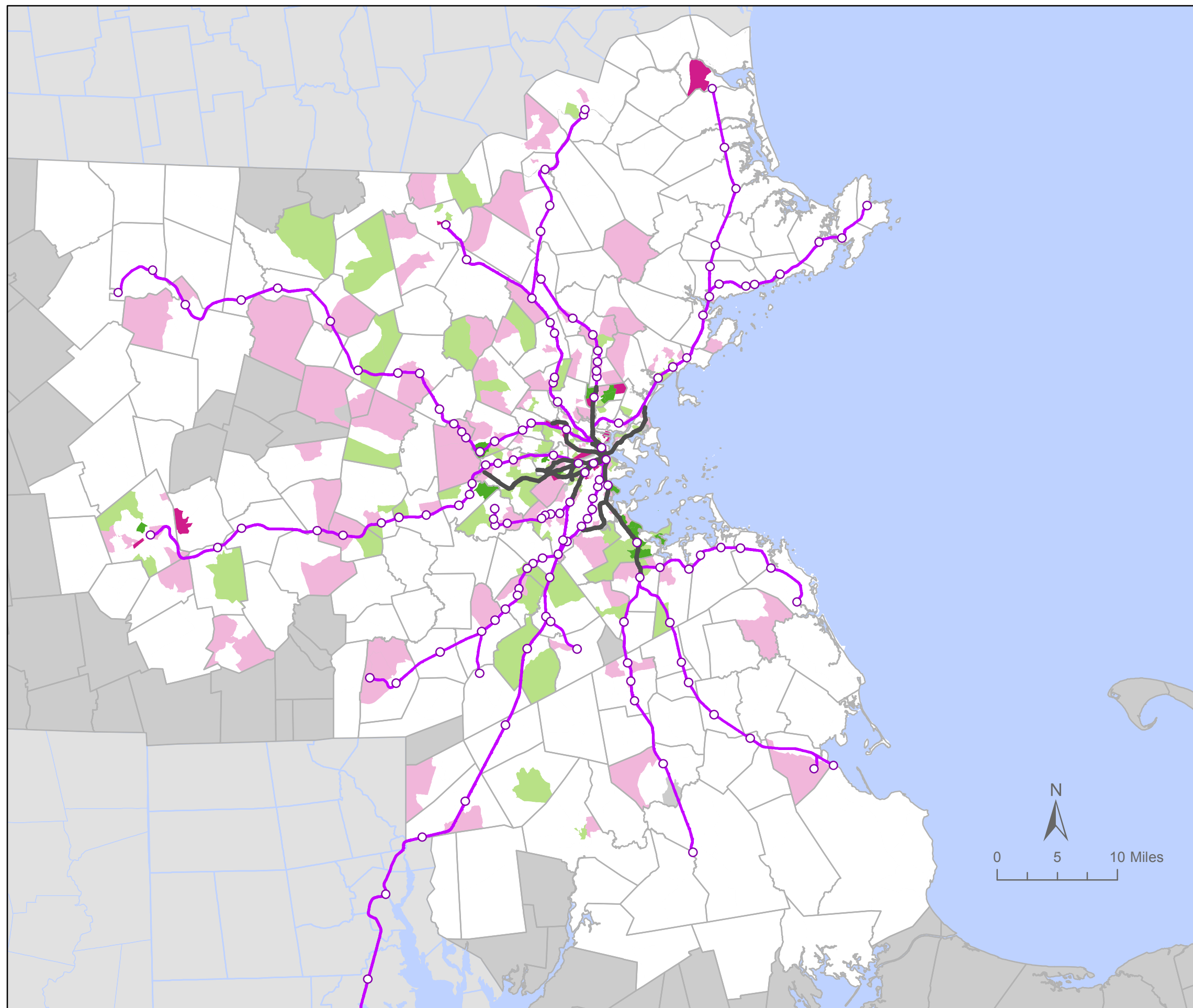
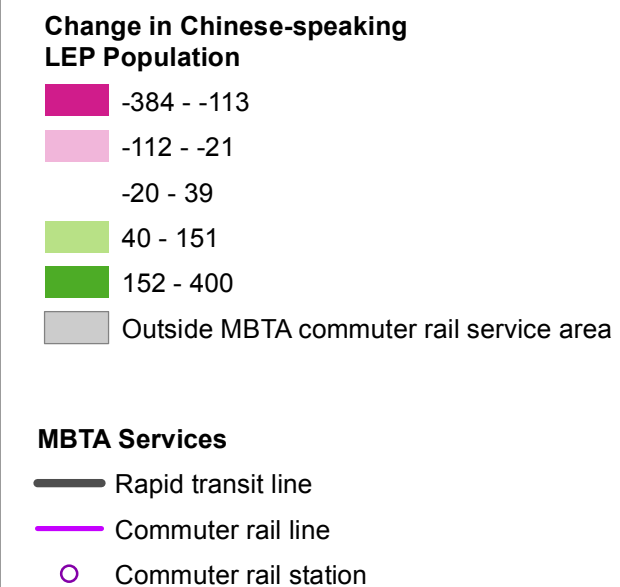
Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA core service area is 11.8 percent.

**FIGURE 6-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Change in Chinese**  
**Speakers**  
**MBTA Commuter Rail**  
**Service Area**

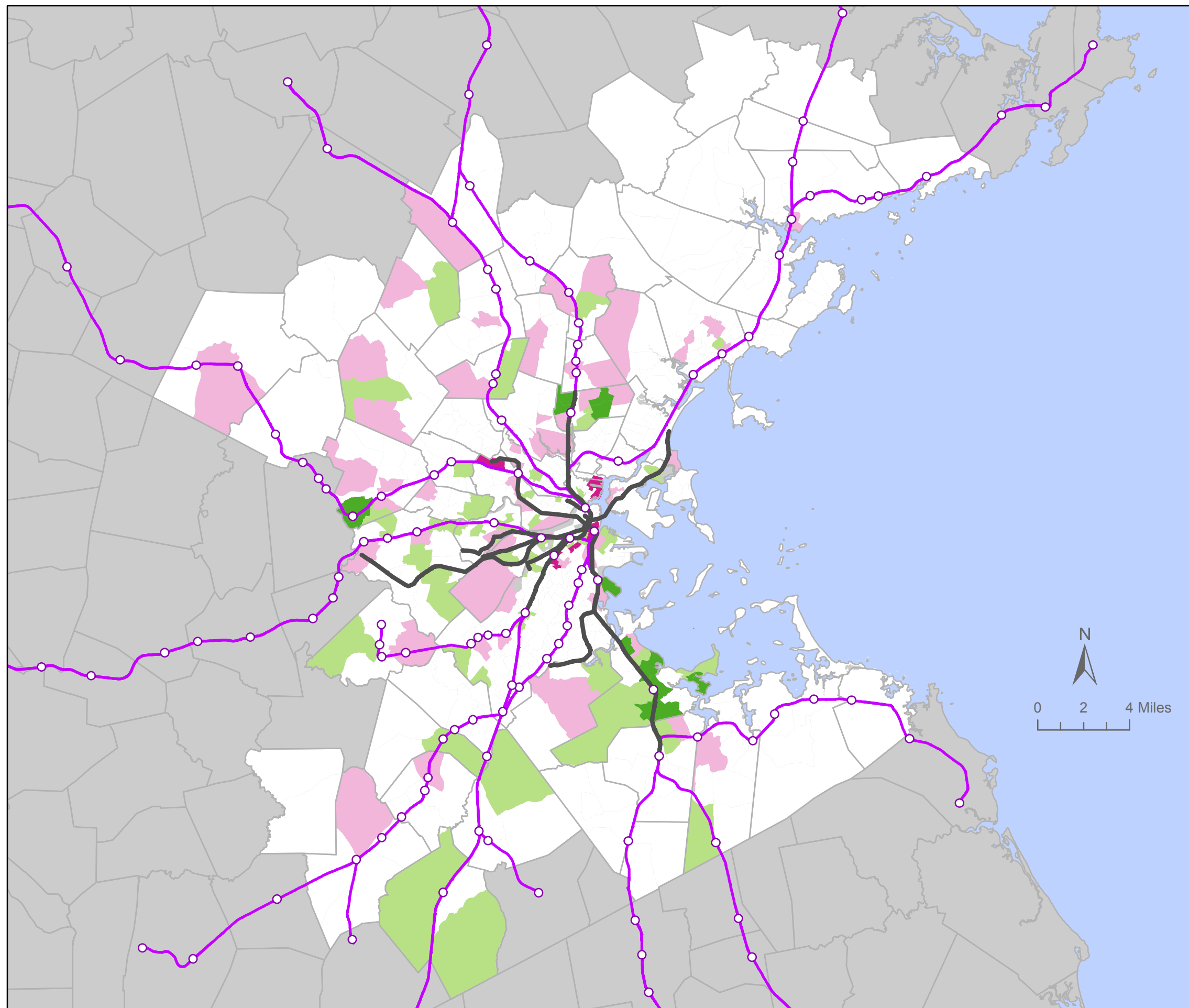


Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.



**FIGURE 6-B**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Change in Chinese**  
**Speakers**  
**MBTA Core Service Area**



**Change in Chinese-speaking LEP Population**

Dark Purple	-384 - -187
Light Purple	-186 - -31
White	-30 - 51
Light Green	52 - 164
Dark Green	165 - 400
Grey	Outside MBTA core service area

**MBTA Services**

Black line	Rapid transit line
Purple line	Commuter rail line
White circle	Commuter rail station

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

## **Portuguese-Speaking LEP Populations**

The Portuguese-speaking population, including Portuguese Creole, is the third largest LEP population in the MBTA's 175-town service area. Portuguese is the top language of the LEP populations of Brockton, Framingham, and Somerville, and is spoken by significant proportions of the LEP populations of other cities in the Boston metropolitan area, North Shore, and in the Merrimack River Valley.

### *Dialects and Countries of Origin*

Portuguese speakers in Massachusetts generally can be grouped as speaking one of three dialect categories: Brazilian Portuguese, European Portuguese, and Cape Verdean (Portuguese Creole). Although these three spoken dialects differ significantly, written Brazilian and European Portuguese are mostly understood by speakers within each of these groups. Brazilian and European Portuguese, however, have some differences in spelling and vocabulary.

### *Service Coverage*

The largest four Portuguese-speaking LEP populations in the MBTA service area are in Brockton, Boston, Framingham, and Everett. The Middleborough/Lakeville Line of the MBTA commuter rail passes through Brockton with stops at Campello, Montello, and Brockton stations. Boston is well served by numerous bus routes, and it is a terminus point for all MBTA rapid transit lines as well as the commuter rail lines. Framingham is served by the Framingham/Worcester commuter rail line at Framingham Station. Everett is served by several bus routes that run through the bus-hub Everett Square.

### *Recent Population Changes*

Brockton, Somerville, and Lowell have all seen significant increases in their Portuguese-speaking LEP populations between 2011 and 2014, depicted both in the maps and tables below. Boston, Framingham, Malden, and Worcester have all seen declines in their populations of Portuguese-speaking LEP people.

### *Population Data by Municipality*

Tables 3a and 3b provide a list of municipalities containing relatively large concentrations of Portuguese-speaking LEP individuals, as identified using the previously described methodology. Table 3a provides information on the total number of Portuguese-speaking individuals in each municipality along with their percentage of the municipality's total population and LEP population. Table 3b provides information on the changes in Portuguese-speaking LEP population for each municipality. Figure 7a displays the concentration of Portuguese-speaking LEP individuals in the 175 municipalities of the MBTA commuter rail service area, and Figure 7b displays the

concentration of Portuguese-speaking LEP individuals in the 59 municipalities of the MBTA's core service area. Municipalities outlined in Figures 7a and 7b are those identified as containing relatively large concentrations of Portuguese-speaking individuals. Figures 8a and 8b show the change in Portuguese-speaking LEP population in both MBTA service areas.

**Table 3a**  
**Representation of the Portuguese-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2014 Portuguese-Speaking LEP Population</b>	<b>Portuguese-Speaking LEP Population - Percentage of Total Population</b>	<b>Portuguese-Speaking LEP Population - Percentage of LEP Population</b>
Brockton	7,387	8.5%	45.6%
Boston	4,952	0.8%	5.0%
Framingham	4,105	6.4%	38.5%
Everett	3,567	9.2%	31.0%
Taunton	2,771	5.3%	64.1%
Somerville	2,755	3.8%	31.4%
Lowell	2,580	2.6%	12.3%
Malden	1,828	3.3%	12.0%
Marlborough	1,744	4.9%	41.4%
Worcester	1,597	0.9%	5.4%
Peabody	1,454	3.0%	42.0%
Stoughton	910	3.6%	43.8%
Woburn	658	1.8%	28.5%
Seekonk	247	1.9%	43.3%

**Table 3b**  
**Changes in Portuguese-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2011 Portuguese-Speaking LEP Population</b>	<b>2014 Portuguese-Speaking LEP Population</b>	<b>Absolute Change in Portuguese-Speaking LEP Population</b>	<b>Percentage Change in Portuguese-Speaking LEP Population</b>
Brockton	5,388	7,387	1,999	37.1%
Boston	6,875	4,952	-1,923	-28.0%
Framingham	4,515	4,105	-410	-9.1%
Everett	3,511	3,567	56	1.6%
Taunton	3,009	2,771	-238	-7.9%
Somerville	2,481	2,755	274	11.0%
Lowell	2,444	2,580	136	5.6%
Malden	2,555	1,828	-727	-28.5%
Marlborough	1,732	1,744	12	0.7%
Worcester	2,251	1,597	-654	-29.1%
Peabody	1,618	1,454	-164	-10.1%
Stoughton	1,156	910	-246	-21.3%
Woburn	719	658	-61	-8.5%
Seekonk	339	247	-92	-27.1%

**FIGURE 7-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:  
 Portuguese Speakers  
 MBTA Commuter Rail  
 Service Area**

● Portuguese speakers who speak English less than "very well"  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

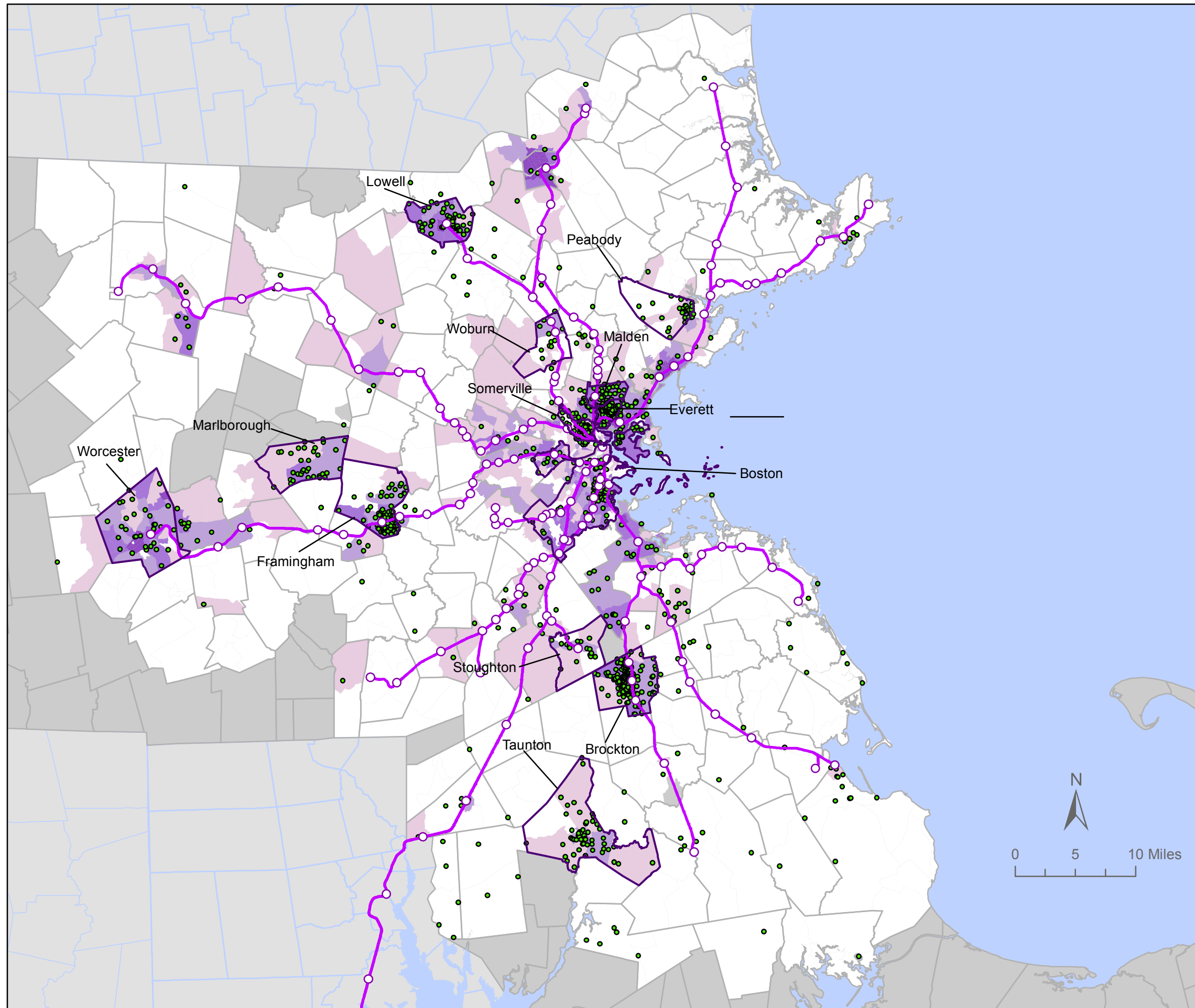
- 0.0% - 5.0%
- 5.1% - 9.8%
- 9.9% - 15.0%
- 15.1% - 30.0%
- 30.1% - 72.2%
- Outside MBTA commuter rail service area
- Significant Portuguese-speaking population

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Significant populations are identified in this map where the general LEP population in a municipality is over 5% and the Portuguese-speaking population is either over 1,000 individuals or over 25% of the municipality's LEP population.

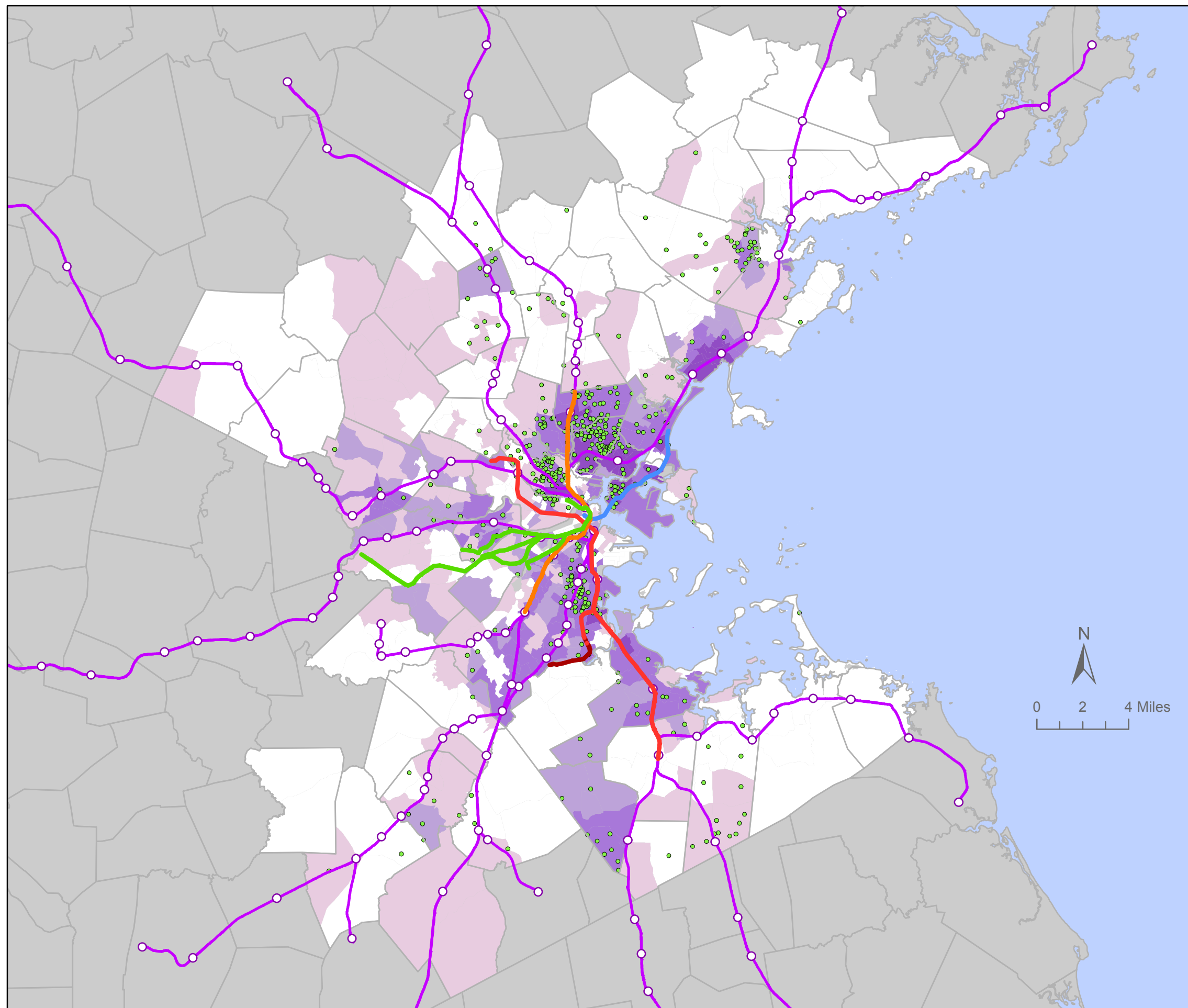
Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.



**FIGURE 7-B**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Portuguese Speakers**  
**MBTA Core Service Area**



● Portuguese speakers who speak English less than "very well"  
(1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area

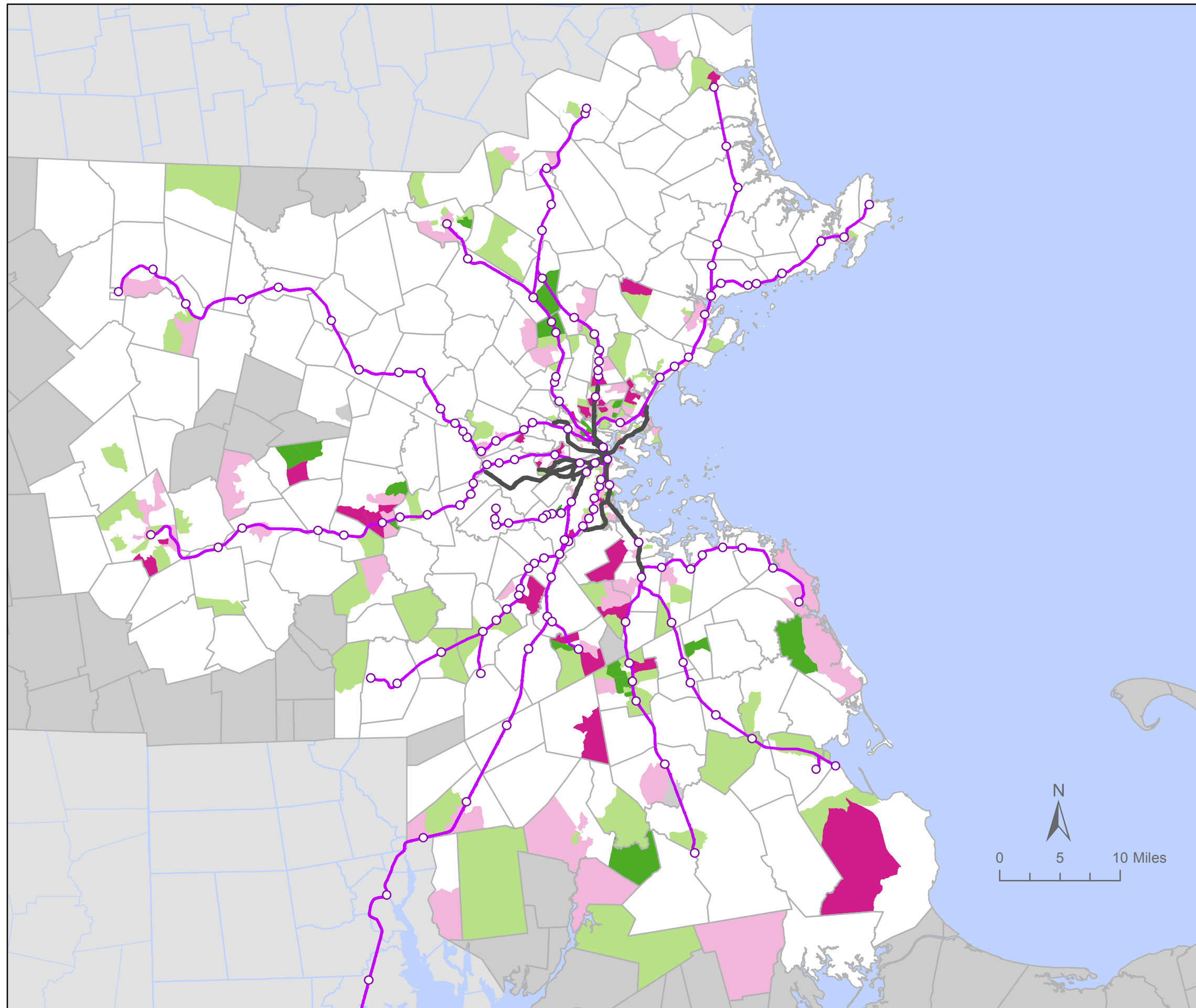
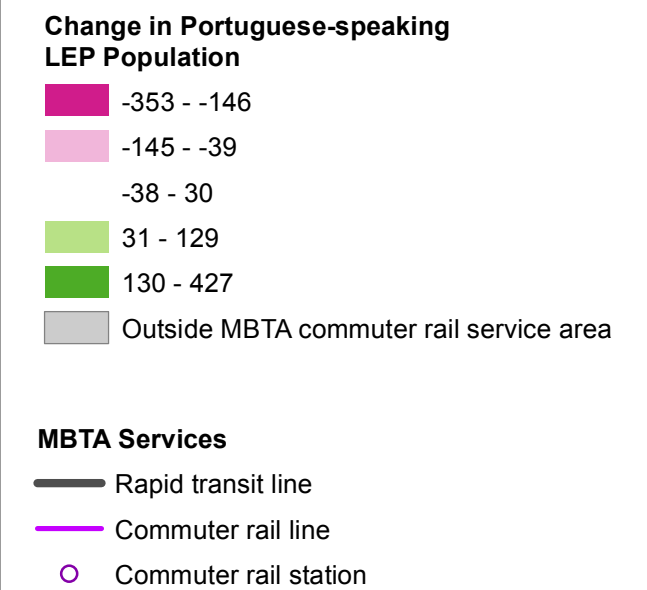
Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA core service area is 11.8 percent.

**FIGURE 8-A**  
**MBTA Language**  
**Assistance Plan**

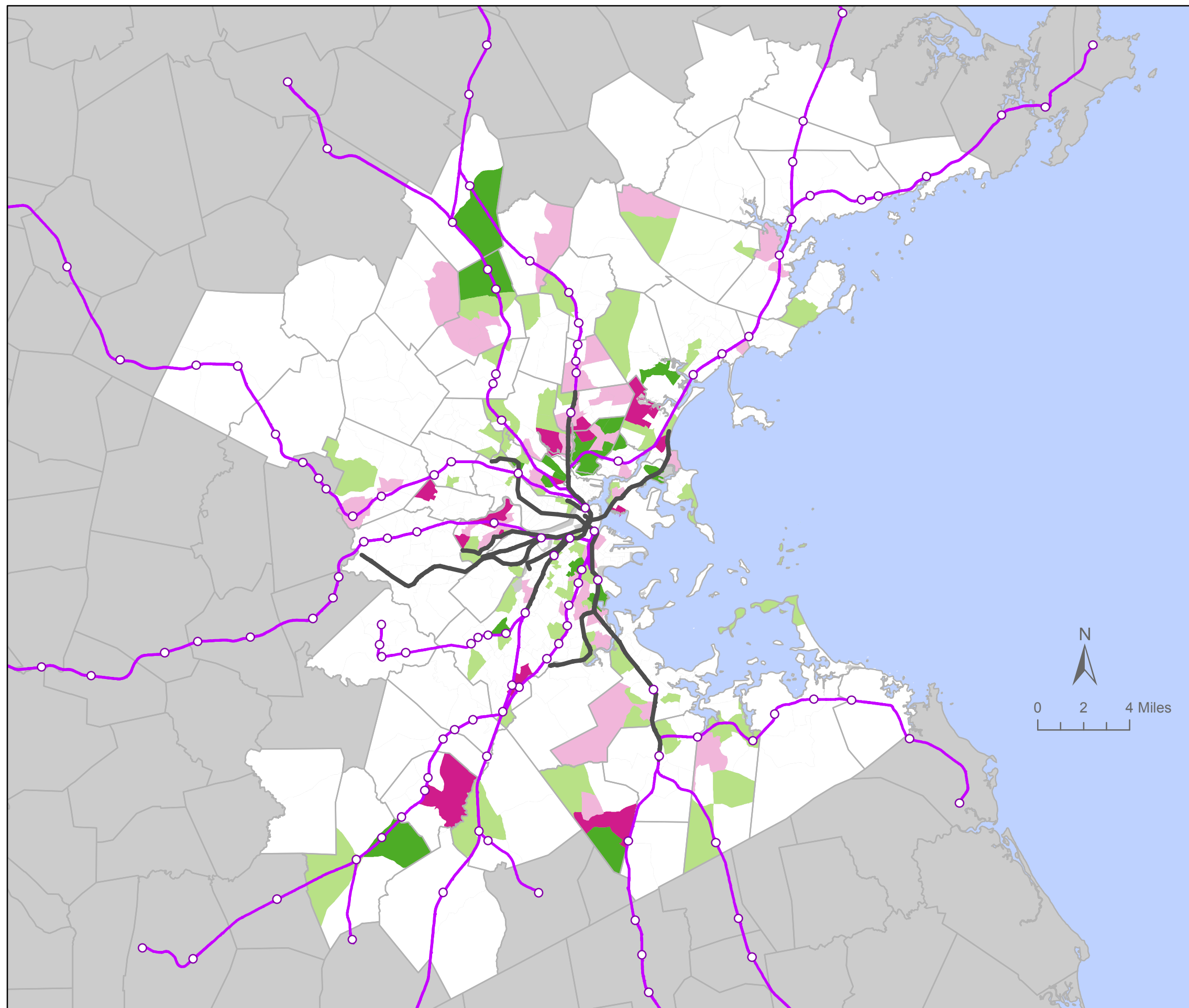
**Limited English Proficiency:  
 Change in Portuguese  
 Speakers  
 MBTA Commuter Rail  
 Service Area**



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

**FIGURE 8-B**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Change in Portuguese**  
**Speakers**  
**MBTA Core Service Area**



**Change in Portuguese-speaking**  
**LEP Population**

- 353 - -179
- 178 - -53
- 52 - 18
- 19 - 87
- 88 - 233
- Outside MBTA core service area

**MBTA Services**

- Rapid transit line
- Commuter rail line
- Commuter rail station

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

## **French Creole-Speaking LEP Populations**

The French Creole-speaking population is the fourth largest LEP population in the MBTA's 175-town service area. French Creole is the predominate language spoken by LEP people in Randolph, and it is spoken by significant proportions of LEP people in some of the municipalities within the MBTA service area.

### *Dialects and Countries of Origin*

The primary dialect of French Creole spoken across Massachusetts is Haitian Creole. Although Haiti recognizes both French and Haitian Creole as its official languages, significant changes have been made to the way these languages are used and taught. Haitian Creole was not introduced formally to Haitian school systems until 1978; the language is still considered a primarily informal language, while French has a more formal connotation. Haitian Creole-speaking individuals who were formally educated in French may not be able to read Haitian Creole. Conversely, written French may be a less easily understood language for those who communicate primarily in Haitian Creole.

### *Service Coverage*

French Creole-speaking LEP individuals are served by nearly every line of the MBTA system. The largest of these populations in the MBTA service area are in Boston, Brockton, Everett, Randolph, and Malden. Boston is well served by numerous bus routes, and it is a terminus point for all MBTA rapid transit lines as well as the commuter rail lines. The Middleborough/Lakeville Line of the MBTA commuter rail passes through Brockton with stops at Campello, Montello, and Brockton stations. Everett is served by several bus routes that run through the bus-hub Everett Square. Randolph is served by two bus routes and the Holbrook/Randolph stop on the Middleborough/Lakeville commuter rail line. Malden is served by several buses, the Haverhill commuter rail line, and the Orange Line at Malden Center and Oak Grove.

### *Recent Population Changes*

Boston and Everett have both seen significant increases in their French Creole-speaking LEP populations between 2011 and 2014, depicted both in the maps and tables below.

### *Population Data by Municipality*

Tables 4a and 4b provide a list of municipalities containing relatively large concentrations of French Creole-speaking LEP individuals, as identified using the previously described methodology. Table 4a provides information on the total number of French Creole-speaking individuals in each municipality along with their percentage of the municipality's total population and LEP population. Table 4b provides information on



the changes in French Creole-speaking LEP population for each municipality. Figure 9a displays the concentration of French Creole-speaking LEP individuals in the 175 municipalities of the MBTA commuter rail service area, and Figure 9b displays the concentration of French Creole-speaking LEP individuals in the 59 municipalities of the MBTA's core service area. Municipalities outlined in Figures 9a and 9b are those identified as containing relatively large concentrations of French Creole-speaking individuals. Figures 10a and 10b show the change in French Creole-speaking LEP population in both MBTA service areas.

**Table 4a**  
**Representation of the French Creole-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2014 French Creole-Speaking LEP Population</b>	<b>French Creole-Speaking LEP Population - Percentage of Total Population</b>	<b>French Creole-Speaking LEP Population - Percentage of LEP Population</b>
Boston	11,634	2.0%	11.8%
Brockton	4,461	5.1%	27.5%
Everett	2,006	5.2%	17.4%
Randolph	1,619	5.3%	35.5%
Malden	1,051	1.9%	6.9%

**Table 4b**  
**Changes in the French Creole-Speaking Population by Municipality**

<b>Municipality</b>	<b>2011 French Creole-Speaking LEP Population</b>	<b>2014 French Creole-Speaking LEP Population</b>	<b>Absolute Change in French Creole-Speaking LEP Population</b>	<b>Percentage Change in French Creole-Speaking LEP Population</b>
Boston	8,889	11,634	2,745	30.9%
Brockton	4,113	4,461	348	8.5%
Everett	1,387	2,006	619	44.6%
Randolph	1,321	1,619	298	22.6%
Malden	1,234	1,051	-183	-14.8%

**FIGURE 9-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**French Creole Speakers**  
**MBTA Commuter Rail**  
**Service Area**

● **French Creole-speakers who speak English less than "very well"**  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

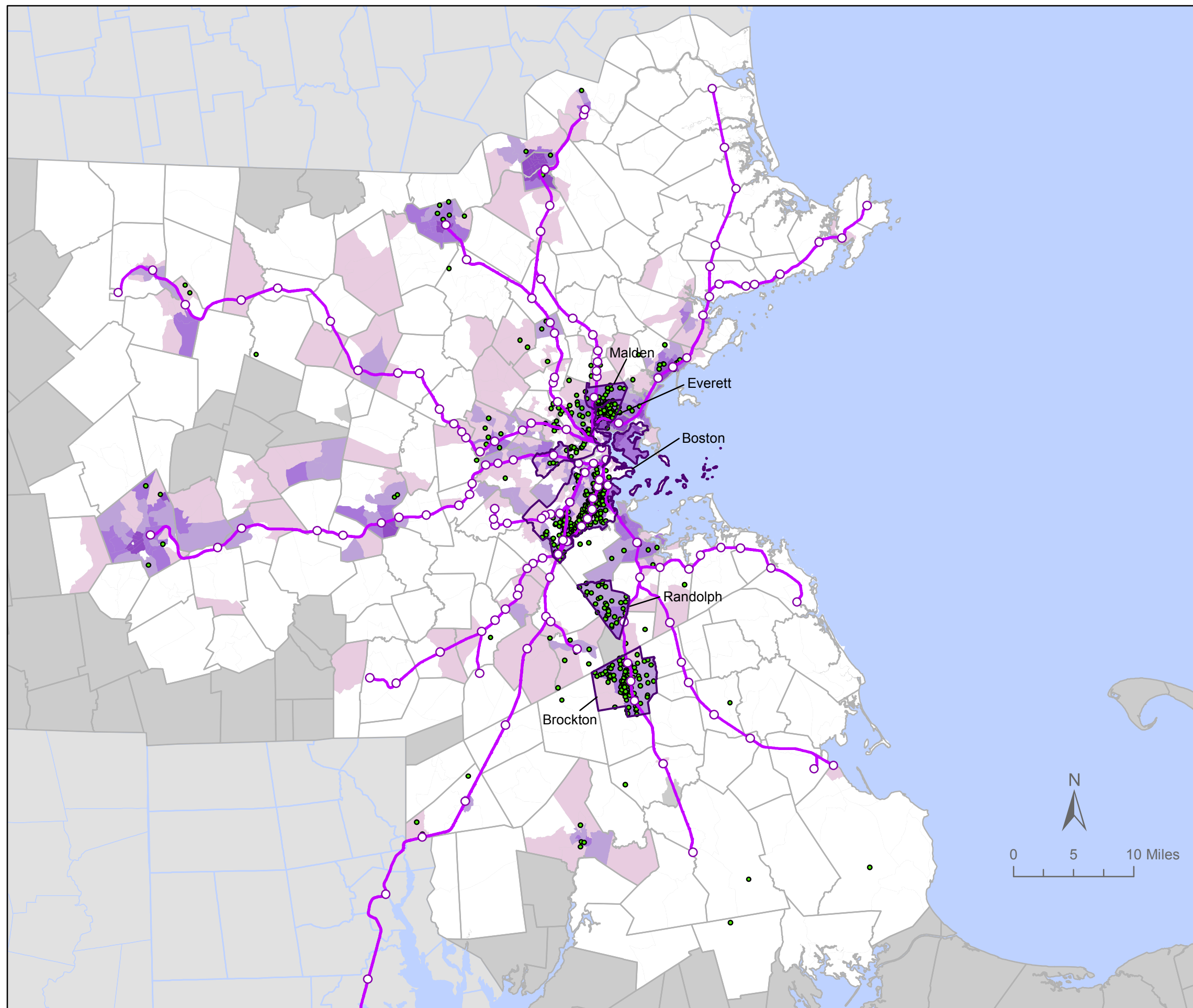
- 0.0% - 5.0%
- 5.1% - 9.8%
- 9.9% - 15.0%
- 15.1% - 30.0%
- 30.1% - 72.2%
- Outside MBTA commuter rail service area
- Significant French Creole-speaking population

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Significant populations are identified in this map where the general LEP population in a municipality is over 5% and the French Creole-speaking population is either over 1,000 individuals or over 25% of the municipality's LEP population.

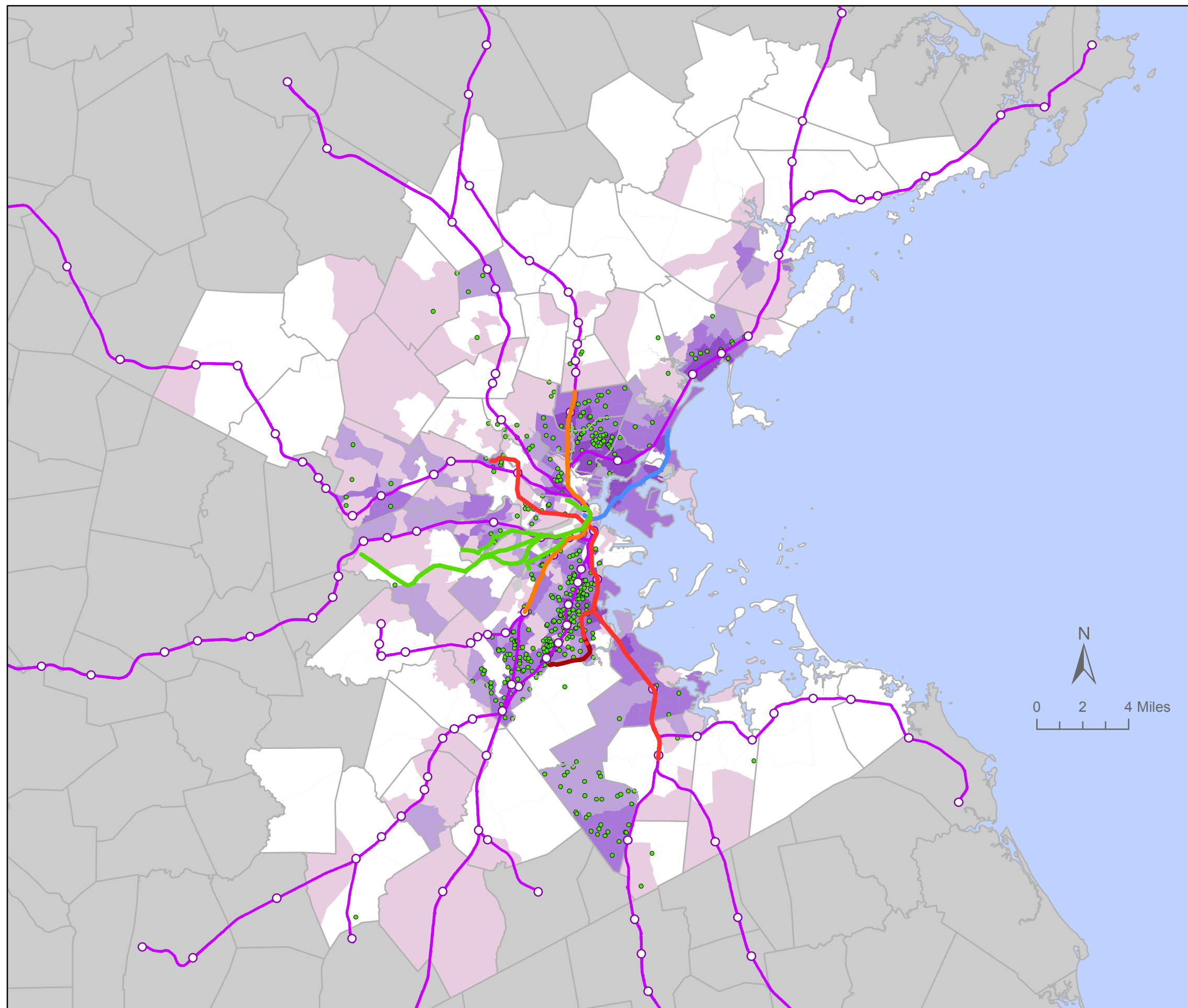
Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.



**FIGURE 9-B**  
**MBTA Language**  
**Assistance Plan**

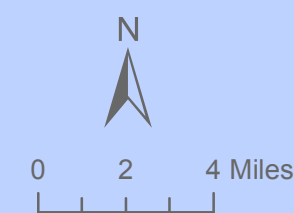
**Limited English Proficiency:**  
**French Creole Speakers**  
**MBTA Core Service Area**



● **French Creole speakers who speak English less than "very well"**  
 (1 dot = 50 speakers)

**Percentage of census tract residents speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area



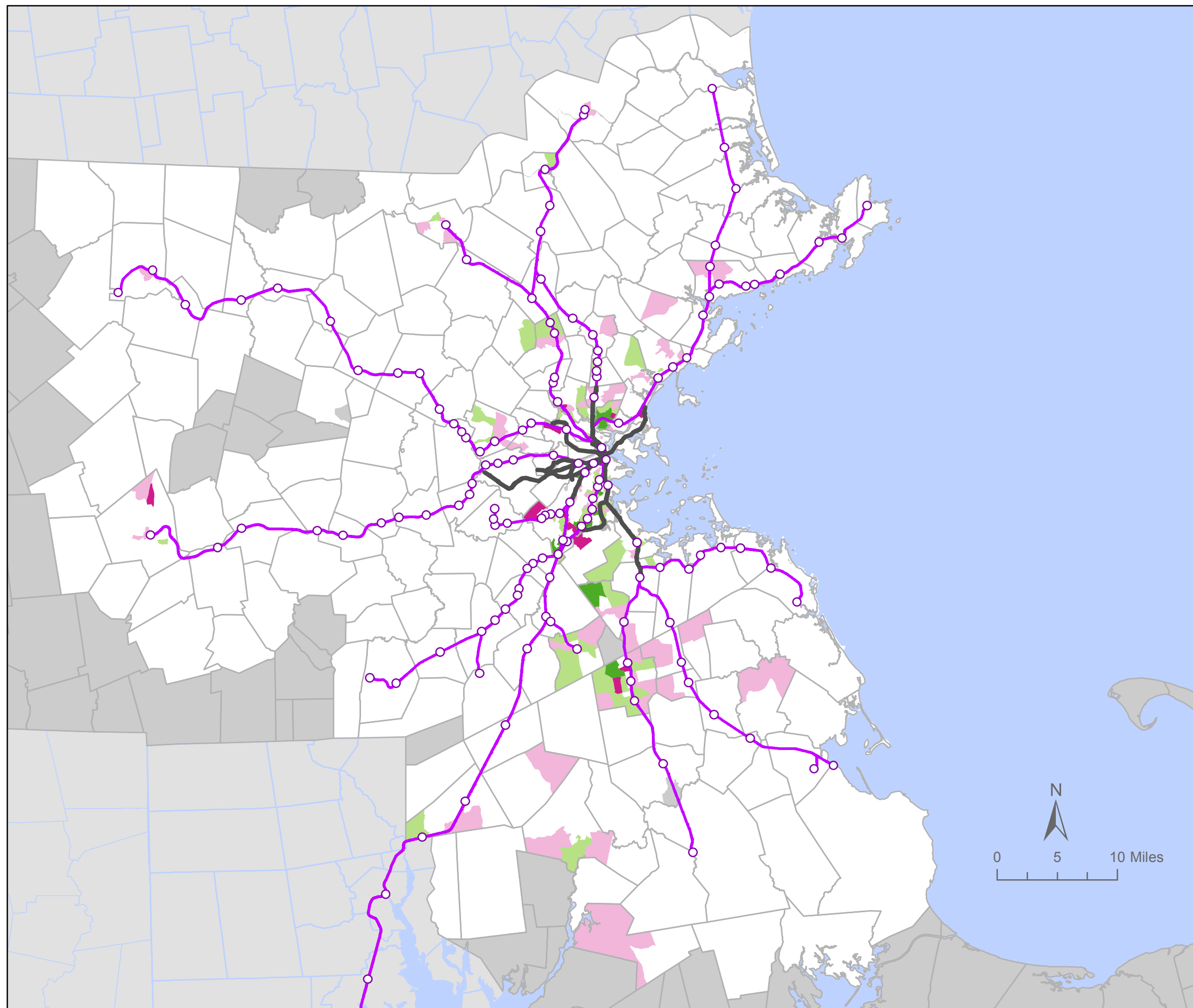
Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA core service area is 11.8 percent.

**FIGURE 10-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:  
 Change in French Creole  
 Speakers  
 MBTA Commuter Rail  
 Service Area**

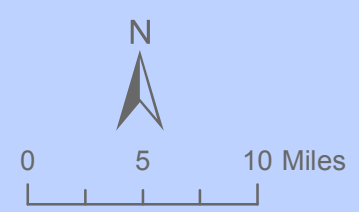


**Change in French Creole-speaking LEP Population**

- 296 - -97
- 96 - -19
- 18 - 38
- 39 - 145
- 146 - 302
- Outside MBTA commuter rail service area

**MBTA Services**

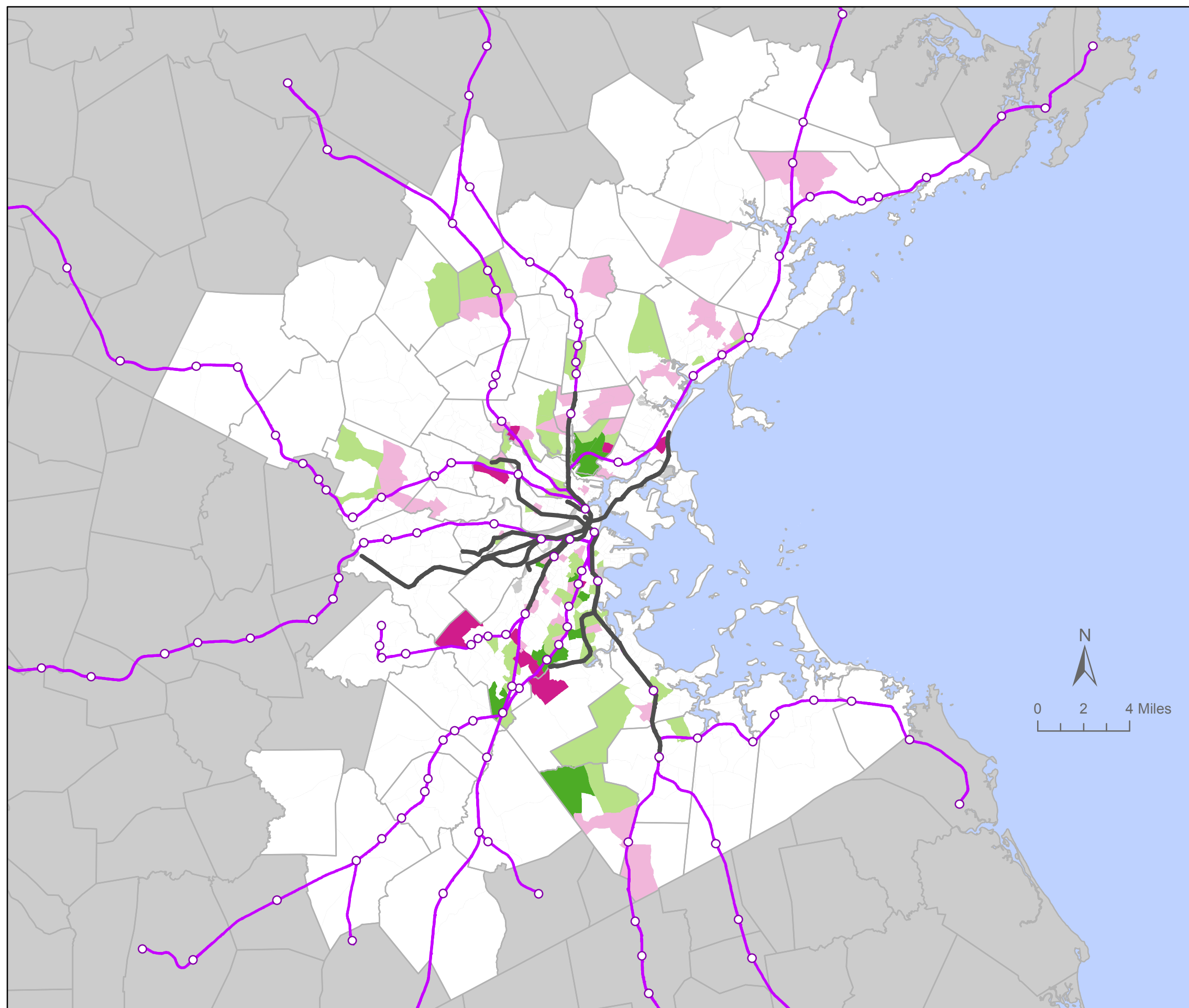
- Rapid transit line
- Commuter rail line
- Commuter rail station



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

**FIGURE 10-B**  
MBTA Language  
Assistance Plan

**Limited English Proficiency:  
Change in French Creole  
Speakers  
MBTA Core Service Area**



**Change in French Creole-speaking  
LEP Population**

- 231 - -100
- 99 - -19
- 18 - 38
- 39 - 145
- 146 - 302
- Outside MBTA core service area

**MBTA Services**

- Rapid transit line
- Commuter rail line
- Commuter rail station

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

## **Vietnamese-Speaking LEP Populations**

The Vietnamese-speaking population is the fifth largest LEP population in the MBTA's 175-town service area. Vietnamese is not one of the top LEP languages in any municipality in the MBTA service area; however, there are significant proportions of LEP people who speak Vietnamese throughout the MBTA service area.

### *Dialects and Countries of Origin*

Vietnamese can generally be grouped into North, Central, and South Vietnamese dialect regions, which differ slightly in vocabulary and grammar, and more significantly in sound.

### *Service Coverage*

The largest four of these populations in the MBTA service area are in Boston, Lowell, Quincy, and Worcester. Boston is well served by numerous bus routes, and it is a terminus point for all MBTA rapid transit lines as well as the commuter rail lines. Lowell is served by the Lowell commuter rail line. Quincy is served by numerous bus routes, four Red Line stops (North Quincy, Wollaston, Quincy Center, and Quincy Adams), and the Quincy Center commuter rail station, which serves as a stop for the Middleborough/Lakeville, Plymouth/Kingston, and Greenbush commuter rail lines. Worcester is served by the Framingham/Worcester commuter rail line at Union Station.

### *Recent Population Changes*

Boston and Lowell have both seen minor increases in their Vietnamese-speaking LEP populations between 2011 and 2014, which is depicted both in the maps and tables below. Worcester and Quincy have experienced minor declines in their populations of Vietnamese-speaking LEP people.

### *Population Data by Municipality*

Tables 5a and 5b provide a list of municipalities containing relatively large concentrations of Vietnamese-speaking LEP individuals, as identified using the previously described methodology. Table 5a provides information on the total number of Vietnamese-speaking individuals in each municipality along with their percentage of the municipality's total population and LEP population. Table 5b provides information on the changes in Vietnamese-speaking LEP population for each municipality. Figure 11a displays the concentration of Vietnamese-speaking LEP individuals in the 175 municipalities of the MBTA commuter rail service area, and Figure 11b displays the concentration of Vietnamese-speaking LEP individuals in the 59 municipalities of the MBTA's core service area. Municipalities outlined in Figures 11a and 11b are those identified as containing relatively large concentrations of Vietnamese-speaking

individuals. Figures 12a and 12b show the change in Vietnamese-speaking LEP population in both MBTA service areas.

**Table 5a**  
**Representation of the Vietnamese-Speaking LEP Population by Municipality**

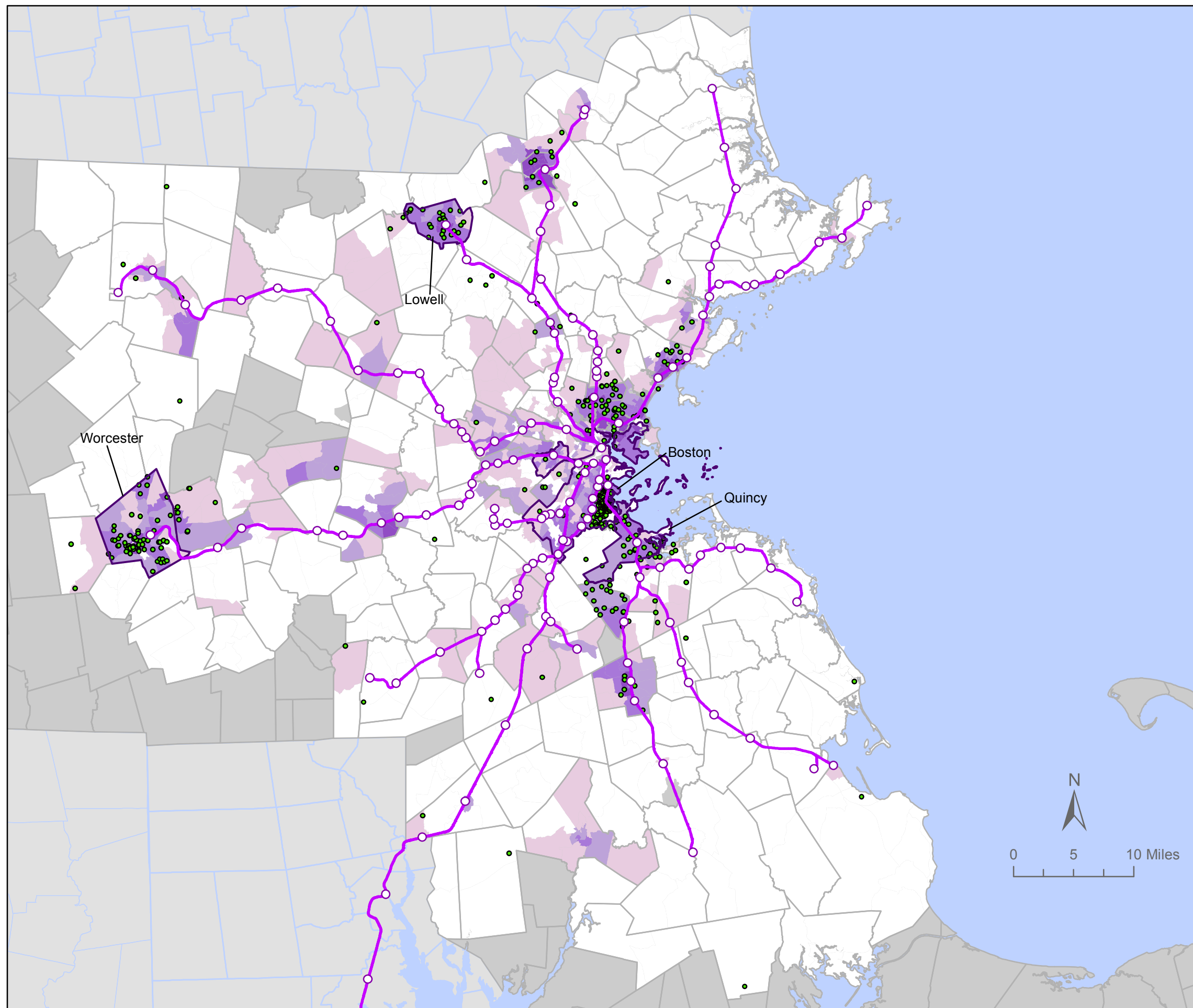
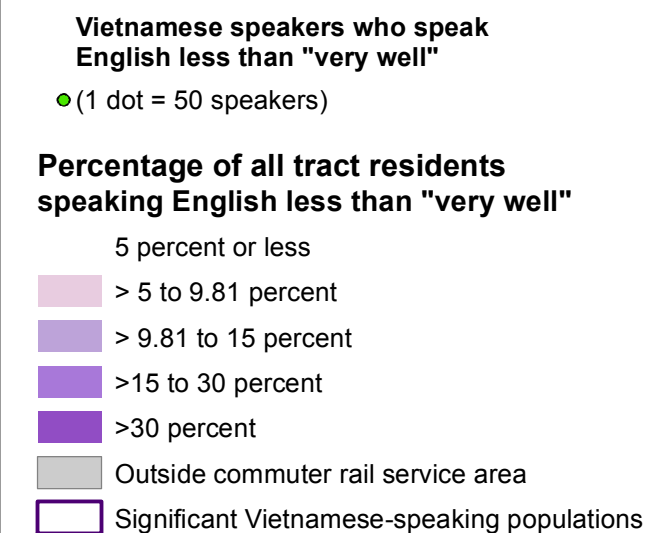
<b>Municipality</b>	<b>2014 Vietnamese-Speaking LEP Population</b>	<b>Vietnamese-Speaking LEP Population - Percentage of Total Population</b>	<b>Vietnamese-Speaking LEP Population - Percentage of LEP Population</b>
Boston	7,527	1.3%	7.6%
Worcester	3,151	1.9%	10.7%
Quincy	1,316	1.5%	8.1%
Lowell	1,143	1.2%	5.5%

**Table 5b**  
**Changes in the Vietnamese-Speaking LEP Population by Municipality**

<b>Municipality</b>	<b>2011 Vietnamese-Speaking LEP Population</b>	<b>2014 Vietnamese-Speaking LEP Population</b>	<b>Absolute Change in Vietnamese-Speaking LEP Population</b>	<b>Percentage Change in Vietnamese-Speaking LEP Population</b>
Boston	7,178	7,527	349	4.9%
Worcester	3,373	3,151	-222	-6.6%
Quincy	1,424	1,316	-108	-7.6%
Lowell	1,124	1,143	19	1.7%

**FIGURE 11-A**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:  
 Vietnamese Speakers  
 MBTA Commuter Rail  
 Service Area**



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

Significant populations are identified in this map where the general LEP population in a municipality is over 5% and the Vietnamese-speaking population is either over 1,000 individuals or over 25% of the municipality's LEP population.

Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA commuter rail service area is 9.8 percent.



**FIGURE 11-B**  
**MBTA Language**  
**Assistance Plan**

**Limited English Proficiency:**  
**Vietnamese Speakers**  
**MBTA Core Service Area**

● Vietnamese speakers who speak English less than "very well"  
(1 dot = 50 speakers)

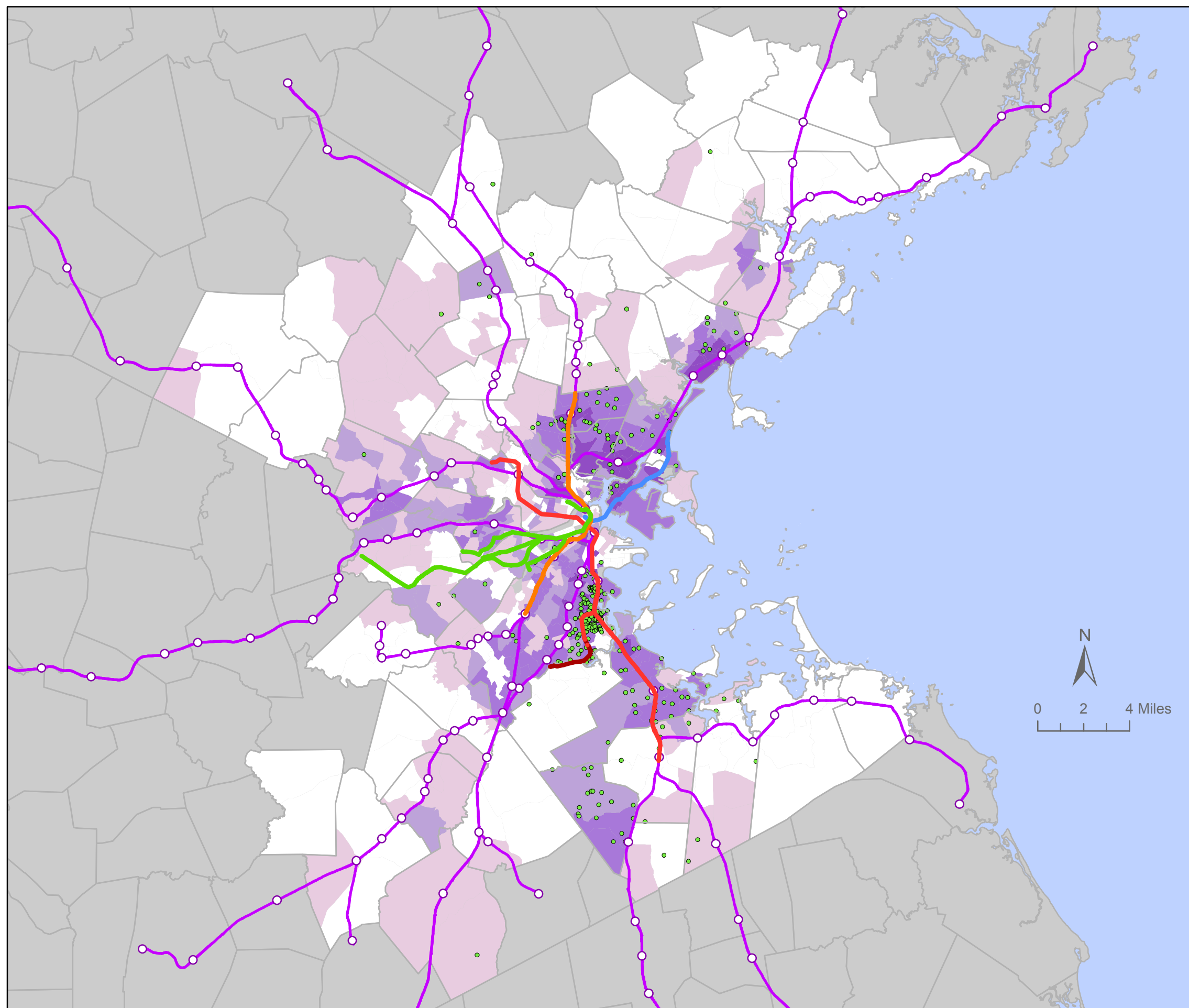
**Percentage of census tract residents speaking English less than "very well"**

- 0% - 5%
- 5.1% - 9.8%
- 9.9% - 15%
- 15.1% - 30%
- 30.1% - 72.2%
- Outside MBTA core service area

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

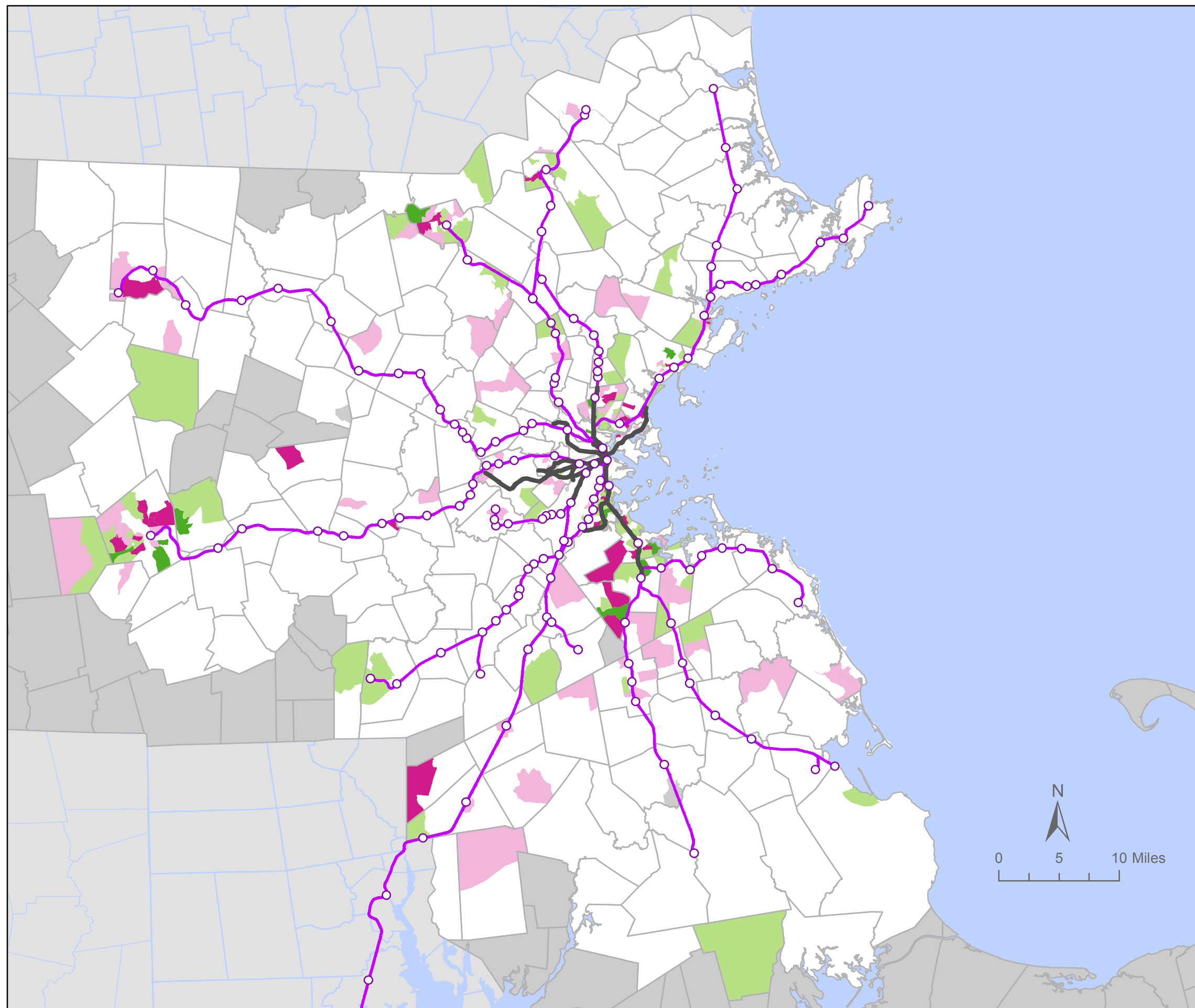
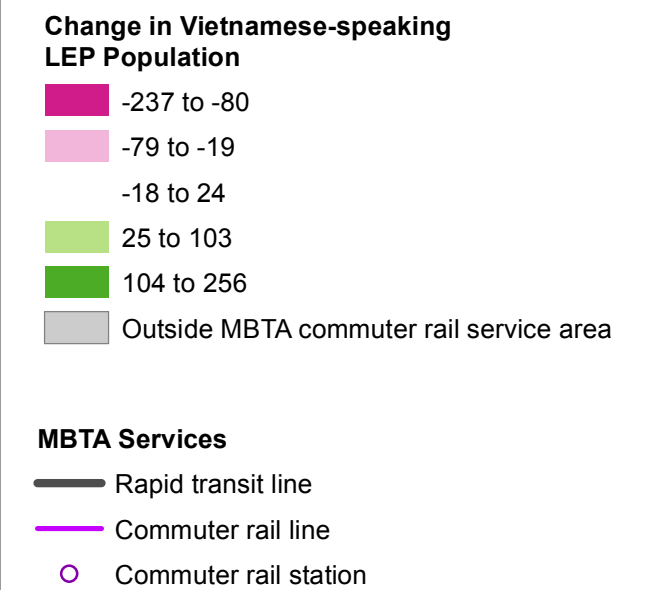
Dots are placed randomly within census tracts to indicate the number of LEP speakers.

The percentage of LEP persons in the MBTA core service area is 11.8 percent.



**FIGURE 12-A**  
**MBTA Language**  
**Assistance Plan**

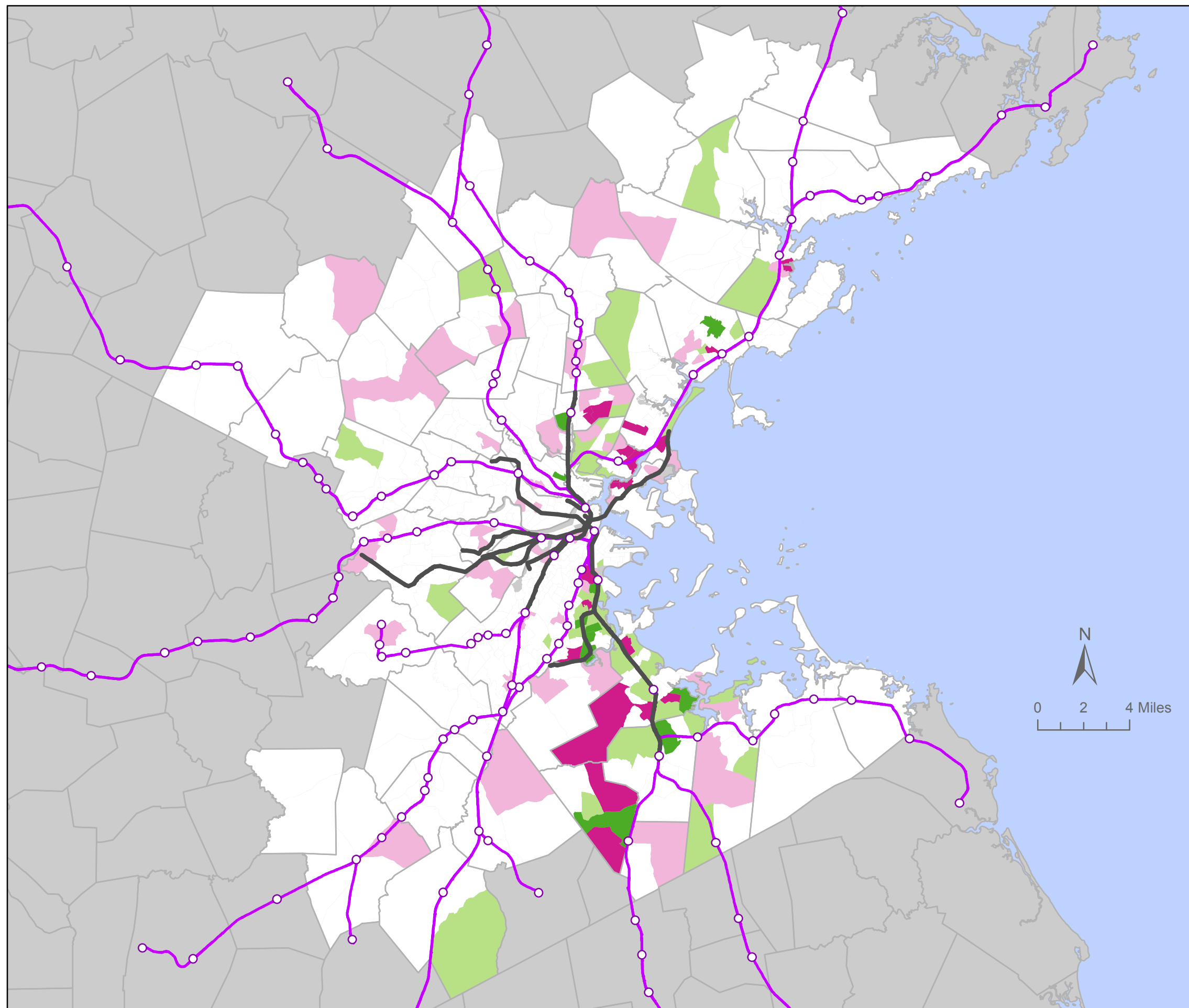
**Limited English Proficiency:**  
**Change in Vietnamese**  
**Speakers**  
**MBTA Commuter Rail**  
**Service Area**



Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

**FIGURE 12-B**  
MBTA Language  
Assistance Plan

**Limited English Proficiency:  
Change in Vietnamese  
Speakers  
MBTA Core Service Area**



**Change in Vietnamese-speaking  
LEP Population**

- 197 - -74
- 73 - -15
- 14 - 26
- 27 - 103
- 104 - 256
- Outside MBTA core service area

**MBTA Services**

- Rapid transit line
- Commuter rail line
- Commuter rail station

Residents with limited English proficiency are defined for Title VI purposes as persons aged five and older whose ability to speak English was self-identified as less than "very well" in the 2014 American Community Survey five-year summary file.

### **Smaller Safe Harbor Language Groups in MBTA Service Area**

As discussed above, the top five non-English language groups in the MBTA's 175-town service area are Spanish, Chinese, Portuguese and Portuguese Creole, French Creole, and Vietnamese. Collectively these languages are spoken by 327,906 people, which amount to 73 percent of the total LEP population of the service area. These top five language groups have been identified as the largest LEP communities to which the MBTA provides translation and interpretation services.

In addition to these five language groups, there are 23 smaller language groups in the MBTA service area that include at least 1,000 speakers, thereby falling within the U.S. DOT's definition of a safe harbor language group. Table 6 lists those smaller language groups, the number of people who speak them, and the percentage of LEP persons each group represents within the MBTA service area.

The 23 language groups shown in Table 6 represent 116,300 LEP individuals, which amounts to 25 percent of the LEP population of the MBTA service area and 2.6 percent of the total population of the service area. The smaller populations of LEP individuals across the 175 towns in the service area range in size from 12,678 (2.83% of the LEP population) in the Russian community to 1,002 (0.22% of the LEP population) among the "other Slavic languages" grouping.

**Table 6: Smaller LEP Language Groups**

	LEP Population	Percent of LEP Total
Russian	12,678	2.83%
Arabic	12,399	2.77%
Mon-Khmer, Cambodian	10,715	2.39%
African languages	9,474	2.11%
French (incl. Patois, Cajun)	8,673	1.94%
Italian	8,650	1.93%
Other Indic languages	6,529	1.46%
Korean	6,550	1.46%
Other Indo-European languages	6,065	1.35%
Greek	5,473	1.22%
Other Asian languages	5,185	1.16%
Polish	3,349	0.75%
Hindi	3,202	0.71%
Gujarati	2,963	0.66%
Japanese	2,977	0.66%
Persian	1,895	0.42%
Tagalog	1,853	0.41%
Armenian	1,724	0.38%
Laotian	1,426	0.32%
German	1,275	0.28%
Thai	1,259	0.28%
Other Slavic languages	1,002	0.22%
Serbo-Croatian	984	0.22%
<b>Total</b>	<b>116,300</b>	

Sources: 2014 American Community Survey 5-Year Summary File, 2010 Census Summary File 1

### Qualitative Analysis Techniques

In addition to performing the quantitative analyses discussed above, the MBTA continues to refine its understanding of the locations of LEP populations through qualitative analyses. The MBTA works with CBOs, state legislators, and other government entities or interested parties to identify LEP populations that may need translation services for specific programs or activities. The MBTA conducts outreach to CBOs that work with LEP populations, such as neighborhood community service centers, community development corporations, and ethnic and cultural organizations. These organizations provide information that is not included in the census or state and local resources, such as the existence of pockets of the LEP populations relative to specific projects or public participation efforts, population trends, and what services are

most frequently sought by the LEP population. Many of these organizations have resources that include language assistance, neighborhood knowledge, and expertise useful in communications with residents and customers. The MBTA's experience in this area shows that the greatest need for language assistance is in Spanish, but that there is also a need for assistance in a diverse range of primary languages, with an emphasis on the top LEP languages in the MBTA service area, including Chinese, Haitian Creole, Portuguese, and Vietnamese.

### **Conclusions for Factor 1**

The MBTA has used quantitative, qualitative, and spatial analyses to estimate the total number and proportion of LEP people in its service area and to identify areas that have high concentrations of LEP people. The top five language groups—Spanish, Portuguese and Portuguese Creole, Chinese, French Creole, and Vietnamese—represent nearly 73 percent of the total LEP population. Due to the size of these top LEP language groups, the MBTA is able to identify geographic areas and transit services where there is a prevalence of these LEP populations, allowing the MBTA to be proactive in disseminating multilingual information in those areas. The MBTA has studied the smaller LEP safe harbor populations that comprise the remaining 25% of language groups and has determined that in many instances it is difficult to pinpoint core communities among these groups across the massive MBTA service area. To effectively reach these populations with vital information as well as instructions for making requests for additional language assistance, the MBTA relies on a coordinated strategy and information-sharing to reach these language groups wherever they exist across the system. This approach emphasizes informing members of LEP communities that language services are available and how to make specific requests for them while also disseminating basic information regarding utilizing MBTA services across all safe-harbor languages and identifying points of contact for LEP riders to use to receive information regarding service disruptions or emergencies (through a one-page instructional document called “How to Ride the MBTA – The Basics” or “MBTA Basics”). When it is possible to identify concentrations among these smaller communities in connection with MBTA projects and initiatives, the MBTA makes reasonable efforts to provide translated materials.

### **Factor 2: The Frequency of Contact**

The MBTA uses the following data and analysis methods to evaluate the frequency with which LEP individuals come into contact with the MBTA:

- Evaluation of Call Center metrics

- Evaluation of customer website browser primary language preferences and visits to the MBTA website
- Analysis of paratransit records
- Survey of frontline staff

## Call Center

The Call Center houses several staff who are fluent in Spanish. The Call Center provides telephone translation service in all languages via a language assistance line.

Below is a table of the number of Spanish calls by year handled by the Call Center between 2012 and December 2017. The number of Spanish-speaking callers had remained stable, however, in 2016 we noticed a significant drop. The volume remained steady in 2017, with a spike in website usage especially in many languages other than English.

**Table 7  
Call Center Calls  
in Spanish (2012–17)**

<b>Year of Operation</b>	<b>Number of Calls in Spanish</b>
2012	8,452
2013	7,829
2014	8,055
2015	8,209
2016	6,531
2017	6,136

In June 2018, the MBTA entered into a contract with a private vendor to assume operations of the MBTA Call Center. Since the transition Exela has offered weekday, weekend, and evening hours of service. Exela has made a commitment to hire bilingual staff, specifically Spanish. For the month of October 2018, the vendor reported receiving 45 calls in Spanish, 1 call in Portuguese, 1 call in Mandarin, and 2 calls in Arabic.

The MBTA also compiled Call Center data on the use of Language Line during the summer months of 2018, when a greater volume of tourist visits and local resident summer vacation and use of MBTA services is likely. We found that the volume of calls supported by Language Line remained low during this period. This data is shown in Table 8. The exception was in the use of Spanish, where there was an increase in the referrals to Language Line in recent months. This could be a result of a reduction of call center staff who are fluent in this language, causing a greater need for use of Language Line for Spanish speaking LEP individuals. It is evident that there are few calls across

the smaller safe harbor populations that reside within the MBTA service areas that are being referred for Language Line interpretation assistance.

**Table 8: Call Center Referrals to Language Line**

	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18
Language	Number of Calls	Number of Calls	Number of Calls	Number of Calls	Number of Calls
Arabic	0	0	0	1	2
Bengali	0	0	1	0	0
Cantonese	0	0	0	1	0
French	1	0	1	0	0
Haitian Creole	1	0	0	0	0
Portuguese	0	0	1	0	1
Russian	0	0	0	1	0
Spanish	0	5	15	39	45
Vietnamese	0	0	1	0	1
<b>Total</b>	<b>2</b>	<b>5</b>	<b>19</b>	<b>42</b>	<b>49</b>

The low volume of calls supported by Language Line clearly indicates a gap in usage, which could be explained by several factors such as the use of the MBTA website through the translation software, lack of knowledge among LEP individuals of the availability of real-time language support services, or the level of MBTA services utilized by smaller safe harbor groups. Separately, there is significant data indicating a tendency among many safe harbor language groups to use the MBTA website, via preferred languages, to secure needed information. This fact in no way dismisses the need for other means of communication with LEP individuals but points to a practical reality in the way the MBTA’s customers tend to seek information. Further, the reality of low volumes of calls supported by Language Line invites the MBTA to take more proactive steps to ensure notice in these communities of the ability to obtain free language assistance, if needed.

### **Website Analytics Based on Preferred Language and Locale Settings**

This section details website usage statistics for the past several years in an attempt to further inform Factor 2 of the four-factor analysis and further develop the MBTA’s understanding of how frequently LEP populations are interacting with the MBTA’s website, in what numbers, and in what languages. Ideally, we would be able to compile several year’s worth of data regarding a consistent web presence and consistent usage measures. However, the MBTA’s website was remade in 2017, not only reflecting a significant change in interface and content but also now tracked through different



analytics. Reconciling the two sets of data is difficult, hence the inclusion of two datasets below.

The MBTA is able to distinguish between categories of visitors to its website by the language that an individual's Web browser identifies as its primary language. Data from the MBTA website analytics for calendar year 2016 indicate that the overwhelming majority of visits (97.29 percent) to the MBTA's website are on browsers that are set to English as the primary language. The next two most commonly set alternative languages are Spanish (0.74 percent of all visits) and Chinese (0.48 percent of all visits), followed by French, German, Japanese, Portuguese, and Korean.

While there was a decrease in non-English-language visits to the MBTA website in 2016, this was also true for English-language speakers, and for the total number of visitors overall to the website.

The number of visitors reveals a greater statistical representation of LEP persons using technology than is shown in the population data from the ACS for the MBTA service area. One reason for this difference is that website data reveal the preferences of people living outside of the MBTA's service area, including visitors to the region who are interested in using public transit.

Within Table 9, below, the MBTA has outlined data on the number of visits to the MBTA website based on preference language on an annualized basis. From this data, there are clear indications over a number of years, from 2014 to 2016 of numerous "hits" that reflect recurring visits to the website by a consistent yet small number of LEP individuals among many visits across the broader LEP community. Across nearly half of the 28 Safe Harbor language groups in the MBTA service area, it is evident that we have annualized website visits far in excess of the population numbers for these groups in the MBTA service area.

There are also a significant number of other visits, of up to 135,472 among the "Other Languages" grouping, reflecting a significant number of potentially other smaller language groups. Recurring visits are clearly evident among 13 of the safe harbor language groups. It is noteworthy that the MBTA has not received complaints about the information obtained from the web from among foreign language users.

This data suggests that among many safe harbor communities, there is both consistent and recurring use of the MBTA website among LEP individuals, whether in Massachusetts or abroad. This reality does not speak to the quality of the translations of the MBTA website, although our research indicates that the efforts by Google and other machine translation service providers to improve translation accuracy have improved significantly in recent years. While this is not a preferred method for communication, the lack of complaints and evidence of use of this resource indicate that customers are in

fact using the MBTA website and finding good results, even if the translations are not completely accurate. The MBTA has not received complaints or inquiry about the quality of the Google translation software.

A literature review on the quality of Google translation software has indicated that the software's accuracy has improved significantly over the past few years as the result of a shift from Phrase-Based Machine Translation (PBMT) to Neural Machine Translation (NMT). This 2016 shift now covers over one hundred languages, and the central feature is that translations are now being made of complete sentences under NMT, as opposed to phrase based translation that was done under PBMT. See, web article, "How Accurate is Google Translate in 2018," ARGO Translation, <https://www.argotrans.com/blog/accurate-google-translate-2018/>. While this transition appears to have led to translation accuracy improvement, the MBTA remains convinced that these machine translations are not completely accurate, and that in given situations, the vital nature of information to be shared continues to warrant MBTA investment in translation and interpretation services.

**Table 9**  
**Number and Percentage of Visits by the Browser Setting for Preferred Language**  
**during Visits to the MBTA Website**

<b>Language</b>	<b>Number of Visits (2014)</b>	<b>Percentage of Visits (2014)</b>	<b>Number of Visits (2015)</b>	<b>Percentage of Visits (2015)</b>	<b>Number of Visits (2016)</b>	<b>Percentage of Visits (2016)</b>
English	30,719,814	97.10%	33,675,076	97.09%	28,207,942	97.29%
Spanish	213,083	0.67%	246,682	0.71%	214,771	0.74%
Chinese	164,674	0.52%	175,214	0.51%	139,499	0.48%
French	102,403	0.32%	100,756	0.29%	87,288	0.30%
German	69,434	0.22%	72,183	0.21%	72,163	0.25%
Japanese	58,729	0.19%	64,030	0.18%	53,595	0.18%
Portuguese	43,838	0.14%	47,742	0.14%	41,908	0.14%
Korean	40,233	0.13%	37,847	0.11%	28,683	0.10%
Italian	29,168	0.09%	29,522	0.09%	27,463	0.09%
Russian	21,181	0.07%	27,041	0.08%	17,763	0.06%
Arabic	19,451	0.06%	9,971	0.03%	10,810	0.04%
Turkish	10,431	0.03%	10,883	0.03%	9,293	0.03%
Swedish	7,626	0.02%	8,125	0.02%	7,200	0.02%
Vietnamese	3,556	0.01%	6,163	0.02%	8,103	0.03%
Polish	5,835	0.02%	5,971	0.02%	5,529	0.02%
Hebrew	4,983	0.02%	5,543	0.02%	5,252	0.02%
Danish	4,912	0.02%	5,118	0.01%	5,155	0.02%
Greek	2,920	0.01%	3,261	0.01%	3,013	0.01%
Czech	3,057	0.01%	2,880	0.01%	2,520	0.01%
Finnish	2,873	0.01%	3,023	0.01%	2,612	0.01%
Thai	2,745	0.01%	2,313	0.01%	2,264	0.01%
Hungarian	2,192	0.01%	2,404	0.01%	2,096	0.01%
Norwegian	114	0.00%	2,615	0.01%	2,919	0.01%
Catalan	1,648	0.01%	1,718	0.00%	1,489	0.01%
Indonesian	1,525	0.00%	1,444	0.00%	2,096	0.01%
Farsi	1,198	0.00%	742	0.00%	719	0.00%
Romanian	1,193	0.00%	1,169	0.00%	1,246	0.00%
Other Languages	99,991	0.32%	135,472	0.39%	29,656	0.10%
Non-English Visits	918,993	2.90%	1,009,832	2.91%	785,105	2.71%
<b>Total</b>	<b>31,638,807</b>	<b>100.00%</b>	<b>34,684,908</b>	<b>100.00%</b>	<b>28,993,047</b>	<b>100.00%</b>

During 2017, the MBTA changed the website, which resulted in divided data between the two sites that is difficult to reconcile accurately. As a result, we have looked at the data for website visits in 2018 in comparison to 2016 data, to reflect further on the consistency of visits from safe harbor groups. In Table 10, below, we show the number of Massachusetts-based safe harbor language speaking users who chose to use the

MBTA website in their spoken language. This information provides a monitoring resource that the MBTA can study to identify possible trends and gaps that suggest opportunities for community engagement, including with respect to the reasons for any significant change in usage. Most importantly, this data suggests an opportunity for outreach by the MBTA to smaller language groups in the service area to ask questions about the need for information and the best means for communicating with more diffuse language groups.

Table 10 – Comparison of MBTA Website Visits 2016 and 2018

<b>Language</b>	<b>Number of Visits (2016)</b>	<b>Percentage of Visits (2016)</b>	<b>Number of Sessions in Massachusetts (2018 Jan. to Oct.)</b>	<b>Percentage of Sessions in Massachusetts (2018 Jan. to Oct.)</b>	<b>LEP Population in the MBTA's 175-Town Service Area</b>	<b>Percentage of Population in 175-Town Service Area</b>
English	28,207,942	97.29%	23,328,742	98.09%	n/a	n/a
Spanish	214,771	0.74%	171,986	0.72%	170,612	3.73%
Chinese	139,499	0.48%	91,562	0.38%	55,195	1.21%
French	87,288	0.30%	34,477	0.14%	37,049	0.81%
German	72,163	0.25%	32,488	0.14%	1,275	0.03%
Japanese	53,595	0.18%	17,702	0.07%	2,977	0.07%
Portuguese	41,908	0.14%	39,715	0.17%	51,413	1.13%
Korean	28,683	0.10%	10,012	0.04%	6,550	0.14%
Italian	27,463	0.09%	10,543	0.04%	8,650	0.19%
Russian	17,763	0.06%	10,078	0.04%	12,678	0.28%

Dutch	--	--	7,757	0.03%	--	--
Polish	5,529	0.02%	7,360	0.03%	3,349	0.07%
Vietnamese	--	--	1,923	0.01%	22,310	0.49%

Sources: MBTA.com website analytics, 2014 American Community Survey 5-Year Summary File, 2010 Census Summary File 1

Since the website change and the bifurcation of language data, described above, the MBTA has been able to track language statistics for website access to the new site. Between April 1, 2017 and Jan 31, 2020, visits to MBTA.com were:

- 97% English
- 0.8% Spanish
- 0.6% Chinese
- 0.3% French
- 0.2% Portuguese
- 0.2% German
- 0.2% Korean
- 0.2% Japanese

Beyond the website as an information access point for LEP persons, a number of mobile transit applications (apps) for accessing and navigating the MBTA transit system have been developed by third-party developers. Among the many apps that the MBTA lists as resources on its Online Trip Planning Tools page, the MBTA has officially endorsed the “Transit” software application, which is available in English, French, German, Italian, Portuguese, and Spanish. The Transit App, which has been popular and well received by users, offers passengers real-time updates for buses and trains, step-by-step navigation, trip planning, transit schedules, and city maps. This app has also integrated methods of accessing bike-sharing, carsharing, and ride hailing when public transit is unavailable.

### **Paratransit (The RIDE) Data for LEP Individuals**

To ensure language access for LEP populations eligible for paratransit service through The Ride, the MBTA informs potential customers of the availability of this service in multiple languages. Key publications meant to inform the public about this service, such as the “Ride Guide,” include instructions in multiple languages on how to secure

language assistance in seeking The Ride service. The MBTA also maintains a basic information document for LEP populations in the service area that identifies and describes all of the MBTA services, including paratransit, along with instructions on how to request additional information about accessing these services. This one-page document (“How to Ride the MBTA – The Basics” or “MBTA Basics”) is translated in its entirety into all LEP language groups that meet or exceed 1,000 people or 5%, whichever is less, and is available to be disseminated directly by the MBTA and in partnership with advocacy groups and service organizations that serve LEP populations in the service area.

LEP individuals interested in The Ride service are directed to make contact with The Ride via phone with real-time interpretation and verbal document translation provided by Language Line. The MBTA tracks the use of this service. When sampling records over an 11 month period from 2017-2018, The Ride received average of 65 eligibility related calls from potential LEP RIDE customers, per month. Although some of these calls may be repeat calls to finalize eligibility from the same LEP individuals/customers, the consistent averages provide a sense that LEP individuals are effectively making contact with and transacting business with The RIDE to seek out this important service and are receiving the assistance they need. The languages on these calls aligns with the top LEP language groups in the MBTA service area. A handful of additional languages have also featured and the Language Line service was able to provide interpretation in those instances (20 different languages were requested during the same 11-month period sampled above). In addition, further sampling from March 2018 indicates that 5.8% of all interviews were conducted in a requested language other than English.

The MBTA will continue to monitor LEP participation in The Ride service from applications for eligibility through service related data to demonstrate LEP utilization. Ultimately, current language access efforts and data tracking sources suggest that LEP individuals are effectively reaching out to and communicating with The RIDE.

### **Survey of Frontline Staff**

In 2011–2012, the MBTA conducted a survey of its bus operators and customer service agents (CSAs), who are often the first contact with the MBTA for people with limited English proficiency, to understand how frequently they engage with LEP people. This survey focused on the:

- Frequency that frontline staff encountered LEP customers
- Ways in which staff communicated with LEP passengers
- Suggestions that staff had to better serve LEP people

The MBTA received 131 valid survey responses. Of the respondents, 98 percent of bus operators and CSAs reported having at least one encounter with an LEP customer, and 81 percent of the respondents reported encountering LEP customers often. A significant number of frontline staff reported the ability to communicate in Spanish and assist Spanish-speaking LEP passengers directly.

### **Conclusions for Factor 2**

Though LEP people represent a small percentage of all riders on the MBTA system, significant numbers of Spanish-speaking LEP customers request translation services through MBTA customer information channels, including the website and customer communications call center. The frequency of contact among the other top language groups is significantly lower than for Spanish speaking LEP individuals. For the smaller LEP safe-harbor language groups, there are also indications that a number of individuals, including international visitors and/or residents within the MBTA service area, make recurring contact with the MBTA based on their browser language selection preferences in coming to the MBTA website.

There are also strong indications of recurring reliance on the MBTA website among Massachusetts-based LEP individuals, though this does not directly indicate a high frequency of contact but rather an effective website translation as a mechanism to address these low-volume and infrequent multilingual needs. While the MBTA's web-based information is not translated exactly, the repeated visits and the lack of customer complaints indicate that this resource plays an important role in communicating with MBTA customers, while interpretation and translation services continue to be needed, based on the vital nature of the information to be conveyed. Further, the MBTA has established a strategy for outreach, based on our understanding that can lead to improving communication with all MBTA customers.

### **Factor 3: The Importance to LEP Persons of the Program, Activity, or Service Provided by the MBTA**

The MBTA performed a quantitative analysis using the results of interviews performed by Boston Region Metropolitan Planning Organization (MPO) staff, surveys of bus operators and CSAs, and responses from the MBTA's Rider Oversight Committee to identify issues that LEP customers encountered while riding on the MBTA. This analysis showed the services that were deemed the most critical to LEP persons: fares and tickets, routes and schedules, and safety and security. These areas were chosen because language barriers could limit a person's ability to fully benefit from MBTA services or, in some cases, they could place a person in physical danger.

The quantitative analysis indicated that:

- MBTA programs and services are very important to LEP people, many of whom are transit dependent. A cross-tabulation of the data for zero-vehicle households and the ability to speak English using the 2010–14 five-year public-use microdata sample shows that 14.8 percent of the people who speak English “less than very well” live in zero-vehicle households. Further, this percentage increases to 26.1 percent when the data are limited to people who speak English “less than well.”
- LEP customers experience frustrations similar to those of other MBTA riders, but are at risk of experiencing specific difficulties if they are unable to find assistance from MBTA staff. LEP customers in particular are susceptible to having problems when something unusual happens or when a service is changed to respond to an incident, and only an operator’s audio announcement is made. Examples of this are when a bus or train switches to express service or drop-off only, or when a bus replacement service is deployed. LEP customers could potentially become endangered or lost if they are unable to understand emergency announcements.
- Finally, LEP customers often rely on traveling companions, such as family members or friends, to use the MBTA.

### **Conclusions for Factor 3**

From the results of the quantitative analysis, it is apparent that the MBTA has an important role to play in the lives of people with limited proficiency in English, many of whom are transit dependent. Further, staff members familiar with riders with limited English proficiency have noted that riders who have difficulty communicating in English struggled with respect to receiving correct information on fares and tickets, routes and schedules, and safety and security.

### **Factor 4: The Resources Available to the MBTA and Costs of Providing Language Access Measures**

The fourth and final factor looks at associated costs and resources available to the MBTA to provide language assistance services considering the language needs identified in Factor 3 in the context of the MBTA’s available and projected resources. The MBTA makes both strategic and well-funded commitments to language assistance that are commensurate with the size and complexity of the organization and the customers we serve. The MBTA’s current language access strategy for written communications consists of two key prongs – providing basic system-access related information into all safe-harbor languages in the service area and also making additional important information available in top LEP languages and/or those languages implicated by local service and/or project-related activities. This approach to resource allocation



has allowed the MBTA to commit to and follow through on a multi-year language access implementation plan that emphasizes professional translation of information vital to accessing MBTA services into all safe-harbor languages in the service area while also expanding the availability of additional important information, both service related as well as project related, into the top LEP languages in the service area.

### **Resources Currently Available**

Three key points of contact for members of the public, including LEP individuals, and the MBTA are the Customer Call Center, frontline staff (including Transit Ambassadors), and the MBTA Police. These services are currently equipped to communicate with LEP individuals in two ways – the availability of multilingual staff as well as active contracts with real-time telephonic interpretation service providers. The staffing and operating budgets across these departments currently appears sufficient to continue making these services available to LEP customers. The MBTA will continue monitoring the costs associated with these services and make updates to Factor 4 of this four-factor analysis, when warranted.

For MBTA departments that may not have multilingual staff with language support responsibilities or for those without access to telephonic interpretation, there are several additional resources available to address the needs of LEP customers. For incidental written or verbal communications, the Office of Diversity and Civil Rights maintains a list of multilingual staff volunteers who can be called upon to assist. Currently, we have documented in-house language capabilities across 41 languages, including 8 of the top languages in the service area. This is a no-cost option for the MBTA to provide language support, but only covers a small portion of the need among LEP customers due to the limitation of only covering incidental interactions.

For more complex interpretations and translations that will require professional supports, the MBTA utilizes the professional language services of the UMass Translation Center and the vendors on the statewide language services contract (PRF63 - <http://www.mass.gov/anf/docs/osd/uguide/prf63.pdf>). The MBTA encourages public facing departments to maintain an annual budget that supports anticipated language supports provided through these professional service contracts. For large professional translation projects, such as the development of the MBTA-Basics one-page instructional sheet which was translated into all safe-harbor languages in the service area, departmental budgets have been strained to cover such costs. However, when this occurs, the MBTA first attempts to allocate additional funding, shift the project to another department better suited to handle the cost in that particular fiscal year, or stretch the project across multiple fiscal years to more evenly distribute the cost, rather than consider such projects to be unsupported given the MBTA's current resources.

The MBTA has integrated machine translation in the website which provides translations of the information on webpages into dozens of languages other than English. The MBTA endeavors to post important information directly into the HTML content of the website so that it can be translated by the embedded machine translator. In recognition that no machine translation system is perfect or intended to replace human translation, the MBTA continues to professionally translate vital documents and will continue to disseminate this content.

### **Costs to Provide Language Assistance**

The MBTA often utilizes the state's language services contract for engaging the services of translation vendors. The state's procurement website provides contact information for each vendor and links to the website for each so that employees can determine the types of services offered and the associated costs. In addition, the MBTA has a longstanding relationship with the UMass Amherst Translation Center for providing professional translation and interpretation services. Details on the vendors, costs, and coverage of the statewide language services contract can be found online here: <http://www.mass.gov/anf/docs/osd/uguide/prf63.pdf>

### **Resources Available and Costs**

The MBTA relies on a phased approach to implementation of language access strategies. Documents with broad applicability across languages and geography, such as the notice to beneficiaries of their civil rights and complaint forms that should be available to everyone, are maintained in the top ten (10) languages as a matter of course. These documents are always available to be translated into more languages, as required by the four-factor analysis, by request, or as a result of feedback from the LEP community. The Title VI Specialist works with the various departments to prioritize other vital documents and the number and order of languages into which each may be translated.

Individual projects include administrative budgets with funds that can be allocated for language services as part of public outreach efforts. If additional resources are needed for unexpected or unanticipated translations, project managers are encouraged to contact their department managers to make a request through the budget office to secure additional funds, as needed.

The MBTA encourages every public facing office to maintain an annual budget line item specifically to support document translations, interpreters, and other related language access services that may be procured during that fiscal year. The Office of Diversity and Civil Rights maintains an annual budget line item of several thousand dollars specifically for this purpose. To date, the translation of Title VI related vital documents into the top ten (10) languages in the state typically requires this entire budget allocation.

#### **Conclusions for Factor 4**

The MBTA's current language access strategy for written communications consists of two key prongs – providing basic system-access related information into all safe-harbor languages in the service area and also making additional important information available in top LEP languages and/or those languages implicated by local service and/or project-related activities. This strategy to written information sharing is further bolstered by the MBTA's additional investment in real-time telephonic translation and the availability of interpreters to address not only the variety of in-person interactions the LEP customers may have with the MBTA, but to also provide an additional strategy for conveying written information, through interpreters, to LEP customers. There are significant costs associated with this multi-disciplinary approach to language access and there are instances where language access related investments need to be distributed across more than one fiscal year. However, this does not prevent the MBTA from taking reasonable steps to provide meaningful access to LEP individuals, it simply requires a coordinated and sustained effort over time to achieve a maximum level of effectiveness.

#### **Concluding Remarks Regarding the Four-Factor Analysis**

The MBTA continues to rely on the qualitative and quantitative analyses that inform the Authority's "four factor analysis." The results of this analysis inform the MBTA's current, multi-faceted, approach to addressing written and verbal multi-lingual communication needs of customers. Key features of this approach include disseminating vital information for accessing MBTA services in all safe-harbor languages as well as providing additional key information in top LEP languages. These written communication strategies are further enhanced by flexible verbal communication resources, such as real-time telephonic interpretation and the provision of interpreters. Informal language strategies, like machine translation, are not relied upon for communicating vital information to the public, but usage statistics indicate that customers are consistently and successfully accessing information through these mechanisms. And lastly, the MBTA continues to train project managers to provide localized language supports to LEP populations impacted by capital projects. The

MBTA continues to rely on community partnerships to assist in disseminating vital information to LEP populations and for providing feedback on the effectiveness of various language access strategies. While current funding strategies appear to be sustainable to support this approach to language access, the MBTA will continue to monitor these resources and consider adjustments and/or efficiencies if presented.

The remainder of this document describes:

- Methods and measures the MBTA uses to communicate with customers with limited proficiency in English
- Training programs for educating staff about the Authority's Title VI obligations, including providing accessible service to customers who are not proficient in English
- Methods the Authority uses to provide notice to the public of the Authority's Title VI obligations, including providing language assistance to customers who are not proficient in English
- MBTA's plans for monitoring and updating the Language Assistance Plan

## II. Language Assistance Measures

Language assistance and staffing support available at the MBTA to minimize barriers for transit service access to customers with limited proficiency in English include the following:

- Call Center staff training on use of Language Line real-time telephonic interpretation in 200+ languages, including all safe-harbor languages in the MBTA service area.
- Deployment of privately contracted Transit Ambassadors, some of whom are multilingual, to provide customer assistance at key transit stations and key transfer points for buses. These contractors, and in-house customer service assistants, are equipped with computer tablets that can access the MBTA website, have "I speak" cards that can be used with customers and can contact Call Center to access Language Line real time assistance for limited English proficient customers.
- MBTA Customer Service Attendants, some of whom are multilingual, have been equipped with tablets that use "I speak" cards to directly engage with customers, to access the Call Center and Language Line in real time.

- The MBTA Title VI Complaint Form is available in English, Arabic, Chinese (simplified and traditional), French, Haitian Creole, Italian, Khmer, Portuguese, Russian, Spanish, and Vietnamese, and in other languages upon request.
- Provision of notice for on-demand translation and interpretation service contracts for meetings, and interpretation and translation of written materials on timely requests, depending on the nature of the event or initiative.
- The Senior/Transit Access Pass Application has been translated into French, Haitian Creole, Portuguese, Simplified Chinese, Traditional Chinese, Vietnamese and Spanish, with translation into other languages on request.
- The CharlieCard Brochure has been translated into French, Haitian Creole, Portuguese, Simplified Chinese, Traditional Chinese, Vietnamese and Spanish, with translation into other languages upon request.
- MBTA employee training programs for new hires and existing employees, which include modules on Title VI Responsibilities, LEP Policies and Procedures, and Anti-discrimination and Harassment Prevention.
- “Engage” mapping software that allows MBTA staff and outreach coordinators to make instant comparisons of construction projects, transportation services, demographics (including populations of LEP individuals), and the proximity of accessible meeting places. This software is important to assess community impact and to assist with public participation planning.
- Sustained communications and ongoing relationships with a number of community organizations that directly serve LEP populations and have working knowledge of neighborhood conditions and specific needs. They can be important resources in communicating with LEP individuals and engaging minority and low-income groups in MBTA policy-making and planning initiatives.
- Machine-translated content for the MBTA’s website via Google Translate and highlighted on the MBTA home page. Google’s machine-based translation is able to provide translations for all of the “safe harbor” languages in the MBTA’s service area. The MBTA has created a guide for customers to understand how we provide language assistance that is part of the Civil Rights page that is linked on the first page of the MBTA website.
- Subway station announcements provide service and courtesy information in Spanish orally and visually via LED signs at stations, including those stations serving LEP communities.

- Safety and security information, including wayfinding, is provided at stations using universal symbols.
- Automated fare kiosks provide fare media and information in Spanish and Chinese, in addition to English.
- Service diversion notices are posted in those languages indicated by a four-factor analysis of local impacts of the change.
- Major-service-change and fare-change information is distributed in multiple languages, including Spanish, Portuguese, Chinese, Haitian Creole, Cape Verdean Creole, and Vietnamese.
- Customer surveys translated into Spanish, French, Portuguese, Chinese (simplified and traditional), and Vietnamese.
- The MBTA Transit Police has contracted with vendor Language Line to provide interpreter services. All officers, including Transit Police dispatchers, have 24-hour access to the service, which provides immediate translation service in more than 200 languages.
- The MBTA Transit Police have a number of police officers able to communicate in multiple languages. At present, 16 of the officers on staff speak Spanish. Other language capabilities within the department include Italian, French, Haitian Creole, Vietnamese, Portuguese, Chinese (Cantonese and Toisanese), and American Sign Language.
- Notices of Title VI rights, complaint forms, and complaints procedures are translated in Arabic, Chinese (simplified and traditional), French, Haitian Creole, Italian, Khmer, Portuguese, Russian, Spanish, and Vietnamese, and have been posted across the MBTA service area, subject to current space limitations.
- Interpretation and translated materials are provided at public meetings.
- MBTA departments have been advised of the responsibility to obtain work orders with private vendors that provide translation services, when needed. MBTA staff is advised to make arrangements for translator services at least five business days prior to an event.
- The MBTA provides outreach, including notice and press information using local media. Among the prominent media publications serving minority and non-English-speaking communities are *El Mundo*, *El Planeta*, *Dorchester Reporter*, *Haitian Reporter*, *Sampan*, and *The Bay State Banner*.
- The Office of Diversity and Civil Rights (ODCR) actively provides technical assistance and guidance to all departments on Title VI issues, including assistance in serving LEP customers.

## **Language Nuance Considerations**

When providing language interpretation services, either in person or in real-time over the phone, the MBTA makes reasonable efforts to provide appropriate dialects, when such information is known ahead of time or discerned during the course of an interpretation activity where additional interpreters, offering additional dialects, may be available.

In general, the MBTA ensures that translations of vital documents are reviewed by internal and external speakers of multiple dialects of a language to ensure clarity for as many speakers of that language as possible. When Spanish language service and courtesy announcements were piloted at Blue Line stations, for example, the content was reviewed by MBTA staff and customers with several different Spanish-speaking backgrounds to maximize the use of terms that would be consistently understood by Spanish speaking LEP riders, across dialects. Moreover, the MBTA often contracts for language translation or interpretation with organizations or firms that have expertise across language dialects.

The MBTA's current policy on Chinese written translation is to translate documents into both Traditional and Simplified Chinese and to provide translators of requested regional dialects to community meetings whenever possible.

In order to assist the Haitian Creole-speaking population within the service area, the MBTA generally translates vital documents into French, which is readable for a large number of Haitian Creole-speaking adults. However, Haitian Creole translators and translations are available by request.

In general, Cape Verdean (Portuguese Creole) speakers are also familiar with written and spoken Portuguese, although translations and translators for Portuguese Creole are made available as much as possible.

While dialect distinctions in Vietnamese are not as significant as they are in the top four languages, speakers of specific dialects may be provided on request whenever possible. Similar to Spanish, the MBTA makes an effort to translate documents for the greatest possible clarity across speakers of Vietnamese in the area.

## **Strategy to Improve Communication and Support to Safe Harbor Languages**

In 2018, the Federal Transit Administration assessed the MBTA regarding language assistance under Title VI, and requested an increased level of communication on vital

information with the smaller Limited English Proficient (LEP) populations within the MBTA service area.

MBTA's overall strategy in response was to ensure that all populations that access services are also aware of language assistance available, including the "safe harbor" LEP language groups. The plan was to provide a notice about the ability to access real-time language supports and/or make request for written translations, as well as basic info about fares, schedules, reduced fare programs, addressing emergencies, and exercising one's civil rights.

To confirm the effectiveness of this proposed strategy, the MBTA Office of Diversity and Civil Rights worked closely with the Massachusetts Office for Refugees and Immigrants (MORI) to form a new vital document explaining how to utilize MBTA services, including access to language assistance. MORI, as well as the Massachusetts Executive Office of Labor and Workforce Development, helped identify over a hundred organizations that work with LEP individuals in the MBTA service area that could be reached out to. MBTA participated in community and partner meetings to share draft ideas and inquire into other information that would be helpful to community members. Furthermore, to discuss the work of MORI as well as share the plan to work with groups that work with LEP individuals, MBTA attended MORI Town Hall Meetings in three locations: Lynn, Lowell, and Springfield. Communicating with the public was identified as important to ensure that the right information would be provided, and attending these meetings was critical step towards addressing that objective.

MORI suggested on a one-page flyer on the basics of how to ride the different services the MBTA provides such as the bus/train transit systems. The flyer idea was adopted and professionally translated into all safe-harbor languages to provide accessibility to the LEP population. Assisting to confirm the accuracy of these translations were volunteer nonprofit organizations, government agencies, and consular offices, which reviewed and made suggestions that were then made by the translation vendor to achieve accurate translations. The translated flyer is available in: English, Spanish, Chinese, Portuguese, French Creole, Vietnamese, Russian, Arabic, Mon-Khmer/Cambodian, Amharic, Kiswahili, Somali, French, Italian, Korean, Albanian, Greek, Nepali, Polish, Hindi, Gujarati, Japanese, Persian, Tagalog, Western Armenian, Laotian, German, Thai, Ukrainian, Marathi, and Romanian.

MBTA's mission is to provide accessible, non-discriminatory, fair, and safe public transportation. Through this flyer, the MBTA is informing the public, including those who have limited English skills, about basic details of riding the T. Riders are assisted, whomever they may be, to ride the bus and train systems comfortable and effectively, as well as understand their rights. This flyer is the embodiment of the mission and the distribution of the flyer will connect and spread awareness to the public.



## **MBTA Vital Materials for Translation**

Vital materials are defined as information or documents that are critical for accessing MBTA programs, services, and activities, and they are prioritized for translation and distribution. The MBTA has prioritized documents and other communications for translation across the following three tiers:

- Tier 1: Safety, Security, and Legal Rights Information
- Tier 2: Vital Customer Access Information
- Tier 3: Information Critical to Customer Involvement and Outreach

### **Tier 1—Safety, Security, and Civil Rights:**

The documents listed in Tier 1 have been prioritized because the information to be shared is considered critical for customer safety and for exercising one's rights.

This includes:

- Emergency Instructions, Announcements, and Postings
- Title VI Notice to the Public
- Title VI Complaint Procedures
- Title VI Complaint Forms

### **Tier 2—Information Critical to Access:**

Tier 2 includes materials that are critical to support customer access to the MBTA's transit system. These documents include information about the MBTA, fare information, major service and fare change related information, routes and schedules, service alerts, and paratransit information. The MBTA maintains a document – "MBTA Basics" – which conveys this information and is translated into all safe-harbor languages in the service area. In addition, in response to service or fare changes or as a result of community-level project development activities, the MBTA translates documents related to these activities into the top languages of populations impacted by these activities. The MBTA has defined the following materials as providing system access information:

- "MBTA Basics" flyer – services, fares, hours of operation, emergencies, reduced fare programs, paratransit, etc.
- Service and fare change information
- Automated fare vending machines, user interface as well as fare levels
- Americans with Disabilities Act reduced fare program application
- THE RIDE acceptance letter
- Information about the On-Demand Paratransit Pilot Program
- Elevator Out of Service Notice
- System maps

### **Tier 3—General Information for Customer Involvement:**

Tier 3 relates to information important to encourage or invite customer participation in decision-making processes to improve the MBTA’s system and services. For example, this element relates to information notifying customers of opportunities to attend board meetings and public meetings about construction or service improvement projects, and/or regarding fare or major service changes. These documents will help customers play a role in the short- and long-term decision-making processes that can empower community groups to voice their opinions or concerns about the quality of transit service in their communities. The MBTA has defined the following materials as providing general information for public involvement:

- Publications of MBTA policies and procedures
- Public meeting flyers and outreach material
- Customer surveys

### **Other Materials**

Other materials considered non-vital may be translated by MBTA departments upon request. Examples of non-vital materials are:

- Planning studies and reports
- Budget reports, including capital investment program
- General advertisements
- General announcements

## **III. Training Programs for MBTA Personnel**

The MBTA’s Title VI training strategy provides tailored training at four distinct levels: one for all frontline staff with direct contact with the public, one for high-level managers, one for project managers, and one for any Title VI or civil rights liaisons. The objective of these trainings is to fit the specific needs of each department to ensure the message is delivered and internalized by staff and subsequently applied in a meaningful way as they carry out their daily job functions.

All training modules focus on the following elements:

1. MBTA’s responsibilities under Title VI and the U.S DOT LEP guidance
2. LEP populations in the MBTA service area
3. A summary of the “four-factor analysis”
4. A description of the language assistance services made available by the MBTA, including how staff can access these resources in their jobs.

5. Cultural-competency training to instruct staff in how to communicate with LEP persons face to face, over the telephone, and in writing.
6. Instructions on how to respond to civil rights complaints.

The following section provides a summary outline of the human resource training programs that the MBTA has in place. All include a reference to the Authority's Title VI obligations, including providing access to service for customers with limited proficiency in English. Each Title VI element of the training extended to employees is facilitated with the overall goal of informing, supporting, and providing the necessary information, tools, and guidance in understanding and appreciating the Title VI requirements.

### **New-Hire Orientation**

The MBTA's Human Resources Department provides orientation training for all new MBTA employees. Included within the orientation is a presentation by the ODCR of the Authority's policies and obligations to promote fairness, diversity, and inclusion for all employees and customers to ensure compliance with federal and state civil rights laws and regulations, including Executive Order #13166.

The Office of Diversity and Civil Rights training for new MBTA employees covers the Authority's policies and federal and state civil rights obligations related to diversity, nondiscrimination, inclusive public engagement, and workplace practices. New hires are trained in the importance of being professional, sensitive, and responsive, as well as on the need to treat all customers with equal respect regardless of language spoken. The Title VI element of the presentation includes a focus on staff responsibilities to eliminate language barriers for LEP customers looking to access the system. During spring 2016, we modified the presentation slides and script to better reflect civil rights standards under Title VI and state law and regulation, including Executive Order #13166, and expanded the coverage for language access within the MBTA,

### **Anti-Discrimination and Harassment Prevention (ADHP)**

The MBTA's ADHP training focuses on civil rights and MBTA policies. One goal of the training is to have employees gain an understanding of supervisors' responsibilities, employees' rights and responsibilities, and customers' rights under the laws and MBTA policies. Another goal is to develop skills and best practices for focusing on legitimate reasons for all employment decisions, and accountability regarding the same; to review best practices for maintaining excellence in customer service; and to learn when to seek assistance and/or partner with ODCR and/or other appropriate representatives at the MBTA.

This mandatory training is offered in separate sessions for supervisors and non-supervisory employees. Managers and supervisors are required to take the training every two years; all frontline employees must complete the one-day training every three years. The training includes a discussion of workplace scenarios, including interactions with customers who are unable to speak English.

### **Training of Customer Service Representatives**

The MBTA trains Call Center Representatives about their nondiscrimination responsibilities and the tools and protocols in place to assist passengers with limited English proficiency. The MBTA utilizes a private vendor, called Exela Technologies, to operate the Call Center. The Call Center has access to Language Line, which offers real-time interpreter in over 200 languages to help customers who are LEP.

The objective of this training is to help Call Center Representatives raise their awareness of the policies and procedures regarding Title VI requirements.

This training provides practical tips and tools for supervisors to develop best-practice skills in areas of Title VI language access, anti-discrimination, and harassment prevention regulations. Participants gain hands-on experience in how to recognize and handle caution areas, the rules for maintaining a discrimination-free workplace, and an awareness of the LEP customer environment.

This training provides Call Center Representatives with the necessary awareness and best-practice skills for providing excellent customer service. Representatives learn the LEP policies and procedures for working with customers with limited English language skills. Employees are also taught how to identify Title VI concerns and make appropriate referrals to connect customers with ODCR. In addition, this training raises their understanding and sensitivity to their responsibilities in helping to provide meaningful access to information and services to all customers.

### **MBTA Title VI Training for Transit Ambassadors**

In 2017, the MBTA entered into an agreement with a private vendor to provide additional customer service in transit stations across the MBTA service area. These contracted agents, called Transit Ambassadors, play a vital role to help transform the customer experience by using technology and other resources to assist riders with fare products, scheduling, and navigating the system. However, before deploying them into stations, Transit Ambassadors participate in a robust training curriculum that involves a comprehensive presentation on preventing discrimination and assisting persons with limited English proficiency.

The Title VI training module concentrates on two core areas that ambassadors are likely to encounter in the train station. The first is an introduction to Title VI and handling discrimination complaint situations, where we give instructions on routing discrimination complaints from the public to the Office of Diversity and Civil Rights. The second core area focuses on helping LEP customers using the tools they have available to communicate with customers who speak a different language, and more importantly, the protocols they follow in each instance, which includes the following:

1. Use of the “I speak” card on tablets that contains a list of 70 different languages to identify the customers preferred language.
2. For brief customer interactions, Transit Ambassadors will use the Google Translate application on their tablets.
3. For long questions or complex instructions, Transit Ambassadors are to use the landline phone in the station to contact the call center, who has access to Language Line, which provides interpreter support in over 160 languages.

It is noteworthy that a number of the Transit Ambassadors speak a second language, including Spanish, French, Chinese, French Creole, Haitian Creole, Cape Verdean Creole, Somali, Thai, Malay, Swahili, Arabic, Hindi, Nepali, Portuguese, Vietnamese, Hindi, Gujarati, Punjabi and Patois. These contractor employees are strategically deployed, as possible, so that their location will provide linkages to the LEP communities the MBTA services.

### **MBTA Title VI Training for Customer Service Agents, Instructors, and Hub Monitors**

ODCR participates in the recertification-training curriculum for Customer Service Agents, Training Instructors, and Hub Monitors. Each of these roles involves providing customer service and interacting with diverse passengers in stations across the service area. The Title VI training program is similar to the one offered to Transit Ambassadors and CSAs on handling discrimination complaints and assisting LEP customers. However, some positions such as the Hub Monitors and Training Instructors do not carry tablets and cannot access the MBTA’s Civil Rights webpage or utilize Google Translate to help them in the field with short interactions. Instead, the personnel in these roles use printed versions of the “I speak” card to identify the customer’s spoken language and then connect with via landline phones in the stations to contact the Call Center and Language Line assistance.

All the training programs mentioned above include:

- 1) A summary of responsibilities under the LEP guidance
- 2) A summary of the MBTA's Language Assistance Plan
- 3) A summary of the Four-Factor Analysis of language assistance needs prepared by the MBTA (Number of LEP persons, frequency of contact, importance of program, and cost factor)
- 4) A description of the language assistance services made available by the MBTA and how staff can access these services

Media resources available to be used in MBTA training programs include:

- 1) LEP videos accessed on the FTA's website, including [www.lep.gov](http://www.lep.gov)
- 2) Links to policy information, including webinars produced by the FTA's Office of Civil Rights, available at [www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/title-vi-civil-rights-act-1964](http://www.transit.dot.gov/regulations-and-guidance/civil-rights-ada/title-vi-civil-rights-act-1964)
- 3) Best practices in engaging LEP customers, available at [www.fhwa.dot.gov/planning/publications/low\\_limited/index.cfm](http://www.fhwa.dot.gov/planning/publications/low_limited/index.cfm)

#### IV. Providing Notice to LEP Persons

The MBTA relies on a variety of methods and media in communicating its Notice and the availability of language assistance to customers and the general public. These include:

- Public meetings and hearing notices
- Postings on [www.mbtta.com](http://www.mbtta.com)
- Distribution through community-based neighborhood organizations including those serving or representing minority and low-income groups.
- Call Center phone line
- Transit Police dispatch phone line
- Press releases, including distribution to outlets serving minority and low-income neighborhoods (for example, to the publications *El Mundo*, *The Bay State Banner*, *El Planeta*, *Mattapan Reporter*, *Dorchester Reporter*, *Sampan*, and *Haitian Reporter*)
- Bilingual announcements in stations and on vehicles.

## V Monitoring and Updating the Language Assistance Plan

The MBTA on an ongoing basis, reviews the effectiveness of the LEP Plan using strategies that may include, but are not limited to the following:

- Solicit direct feedback from CBOs and other stakeholders by distributing a questionnaire or holding focus group sessions on communicating with LEP individuals;
- Assess the demographic composition of the MBTA service area using the most current census data or data collected from community organizations;
- Measure the actual frequency of contact by LEP persons by collecting information from the Customer Care Call Center, the MBTA website translation, and frontline operations staff interviews;
- Partnering with other Boston-region organizations and participation in regional forums and events focused on issues of diversity and social equity. Such regional collaborations include the MetroFuture planning workshops and task forces headed by the Metropolitan Area Planning Council; and
- Changes by the MBTA to this Language Assistance Plan as needed; at a minimum every three years. The three-year update will coincide with the MBTA's Title VI Program submittal to the FTA.

Table 11 outlines the MBTA's Language Assistance Implementation Schedule.

**TABLE 11****Language Access Implementation Schedule**

Updated March 2020

Activity/Task	Responsibility	Completed	Ongoing	FY 20	FY 21	FY 22	Status
<b>1. LAP Updates</b>							
i. Update to MBTA Four Factor Analysis	Central Transportation Planning Staff (CTPS); Office of Diversity and Civil Rights (ODCR)		X				Generally, the four factor analysis is updated every three years, but certain circumstances may require an immediate update.
ii. Update inventory/information from community-based organizations	Customer Experience, ODCR		X				The MBTA maintains and regularly updates its lists of community-based organizations throughout the service area, include those that serve LEP populations.
iii. Evaluate applicability of new machine translation techniques to website and service alerts	ODCR, Customer Technology Department, GM's Office				X		As technology continues to evolve and access to technology continues to proliferate across all demographic groups, the MBTA intends to study the current state of the practice regarding available options for machine



							translation, including interactive/adaptive translation and post-editing machine translation, as they may apply to improved website translation and/or service alert translation options.
<b>2. Safety, Security, and Legal Rights Information (Tier 1)</b>							
A. Title VI Notices, Complaint Forms, Complaint Procedures							
i. Notice – Website (translation in top languages)	ODCR, Customer Technology	X					The Title VI Notice is posted on the MBTA website.  <b>Languages (full translation): EN, SP, PO, FR, HC, IT, CH, VI, KH, RU, AR*</b>
ii. Notice – Website (translation in safe-harbor languages)	ODCR, Customer Technology				X		

iii. Notice - Rapid Transit Stations	ODCR, Customer Experience, Charlestown Sign Shop, Operations	X				<p>The Title VI Notice is posted inside of display cases in all rapid transit stations (subject to limitations of Green Line and trolley stations).</p> <p><b>Languages (full translation): EN, SP, PO, CH, VI, RU</b></p>
iv. Notice - Commuter Rail Stations	Keolis, ODCR	X				<p>Commuter Rail passengers can find the Keolis-branded Title VI Notice (which mirrors the MBTA’s full Notice) at all outlying platforms and stations throughout the network, in addition to the Boston locations: South Station, North Station, Back Bay and Ruggles.</p> <p><b>Languages (riders): EN, SP, PO, HC, CH, VI</b></p>
v. Notice - Major Bus Terminals	ODCR, Customer Experience, Charlestown Sign Shop, Operations	X				<p>The Title VI Notice is posted in all major bus terminals.</p> <p><b>Languages (full translation): EN, SP, PO, CH, VI, RU</b></p>

vi. Notice - Ferry Terminals	Customer Experience, ODCR, Contracted Service Operations	X					The Title VI Notice is posed in all Ferry Terminals.  <b>Languages (full translation): EN, SP, PO, CH, VI, RU</b>
vii. Complaint Forms	ODCR, Customer Technology	X					The Title VI Complaint Form is disseminated broadly across the Authority, including within the Title VI Program, on the MBTA website, in public facing offices, and incorporated into the Call Center intake process.  <b>Languages (full translation): EN, SP, PO, FR, HC, IT, CH, VI, KH, RU, AR</b>
viii. Complaint Procedure – Translation	ODCR, Customer Technology	X					The Title VI Complaint Procedure is fully translated into the top 10 languages in the service area.  <b>Languages (full translation): EN, SP, PO, FR, HC, IT, CH, VI, KH, RU, AR</b>
ix. Complaint Procedure – Dissemination	ODCR, Customer Technology				X		The Title VI Complaint Procedure is to be disseminated electronically on the MBTA website and in hardcopy by being

							made available at MBTA public offices.
B. Emergency, Safety, and Security Information							
i. Station PA Announcements	ODCR, Customer Experience, Operations	X					Bilingual safety and courtesy announcements are available at stations.  <b>Languages (full translation): EN, SP</b>
ii. Bus PA Announcements	ODCR, Customer Experience, Customer Technology	X					All MBTA buses out of the Lynn garage play bilingual schedule change announcements.  <b>Languages (full translation): EN, SP</b>
iii. Evaluate the need for station and/or bus announcements in additional languages, including feasibility	ODCR, Customer Experience, Customer Technology					X	Based on customer feedback and the capability of station and vehicle audio systems, acknowledging the limitations of timing and duration for audio announcements, the MBTA will continue to gauge whether additional audio announcements,

							in additional languages, are needed.
<b>3. Vital Customer Access Information (Tier 2)</b>							
i. Generalized LEP Outreach and Instructions – “MBTA Basics” document	ODCR, Customer Experience					X	<p>The MBTA disseminates instructions, directly to LEP populations and through service organizations, to inform LEP populations in all Safe-Harbor language groups of the availability of language assistance and specific instructions to contact the Call Center through Language Line for assistance understanding any aspect of MBTA service, including understanding safety and security related matters.</p> <p><b>Languages (full translation): All LEP language groups in the service area that meet or exceed 1,000 people or 5% of the population, whichever is less. (EN, SP, CH, PO, HC, VI, RU, AR, KH, FR, IT, KO, GR, PL, HI, GU, JP,</b></p>

							<b>PR,TA, AR, LA, GE, TH, SC, UR, HB, HM, HU, YD.)</b>
i. Fare and Major Service Changes	Customer Experience, Planning and Schedules, Operations		X				Such changes are documented in summary documents that are translated and disseminated to facilitate public review and feedback. In most instances, summary documents are translated into the top 5 LEP languages in the service area, but additional translations are available when needed.  <b>Languages (full translation): EN, SP, PO, CH, VI, RU</b>
ii. The RIDE Guide	Office of Transportation Access	X					The RIDE Guide includes instructions in the top 10 LEP languages in the service area on requesting assistance with RIDE services. Potential RIDE customers are also provided with the Generalized LEP Outreach and Instructions document (see above) directly by the MBTA and through local service organizations.

							<b>Languages (riders): EN, SP, PO, FR, HC, IT, CH, VI, KH, RU, AR</b>
iii. The Ride Acceptance Letter	Office of Transportation Access		X				Translations of the acceptance letter is made upon request
iv. Fare payment instructions	Customer Experience	X					Current kiosks can be operated in English, Spanish, and Chinese. LEP customers are also provided with Generalized LEP Outreach and Instructions document (see above) that provides details on fares, including discount pass programs.  <b>Languages (full translation): EN, SP, CH</b>
v. Ticket vending machines with multilingual functions	AFC Department	X					Fare vending machines offer instructions in English, Spanish, and Chinese. LEP customers are also provided with Generalized LEP Outreach and Instructions document (see above) that provides details on fares, including discount pass

							<p>programs.</p> <p><b>Languages (full translation): EN, SP, CH</b></p>
vi. ADA Reduced Fare Application	System-Wide Accessibility	X					<p>ADA Reduced Fare Applications are available online and at the Charlie Card Store in top 6 languages. Beyond those languages, LEP customers can call the Call Center through Language Line for this information.</p> <p><b>Languages (full translation): EN, SP, PO, HC, FR, VI, CH</b></p>
vii. Senior Reduced Fare Application	Customer Experience	X					<p>Senior Reduced Fare Applications are available online and at the Charlie Card Store in top 6 languages. Beyond those languages, LEP customers can call the Call Center through Language Line for this information.</p> <p><b>Languages (full translation): EN, SP, PO, HC, FR, VI, CH</b></p>



viii. Translated information on website	ODCR, Customer Technology Department		X			The MBTA's Website is a key means of disseminating professionally translated information and documents to LEP customers. For general content that is not professionally translated, the MBTA website is effectively accessed in dozens of languages by individuals with web browser settings that push machine translated content to them as end users. For those that are not able to modify browser settings, the MBTA utilizes Google Translate as a last resort for some level of language assistance.
ix. Diversion Notices and Announcements	Customer Experience		X			As needed; languages for translation selected on the basis of the four-factor analysis
<b>4. Outreach and General Information (Tier 3)</b>						

i. Translate meeting notices and press releases	Customer Experience and Relevant Department		X			As needed; languages for translation selected on the basis of the four-factor analysis
ii. Provide interpreters at public meetings	Relevant Department		X			As needed / upon request; languages for translation selected on the basis of the four-factor analysis
<b>5. Monitoring and Updating the LEP Plan</b>						
i. Conduct LAP and PEP trainings for each individual department with public facing responsibilities	ODCR		X			ODCR continually trains key public facing MBTA/MassDOT departments on the Language Access Plan and Public Participation Plan
ii. Obtain feedback from community-based organizations and agency staff	ODCR		X			ODCR has structured an outreach plan to engage with community based organization to seek feedback and recommendation on the MBTA's language assistance measures
iii. Review complaints	ODCR		X			ODCR's Title VI Staff review public complaints on a regular basis to determine the prevalence of any language access concerns and, if applicable, to try to identify any

							patterns of non-compliance with the provisions of this LAP.
iv. Demographics survey of passengers, including language demographics.	ODCR		X				At least every 5 years, the MBTA conducts a survey of passengers and requests language demographics. The surveys are available in the top 10 languages in the service area and can be translated into additional languages upon request.  <b>Languages (full translation): EN, SP, CH, FR, PO, HC, VI, CV</b>

*Language Abbreviations	Language
SP	Spanish
CH	Chinese
PO	Portuguese
HC	Haitian Creole
VI	Vietnamese
RU	Russian
AR	Arabic
KH	Mon-Khmer
FR	French
IT	Italian
KO	Korean
GR	Greek

PL	Polish
HI	Hindi
GU	Gujarati
JP	Japanese
PR	Persian
TA	Tagalog
AR	Armenian
LA	Laotian
GE	German
TH	Thai
SC	Serbo-Croatian
UR	Urdu
HB	Hebrew
HM	Hmong
HU	Hungarian
YD	Yiddish
CV	Cape Verdean



# APPENDIX 2I

## TITLE VI SUBRECIPIENT MONITORING PROCEDURE



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# Title VI Subrecipient Monitoring

## INTRODUCTION

Pursuant to Title 49, Section 21.9 (b), of the Code of Federal Regulations (49 C.F.R. § 21.9 (b)), all subrecipients of federal financial assistance are required to comply with the nondiscrimination obligations in Title VI of the Civil Rights Act of 1964. Primary recipients of federal financial assistance that pass funds to third parties, thereby making them subrecipients, are required to ensure subrecipient compliance with Title VI requirements, including by providing technical assistance to achieve compliance when necessary.

Common Title VI compliance requirements for subrecipients are as follows:

- Title VI notice
- Title VI complaint form
- Title VI complaint procedures
- Title VI complaint log
- Public participation plan
- Language access plan

Additional compliance requirements may exist depending on the nature of the subrecipient organization. For example, metropolitan planning organizations and regional transit authorities may have particular reporting requirements).<sup>1</sup>

Oversight activities of primary recipients are as follows:

- Establish a Title VI program reporting cycle for subrecipient compliance
- Coordinate with project managers for record keeping related to the federally funded activities of subrecipients
- Provide technical assistance for compliance deliverables
- Report to the Federal Transit Administration on subrecipient Title VI compliance through a triennial reporting obligation

## MBTA SUBRECIPIENT MONITORING METHODOLOGY

At the Massachusetts Bay Transportation Authority (MBTA), primary day-to-day oversight of subrecipient's compliance with Title VI is the responsibility of the project manager, or designee, assigned to monitor the federally funded program, service, or activity. Project managers are trained on Title VI obligations and how to demonstrate compliance. They conduct routine audits to ensure that project administration meets applicable federal and state laws, including Title VI. The

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<sup>1</sup> See Federal Transit Administration Title VI Circular 4702.1B, Chapters II-2, 5, and III-10.

MBTA's Title VI Specialist and the Massachusetts Department of Transportation and MBTA's Director of Title VI and Accessibility play an active role in ensuring that the subrecipient's Title VI-related requirements are monitored through coordination with the project manager. Their role is to explain the requirement, set a timeframe for the submission of required Title VI documentation, and provide support to ensure that subrecipients comply with federally mandated reporting requirements, as outlined above.

## **Project Initiation**

As part of the federal funding award and obligation process, the MBTA project manager organizes an initial meeting with the MBTA's Title VI Specialist, or designee, to review the administrative requirements and procedures for a particular project and to discuss the Title VI reporting needs that must be addressed by the subrecipient. Each subrecipient is then asked to assign a Title VI Coordinator to prepare the organization's Title VI documentation, which is submitted to the project manager and the Office of Diversity and Civil Rights (ODCR), based on an agreed upon schedule. As part of this discussion, subrecipients are provided with an explanation of Title VI/Nondiscrimination requirements and are sent a sample of the Subrecipient Monitoring Checklist used by MBTA staff to ensure compliance.

MBTA staff who specialize in Title VI offer technical training for subrecipients and provide clarification regarding compliance requirements. The purpose of these one-on-one interactions is to provide the subrecipient with guidance on Title VI program adoption, development, customization, and implementation.

## **Review of Draft and Final Title VI Program**

Once ODCR receives the subrecipient's proposed Title VI program documents, a review will be completed within 60 days. If there are any Title VI program elements that are not compliant, ODCR will ask the subrecipient resubmit those components to align with the governing directives. This follow-up process may be conducted informally over the phone or in person, as appropriate, or through formal written correspondence.

## **Modifications to Monitoring Protocol**

Certain occurrences during the project delivery cycle may affect the subrecipient monitoring protocol. These procedures are intended to be flexible and thereby allow the MBTA to enhance and/or modify monitoring activities based on the following:

- Title VI complaints



- Staff changes
- Patterns of noncompliance

In the event that an issue does arise, ODCR will assess the need for technical assistance and provide guidance to the subrecipient on addressing the matter, or undertake to address the situation under ODCR's investigative and/or compliance authority, if needed.

### **Subrecipient and Contractor Corrective Actions**

If a subrecipient or contractor is found to be noncompliant with Title VI and fails or refuses to comply, ODCR will take one or more of the following actions:

- Resolve the noncompliance or potential noncompliance through a voluntary compliance agreement with the subrecipient or contractor
- Where voluntary compliance efforts are unsuccessful, the MBTA may condition further financial assistance on the achievement of compliance
- Consult with the Federal Transit Administration regarding possible federal intervention, depending on the severity of noncompliance



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# APPENDIX 5A

## SERVICE DELIVERY POLICY

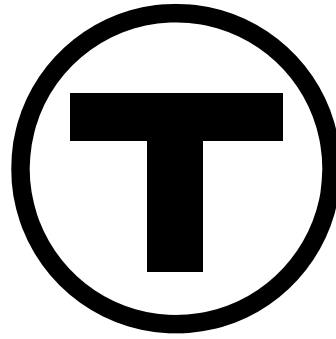


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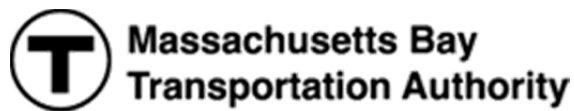
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# *Service Delivery Policy*

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MBTA Fiscal and Management Control Board  
Approved January 23, 2017



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# Chapter 1: Introduction

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## Purpose

The Service Delivery Policy sets how the MBTA evaluates service quality and allocates transit service to meet the needs of the Massachusetts Bay region. It is consistent with the MBTA's enabling legislation and other external mandates, such as Title VI of the Civil Rights Act of 1964 (Title VI), and the Americans with Disabilities Act of 1990 (ADA). As such, the Service Delivery Policy:

- Establishes the aspects that define service availability and sets parameters for levels of provided service
- Establishes objectives that define the key performance characteristics of quality transit services
- Identifies quantifiable standards that are used to measure whether the MBTA's transit services achieve their objectives, within the context of federal, state, and local regulations
- Outlines a service planning process that applies the service standards in an objective, uniform, and accountable manner
- Sets the priorities for the service planning process by setting minimum levels and targets for the service standards
- Involves the public in the service planning process in a consistent, fair, and thorough manner

## Background

This document is the 2017 update of the MBTA's Service Delivery Policy. The 2017 Service Delivery Policy takes advantage of the capabilities offered by newer technologies to collect and analyze data and to take the first steps towards creating standards from a passenger perspective. To this end, the MBTA worked with two committees to produce this document: 1) a policy advisory committee tasked with developing the service objectives, and 2) a technical advisory committee tasked with establishing standards, metrics, and thresholds designed to address the service objectives. These committees included staff from the MBTA, the Massachusetts Department of Transportation (MassDOT), and the Central Transportation Planning Staff (CTPS), along with members of academia, and various planning and advocacy groups. In addition, the MBTA engaged members of the public through a series of workshops throughout the region, via an online survey, and through public meetings.



This policy is intended to be updated regularly as the MBTA expands its ability to collect and analyze data, build out metrics, and define service parameters and targets. In addition, as priorities for service change, this policy can be updated to reflect these new priorities. Future updates will have a public input component and will be adopted by the MBTA governing board.

## Document Structure

Chapter 2 lays out the service *objectives*. The service objectives include service availability and service quality. Service availability objectives describe where, when, and how often service is available to residents of the service area, and the ADA accessibility of the MBTA network. Service quality objectives describe the quality of the delivered service, from a passenger perspective whenever possible.

Since the MBTA offers a number of different types of service that play different roles in the overall network, and services also vary by time period during the service day, Chapter 2 also defines each type of service provided by the MBTA and the time periods of the service day.

Chapter 3 sets the quantifiable *standards* used to measure the objectives. These standards are divided into two categories: service planning standards used in the service planning process to evaluate and allocate service, and accessibility standards that fall outside the service planning process. The service planning standards will be evaluated in the Service Monitoring portion of the MBTA Title VI Program.

The standards for accessibility that fall outside the service planning process are set within the context of the ADA. These standards are used to inform capital and operating decisions outside of the service planning process.

Each standard has a number of components. The *definition* describes what conditions are considered passing for that standard. Within a single standard, the definition changes depending on the type of service or time period. The pass/fail condition is measured at different levels of aggregation depending on the standard. For example, whether a bus is considered on-time is measured at each time point on the route.

All standards are designed in the positive direction, so 100% would be perfect performance. This means improvement is always measured by increasing the percentage. Depending on the standard, performance can be measured at the route level, at the mode level, or for the entire network.

Each standard has a target. The targets provide a medium term goal for improving service; targets can be updated on a yearly basis as progress is made.

In addition the bus service planning standards have a *minimum*; since service planning requires trade-offs between standards the minimums are used to set priorities. If performance at a route or mode level falls below the minimum level on a standard, that

standard becomes a priority to address in the service planning process as appropriate. This document includes the 2016 performance on each of the standards to provide context for the minimums and targets.

In addition, Chapter 3 describes the methodology the MBTA uses to assess the cost-benefit ratio of bus routes. This metric is used to identify bus routes that are providing a high value for their cost and those providing a low value for their cost. This allows the MBTA to understand the characteristics of high-performing routes to emulate, and identify changes to modify or otherwise improve low-performing routes.

Chapter 4 lays out the service planning process. It includes the quarterly changes, the rolling service plan process and the annual gap analysis. Within the rolling service planning process Chapter 4 describes how the service standard minimums and targets are used to prioritize service changes.

The appendices provide additional information used to calculate the standards. Appendix D summarizes the standards and the targets, minimums, and 2016 performance levels.

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## Chapter 2: Services and Service Objectives

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### Service Objectives

The MBTA, in collaboration with stakeholders and passengers, identified the following service objectives representing the most important characteristics of a high-quality transit system. These objectives also address the requirements of the MBTA's enabling legislation.

#### Service Availability (Convenience)

People should be able to use the MBTA to travel throughout the service area at convenient times and frequencies.

#### Accessibility

As many people as possible should be able to use the entire system and all of the MBTA's services regardless of their abilities.

The MBTA will comply with ADA precepts to ensure that its services are accessible to the extent possible.

#### Reliability

The MBTA should operate the services it schedules.

Passengers should experience consistent headways on frequent services and on-time performance on infrequent services. Passengers should not experience excessive wait times.

#### Comfort

Passengers should have a reasonable amount of personal space during their trips.

#### Communication

Passengers should receive accurate and relevant information about the services they use in languages consistent with the MBTA's Language Access Plan (LAP) in a timely manner and in alternative formats if requested.

#### Safety and Security

Passengers should experience safe and secure traveling conditions.

The MBTA should operate and maintain the system with the highest regard for the safety of passengers and employees.

#### Rider Satisfaction

Passengers should be satisfied with the service the MBTA provides.

#### Environmental Benefit

The MBTA should reduce its own environmental impact and should offer passengers a

service experience that supports travel choices other than single-occupancy vehicle trips.

## **Service Standards**

For the service planning and accessibility objectives cited above, the MBTA established quantifiable standards that allow the MBTA to evaluate the performance of its services relative to each objective. Not all objectives are addressed in this Service Delivery Policy.

Specifically, the standards for safety and security are set with the MBTA's state and federal regulatory partners and are monitored and reported outside of this policy. The standards for communication are currently being developed and will be adopted at a later date.

The MBTA monitors rider satisfaction through a monthly customer opinion panel and other survey efforts. These results are reported on the MBTA Performance Dashboard monthly. The MBTA Environmental and Energy Department monitors the MBTA's environmental impact, including measures of greenhouse gas emissions per unlinked passenger trip and greenhouse gas displacement. These results are published in the MBTA Sustainability Report.

Table 1 summarizes the remaining service objectives and standards, what types of tools the MBTA has to improve them, and the Title VI implications; Chapter 3 discusses the service standards in detail.

**Table 1: MBTA Service Objectives and Standards**

<b>Service Objective</b>	<b>Standards</b>	<b>Tools to address</b>	<b>Title VI Implication</b>
Service Availability	Span of service	Service planning	Service monitoring and equity analyses for major service changes
	Frequency of service Coverage: <ul style="list-style-type: none"> <li>• Coverage of the service area</li> <li>• High-frequency service coverage for high-density areas</li> <li>• Coverage for low-income households</li> </ul>		
Reliability	Schedule adherence	Service planning, operational changes, municipal partnerships	Service monitoring
	Passenger wait time Service operated		
Comfort	Vehicle load	Service planning, operational changes, municipal partnerships	Service monitoring
Accessibility	Platform accessibility Vehicle accessibility	Capital budget, operational changes	Elevators included in service monitoring

Source: MBTA.

## Services

The MBTA operates a comprehensive set of transit services. This policy addresses all of the MBTA's fixed-route services including bus, light rail, heavy rail, commuter rail, and boat, as described below<sup>1</sup>.

Contracts with the service providers who operate The RIDE, the MBTA's paratransit service, include performance standards. Appendix C: The RIDE Service lists these requirements.

### **Bus**

For the purposes of this policy, "bus" includes all rubber-tire vehicles regardless of the vehicle's power source. The MBTA operates several different types of bus services including:

**Local Bus Routes** provide full weekday service that extends beyond the morning and afternoon peak travel hours. Local routes are not necessarily designed to target any specific trip purpose. In general, stops on local routes are closely spaced, and pick-ups/drop-offs are allowed at all stops across the entire route; however, some local routes, such as the crosstown routes, operate with limited stops.

**Key Bus Routes** are similar to local routes, but generally operate longer hours and at higher frequencies to meet high levels of passenger demand in high-density travel corridors. Key bus routes are identified in maps and schedules.

Silver Line routes meet or exceed the characteristics of key bus routes and operate on dedicated right-of-ways for a portion of the routes.

In concert with light rail and heavy rail (discussed below), the key bus routes ensure geographic coverage of frequent service in the densest areas of Greater Boston's core, and offer intermodal connections to other MBTA services that extend throughout the region.

**Commuter Bus Routes** provide a limited number of peak-direction trips during periods when commuters would use the services. Commuter routes include **express bus routes**, which are identified as such in schedules and are characterized by a limited number of stops that are provided only near the ends of the routes. Some stops may be drop-off or pick-up only. Some commuter routes include closely spaced stops.

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<sup>1</sup> Service standards also apply to all contracted services. The MBTA will take steps in all future contracts to ensure the collection of all data necessary to calculate the standards.

**Community Bus Routes** provide weekday service between the morning and afternoon peak hours primarily for non-work travel. Stops are closely spaced (where practical) and pick-ups/drop-offs are allowed at all stops across the entire route.

**Supplemental Bus Routes** either provide limited service early in the morning or are designed to support other bus routes.

Tables showing the route type for each route is in the attached Appendix A: Route Types, which is updated as changes to route designations occur.

### ***Rapid Transit***

The MBTA's rapid transit system includes its heavy rail and light rail services, described below. For the purposes of this policy the Silver Line is evaluated on Key Bus Route standards.

#### **Light Rail**

The MBTA's primary light rail system, the Green Line, provides local service in outlying areas via its surface operations and core subway services in the heart of the city. In addition, the MBTA operates the Mattapan High Speed Line, which serves as a Red Line extension from Ashmont Station to Mattapan Station via light rail.

#### **Heavy Rail**

The MBTA operates three heavy rail lines—the Red Line, the Blue Line, and the Orange Line—that provide core subway services.

### ***Commuter Rail***

The MBTA's commuter rail lines provide long-haul, primarily commuter-oriented services that link the outer portions of the region with Downtown Boston.

### ***Boat***

The MBTA provides Inner Harbor Ferry services for travel between destinations in Boston, and Commuter Boat services from the South Shore to Downtown Boston and Logan Airport.

### ***The RIDE***

The MBTA's paratransit program, The RIDE, is mandated under the ADA. It provides door-to-door, shared-ride transportation to eligible passengers who cannot use fixed-route all or some of the time because of a physical, cognitive or mental disability. The service area currently covers 58 cities and towns in and around Boston. The program provides ADA trips (trips with origins and destinations within three-quarter miles of a

fixed-route service) at one fare rate and non-ADA trips (trips with origins and destinations greater than three-quarter miles away from a fixed-route service or for same-day trip request) at a higher fare rate.

### Time periods

The MBTA provides different levels of services depending on the time of day and days of the week. Table 2 provides the time periods for weekdays. Saturdays and Sundays are measured separately for most standards.

This time periods are designed for the purposes of bus service planning. Due to the different nature of the service Commuter Rail has different time periods. Its AM Peak includes all trains that arrive in their final Boston terminal between 6:00AM to 10:00AM and its PM Peak is all trains that originate in Boston and depart between 3:30PM and 7:00PM.

**Table 2: MBTA Weekday Time Period Definitions**

<b>Time Period</b>	<b>Definition</b>
Sunrise	3:00 AM – 5:59 AM
Early AM	6:00 AM – 6:59 AM
AM Peak	7:00 AM – 8:59 AM
Midday Base	9:00 AM – 1:29 PM
Midday School	1:30 PM – 3:59 PM
PM Peak	4:00 PM – 6:29 PM
Evening	6:30 PM – 9:59 PM
Late Evening	10:00 PM – 11:59 PM
Night	12:00 AM – 2:59 AM

Source: MBTA.



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## Chapter 3: Standards and Planning Tools

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The service standards perform two important functions. First, they establish the acceptable levels of service that the MBTA must provide to achieve the service objectives. Second, the standards provide a framework for measuring the performance of MBTA services as a part of the service planning process, which is discussed in Chapter 4. Through the service planning process, performance data collected on MBTA services are compared against the service standards to determine whether individual existing services perform at acceptable levels and to evaluate the need for service changes. The service planning process also uses the service standards to prioritize and reallocate resources within the system.

There are a multitude of factors that can impact the performance of the MBTA services. Service planning is one of the tools the MBTA uses to improve performance. In addition, the MBTA works with our municipal partners to address factors that are in our mutual control.

The service planning process is designed to use the service standards to help ensure a cost-effective allocation of service and basic availability throughout the region within the overall amount of operations funding, which is determined through the annual budget process. This policy also provides a service planning tool to measure the cost-efficiency of bus routes. In addition, the service planning process also documents the resource gap between meeting all of the service standards at the target levels and the performance of the operated service each year.

The progress towards the performance targets is reported in the Massachusetts Department of Transportation annual performance report *Tracker*. This allows the MBTA to track progress toward targets regularly and revisit them as necessary. All of the service standard targets and minimums are listed in Appendix D: Service Standard Targets. Appendix D also lists the time frame for all the reported 2016 performance data.

Some of these standards are evaluated over a relatively short period (for example, daily or quarterly), and others are evaluated when the MBTA considers modifying service. How often each standard is evaluated is listed in Table 14.

The following is a discussion of the MBTA service standards, in the context of the service objective to which each applies. These standards address the fixed-route modes as described in Chapter 2.

### Service Availability Standards

The availability standards define the levels of service that will provide meaningful access to the transit system, in terms of the length of the service day (span of service)

and the frequency of service. Each of these standards varies by mode. In addition, the MBTA measures geographic access to the system using a coverage standard with three components.

Many of the service standards differ depending on the time of day the service is offered. Table 2 defines the weekday service time periods. Because weekend travel patterns differ from weekdays, specific periods are not defined for Saturdays and Sundays.

### ***Span of Service***

Span of service refers to the hours during which service is available. The MBTA has established span of service standards that define the expected hours that any given service will operate. This provides passengers with the confidence that particular types of services will be available throughout the day. The MBTA may extend a service's span beyond the expected hours in response to customer demand.

The span of service standards, stated in Table 3 below, vary by mode and by day of the week, reflecting the predominant travel flows in the region. The standards require that the first trip in the morning in the peak direction of travel must arrive in downtown Boston, or the route terminal if the route does not serve downtown Boston, at or before the beginning span of service time (for example, 7:00 AM for local bus). At the end of the service day, the last trip in the evening in the peak direction of travel must depart downtown Boston, or the route terminal if the route does not serve downtown Boston, at or after the ending span of service time (for example, 7:00 PM for local bus).

For example, the Orange Line serves downtown Boston, so the standard requires that the first northbound and southbound trips must each reach Downtown Crossing by 6:00 AM. On the other hand, Key Bus Route 66 does not serve downtown Boston, and more passengers travel towards Harvard in the AM Peak period, so the standard requires that the first trip in the morning must arrive at Harvard before 6:00 AM.

If Table 3 does not specify an expected span of service for a mode or time period, then there is no respective standard. Service hours are set based on demand.

**Table 3: Span of Service**

<b>Mode</b>	<b>Day</b>	<b>Expected Span of Service</b>
<b>Bus</b>		
Local	Weekday	7:00 AM – 7:00 PM
	Saturday <sup>1</sup>	8:00 AM – 6:30 PM
	Sunday <sup>1</sup>	10:00 AM – 6:30 PM
Community	Weekday	10:00 AM – 4:00 PM
Commuter	Weekday	7:00 AM – 9:00 AM 4:00 PM – 6:30 PM
	Supplemental	Weekday
Key Bus Routes	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight
<b>Heavy Rail</b>		
	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight
<b>Light Rail</b>		
	Weekday	6:00 AM – midnight
	Saturday	6:00 AM – midnight
	Sunday	7:00 AM – midnight
<b>Commuter Rail</b>		
	Weekday	7:00 AM – 10:00 PM
	Saturday	8:00 AM – 6:30 PM
<b>Boat</b>		
	Weekday	7:00 AM – 6:30 PM
	Saturday <sup>2</sup>	8:00 AM – 6:30 PM

<sup>1</sup> This is a standard for high-density areas. There is no span standard for low-density areas on weekends.

<sup>2</sup> Memorial Day–Columbus Day

Note: The RIDE generally operates from 5:00 AM to 1:00 AM. The MBTA provides extended hours for trips starting and ending within 0.75 miles of a fixed-route service that operates outside of these hours.

Source: MBTA.

During the service planning process the MBTA will evaluate vehicle loads at the beginning and end of the service day to determine whether expanding the span of service is warranted.

The MBTA's performance on this measure is weighted by ridership; passenger trips taken on services that operate at least during the expected span are counted as "passing", while trips taken on services that operate less than the expected span are counted as "failing". This weighting prioritizes meeting the expected span of service on routes and services with high ridership. Performance is evaluated for each mode.

**Table 4: Span of Service Targets and Performance**

<b>Standard</b>	<b>Minimum</b>	<b>Target</b>	<b>2016 weekday performance</b>
Bus	90%	95%	93%
Heavy Rail	—	100%	100%
Light Rail	—	100%	100%
Commuter Rail	—	100%	100%
Boat	—	100%	100%

Bus performance data from Spring 2016. Other data from Dec. 2016.

Source: MBTA.

### ***Frequency of Service***

To maintain access to the transportation network within a reasonable waiting time, the MBTA established expected frequency of service levels for each mode, by time of day. On less heavily-traveled services, these expected levels set the standard for the frequency of service, regardless of customer demand. Frequency of service standards are measured using either headway (minutes between trips) or frequency (trips per time period).

If Table 5 does not specify an expected frequency for a mode or time period, then there is no respective standard. Frequencies for these services are set based on demand.

**Table 5: Service Frequency**

<b>Mode</b>	<b>Weekday Time Periods</b>	<b>Expected Frequency or Headway</b>
<b>Bus Local, Community</b>	AM and PM Peak	Every 30 minutes
	All other periods	Every 60 minutes
	Saturday and Sunday	Every 60 minutes
<b>Commuter</b>	AM Peak	3 trips in the peak direction
	PM Peak	3 trips in the peak direction
<b>Key Bus Routes</b>	AM and PM Peak	Every 10 minutes
	Early AM and Midday Base/School	Every 15 minutes
	Evening and Late Evening	Every 20 minutes
	Saturday and Sunday	Every 20 minutes
<b>Rapid Transit</b>	AM and PM Peak	Every 10 minutes
	All other periods	Every 15 minutes
	Saturday and Sunday	Every 15 minutes
<b>Commuter Rail</b>	AM Peak	3 trips in peak direction
	PM Peak	4 trips in peak direction
	All other periods	Every 3 hours in each direction
	Saturday	Every 3 hours in each direction
<b>Boat</b>	AM and PM Peak	3 trips in the peak direction
	Off-Peak periods	Every 3 hours

Note: There is no frequency standard during the Sunrise or Night times or for supplemental bus service. AM Peak and PM Peak are defined differently for Commuter Rail.

Source: MBTA.

The frequency of service levels may not be sufficient to meet passenger demand on heavily used services or on services with peak ridership that is outside the traditional peak hours. When load levels indicate that additional service is warranted on a particular route, as defined in the crowding standard, the MBTA may increase that service's frequency or provide larger vehicles to provide sufficient capacity to accommodate passenger demand.

MBTA's performance on this measure is weighted by ridership in each time period; passenger trips taken on services that operate at least at the expected frequency are counted as "passing", while trips taken on services that operate less than at the expected frequency are counted as "failing". This weighting prioritizes meeting the expected frequency at peak periods and on routes and services with high ridership. Performance is evaluated for each mode.

**Table 6: Service Frequency Targets and Performance**

<b>Standard</b>	<b>Minimum</b>	<b>Target</b>	<b>2016 weekday performance</b>
Bus	90%	95%	90%
Rapid Transit	—	100%	100%
Boat	—	100%	100%

Bus performance data from Spring 2016. Other data from Dec. 2016.

Note: This version of the Service Delivery Policy has focused on bus service planning; future versions will address Commuter Rail service planning once more granular ridership data is available.

Source: MBTA.

### ***Coverage Standard***

An important aspect of providing the region with adequate access to transit services is the system's geographic coverage. The MBTA recognizes that coverage means different things to different markets. To address these different groups, the MBTA measures coverage in three ways:

- Base Coverage
- Frequent Service in Dense Areas Coverage
- Low-income Household Coverage

Because of constraints such as topography and street network restrictions, it is not always possible to achieve uniform geographic coverage. In addition, demand for transit does not exist uniformly across the service area; high population density and low-income households create higher demand and need for transit access.

The MBTA prioritizes high frequency service in high density area and service to areas with high proportions of low-income households, while maintaining an acceptable level of base coverage. For the coverage standard, the MBTA will set a minimum for the base coverage and targets for the coverage of frequent service in dense areas and coverage of low-income households<sup>2</sup>.

The MBTA will monitor the effect of proposed service modifications on all three components of the coverage standard as part of its service planning process, described in Chapter 4.

<sup>2</sup> The base coverage will be evaluated as part of the Title VI Service Monitoring.

In order to calculate the coverage the MBTA uses walkshed distances to bus stops, rail stations, or boat docks. This means the half-mile distance is calculated based on the walking distance using the street network instead of a straight line distance that is usually impossible for pedestrians to travel. This means that another way to increase the coverage is by changes to the street network to shorten walking distances.

### ***Base Coverage***

People expect the MBTA to provide a basic level of coverage throughout its service area. Some of this service may be relatively infrequent for some or all of the service day; but people throughout the service area expect and should have a minimum level of service.

The MBTA will measure the:

*Percent of the population that lives no more than 0.50 miles from a bus stop, rapid transit station, commuter rail station, or boat dock in the municipalities in the MBTA's service area, excluding municipalities that are members of a regional transit authority (RTA).*

Supplemental bus routes will not be counted in the base coverage calculations.

### ***Frequent Service in Dense Areas***

Beyond a basic level of service throughout the entire service area, there are dense, urban areas where people expect frequent service. Within these urban areas, people can be reasonably sure that if they want to make a trip, they will have convenient access to frequent service.

In this section, frequent transit service is defined to include all bus stops along key bus routes, all rapid transit stations, and any bus stop that receives frequent service during its span of service.

A bus stop in the MBTA bus network is considered to receive frequent service if the average headway at that bus stop during the hours when any route serves the bus stop is less than a headway of:

- 15 minutes on weekdays (set to the expected headway for key bus routes during the midday base time period) *and*
- 20 minutes on Saturdays and Sundays (set to the expected headway for key bus routes on Saturdays and Sundays)

A bus stop can only be considered to receive frequent service if the span of service of all routes serving the bus stop meets or exceeds the span of service definitions for key bus routes.

The MBTA will measure the:

*Percent of the population that lives no more than 0.50 miles away from high-frequency service in the census block groups within the MBTA's service area that have densities greater than or equal to 7,000 people per square-mile, excluding census block groups within municipalities that are members of an RTA.*

The goal of this standard is to identify mostly contiguous, dense areas in the MBTA's service area that would support sufficiently effective frequent bus services. Choosing census block group densities below approximately 7,000 people per square mile creates many noncontiguous high-density "islands" throughout the MBTA's service area. At approximately 7,000 people per square mile, few high density islands remain.

### ***Low-income Households***

To reflect the importance of transit service to people who live in lower income households, the MBTA will measure the percentage of low-income households in its service areas that are located near transit.

The MBTA will measure the:

*Percent of the low-income households that are located no more than 0.50 miles away from any stop or station in the municipalities in the MBTA's service area, excluding municipalities that are members of an RTA.*

For all three components of the coverage standard, the MBTA will use the smallest census-based geography that is available and reliable. The distance to a transit stop will be measuring using walking distances.



**Summary of Coverage Standard**

**Table 7: Summary of Coverage Standards**

	<b>Numerator</b>	<b>Denominator</b>	<b>Minimum/ Target</b>	<b>2016 performance</b>
Base	Population living in census block groups within 0.50 miles of transit	Population of the MBTA service area	Minimum 75%	80%
Frequent service in dense areas	Population living no more than 0.50 miles away from high-frequency service in the census block groups that have densities greater than or equal to 7,000 people per square-mile	Population living in the census block groups that have densities greater than or equal to 7,000 people per square-mile	Target 85%	80%
Low-income households	Number of low-income households located in census block groups within 0.50 miles of transit	Households in the MBTA service area	Target 85%	83%

Performance data from Fall 2016.

Note: All populations include people living in municipalities in the MBTA’s service area, excluding people living in municipalities that are members of an RTA.

Source: MBTA.

**Accessibility Standards**

**Platform Accessibility Standard**

If elevators are not available to people who need or want to use them, they may not be able to gain access to MBTA services. The MBTA’s goal is for people to be able to access the platforms in each station at all times service is offered.

The MBTA will measure the:

*Percent of the total platform-hours<sup>3</sup> that are accessible.*

The MBTA will measure this separately for rapid transit stations, commuter rail stations, and boat docks; and it will continue to measure progress towards this standard. The minimum will always be set as the current annual performance.

**Vehicle Accessibility Standard**

The MBTA should provide at least one ADA-compliant vehicle on each trip it operates. The MBTA will measure the:

*Percent of trips that the MBTA provides with at least one ADA-compliant vehicle.*

A trip on Commuter Rail is considered compliant if at least one ADA-compliant car/coach in the trainset matches the location of each high-level platform at stations served by the trip. ADA-compliant Commuter Rail coaches must include ADA-compliant restrooms. Trips on the Green Line are considered noncompliant if none of the vehicles in a train set is ADA-compliant. Bus trips are not measured since ramps can be deployed manually. Heavy rail and boat trips are covered in the platform standard.

The minimum will always be set as the current annual performance and the MBTA will continue to measure progress toward this standard.

**Table 8: Accessibility Standards Targets and Performance**

Standard	Minimum	Target	2016 performance	2016 data
Platform Accessibility (Rapid Transit stations)	92%	100%	92%	Apr 2015–Mar 2016
Vehicle Accessibility (Green Line)	98.6%	100%	98.6%	Jul 2015–Jun 2016

Rapid Transit stations, include gated Silver Line Waterfront stations, but exclude surface-level stops on Green and Silver lines.

Source: MBTA.

<sup>3</sup> One hour of service offered to trains traveling each direction at a station. For each hour of service, a station can provide two accessible platform-hours, one hour for trains traveling in each direction. Stations with multiple platforms serving multiple branches or lines can have more than two accessible platform-hours per hour.

## Reliability Service Standards

Reliability standards vary by mode and provide tools to evaluate the on-time performance of individual MBTA lines and routes. Reliability standards also vary based on frequency of service; passengers using high-frequency services generally are more interested in regular vehicle arrivals than in strict adherence to published timetables, whereas passengers who use less-frequent services expect arrivals/departures to occur as published.

### ***Bus Reliability***

#### ***Bus Timepoint Tests***

To determine whether a bus is on time at an individual timepoint, such as the beginning of a route, end of a route, or a scheduled point in between, the MBTA uses two different tests based on the scheduled frequency of the service:

**Scheduled-Departure Service:** A trip is considered to provide scheduled-departure service when it operates with a headway longer than 15 minutes. For scheduled-departure services, passengers generally time their arrivals at bus stops to correspond with the specific published departure times.

**Frequent Service:** A trip is considered to provide frequent service when it operates with a headway of 15 minutes or shorter. For frequent service, passengers can arrive at a stop without looking at a schedule and expect a reasonably short wait. Key bus routes, whose passengers use the services as if they were frequent services despite occasional longer than 15 minute headways, are always evaluated using the frequent service definition even when their headways exceed 15 minutes.

Routes other than key bus routes might operate entirely with frequent service, entirely with scheduled-departure service, or with a combination of both throughout the day. Because any given route may have both types of service, each trip is considered individually to determine whether it represents scheduled-departure service or frequent service, and each timepoint crossed on that trip is measured accordingly. Therefore, there are two separate timepoint tests:

#### ***On Time Test for Scheduled-Departure Timepoints***

To be considered on time at a timepoint, any trip evaluated using the scheduled-departure standard must meet one of the conditions cited below.

**Origin timepoint:** The trip must *depart* its origin timepoint between 0 minutes before and 3 minutes after its scheduled departure time.

**Mid-route timepoint:** The trip must *leave* the mid-route timepoint(s) between 1 minute before and 6 minutes after its scheduled departure time.

**Destination timepoint:** The trip must *arrive* at its destination timepoint no later than 5 minutes after its scheduled arrival time.

This standard allows vehicles to arrive early at their mid-route timepoints and at their destinations. The MBTA's communication standards will assesses the accuracy and timeliness of vehicle arrival predictions in order to make sure passengers have information on early mid-route arrivals.

### ***On-Time Test for Timepoints on Frequent Services***

**Origin or mid-route timepoint:** To be considered on time at a timepoint, a trip evaluated using the frequent service standard must leave its origin timepoint or mid-route timepoint no later than the scheduled headway plus 3 minutes.

For example, if “trip A” is scheduled to depart at 7:00 AM and the route’s next trip, “trip B,” is scheduled to depart at 7:07 AM, trip B has a 7-minute scheduled headway. Therefore, trip B must depart no more than 10 minutes (3 minutes more than the scheduled headway) after trip A actually depart for the origin timepoint to be considered on time. If trip A departs at 7:05 (5 minutes after its scheduled departure time), trip B can depart no later than 7:15 (10 minutes after trip A’s actual departure) to be considered on time.

**Destination:** The actual run time from the origin timepoint to the destination timepoint must be no more than 120 percent of the scheduled run time for the trip to be considered on time at the destination timepoint.

### ***Treatment of Dropped Trips in the Bus Reliability Standard***

The MBTA does not currently track dropped bus trips on a trip-by-trip basis. If the reliability data for a trip is not available, the MBTA excludes the trip from the calculation—the trip is removed from the total number of timepoints that are on time (or not on time) and from the total number of timepoints. In the case of the frequent service test, this means that the MBTA excludes headways preceding and following a trip with missing data from the calculation.

In the future, when the MBTA is able to track dropped trips on a trip-by-trip basis:

In the scheduled-departure test, dropped trips will count as failures for all timepoint crossings.

In the frequent service test, a dropped trip does not count towards the number of timepoint crossings, and the headway of the next operated trip, following the dropped trip(s), is measured from the previous operated trip.

### ***Bus Route Test***

Bus reliability is calculated as the:

*Percent of each route’s timepoints that meet the above definitions.*

The numerator is the number of time points that met the above definitions and the denominator is the number of total time points.

**Table 9: Summary of the Bus Reliability Timepoint and Route Tests**

	Origin	Mid-route	Destination
<b>Scheduled Departures</b> (Headways > 15 min.)			
<b>Standard</b>	Depart 0 min. early to 3 min. late	Depart 1 min. early to 6 min. late	Arrive no more than 5 min. late
<b>Arrival Standard</b>	—	—	$A \leq 5.0$
<b>Departure Standard</b>	$0.0 \leq D \leq 3.0$	$-1.0 \leq D \leq 6.0$	—
<b>Frequent Service Departures</b> (Headways $\leq 15$ min.)			
<b>Standard</b>	Depart no later than the scheduled headway plus 3 minutes		Actual run time is no more than 120% of the scheduled running time
<b>Standard</b>	$h_a \leq h_s + 3 \text{ minutes}$		$t_a \leq 1.2 \times t_s$

Source: MBTA.

**Where:**

$$A = \frac{\text{Number of arrivals meeting standard}}{\text{Total number of arrivals}}$$

$$D = \frac{\text{Number of departures meeting standard}}{\text{Total number of departures}}$$

$$h_s = \text{Scheduled headway}$$

$$h_a = \text{Actual headway}$$

$$t_s = \text{Scheduled running time}$$

$$t_a = \text{Actual running time}$$

**Exceptions:**

The first trip of the day on *each* route, which does not have a leading headway, is considered a scheduled-departure trip. All key bus routes are considered frequent services at all times, except for their first trip of the day.

## ***Heavy and Light Rail Reliability***

### ***Passenger Wait Time***

As with frequent bus services, passengers on light rail and heavy rail do not rely on printed schedules; rather, they expect trains to arrive at consistent headways. Therefore, schedule adherence for light rail and heavy rail is measured based on the proportion of a line's passengers who wait the scheduled headway, or less, for a train to arrive.

The passenger wait time standard is measured based on the:

*Percent of passengers traveling in each time period that wait the scheduled headway, or less, at each station.*

For people traveling in the trunk section of the Green Line, the headway is defined as 3 minutes.

### ***On-Time Test for Stations on the Mattapan Line***

The Mattapan Line is currently separate from the other light rail lines because the systems do not exist to evaluate the line using the passenger wait and travel time standards<sup>4</sup>. The Mattapan Line is evaluated using the On-Time Test for Timepoints on Frequent Services standard, used to measure the on-time performance of frequent bus services, with station departures corresponding to timepoint crossings.

The Mattapan Line reliability is measured by the:

*Percent of all station departures (or arrivals for terminal stations) on the Mattapan Line over the entire service day that pass their on-time tests.*

## ***Commuter Rail Reliability***

Commuter rail passengers expect to arrive at their destination station at the time posted in the schedule. The MBTA will measure the number of trains that arrive at the destination terminal no later than 5 minutes after the time published in the schedule.

Commuter rail reliability is measured as the:

*Percent of trains that arrive at their destination station on time.*

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<sup>4</sup> Once the technology systems necessary to evaluate Mattapan Trolley service is finished being implemented, it will switch over to the same standard as the Light and Heavy Rail.

The MBTA and its commuter rail operator are working to develop passenger weighted measures for commuter rail reliability.

### ***Boat Reliability***

Boat passengers expect to arrive at their destination dock at the time posted in the schedule. The MBTA will measure the number of boats that arrive at the destination terminal no later than 5 minutes after the time published in the schedule.

Boat reliability is measured as the:

*Percent of boats that arrive at their destination dock on time.*

### ***Service Operated Standard***

The MBTA intends to operate all of the service it schedules. A multitude of factors, including equipment failure, lack of personnel, and unforeseen delays like medical and police emergencies, can sometimes prevent the MBTA from operating scheduled service.

The MBTA will measure the:

*Percent of scheduled service that is actually provided for each bus route, light rail line, heavy rail line, commuter rail line, and boat route.*

Planned heavy, light, and commuter rail outages where the MBTA offers substitute service do not count against this standard. For bus this standard will also be examined at the route level to determine if some bus routes have higher dropped trips rates, so steps can be taken to address significant imbalances.

**Table 10: Reliability Standards and Performance**

<b>Standard</b>	<b>Minimum</b>	<b>Target</b>	<b>2016 performance</b>	<b>2016 data</b>
Bus Reliability (non-Key)	70%	75%	65%	Mar-Dec 2016
Key Bus	75%	80%		
Rapid Transit Passenger Wait Times	—	90%	89%	Mar-Dec 2016
Commuter Rail Reliability	Contract requires 92% adjusted		93.8% (adjusted)	Jan-Dec 2016
Boat Reliability	—	99%	98%	Jul 2015– Jun 2016
Bus Service Operated	—	99.5%	98.5%	Jul 2015– Jun 2016
Light Rail Service Operated	—	99.5%	96.5%**	March- December 2016
Heavy Rail Service Operated	—	99.5%	99.1%**	March- December 2016
Commuter Rail Service Operated	Contract sets fines for canceled service		99.8%	Jan-Dec 2016

\*\* Data subject to change with improvements in data collection methodologies

Source: MBTA.

## Comfort Standards

Passenger comfort is influenced by the number of people on the vehicle and whether or not a seat is available to each rider for all or most of the trip. Passenger comfort



standards, which vary by mode and time of day, establish the maximum number of passengers per vehicle to provide a safe and comfortable ride.

### ***Passenger Comfort Standards***

As indicated in the frequency of service standard, the level of service provided by the MBTA is primarily a function of demand, as demonstrated by the number of passengers using the service at different times during the day. On weekends and some weekday periods, most MBTA services operate with sufficient frequency to provide every passenger with a seat. However, at the heaviest weekday travel times or locations, some passengers will need to stand.

During periods when some passengers will be standing, the MBTA strives to provide sufficient service so that people are reasonably comfortable. The purpose of the passenger comfort standard is to define the levels of crowding that are acceptable by mode and time period. The periods used by the MBTA for all modes, for both frequency of service and vehicle load standards, are defined earlier in this chapter (see Table 2).

There are a number of different types of vehicles in the MBTA's fleets at any given time, and the fleets change over time. Hence, the actual seating capacity and maximum number of passengers allowed by the comfort standards for each mode changes periodically. These load standards are included in Appendix B: Vehicle Load, which is updated as the fleets change.

### ***Bus***

The MBTA will measure the passenger hours of travel experienced by comfortable bus passengers during each time period. The maximum comfortable load is expressed as a ratio of the number of passengers on the vehicle to the number of seats on the vehicle. The maximum comfortable loads are set based on Department of Public Utility (DPU) Regulation 220 CMR 155.02 (26), which states "passengers in excess of 40 percent above the seating capacity of a motor bus shall not habitually be carried... ."

#### ***High-volume Time Periods***

The maximum comfortable passenger-to-seat ratio for high-volume travel periods is 140%. At loads of 140% or less of seated capacity, all passengers are considered comfortable. No passengers are considered comfortable when the vehicle load exceeds 140% of seated capacity.

#### ***Low-volume Time Periods***

The maximum comfortable passenger-to-seat ratio for lower-volume travel periods is 125%. At loads up to 125% of seated capacity, all passengers are considered comfortable; above 125% and up to 140% of seated capacity, seated passengers are

considered comfortable; and no passengers are considered comfortable when the vehicle load exceeds 140% of seated capacity.

Appendix B: Vehicle Load contains the number of seats and the loading thresholds for each vehicle type.

The MBTA will measure the:

*Percent of passenger travel time experienced in comfortable conditions<sup>5</sup>.*

**Table 11: Passenger Comfort Standard Targets and Performance**

<b>Standard</b>	<b>Minimum</b>	<b>Target</b>	<b>2015 performance</b>
Bus Passenger Minutes in Comfortable Conditions	92%	96%	94%

Data from average weekday September 1- December 14, 2015

Source: MBTA.

***Heavy and Light Rail***

The MBTA currently lacks the data to accurately measure passenger loads on heavy and light rail vehicles. As of 2016, the MBTA is working to procure heavy and light rail vehicles that have Automatic Passenger Counters (APCs) installed. This will allow for a standard similar to bus that measures the passenger time in crowded conditions.

In the meantime, the MBTA is developing a capacity metric for heavy and light rail that compares the number of people entering stations over 30 minute time periods to the capacity of the number of trains operated in that time period. This capacity metric will identify segments in the system that need additional service to address overcrowding.

***Commuter Rail***

The MBTA currently lacks the data to accurately measure the passenger loads on individual commuter rail coaches. The MBTA and its commuter rail operator are working to collect this type of data to allow for better planning. The contract does set expectations on the number of seats the operator should provide based on expected loads.

<sup>5</sup> For bus routes without enough data to model the passenger time in comfortable conditions, the proxy variable of maximum load will be used for all service planning decisions.

**Boat**

Federal laws prohibit boats from carrying more than their certified capacity—boats will leave people behind before they exceed their capacity. The MBTA does not have crowding-based comfort standards for its boat services. The MBTA will monitor if passengers are being regularly left-behind to determine if additional capacity is necessary.

**Service Planning Tools**

In addition to service standards, the MBTA can and should use diagnostic tools as part of its service planning process. For example, the MBTA needs to be able to evaluate the cost-effectiveness of its bus routes, even without establishing a cost standard. This Bus Route Cost-Benefit Ratio Tool will not be used to direct service cuts, but instead will be used to determine the cost-efficiency of the service provided and to identify service changes to improve performance.

**Bus Route Cost-Benefit Ratio**

Services may be valuable for different reasons; while carrying many passengers is an important characteristic, it is not the only factor that determines whether a service is effective or valuable. The MBTA considers three primary characteristics, or aspects, when evaluating whether a service is valuable to the system:

- **Ridership:** The number of people who use a service.
- **Transit Dependent Passengers:** The percentage of transit dependent people who use the service.
- **Value to Network:** Whether a service provides access to the greater network and the region. Value to the Network is composed of three characteristics:
  - Catchment Area:** The number of people uniquely covered by each service.
  - Destination Coverage:** The number of jobs and destinations sited near each service.
  - Transferring Passengers:** The share of passengers who transfer to other services—these passengers contribute to the service effectiveness of other routes and modes.

Each bus route receives a benefit score for each of these aspects. Each aspect (Ridership, Transit Dependent Passengers, and Value to the Network) may be weighted depending on priorities set by the governing board. Table 12 has the current weights.

**Table 12: Weighting of Components of Bus Route Benefit**

Weight	Ridership	Transit Dependent	Value to the Network
	70%	15%	15%

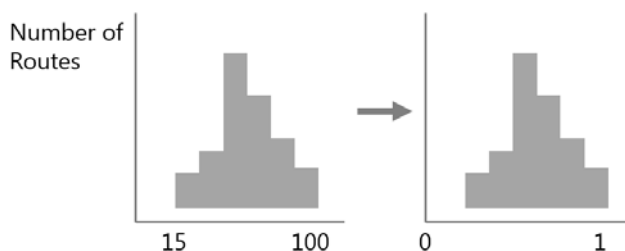
After summing the scores for each aspect, the score is divided by the net operating cost to develop a cost-benefit ratio. A cost-allocation formula uses a route's peak and off-peak service hours and the total miles of service provided to calculate the route's operating cost.

Routes in the 10<sup>th</sup> percentile or lower will be reviewed to determine what actions could be taken to improve the route's performance or to determine whether the route is a worthy use of resources. In addition, routes that perform above the 90<sup>th</sup> percentile will be analyzed to determine the characteristics of high performing routes.

**The Methodology for Benefit**

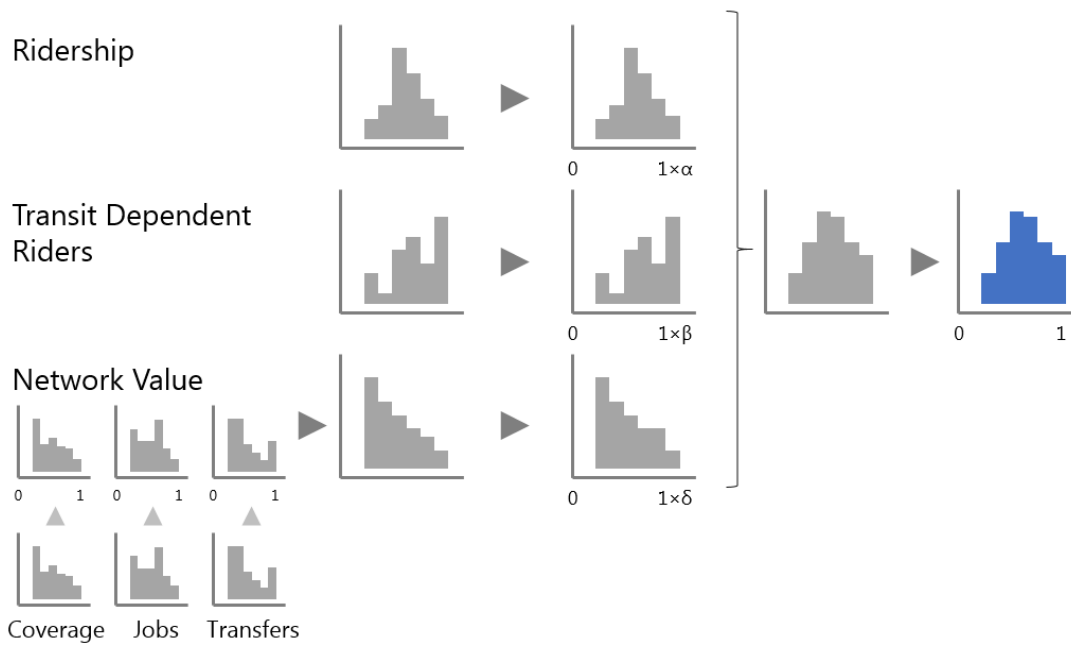
The MBTA combines the scores for each aspect to develop a single value for each service. Since the aspects have significantly different orders of magnitude<sup>6</sup>, they need to be standardized before they can be combined.

To scale the values to comparable values, the MBTA scales each aspects distribution to values between 0 and 1:



Within the Value to the Network portion of this equation, the values are added together. The scores for Value to the Network are renormalized to be combined with Ridership and Transit Dependent Passengers metrics. When combining the three top-level aspects, first the weights are applied to each aspect, then the values are added and renormalized.

<sup>6</sup> Ridership per route varies between 50 and 15,000 trips per day. Transit dependent passengers and transferring passengers vary between 0 and 100%. Catchment area and destination coverage can be in the tens of thousands.



For example:

**Table 13: Evaluation of an Example Route**

Metric	Value	Normalized	×	Weight	Final	
<b>Ridership</b>	13,000	<b>0.95</b>	×	<b>4</b>	<b>3.80</b>	
<b>Transit Dependent Passengers</b>	20%	<b>0.25</b>	×	<b>2</b>	<b>0.30</b>	
<b>Value to the Network</b>	1.10	<b>0.60</b>	×	<b>1</b>	<b>0.60</b>	
<i>Catchment Area</i>	2,000 people	0.10				
<i>Destination Coverage</i>	10,000 jobs	0.60				
<i>Transferring Passengers</i>	10%	0.40				
<i>Total Score</i>	<i>1.10 (0.10+0.60+0.40)</i>	<i>0.60</i>				
<b>Productivity Score</b>					<b>4.70</b>	
<b>Normalized Score</b>					<b>0.68</b>	

## Frequency of Analysis

The MBTA measures all of the standards at different frequencies depending on the availability of data and the use of the specific metric.

Table 14 shows often each of the standards are measured.

**Table 14: Frequency at which Each Standard is Typically Measured**

<b>Standard</b>	<b>Daily</b>	<b>Quarterly</b>	<b>Annual/ Service Plan</b>
<i>Availability</i>			
Span of service	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Coverage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Accessibility</i>			
Platform accessibility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Vehicle accessibility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Reliability</i>			
Bus and all rail reliability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boat reliability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Service operated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Comfort</i>			
Crowded passenger minutes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Service Planning Metric</i>			
Bus cost benefit ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source: MBTA.

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## Chapter 4: Service Planning Process

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The MBTA regularly evaluates performance of its services and recommends and implements service changes through the service planning process. The service planning process strives to ensure that the MBTA uses resources in the most effective manner by developing strategies to improve performance and/or to allocate service within the system. Additionally, the process also identifies the gap between actual service levels and the targets set in this policy. The service planning process includes system-wide quarterly changes, ongoing rolling Service Plan changes, and an annual evaluation to inform the MBTA's budget process.

This chapter focuses on planning for bus and subway modes; many of the processes described in this chapter may be used in planning for commuter rail and boat modes.

### Service Planning Process

The service planning process takes place on two levels. One is the quarterly evaluation and implementation of incremental service changes. The other is an annual review of system performance along with rolling service plans focused on development of proposals for more substantial service changes in particular regions or on individual routes.

The primary differences between the quarterly service changes and the rolling service plans include:

- Magnitude of service changes considered (as defined below)
- Extent and type of analysis used
- Level of public participation

Quarterly service changes to transit services can be implemented with existing equipment, within the adopted budget, and without significantly affecting route structure or service delivery.

Rolling Service Plan changes have a notable effect on passengers, resource requirements, route structure, or service delivery.

**Table 15: Quarterly and Service Plan Changes**

<b>Magnitude</b>	<b>Resource Implications</b>	<b>Type</b>
<b>Quarterly</b>	Changes that can be implemented with existing equipment and within the adopted budget	Running time adjustments
		Departure time adjustments
		Headway changes to match ridership and service levels (provided the frequency and comfort minimums are still met)
		Changes to stop locations
		Route alignment changes
		Span of service changes within 1 hour or less
		Route extensions of 1 mile or less
		Route variation modifications
<b>Service Plan</b>	Changes that will have a significant effect on resources, and may potentially have a significant effect on passengers	Major service restructuring
		Implementation of new routes or services
		Elimination of a route or service
		Elimination of part of a route greater than 1 mile
		Span of service changes greater than 1 hour
		Route extensions greater than 1 mile

Source: MBTA.

## Initiation of Service Planning Ideas

Service changes may be initiated in a variety of ways, including, but not limited to:

- Service requests and/or comments from the public, including municipalities and organizations through various media (public meetings or workshops, written correspondence, MBTA website, MBTA customer call center, email, Twitter, etc.)
- Proposals made by MBTA staff (Service Planning; Operations staff, such as drivers, inspectors, or garage superintendents)
- Studies completed by regional entities or municipalities



- Gaps identified between provision of MBTA services and performance targets established in this document. If, during the Quarterly or Rolling Service Plan process, a route is found to fall below the minimum on one of the established standards, it should be prioritized.

## Quarterly Service Planning Process

The MBTA Service Planning Department screens potential service changes to determine whether they should be evaluated and implemented as part of the Quarterly process or Service Plan process. Potential changes are considered with respect to their impact on Service Delivery Policy standards.

Proposed changes are presented to the Service Committee, which includes representatives of the following departments:

- Service Planning
- Schedules
- Operations
- System-wide Accessibility
- Office of Performance Management and Innovation
- Other departments, as appropriate

Quarterly changes are approved by the Service Committee and implemented within the adopted budget as soon as practical.

## Rolling Service Plans Process

Two inputs inform the Service Plan process, which will be performed on a continuous rolling basis in particular areas or on certain routes.

- Current service performance measured against performance targets
- Recommendations for service changes that improve route or network performance

The priorities for the rolling service plan are determined by which service planning standards fall below their minimum level. Depending on the standard, the analysis is done at the network, mode, and/or route level. If the performance level of a mode below the minimum on any standard, that standard must be prioritized. Since there are tradeoffs between standards, allocating resources to address priority standards can impact other standards. After suggested changes, the performance levels on all standards must be re-evaluated to determine if the changes lowered performance on any other standards below the minimum levels (at the route, mode, and/or network

level). Since crowding and reliability can only be measured for operated service, proxy variables can be used to model the impact of the proposed changes.

During the Rolling Service Planning process, the routes are evaluated using the Cost-Benefit Ratio tool corresponding to the most recent data available. Routes that fall below the 10<sup>th</sup> percentile are flagged for analysis. The tool is used to determine which aspect(s) of the service are driving the low ratio and could be addressed to improve the service, or how the cost could be lowered, up to and including route elimination. Routes that perform at higher than 90<sup>th</sup> percentile will also be evaluated to consider which aspect(s) may have contributed to extraordinary performance and whether they can be emulated in other services.

The Service Committee recommends service proposals to include in the Preliminary Service Plan. Each Preliminary Service Plan is made available to the public for review and comment. A list of final recommendations are then submitted to the MBTA governing board for approval before the changes are implemented, along with Title VI and environmental justice service equity analyses, if necessary.

As with the Quarterly service planning process, a goal in developing service plans is to ensure that the MBTA uses available resources effectively. However, the rolling planning process also can identify service changes and enhancements that have merit, but which cannot be provided within the existing operating budget. In such cases, additional operating funds may be requested, and the service(s) may be implemented when sufficient resources become available.

With seven bus districts and four heavy rail or light rail districts, the MBTA anticipates that the rolling process will take 2-3 years to complete an entire cycle. The MBTA may consider substantial service changes for a specific route or corridor either individually or grouped with other routes, areas, or bus districts.

## **Annual Service Evaluation**

Once a year, the MBTA will publish a summary report of route and network performance according to the standards included in the Service Delivery Policy. Included in this report will be an analysis of the “gap” between the level of service that the MBTA is currently providing and the levels of service the MBTA would need to provide to reach the performance targets set in the Service Delivery Policy.

The MBTA will quantify gaps and identify potential actions to close the gaps. Options include those internal to the Service Planning process, such as shifting resources to benefit one service or standard over another without dropping below the minimum on any standards. The gap analysis will also consider external measures, such as securing additional operating funds, future capital investments, or more inter-governmental cooperation. Both internal and external measures will give policymakers, MBTA officials, and the public a better sense of the tradeoffs inherent in budget-constrained service

planning and suggest how additional resources could be used to provide service according to Service Delivery Policy performance targets.

## **Public Participation**

Public participation in the general service planning process occurs both on an on-going basis and as part of the Service Plan-specific process. The purpose of public involvement in the service planning process is to promote regular dialogue with existing and potential passengers, elected officials, and communities regarding their service needs.

Public participation is always required for a Service Plan. In addition, specific changes, for example route elimination, require public participation regardless of when the change takes place.

### ***Ongoing Public Outreach***

The MBTA provides avenues for ongoing communication through its website, customer phone line, social media outlets, standing committees, and comments sent to individual MBTA officials. Service-related comments and requests are directed to the appropriate department for consideration and response. Upon request, MBTA staff also attend public meetings held by municipalities or with public officials to address specific service issues. From time to time, the MBTA may conduct specific market or route-based meetings to gather direct feedback on potential service changes. This ongoing public outreach informs both the quarterly service planning process and the rolling service plan process.

### ***Rolling Service Plan Public Outreach***

Once a Preliminary Service Plan is complete, the MBTA schedules one or more public meetings in appropriate locations. At these open meetings, the MBTA presents the analysis and issues behind the proposed service changes and solicits public comments on them. MBTA staff then assesses and analyzes the suggestions made through the public comments and, as appropriate, incorporates them into the final recommendations that go to the Board of Directors for approval.

All Service Plan public notifications and meetings conform to ADA and Title VI requirements and MBTA policies associated with these laws.

**Table 16: Summary of Service Planning Processes**

	<b>Quarterly Service Planning Process</b>	<b>Rolling Service Plan Process</b>
<b>Initiation of changes:</b>	<p>Requests/comments from public, including public and non-profit entities</p> <p>Bus Operations feedback</p> <p>Service Planning staff</p> <p>Service studies</p>	<p>Requests/comments from public, including public and non-profit entities</p> <p>Bus Operations feedback</p> <p>Service Planning staff</p> <p>Service studies</p> <p>Public meetings</p>
<b>Evaluation of changes:</b>	<p>Route-level analysis using the evaluation criteria</p> <p>Review by Service Committee</p>	<p>Area or district-level analysis using the evaluation criteria including performance review of all services using service standards</p> <p>Comparative evaluation of proposed service changes and possible new services</p> <p>Review by Service Committee</p> <p>Public review and comment</p> <p>Title VI and Environmental Justice analysis as needed</p>
<b>Implementation of changes:</b>	<p>Quarterly with regular schedule changes</p>	<p>Rolling, upon approval of the Service Plan by the MBTA governing board</p>

*Source: MBTA.*

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# Glossary of Terms and Acronyms

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**ADA:** Americans with Disabilities Act of 1990, and as amended in 2008.

**Automated Fare Collection (AFC) System:** The specific instruments, such as faregates and fareboxes, and back-end infrastructure the MBTA uses to collect fares.

**AVL:** Automatic Vehicle Locator.

**Boston Region MPO:** Boston Region Metropolitan Planning Organization. The Boston Region Metropolitan Planning Organization, staffed by CTPS, is responsible for conducting the federally required metropolitan transportation-planning process (often called the 3C—continuing, cooperative, and comprehensive—process) for the Boston metropolitan area. The MPO uses this process to develop a vision for the region, then decides how to allocate federal and state transportation funds to programs and projects—roadway, transit, bicycle, and pedestrian—that support that vision.

**Coverage:** People living within the geographic area served by the MBTA system.

**CTPS:** Central Transportation Planning Staff (to the Boston Region MPO).

**Dual Mode:** Buses that can operate using electrical power from overhead catenary wires or a diesel engine to power the electric traction motors that turn the wheels.

**Fixed-Route Service:** Services that operate on designated routes with published timetables including all light rail, heavy rail, commuter rail, boat, and bus services. (The RIDE, the MBTA's paratransit service, is not a fixed-route service.)

**Frequency of Service:** The number of trips per hour provided on a route (for example, a route that operates every 15 minutes has a frequency of four trips per hour).

**Headway:** The number of minutes between scheduled trips on a route (for example, a route that operates four trips per hour has a 15-minute headway).

**Heavy Rail Services:** Red Line, Orange Line, and Blue Line.

**Key Routes:** Key bus routes are similar to local routes, but have policy standards for a longer span and higher frequency of service.

**Language Access Plan (LAP):** Includes the MBTA's language access needs assessment, based on the US Department of Transportation "four-factor analysis" and it prescribes:

- Methods and measures the MBTA uses to communicate with passengers with limited proficiency in English
- Training programs for educating staff about the Authority's Title VI obligations, including providing accessible services to passengers who are not proficient in English

- Methods the Authority uses to provide notice to the public of the Authority's Title VI obligations, including providing language assistance to passengers who are not proficient in English
- Plans for monitoring and updating the Language Assistance Plan.

**Leading Headway:** The number of minutes between a trip and the trip before it.

**Light Rail Services:** Green Line and Mattapan High Speed Line.

**Limited English Proficiency (LEP):** Individuals who have a limited ability to read, write, speak, or understand English are limited English proficient, or 'LEP. According to the American Community Survey (ACS), those who indicated they spoke English "well," "not well," or "not at all" were considered to have difficulty with English—identified also as people who speak English "less than very well."

**MPO:** Metropolitan Planning Organization.

**Paratransit:** A transit mode operating with flexible schedules and without fixed routes. Generally, paratransit operators use cars, vans, or small buses to serve passengers. The MBTA's ADA paratransit service is known as The RIDE.

**Peak Direction:** The direction in which most commuters are traveling on a route during the peak period (for example, toward Boston in the morning and away from Boston in the afternoon).

**Public Participation Plan:** The Public Participation Plan, or PPP, serves to guide agency public participation efforts, including populations that have been underserved by the transportation system and/or have lacked access to the process. The PPP guides in its efforts to offer early, continuous, and meaningful opportunities for the public to help identify social, economic, and environmental impacts of proposed transportation policies, projects and initiatives across MassDOT/MBTA.

**Schedule Adherence:** An indication of on-time performance, or how reliably services adhere to published schedules. Schedule adherence is the service standard that is used to measure progress toward achieving the reliability service objective.

**Shared Segment:** A portion of the bus network that is used by multiple bus routes.

**Span of Service:** Refers to the hours during which service is accessible and is defined by the times that a service begins in the morning and ends in the evening. Span of Service is one of the service standards that are used to measure progress toward achieving the availability service objective.

**Timepoint:** A bus stop for which the MBTA lists the scheduled arrival time on its schedules. Timepoints are frequently found at major intersections along a route. There is neither a set distance between timepoints nor a specific number of timepoints for a route.

**Timepoint Crossing:** The act of passing a timepoint.

**Title VI:** Title VI of the Civil Rights Act of 1964 requires that transit agencies that receive federal funding demonstrate that they do not discriminate based on race, color, or national origin in providing services.

**Vehicle Load:** Defines the level of passenger crowding that is acceptable for a safe and comfortable ride. Vehicle Load is expressed as a ratio of the number of passengers on the vehicle to the number of seats on the vehicle. Vehicle load is used to calculate the service standard for measuring progress toward achieving the comfort service objectives.

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## Appendix A: Route Types

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**Table A1: Local Bus Routes**

7	City Point – Otis and Summer Streets
8	Harbor Point /U Mass – Kenmore Station
9	City Point – Copley Square via Broadway Station
10	City Point – Copley Square Via BU Med Center
11	City Point – Downtown
14	Roslindale Square – Heath Street Loop
16	Forest Hills Station – U Mass. Or Andrew Station
17	Fields Corner Station – Andrew Station
18	Ashmont Station – Andrew Station
19	Fields Corner Station – Ruggles or Kenmore Station
21	Ashmont Station – Forest Hills Station
24	Wakefield Ave. – Mattapan Station or Ashmont
26	Ashmont Station – Norfolk and Morton Belt Line
27	Mattapan Station – Ashmont Station
29	Mattapan Station – Jackson Square or Ruggles
30	Mattapan Station – Forest Hills Station
31	Mattapan Station – Forest Hills Station
33	River and Milton Streets – Mattapan Station
34/34E	Walpole Center or Dedham Line – Forest Hills Station
35	Dedham Mall – Forest Hills Station
36	VA Hospital – Forest Hills Station Via Chas. River Loop
37	Baker and Vermont Streets – Forest Hills Station
38	Wren Street – Forest Hills Station
40	Georgetowne – Forest Hills Station
41	Centre and Eliot Streets – JFK U Mass Station
42	Forest Hills Station – Dudley or Ruggles Station
43	Ruggles Station – Park and Tremont Streets
44	Jackson Square Station – Ruggles Station
45	Franklin Park – Ruggles Station
47	Central Square Cambridge. – Broadway Station
50	Cleary Square – Forest Hills Station Via Metropolitan
51	Reservoir – Forest Hills Station
52	Dedham Mall – Watertown Yard
55	Queensberry Street – Park and Tremont Streets
59	Needham Junction – Watertown Square
60	Chestnut Hill Station – Kenmore Station
62	Bedford V.A. Hospital – Alewife Station
64	Oak Square – University Pk. Cambridge
65	Brighton Center – Kenmore Station
67	Turkey Hill – Alewife Station
68	Harvard Square – Kendall MIT Station
69	Harvard Square – Lechmere Station
70/70A	Cedarwood – Central Square Cambridge
72	Aberdeen and Mt. Auburn – Harvard Station
74	Belmont Center – Harvard Station via Concord Ave
75	Belmont Center – Harvard Station via Fresh Pond Pkwy
76	Hanscom Air Force Base – Alewife Station
78	Arlmont Village – Harvard Station
79	Arlington Heights – Alewife Station
80	Arlington Center – Lechmere Station
83	Rindge Ave. – Central Square, Cambridge
85	Spring Hill – Kendall MIT Station
86	Sullivan Station – Reservoir Station



87	Arlington Center or Clarendon Hill – Lechmere Station via Somerville Avenue
88	Clarendon Hill – Lechmere Station via Highland Avenue
89	Clarendon Hill or Davis Square – Sullivan Station via Broadway
90	Davis Square Station – Wellington Station
91	Sullivan Station – Central Square, Cambridge
92	Assembly Square Mall – Downtown Via Main Street
93	Sullivan Station – Downtown Via Bunker Hill
94	Medford Square – Davis Square Station
95	West Medford – Sullivan Station
96	Medford Square – Harvard Station
97	Malden Station – Wellington Station
99	Boston Reg. Med Center Stoneham – Wellington Station
100	Elm Street – Wellington Station
101	Malden Station – Sullivan Station Via Medford Square
104	Malden Station – Sullivan Station Via Ferry Street
105	Malden Station – Sullivan Station Via Main Street
106	Franklin Square or Lebanon Street Loop – Wellington Station
108	Linden Square – Wellington Station
109	Linden Square – Sullivan Station
110	Wonderland Station – Wellington Station
112	Wellington Station – Wood Island Station
119	Northgate Shopping Center – Beachmont Station
120	Orient Heights Station – Maverick Station
132	Redstone Shopping Center – Malden Station
134	North Woburn – Wellington Station
136	Reading Depot – Malden Station Via Lowell St
137	Reading Depot – Malden Station Via North Ave
201/202	Fields Corner Station – Fields Corner Station
210	Quincy Center Station – No. Quincy Station or Fields Corner Station
211	Quincy Center Station – Squantum
214	Quincy Center Station – Germantown
215	Quincy Center Station – Ashmont Station
216	Quincy Center Station – Houghs Neck
220	Quincy Center Station – Hingham
222	Quincy Center Station – East Weymouth
225	Quincy Center Station – Weymouth Landing or Columbian Square
230	Quincy Center Station – Montello Station
236	Quincy Center Station – South Shore Plaza
238	Quincy Center Station – Holbrook/Randolph Comm. Rail St
240	Avon Line – Ashmont Station
245	Quincy Center Station – Mattapan Station
350	North Burlington – Alewife Station
411	Malden Station – Revere/Jack Satter House
426	Central Square Lynn – Haymarket or Wonderland Station Via Clifftondale Square <b>(Partially Express)</b>
429	Northgate Shopping Center – Central Square Lynn
430	Malden Center Station – Saugus Center via Square One Mall
435	Liberty Tree Mall – Central Square Lynn
436	Liberty Tree Mall – Central Square Lynn
441	Marblehead – Haymarket or Wonderland Station via Paradise Rd.
442	Marblehead – Haymarket or Wonderland Station via Humphry St.
450	Salem Depot – Haymarket or Wonderland Station via Western Ave <b>(Partially Express)</b>
455	Salem Depot – Wonderland Station
456	Salem Depot – Central Square Lynn
465	Danvers Square – Salem Depot
553	Roberts – Downtown Boston <b>(Partially Express)</b>
554	Waverley Square – Downtown Boston <b>(Partially Express)</b>
CT1 (701)	Central Square Cambridge. – B.U. Medical Campus/Boston Medical Ctr. Via MIT
CT2 (747)	Sullivan Station – Ruggles Station via Union Square Kendall/MIT and Longwood Medical Area
CT3 (708)	Beth Israel Deaconess or B.U. Medical Campus – Andrew Station

*Private Carrier Local Bus Routes*

710	North Medford – Medford Square Meadow Glen Mall or Wellington Station
712/713	Point Shirley, Winthrop – Orient Heights
714	Pemberton Pt., Hull – Station St., Hingham
716	Cobbs Corner – Mattapan Station via Canton Center

**Table A2: Key Bus Routes**

1	Harvard Square – Dudley Station via Mass. Ave.
15	Kane Square or Fields Corner – Ruggles Station
22	Ashmont Station – Ruggles Station Via Talbot Ave
23	Ashmont Station – Ruggles Station via Washington Street
28	Mattapan Station – Ruggles Station
32	Wolcott Square or Cleary Square – Forest Hills Station
39	Forest Hills Station – Back Bay Station
57/57A	Watertown Yard – Kenmore Station
66	Harvard Square – Dudley Station via Brookline
71	Watertown Square – Harvard Station
73	Waverley Square – Harvard Station
77	Arlington Heights – Harvard Station
111	Woodlawn or Byway and Park – Haymarket Station
116	Wonderland Station – Maverick Station Via Revere (in combination with 117)
117	Wonderland Station – Maverick Station via Beach (in combination with 116)
SL1 (741)	Logan Airport – South Station
SL2 (742)	Boston Design Center – South Station
SL4 (751)	Dudley Station – South Station
SL5 (749)	Dudley Station – Downtown

**Table A3: Commuter Bus Routes**

4	North Station – Tide Street
84	Arlmont Loop – Alewife Station
121	Wood Island Station – Maverick Station
131	Melrose Highlands – Malden Station
170	Waltham – Dudley Station (Limited Service) <b>(Express)</b>
212	Quincy Center Station – North Quincy Station
217	Quincy Center Station – Ashmont Station
221	Quincy Center Station – Fort Point
325	Elm Street – Haymarket Station <b>(Express)</b>
326	West Medford – Haymarket Station <b>(Express)</b>
351	EMD Serono/Bedford Woods – Alewife Station <b>(Express)</b>
352	Burlington – State Street <b>(Express)</b>
354	Woburn Line – State Street <b>(Express)</b>
424	Eastern and Essex – Haymarket or Wonderland <b>(Express)</b>
428	Oaklandvale – Haymarket Station via Granada Highlands
434	Peabody Square – Haymarket Station via Goodwins Circle <b>(Express)</b>
439	Bass Point Nahant – Central Square Lynn
448	Marblehead – Downtown Crossing <b>(Express)</b>
449	Marblehead – Downtown Crossing <b>(Express)</b>
451	North Beverly – Salem Depot
459	Salem Depot – Downtown Crossing <b>(Express)</b>
501	Brighton Center – Downtown Boston <b>(Express)</b>
502	Watertown Yard – Copley Square <b>(Express)</b>
503	Brighton Center – Copley
504	Watertown Yard – Downtown Boston <b>(Express)</b>
505	Waltham Center – Downtown Boston <b>(Express)</b>
556	Waltham Highlands – Downtown Boston <b>(Express)</b>
558	Auburndale – Downtown Boston <b>(Express)</b>

**Table A4: Community Bus Routes**

5 City Point – McCormack Housing

**Table A5: Supplemental Bus Routes**

114 Bellingham Square – Maverick Station  
171 Dudley Station – Logan Airport via Andrew Station  
191 Mattapan – Haymarket via Ashmont, Fields Corner and Dudley Station  
192 Cleary Square – Haymarket via Forest Hills and Copley Square  
193 Watertown Yard – Haymarket via Kenmore Station  
194 Clarendon Hill – Haymarket via Sullivan Square Station  
195 Shattuck Hospital – Temple Place  
SLW (746) Silver Line Way – South Station  
9701 Cambridge Street at Warren Street – Ruggles Station  
9702 Cambridge Street at Warren Street – Andrew Station  
9703 Cambridge Street at Warren Street – Jackson Station

## Appendix B: Vehicle Load

**Table B1: Bus and Trackless Trolley**

Vehicle Type	No. of Seats	Off-Peak Standard	Off-Peak Max Load	Peak Load Standard	Peak Max Load
RTS 40' Diesel	40	125%	50	140%	56
New Flyer 40' Emission Contr. Diesel	39	125%	48	140%	55
New Flyer 40' Compressed Natural Gas	39	125%	48	140%	55
New Flyer 40' XDE40	37	125%	46	140%	52
NABI 40' Compressed Natural Gas	39	125%	48	140%	55
Neoplan 40' Emission Controlled Diesel	38	125%	47	140%	53
Neoplan 40' Electric Trolley Bus	31	140%	43	140%	43
New Flyer 60' Diesel-Electric Hybrid	57	125%	71	140%	80
Neoplan 60' Compressed Natural Gas	57	125%	71	140%	80
Neoplan 60' Dual-Mode Articulated	47	140%	66	140%	66
Neoplan 60' Airport Dual-Mode Artic.	38	140%	53	140%	53

*Note: Dual-mode vehicles used in Silver Line tunnels and electric trolley buses are always evaluated using the Peak Load Standard because of the operating characteristics of that service and because those vehicles have more standing room per seat.*

Source: MBTA.

**Table B2: Vehicle Load on Light Rail, Heavy Rail, Silver Line Waterfront**

Vehicle Type	No. of Seats	Floor Area (sq. ft.)	Total Passengers			
			Early AM/ AM Peak	Midday Base	Midday School/ PM Peak	Evenings and Weekends
Green Line 7/8	46/44	207	100	66	100	66
Mattapan Line	41	120	73	53	73	53
Red Line 1	63	306	165	94	165	94
Red Line 2	62	297	161	92	161	92
Red Line 3	50	338	163	84	163	84
Orange Line	58	249	141	83	141	83
Blue Line	35	154	86	50	86	50

Source: MBTA.

**Table B3: Commuter Rail**

<b>Vehicle Type</b>	<b>Fleet ID</b>	<b>Number of Seats</b>	<b>Peak Load Standard</b>	<b>Peak Max Load</b>
Pullman	200-258	114	110%	125
Bombardier	350-389	127	110%	140
Bombardier	600-653	122	110%	134
Bombardier	1600-1652	122	110%	134
Kawasaki	700-749	185	110%	204
Kawasaki	750-781	182	110%	200
Kawasaki	900-932	178	110%	196
Kawasaki	1700-1724	175	110%	193
MBB	500-532	94	110%	103
MBB	1500-1533	96	110%	106
Rotem	800-846	179	110%	197
Rotem	1800-1827	173	110%	190

*Source: MBTA.*

**Table B4: Commuter Boat (MBTA-Owned)**

<b>Vessel Name</b>	<b>Vessel Type</b>	<b>Max Load</b>
Flying Cloud	Catamaran	149
Lightning	Catamaran	149

*Source: MBTA.*

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## Appendix C: The RIDE Service Standards

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The MBTA monitors The RIDE contractors using performance metrics. If a contractor fails to meet standards set in the contracts, as well as FTA ADA requirements, they incur monetary penalties.

These metrics include:

### ***Reliability***

#### **Missed trips** (service provider at fault)

Vehicle does not show or is more than 30 minutes late.

#### **Late trips** (service provider at fault):

Pick up is more than 15 minutes late and/or drop-off is more than 10 minutes after appointment time.

#### **Not Available trips** (service provider at fault)

#### **No Show/Late Cancellation trips** (customer at fault)

#### **Travel time**

Total registered trips that violate travel time standards should not exceed 2% of all registered trips.

#### **Percent of registered trips assigned to non-dedicated vehicles**

Total registered trips assigned to non-dedicated vehicles should not exceed 5% of all registered trips, unless the Contractor has received prior approval to do so by the MBTA.

#### **Complaint rates**

The number of complaints concerning The RIDE should not exceed 0.2% of the trips requested.

#### **Accident rates** (At fault/not at fault)

All incidents and accidents should be reported.

### ***Accessibility***

#### **Lift or ramp failures**

Ramps should be operable.

***Comfort*****Air Conditioning/heating failures**

Air conditioners and heaters should be operable.

***Communication*****Telephone communication system failures**

The telephone communication system should be operable. The MBTA levies penalties for interruptions in excess of 30 minutes.

**Vehicle communication system failures**

The vehicle communication system should be operable. The MBTA levies penalties for interruptions in excess of 60 minutes. Any occurrence of <90% functionality of these systems for all vehicles deployed in service shall also constitute a failure/ interruption.

**Computer system disruptions**

The computer systems used in the delivery of services (reservations, scheduling, dispatching, reporting) should be operable. The MBTA levies penalties for interruptions in excess of 60 minutes.

**Telephone hold time**

The average hold time is over 1.5 minutes and/or where 5% of the total calls have a hold time that exceeds 5 minutes.

**Staff uniform policy violations**

Staff should abide by the uniform policy.

**Failure to respond to complaints**

Complaints should be responded to within 10 days.

***Management and Staffing*****Key senior staff vacancies**

Vacancies in one of the eight "key senior staff" positions should not last longer than 60 calendar days.

**Personnel complement compliance**

Each month, 100% of the proposed complement of personnel for each position should be maintained.

## Appendix D: Service Standard Minimums and Targets

**Table D1: All Service Standards**

Standard	Minimum	Target	2016 performance	2016 data
<b>Span of Service Standards</b> (minimums, targets, and 2016 performance apply to weekdays only)				
Bus	90%	95%	93%	Spring 2016
Heavy Rail	—	100%	100%	Dec 2016
Light Rail	—	100%	100%	Dec 2016
Commuter Rail	—	100%	100%	Dec 2016
Boat	—	100%	100%	Dec 2016
<b>Service Frequency Standards</b> (minimums, targets, and 2016 performance apply to weekdays only)				
Bus	90%	95%	90%	Spring 2016
Rapid Transit	—	100%	100%	Dec 2016
Boat	—	100%	100%	Dec 2016
<b>Coverage Standards</b>				
Base	75%	—	80%	Fall 2016
Frequent service in dense areas	—	85%	80%	Fall 2016
Low-income households	—	85%	83%	Fall 2016

Table D1 continues on next page



**Table D1: All Service Standards, continued**

<b>Standard</b>	<b>Minimum</b>	<b>Target</b>	<b>2016 performance</b>	<b>2016 data</b>
<b>Accessibility Standards</b>				
Platform Accessibility (Rapid Transit, gated stations)	92%	100%	92%	Apr 2015– Mar 2016
Vehicle Accessibility (Green Line)	98.6%	100%	98.6%	Jul 2015– Jun 2016
<b>Reliability Standards</b>				
Bus Reliability (non-Key)	70%	75%	65%	Mar–Dec 2016
Key Bus Reliability	75%	80%		
Rapid Transit Passenger Wait Times	—	90%	89%	Mar–Dec 2016
Commuter Rail Reliability	Contract requires 92% (adjusted)		93.8% (adjusted)	Jan–Dec 2016
Boat Reliability	—	99%	98%	Jul 2015– Jun 2016
Bus Service Operated	—	99.5%	98.5%	Jul 2015– Jun 2016
Light Rail Service Operated	—	99.5%	96.5%*	Mar–Dec 2016
Heavy Rail Service Operated	—	99.5%	99.1%*	Mar–Dec 2016
Commuter Rail Service Operated	Contract sets fines for canceled service		99.8%	Jan–Dec 2016
<b>Passenger Comfort Standards</b>				
Bus Passenger Minutes in Comfortable Conditions	92%	96%	94%	Weekdays, Sep–Dec 2015

\* Data subject to change with improvements in data collection methodologies



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# APPENDIX 6A

## MINORITY CLASSIFICATIONS OF MBTA SERVICES



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# Minority Classifications of MBTA Services

The classifications shown in tables 6A-1 through 6A-4 are based on the Massachusetts Bay Transportation Authority (MBTA) 2015–17 Systemwide Passenger Survey.

**Table 6A-1**  
**MBTA Bus Route Minority Classification**

<b>Route</b>	<b>Route Name (from MBTA Database)</b>	<b>Classification</b>
1	Harvard Station—Dudley Station via BU Medical Center	Minority
4	North Station—World Trade Center	Nonminority
5★	City Point—Mary Ellen McCormick Housing	Nonminority
7	City Point—Otis and Summer Streets via Summer Street	Nonminority
8	Harbor Point/UMASS—Kenmore via South Bay and BU Medical Center	Minority
9	City Point—Copley Station	Nonminority
10★	City Point—St. James Avenue via South Bay Mall	Nonminority
11	City Point—Bedford and Chauncy Streets	Nonminority
14	Roslindale Square—Heath Street via Dudley	Minority
15	Kane Square—Ruggles Station	Minority
16	Forest Hills Station—UMASS Campus via JFK and South Bay	Minority
17	Fields Corner—Andrew Station via Uphams Corner	Minority
18★★	Ashmont Station—Andrew Station	Minority
19	Fields Corner Station—Kenmore Station	Minority
21	Ashmont Station—Forest Hills Station	Minority
22	Ashmont Station—Ruggles via Jackson Square Station	Minority
23	Ashmont Station—Ruggles Station via Washington	Minority
24★	Wakefield Avenue/Truman Parkway—Mattapan Station	Minority
26	Ashmont Station/Norfolk Street Loop via Norfolk	Minority
27	Mattapan Station—Ashmont Station	Minority
28	Mattapan Station—Ruggles via Dudley	Minority
29	Mattapan Square—Jackson Square Station	Minority
30	Mattapan—Forest Hills Station via Roslindale Square	Minority
31	Mattapan Square—Forest Hills Station	Minority
32	Wolcott Square—Forest Hills Station via Cleary Square	Minority
33★	River and Milton Streets, Dedham—Mattapan Station	Minority
34	Dedham Line—Forest Hills Station via Washington	Minority
35	Dedham Mall—Forest Hills Station via Centre and Belgrade	Nonminority
36	VA Hospital West Roxbury—Forest Hills Station via Charles	Minority
37	Baker and Vermont Streets—Forest Hills Station	Nonminority
38	Wren Street—Forest Hills Station	Minority
39	Forest Hills Station—Back Bay Station	Minority
40★★	Georgetown—Forest Hills Station via Alwin Street	Minority
41	Center and Elliott Streets—JFK/UMass via Dudley	Minority

<b>Route</b>	<b>Route Name (from MBTA Database)</b>	<b>Classification</b>
42	Forest Hills—Dudley Square Terminal via Garage	Minority
43	Ruggles Station—Park and Tremont Streets	Minority
44	Jackson Square—Ruggles Station via Seaver Street	Minority
45	Franklin Park—Ruggles Station via Grove Hall	Minority
47	Central Square—Broadway Station	Nonminority
50	Cleary Square—Forest Hills Station	Minority
51	Reservoir Station—Forest Hills Station	Minority
52	Dedham Mall—Watertown via Oak Hill	Minority
55	Jersey and Queensbury—Park and Tremont Streets	Nonminority
57	Watertown Bus Yard—Kenmore Square	Nonminority
59	Needham Junction—Watertown Square	Minority
60	Chestnut Hill Mall—Kenmore Square	Minority
62	Bedford VA Hospital—Alewife Station via Lexington Center	Nonminority
64	Oak Square—Kendall/MIT Station via Union and Central	Nonminority
65	Brighton Center—Kenmore Square	Nonminority
66	Harvard Square—Dudley Square via Union Square, Allston	Minority
67	Turkey Hill—Alewife Station via Arlington Center	Nonminority
68	Harvard Square—Kendall Station	Minority
69	Harvard Square—Lechmere Station	Minority
70	North Waltham (Lakeview)—University Park via Central Square	Minority
71	Watertown Square—Harvard Station via Mount Auburn Street	Nonminority
72	Aberdeen Avenue and Mount Auburn—Bennett Street via Huron	Nonminority
73	Waverly Square—Harvard Station via Belmont	Nonminority
74	Belmont Center—Bennett Street Alley	Nonminority
75	Belmont Center—Bennett Alley via Huron Towers	Nonminority
76	Lincoln Labs—Alewife Station via Hanscom	Minority
77	Arlington Heights—Bennett Street Alley	Nonminority
78	Arlmont Village—Bennett Alley	Nonminority
79	Arlington Heights—Alewife Station	Nonminority
80	Arlington Center—Lechmere Station	Nonminority
83	Rindge Avenue—Central Square, Cambridge	Nonminority
84	Alewife Station—Alewife Station via Arlmont Loop	Nonminority
85	Spring Hill—Kendall Station	Nonminority
86	Sullivan Station—Cleveland Circle	Nonminority
87	Arlington Center—Lechmere Station	Nonminority
88★	Clarendon Hill—Lechmere Station via Highland Avenue	Nonminority
89	Clarendon Hill—Sullivan Station	Nonminority
90★	Davis Station—Wellington Station via Sullivan	Nonminority
91	Central Square, Cambridge—Sullivan Station	Nonminority
92	Assembly Square Mall—Franklin Street via Sullivan	Nonminority
93	Sullivan Station—Downtown Boston via Bunker Hill	Nonminority
94	Medford Square—Davis Square via West Medford	Nonminority
95	West Medford—Sullivan Station via Mystic Avenue	Minority

<b>Route</b>	<b>Route Name (from MBTA Database)</b>	<b>Classification</b>
96	Medford Square—Bennett Alley via Davis Square and George	Nonminority
97**	Malden Station—Wellington Station via Commercial Street	Minority
99	Boston Regional Medical Center (Upper Highland)—Wellington Station	Minority
100	Elm Street—Wellington Station via Fellsway	Minority
101	Malden Center Station—Sullivan Station via Winter Hill	Nonminority
104	Malden Center Station—Sullivan Station via Ferry	Minority
105**	Malden Station—Sullivan Station via Newland Street Housing	Minority
106	Lebanon Loop—Wellington Station via Malden Station	Minority
108	Linden Square—Wellington Station via Malden Station	Minority
109	Linden Square—Sullivan Station via Broadway	Minority
110	Wonderland Station—Wellington Station via Woodlawn	Minority
111	Woodlawn—Haymarket via Bellingham Square	Minority
112	Wellington—Wood Island via Mystic Mall	Minority
114*	Bellingham Square—Maverick Station	Minority
116*	Wonderland—Maverick via Revere Street	Minority
117*	Wonderland—Maverick via Beach Street	Minority
119	Northgate Shopping Center—Beachmont Station	Minority
120*	Orient Heights—Maverick Station via Jeffries Point and Waldemar	Minority
121*	Wood Island Station—Maverick Station via Lexington Street	Minority
131	Melrose Highland—Oak Grove Station via East Side	Nonminority
132	Redstone Shopping Plaza—Malden Station	Nonminority
134	North Woburn—Wellington Station via Riverside Avenue	Minority
136	Reading Depot—Malden Center Station	Nonminority
137	Reading Depot—Malden Center Station	Nonminority
170**	Oakpark—Dudley Station via Waltham and Back Bay	Minority
201*	Fields Corner Loop via Neponset Avenue	Minority
202*	Fields Corner Loop via Adams, Keystone and Puritan	Minority
210*	Quincy Center Station—Fields Corner Station	Minority
211	Quincy Center Station—Squantum via North Quincy Station	Minority
212*	Quincy Center Station—North Quincy Station	Minority
214*	Quincy Center—Germantown	Minority
215	Quincy Center—Ashmont Station via West Quincy	Minority
216*	Quincy Center—Hough's Neck	Minority
217*	Quincy Center—Ashmont Station	Minority
220*	Quincy Center—Hingham Square via Hingham Center	Nonminority
221*	Quincy Center—Fort Point via North Weymouth	Nonminority
222	Quincy Center—East Weymouth	Minority
225	Quincy Center—Weymouth Landing via Des Moines	Minority
230	Quincy Center—Montello Commuter Rail via Braintree	Minority
236**	Quincy Center—South Shore Plaza via Braintree Station	Minority
238	Quincy Center—Crawford Square via Holbrook/Randolph Station	Minority
240	Avon Square—Ashmont Station	Minority
245*	Quincy Center—Mattapan via Quarry Street and Edgehill Road	Minority

<b>Route</b>	<b>Route Name (from MBTA Database)</b>	<b>Classification</b>
325	Elm Street, Medford—Haymarket Station via Interstate 93	Nonminority
326	West Medford—Haymarket Station	Nonminority
350	Burlington (Chestnut Avenue)—Alewife Station	Minority
351**	Oak Park/Bedford Woods—Alewife via Mall Road	Minority
352	Burlington (Chestnut Avenue)—State Street, Boston	Nonminority
354	Woburn Line—State Street, Boston via Woburn Square	Nonminority
411*	Jack Satter House (Revere)—Malden Station	Minority
424*	Eastern Avenue/Essex Street—Haymarket Station	Minority
426*	Central Square, Lynn—Haymarket via Cliftondale Square	Nonminority
428*	Oaklandvale—Haymarket via Granada Highlands	Nonminority
429**	Northgate Shopping Center, Central Square, Lynn via Square 1 Mall	Minority
430*	Saugus Center—Malden Station	Minority
434*	Neptune Towers—Central Square	Minority
435*	Main Street, Peabody—Haymarket via Goodwin Circle	Minority
436*	Liberty Tree Mall—Central Square, Lynn via Euclid	Minority
439**	Nahant—Central Square, Lynn	Nonminority
441	Marblehead—Haymarket via Central Square and Paradise Road	Minority
442	Marblehead—Haymarket via Central Square and Humphrey Street	Minority
448*	Marblehead—Downtown Crossing Express via Paradise Road	Nonminority
449*	Marblehead—Downtown Crossing Express via Humphrey	Nonminority
450*	Salem Center—Haymarket Square via Western Avenue	Minority
451*	North Beverly—Salem Depot via Cabot Street	Nonminority
455*	Salem Depot—Wonderland via Central Square, Lynn	Minority
456*	Salem Depot—Central Square, Lynn via Highland Avenue	Minority
459*	Salem Depot—Downtown Crossing via Central Square, Lynn	Minority
465*	Danvers Square—Salem Depot via Liberty Tree Mall	Nonminority
501	Express: Brighton—Federal and Franklin Streets	Nonminority
502	Express: Watertown Square—Copley Square	Nonminority
503	Express: Brighton—Copley Square	Nonminority
504	Express: Watertown Square—Federal and Franklin Streets	Nonminority
505	Express: Waltham Center—Federal and Franklin Streets	Nonminority
553	Roberts—Federal and Franklin Streets	Nonminority
554	Waverly Square—Federal and Franklin Streets	Minority
556	Waltham Highlands—Federal and Franklin Streets	Nonminority
558	Riverside—Federal and Franklin Streets	Minority
701	CT1: Central Square, Cambridge—BU Medical Center	Nonminority
708	CT3: Beth Israel Deaconess—Andrew Station	Minority
747	CT2: Sullivan Station—Ruggles Station	Nonminority

\* This route was classified using a cluster analysis that combined survey responses for routes in close proximity to achieve a combined confidence level of 90 percent with a confidence interval of 10 percent (90/10 standards).

\*\* This route did not have enough valid survey responses to provide a confidence level of 90 percent with a confidence interval of 10 percent (90/10 standards), and also could not be reasonably clustered with another route to achieve this standard.

Source: MBTA 2015–17 Systemwide Passenger Survey.



**Table 6A-2  
Rapid Transit, Commuter Rail, and Boat Lines Minority Classification**

<b>Line</b>	<b>Classification</b>
<b>Rapid Transit—Heavy Rail</b>	
Red Line—Total	Nonminority
Red Line—Shared Trunk	Nonminority
Red Line—Ashmont Branch	Minority
Red Line—Braintree Branch	Nonminority
Blue Line	Minority
Orange Line	Minority
<b>Rapid Transit—Light Rail</b>	
Green Line—Total	Nonminority
Green Line—Shared Trunk	Nonminority
Green Line—B Branch	Nonminority
Green Line—C Branch	Nonminority
Green Line—D Branch	Nonminority
Green Line—E Branch	Nonminority
Mattapan (Red)	Minority
<b>Rapid Transit—Silver Line</b>	
SL1/SL2 Waterfront	Nonminority
SL4/SL5 Washington Street	Minority
<b>Commuter Rail</b>	
Fairmount	Minority
Fitchburg	Nonminority
Framingham/Worcester	Nonminority
Franklin	Nonminority
Greenbush	Nonminority
Haverhill/Reading	Nonminority
Lowell	Nonminority
Middleborough/Lakeville	Nonminority
Needham	Nonminority
Newburyport/Rockport	Nonminority
Plymouth/Kingston	Nonminority
Providence/Stoughton	Nonminority
<b>Commuter Boat</b>	
Charlestown Ferry	Nonminority
Hingham/Hull Ferry	Nonminority

**Table 6A-3  
MBTA Rapid Transit Station Minority Classification**

<b>Station</b>	<b>Classification</b>
<b>Transfer Stations</b>	
Ashmont—Red Line and Mattapan Line platforms	Minority
Downtown Crossing—Red Line and Orange Line platforms	Minority
Government Center—Blue Line and Green Line platforms	Minority
Haymarket—Orange Line and Green Line platforms	Minority
North Station—Orange Line and Green Line platforms	Nonminority
Park Street—Red Line and Green Line platforms	Nonminority
South Station—Red Line and Silver Line platforms	Nonminority
State—Orange Line and Blue Line platforms	Minority
<b>Red Line</b>	
Alewife	Nonminority
Davis	Nonminority
Porter	Nonminority
Harvard	Nonminority
Central	Nonminority
Kendall/MIT	Nonminority
Charles/MGH	Nonminority
Park Street—Red Line platform only	Nonminority
Downtown Crossing—Red Line platform only	Minority
South Station—Red Line platform only	Nonminority
Broadway	Nonminority
Andrew	Minority
JFK/UMass	Minority
Savin Hill	Nonminority
Fields Corner	Minority
Shawmut	Minority
Ashmont—Red Line platform	Minority
North Quincy	Minority
Wollaston	Nonminority
Quincy Center	Minority
Quincy Adams	Nonminority
Braintree	Nonminority
<b>Mattapan High-Speed Line</b>	
Ashmont—Mattapan Line platform only*	Minority
Cedar Grove*	Minority
Butler*	Minority
Milton*	Minority
Central Avenue*	Minority
Valley Road*	Minority
Capen Street*	Minority
Mattapan*	Minority

<b>Station</b>	<b>Classification</b>
<b>Orange Line</b>	
Oak Grove	Nonminority
Malden	Minority
Wellington	Minority
Assembly Square	Nonminority
Sullivan Square	Nonminority
Community College	Minority
North Station—Orange Line platform only	Nonminority
Haymarket—Orange Line platform only	Minority
State—Orange Line platform only	Minority
Downtown Crossing—Orange Line platform only	Minority
Chinatown	Nonminority
Tufts Medical Center	Minority
Back Bay	Nonminority
Massachusetts Avenue	Nonminority
Ruggles	Minority
Roxbury Crossing	Minority
Jackson Square	Minority
Stony Brook	Nonminority
Green Street	Nonminority
Forest Hills	Nonminority
<b>Blue Line</b>	
Wonderland	Nonminority
Revere Beach	Minority
Beachmont	Nonminority
Suffolk Downs	Nonminority
Orient Heights	Nonminority
Wood Island	Minority
Airport	Minority
Maverick	Minority
Aquarium	Nonminority
State—Blue Line platform only	Minority
Government Center—Blue Line platform only	Minority
Bowdoin	Nonminority
<b>Green Line Shared Trunk</b>	
Lechmere	Nonminority
Science Park	Minority
North Station—Green Line platform only	Nonminority
Haymarket—Green Line platform only	Nonminority
Government Center—Green Line platform only	Minority
Park Street—Green Line platform only	Nonminority
Boylston	Nonminority
Arlington	Nonminority

<b>Station</b>	<b>Classification</b>
Copley	Nonminority
Hynes Convention Center	Nonminority
Kenmore	Nonminority
<b>Green Line–B</b>	
Blandford Street★	Nonminority
BU East★	Nonminority
BU Central★	Nonminority
BU West★	Nonminority
St. Paul Street★	Nonminority
Pleasant Street★	Nonminority
Babcock Street★	Minority
Packards Corner★	Minority
Harvard Avenue★	Nonminority
Griggs Street★	Nonminority
Allston Street★	Nonminority
Warren Street★	Nonminority
Washington Street	Nonminority
Sutherland Road★	Nonminority
Chiswick Road★	Nonminority
Chestnut Hill Avenue★	Nonminority
South Street★	Nonminority
Boston College★	Nonminority
<b>Green Line–C</b>	
St. Marys Street★	Nonminority
Hawes Street★	Nonminority
Kent Street★	Nonminority
St. Paul Street★	Nonminority
Coolidge Corner	Nonminority
Summit Avenue★	Nonminority
Brandon Hall★	Nonminority
Fairbanks Street★	Nonminority
Washington Square★	Nonminority
Tappan Street★	Nonminority
Dean Road★	Nonminority
Englewood Avenue★	Nonminority
Cleveland Circle	Nonminority
<b>Green Line–D</b>	
Fenway	Nonminority
Longwood	Nonminority
Brookline Village	Nonminority
Brookline Hills★	Nonminority
Beaconsfield★	Nonminority
Reservoir	Nonminority

<b>Station</b>	<b>Classification</b>
Chestnut Hill	Nonminority
Newton Centre	Nonminority
Newton Highlands	Nonminority
Eliot	Nonminority
Waban★	Nonminority
Woodland★	Nonminority
Riverside	Nonminority
<b>Green Line–E</b>	
Prudential	Nonminority
Symphony	Nonminority
Northeastern	Minority
Museum of Fine Arts	Nonminority
Longwood Medical	Nonminority
Brigham Circle	Nonminority
Fenwood Road★	Nonminority
Mission Park★	Nonminority
Riverway★	Nonminority
<b>Silver Line Waterfront and Washington Street</b>	
South Station—Silver Line platform only	Nonminority
Court House	Nonminority
World Trade Center	Nonminority
Dudley Station	Minority
Washington Street @ Melnea Cass Blvd★	Minority
Washington Street @ Lenox Street★	Minority
Washington Street @ Massachusetts Avenue★	Minority
Washington Street @ Worcester Street	Nonminority
Washington Street @ E Newton Street★	Minority
Washington Street @ W Newton Street★	Minority
Washington Street @ Union Park★	Minority
Washington Street @ E Berkeley Street★	Minority
Washington Street @ Herald Street★	Minority

★ This station was classified using a cluster analysis that combined survey responses for stations in close proximity to achieve a combined confidence level of 90 percent with a confidence interval of 10 percent (90/10 standards).

Source: MBTA 2015–17 Systemwide Passenger Survey.

**Table 6A-4  
Commuter Rail Station Minority Classification**

<b>Station</b>	<b>Classification</b>
<b>Multiline Stations</b>	
North Station—passengers on all lines	Nonminority
South Station—passengers on all lines	Nonminority
Back Bay—passengers on all lines	Nonminority
Ruggles—passengers on all lines	Nonminority
JFK/UMass—passengers on all lines	Nonminority
Quincy Center—passengers on all lines	Nonminority
Braintree—passengers on all lines	Nonminority
Hyde Park—passengers on all lines	Nonminority
Readville—passengers on all lines	Nonminority
<b>Newburyport/Rockport</b>	
Rockport	Nonminority
Gloucester★	Nonminority
West Gloucester★	Nonminority
Manchester	Nonminority
Beverly Farms	Nonminority
Prides Crossing	Nonminority
Montserrat	Nonminority
Newburyport	Nonminority
Rowley	Nonminority
Ipswich	Nonminority
Hamilton/Wenham	Nonminority
North Beverly	Nonminority
Beverly	Nonminority
Salem	Nonminority
Swampscott	Nonminority
Lynn	Nonminority
River Works	Nonminority
Chelsea	Nonminority
North Station—Newburyport/Rockport passengers only	Nonminority
<b>Haverhill</b>	
Haverhill	Nonminority
Bradford	Nonminority
Lawrence	Nonminority
Andover	Nonminority
Ballardvale	Nonminority
North Wilmington★	Nonminority
Reading	Nonminority
Wakefield	Nonminority
Greenwood	Nonminority
Melrose Highlands	Nonminority
Melrose/Cedar Park	Nonminority

<b>Station</b>	<b>Classification</b>
Wyoming Hill	Nonminority
Malden Center	Nonminority
North Station—Haverhill passengers only	Nonminority
<b>Lowell</b>	
Lowell	Nonminority
North Billerica	Nonminority
Wilmington★	Nonminority
Anderson/Woburn	Nonminority
Mishawum	Nonminority
Winchester Center	Nonminority
Wedgemere	Nonminority
West Medford	Nonminority
North Station—Lowell passengers only	Nonminority
<b>Fitchburg</b>	
Wachusett	Nonminority
Fitchburg★	Nonminority
North Leominster★	Nonminority
Shirley	Nonminority
Ayer	Nonminority
Littleton/Route 495	Nonminority
South Acton	Nonminority
West Concord	Nonminority
Concord	Nonminority
Lincoln	Nonminority
Silver Hill★	Nonminority
Hastings★	Nonminority
Kendal Green★	Nonminority
Brandeis/Roberts	Nonminority
Waltham	Nonminority
Waverley★	Nonminority
Belmont★	Nonminority
Porter Square	Nonminority
North Station—Fitchburg passengers only	Nonminority
<b>Framingham/Worcester</b>	
Worcester	Nonminority
Grafton★	Nonminority
Westborough★	Nonminority
Southborough	Nonminority
Ashland	Nonminority
Framingham	Nonminority
West Natick	Nonminority
Natick	Nonminority
Wellesley Square	Nonminority

<b>Station</b>	<b>Classification</b>
Wellesley Hills★	Nonminority
Wellesley Farms★	Nonminority
Auburndale	Nonminority
West Newton★	Nonminority
Newtonville★	Nonminority
Lansdowne	Nonminority
Back Bay—Framingham/Worcester passengers only	Nonminority
South Station—Framingham/Worcester passengers only	Nonminority
<b>Needham</b>	
Needham Heights	Nonminority
Needham Center	Nonminority
Needham Junction	Nonminority
Hersey	Nonminority
West Roxbury	Nonminority
Highland	Nonminority
Bellevue	Nonminority
Roslindale Village	Nonminority
Forest Hills	Nonminority
Ruggles—Needham passengers only	Nonminority
Back Bay—Needham passengers only	Nonminority
South Station—Needham passengers only	Nonminority
<b>Franklin</b>	
Forge Park/495	Nonminority
Franklin	Nonminority
Norfolk	Nonminority
Walpole	Nonminority
Plimptonville	Nonminority
Windsor Gardens	Minority
Norwood Central	Nonminority
Norwood Depot	Nonminority
Islington★	Nonminority
Dedham Corp. Center	Nonminority
Endicott★	Nonminority
Readville★	Nonminority
Hyde Park★	Nonminority
Ruggles—Franklin passengers only	Nonminority
Back Bay—Franklin passengers only	Nonminority
<b>Providence/Stoughton</b>	
South Attleboro	Nonminority
Attleboro	Nonminority
Mansfield	Nonminority
Sharon	Nonminority
Stoughton	Nonminority



<b>Station</b>	<b>Classification</b>
Canton Center	Nonminority
Canton Junction	Nonminority
Route 128	Nonminority
Hyde Park★	Nonminority
Ruggles—Providence/Stoughton passengers only	Nonminority
Back Bay—Providence/Stoughton passengers only	Nonminority
South Station—Providence/Stoughton passengers only	Nonminority
<b>Fairmount</b>	
Readville★	Nonminority
Fairmount★	Nonminority
Morton Street★	Minority
Talbot Ave★	Minority
Four Corners★	Minority
Uphams Corner★	Minority
Newmarket★	Minority
South Station—Fairmount passengers only	Minority
<b>Middleborough</b>	
Middleboro/Lakeville	Nonminority
Bridgewater★	Nonminority
Campello★	Nonminority
Brockton★	Minority
Montello★	Minority
Holbrook/Randolph	Nonminority
Braintree★	Nonminority
Quincy Center★	Nonminority
JFK/UMass★	Nonminority
South Station—Middleboro/Lakeville passengers only	Nonminority
<b>Kingston/Plymouth</b>	
Plymouth	Nonminority
Kingston	Nonminority
Halifax	Nonminority
Hanson	Nonminority
Whitman	Nonminority
Abington	Nonminority
South Weymouth	Nonminority
Braintree★	Nonminority
JFK/UMass★	Nonminority
South Station—Plymouth/Kingston passengers only	Nonminority
<b>Greenbush</b>	
Greenbush	Nonminority
North Scituate	Nonminority
Cohasset	Nonminority
Nantasket Junction★	Nonminority

Station	Classification
West Hingham*	Nonminority
East Weymouth*	Nonminority
Weymouth Landing/East Braintree*	Nonminority
Quincy Center*	Nonminority
JFK/UMass*	Nonminority
South Station—Greenbush passengers only	Nonminority

\* This station was classified using a cluster analysis that combined survey responses for stations in close proximity or passengers who use the same station to access multiple lines in order to achieve a combined confidence level of 90 percent with a confidence interval of 10 percent (90/10 standards).

Source: MBTA 2015–17 Systemwide Passenger Survey.

The classifications shown in Table 6A-5 are based on the results of the Rhode Island Department of Transportation (RIDOT) 2017 commuter rail passenger survey.

**Table 6A-5  
Rhode Island Commuter Rail Station Classification**

Line	Classification
<b>Commuter Rail—Providence/Stoughton</b>	
Wickford Junction	Nonminority
T.F. Green	Nonminority
Providence	Minority

Source: RIDOT 2017 on-board passenger survey data.

The classifications shown in Table 6A-6 are derived from US Census data.

**Table 6A-6  
Population Data Classification**

Line	Classification
<b>Silver Line SL3—Chelsea</b>	
Chelsea	Minority
Bellingham Square	Minority
Box District	Minority
Eastern Avenue	Minority
Airport	Minority
<b>Commuter Rail—Framingham/Worcester</b>	
Boston Landing	Minority
<b>Commuter Rail—Fairmount</b>	
Blue Hill Avenue	Minority

Source: 2010 Census.

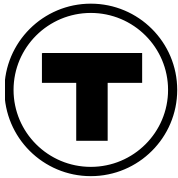


# APPENDIX 6B

## MBTA DISPARATE IMPACT AND DISPROPORTIONATE BURDEN POLICY



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# Massachusetts Bay Transportation Authority

## POLICY/PROCEDURE

<p><b><u>SUBJECT:</u></b> Equity Analysis for Major Service and Fare Changes</p>	<p><b><u>DATE OF ISSUE:</u></b>  January 30, 2017</p>	<p><b><u>APPROVED BY:</u></b> Signature on Original Brian Shortsleeve, Acting General Manager</p>
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## Disparate Impact/Disproportionate Burden (DI/DB) Policy

### Requirement

The Federal Transit Administration’s (FTA) Title VI Circular 4702.1B, issued in October 2012, under the authority of Title VI of the Civil Rights Act of 1964 (Title VI), directs transit providers to study proposed major service changes and all fare changes for possible disparities in impacts on minority and low-income riders/communities.

This requirement is part of the Massachusetts Bay Transportation Authority’s (MBTA) Title VI assurance that no person shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance. 42 U.S.C. § 2000d et seq., and the Civil Rights Restoration Act of 1987 (P.L. 100.259).

### Purpose

This policy satisfies FTA’s requirement under Title VI Circular 4702.1B, chapter IV, section 7, to evaluate, prior to implementation, any and all service changes that exceed the MBTA’s major service change threshold, as well as all fare changes, to determine whether those changes may have a discriminatory impact based on the finding of an adverse effect linked to race, color, or national origin, and/or a disproportionate burden, based on the finding of an adverse effect linked to minority or low-income status. All FTA requirements for conducting equity analyses are listed in Chapter IV, Section 7 of C4702.1B, and are addressed within this policy, including the definition of Major Service Change, Adverse Effects, Disparate Impact, and Disproportionate Burden. Explanations for all relevant terms and concepts related to this policy are provided in the Definitions section, below.

It is important to note that the unique nature of transit fare and service changes and the data used in given instances - - for example the appropriate population or ridership data -- will vary in order to ensure statistical reliability and significance. For this reason, MBTA exercises the discretion, as needed, to consult with FTA representatives for technical assistance. FTA’s

<p><i>Policy Title</i>  <b>Disparate Impact/ Disproportionate Burden</b></p>	<p><i>Supersedes</i>  <b>DI/DB Policy of May 14, 2014</b></p>	<p><i>Page Number</i>  <b>1 of 6</b></p>
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guidance recognizes that there must be flexibility in the selection of data for analysis, as “one size does not fit all” circumstances of possible transit fare and service changes. The guidance is further structured to ensure that a combination of timely and reasonable analyses, vetted through public input and Board approval, will ultimately result in equitable decision-making.

## Scope

The requirement to analyze service and fare changes at the MBTA applies to proposed changes to the Authority’s fixed-route modes; these analyses are not required for demand-response modes, including paratransit.

## Service Equity Analysis

### Major Service Change Policy

Per FTA’s Title VI Circular 4702.1B, the MBTA is required to evaluate the impacts on minority and/or low-income populations of proposed “major” service changes to the Authority’s fixed-route services. Whether a proposed service change will be considered “major” depends on whether the proposal meets one or more of the following conditions:

#### *Major Service Change at the Modal Level –*

- A change in Revenue Vehicle Hours (RVH) per week of at least 10% by mode.

#### *Major Service Change at the Route-Level –*

- For all routes, a change in route length of at least 25% or 3 miles; or  
For routes with at least 80 RVH per week, a change in RVH per week of at least 25%.

Note: Once a major service change is triggered by either the modal or route-level definition described above, the equity analysis must consider all concurrently proposed changes in the aggregate.

For the purposes of this policy:

- The MBTA’s fixed-route modes consist of: fixed-route bus (including electric trolley buses), heavy rail (Red Line, Orange Line, Blue Line), light rail (Green Line, Mattapan Trolley), commuter rail, and ferry.
- The MBTA’s non-bus routes are identified as each commuter rail line, each heavy rail or light rail line and each ferry line.
- Supplemental service that adds trips along pre-existing transit routes (e.g. school trips, weekend variations) will be counted as part of the parent route.

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- The complete elimination of existing routes or addition of new routes, by definition, constitutes major service changes.
- Changes in RVH and/or route length produced by quarterly service adjustments will be categorized under one of two labels: (1) Summer Quarter or (2) All Other Quarters. In determining whether these changes qualify as “major” under this policy, changes to Summer Quarter service will be compared to the previous Summer Quarter’s service and changes to any other quarter will be compared to the most recent non-Summer quarter’s service (fall is compared to spring, winter is compared to fall, and spring is compared to winter).
- Change in route length includes changes in alignment.
- Changes to RVH and/or route length will be analyzed as a percentage change and as an absolute change.
- Making a service change to more than 25% or 3 miles of a primary variation’s length would trigger the “major service change” designation.
- Making a service change to more than 25% or 3 miles of the combined segments of all variants (counting overlapping segments only once) would trigger the “major service change” designation.

Definition of Adverse Effects

The MBTA defines adverse effects of service changes as:

- For routes with at least 80 revenue vehicle hours per week, an increase or decrease in the amount of service scheduled, by route and by mode (as measured by changes to weekly RVH)
- An increase or decrease in the access to service, by route (as measured by changes to route length, in miles)

For the purposes of evaluating the degree of adverse impacts resulting from major service change proposals, the MBTA will measure and compare the extent of the loss or the gain among minority and nonminority populations and among low-income and non-low-income populations when conducting the equity analysis.

Disparate Impact/Disproportionate Burden Policy for Service Changes

The MBTA’s threshold for determining when adverse effects of major service changes may result in disparate impacts on minority and/or disproportionate burdens on low-income populations is 20%. If the ratio of the impact on minority to non-minority populations or low-income to non-low-income populations is more than 1.20 (or 20%), then the proposed change would be determined to pose a potential disparate impact or disproportionate burden.

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Upon finding a potential disparate impact on minority populations from a proposed major service change, the MBTA will analyze alternatives/revisions to the proposed change in order to avoid, minimize, or mitigate the potential adverse effects from the change. Any proposed alternative would also be subject to a service equity analysis. The MBTA will implement any proposal in accordance with then current FTA guidance.

When potential disparate impacts are identified, the MBTA will provide a meaningful opportunity for public comment on any proposed mitigation measures, including the less discriminatory alternatives that may be available.

Upon finding a potential disproportionate burden on low-income populations from a proposed major service change, the MBTA may take steps to avoid, minimize, or mitigate these impacts, where practicable, and will describe alternatives available to the low-income passengers affected by the service changes.

### **Fare Equity Analysis**

For all fare changes, the MBTA will compare the percentage change in the average fare for minority and overall riders and for low-income and overall riders. For fare-type changes across all modes, the MBTA will assess whether minority and low-income customers are more likely to use the affected fare type or media than overall riders. Any or all proposed fare changes will be considered in the aggregate and results evaluated using the fare DI/DB threshold, below.

#### Disparate Impact/Disproportionate Burden Policy for Fare Changes

The MBTA's threshold for determining when fare changes may result in disparate impacts or disproportionate burdens on minority or low-income populations, respectively, is 10%.

Upon finding a potential disparate impact on minority populations from a proposed fare change, the MBTA will analyze alternatives/revisions to the proposed change that meet the same goals of the original proposal. Any proposed alternative fare change would be subject to a fare equity analysis. The MBTA will implement any proposal in accordance with then current FTA guidance.

Where potential disparate impacts are identified, the MBTA will provide a meaningful opportunity for public comment on any proposed mitigation measures, including any less discriminatory alternatives that may be available.

Upon finding a potential disproportionate burden on low-income populations from a proposed fare change, the MBTA may take steps to avoid, minimize, or mitigate these impacts, where practicable.

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## Definitions

(Note: These definitions are drawn from a broader set of definitions provided by the FTA in its Title VI Circular 4702.1B)

- Demand response system: Any non-fixed route system of transporting individuals that requires advanced scheduling including services provided by public entities, non-profits, and private providers. An advance request for service is a key characteristic of demand response service.
- Discrimination: refers to any action or inaction, whether intentional or unintentional, in any program or activity of a Federal-aid recipient, subrecipient, or contractor that results in disparate treatment, disparate impact, or perpetuating the effects of prior discrimination based on race, color, or national origin.
- Disparate Impact: refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.
- Disproportionate Burden: refers to a neutral policy or practice that disproportionately affects, whether by benefit or burden, low-income populations more than non-low-income populations, related to a major service change or fare modification proposal. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.
- Disparate Treatment: refers to actions that result in circumstances where similarly situated persons are intentionally treated differently than others because of their race, color, or national origin.
- Fixed Route: refers to public transportation service provided in vehicles operated along pre-determined routes according to a fixed schedule.
- Low-Income Household: those households with income less than 60 percent of the median household income of the MBTA service area.
- Low-Income Census Tract: one in which the median household income is less than 60% of the median household income for the MBTA service area (\$43,415 in 2015, and subject to annual modification).
- Low-Income Population: any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed MBTA program, policy, or activity.
- Minority Individual: one who identifies as belonging in any one or more of the following US census categories: American Indian and Alaska Native; Asian; Black or African American; Hispanic or Latino (of any race); Native Hawaiian or Other Pacific Islander.

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- **Minority Census Tracts:** one in which the minority percentage exceeds the systemwide average (26.19% in 2015, and subject to annual modification).
- **Minority Population:** any readily identifiable group of minority persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed MBTA program, policy, or activity.
- **Revenue Vehicle Hours (per week):** the total number of hours per week in which transit vehicles operate in revenue service.
- **Route Length:** the physical length of a transit route, as measured in miles.

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# APPENDIX 6C

## DETAILED RESULTS OF MBTA SERVICE MONITORING



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# Detailed Results of MBTA Service Monitoring

Through its service monitoring program, the Massachusetts Bay Transportation Authority (MBTA) analyzed the service it provides using 90 different metrics. The MBTA found that 81 of those metrics showed no disparate impact. The details of those analyses are provided in this appendix. There are also some analyses which either do not apply or for which the MBTA does not have sufficient data, and those analyses are also discussed below.

## SERVICE STANDARDS (FTA C 4702.1B, IV-3.a.(2).(c))

### Vehicle Load (FTA C 4702.1B, IV-4.a.(1))

#### *Bus*

The MBTA uses its standards for bus passenger comfort to assess bus vehicle load (see Appendix 5A, pages 25-27). First, for each bus route, the number of passenger hours experienced in comfortable conditions was divided by the total number of passenger hours, yielding an average comfort percentage for each route. Second, the route-level comfort percentages were averaged to calculate a systemwide average bus comfort level. On weekdays, the systemwide average was 96.7 percent. Third, the number of minority bus routes that exceeded the average was counted, and the number of nonminority routes that exceeded the average was counted. Table 6C-1 shows that 72 out of 103 minority-classified routes (69.9 percent) performed better than average and 27 out of 63 nonminority-classified routes (42.9 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 1.63. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-1  
Bus Vehicle Load—Weekday**

Route Classification	Number of Routes	Number of Routes Performing Above Average	Percentage of Routes Performing Above Average
Minority	103	72	69.9%
Nonminority	63	27	42.9%
Ratio of minority to nonminority			1.63
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between September 2 and December 22, 2018, excluding holidays.

On Saturdays, the systemwide average bus comfort level was 99.6 percent. Table 6C-2 shows that 65 out of 83 minority-classified routes (78.3 percent) performed better than average and 33 out of 37 nonminority-classified routes

(89.2 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.88. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-2  
Bus Vehicle Load—Saturday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	83	65	78.3%
Nonminority	37	33	89.2%
Ratio of minority to nonminority			0.88
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between September 2 and December 22, 2018.

On Sundays, the systemwide average bus comfort level was 99.5 percent. Table 6C-3 shows that 54 out of 68 minority-classified routes (79.4 percent) performed better than average and 24 out of 27 nonminority-classified routes (88.9 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.89. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-3  
Bus Vehicle Load—Sunday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	68	54	79.4%
Nonminority	27	24	88.9%
Ratio of minority to nonminority			0.89
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between September 2 and December 22, 2018.

**Heavy and Light Rail**

At this time, the MBTA is unable to assess passenger comfort adherence between minority-classified heavy and light rail lines and nonminority-classified heavy and light rail lines. The MBTA is limited in its ability to estimate passenger loads on board heavy and light rail vehicles because very few vehicles are currently equipped with automatic passenger counters (APCs). New APC-equipped vehicles have just begun to enter service on the Green and Orange Lines, and new APC-equipped Red Line vehicles are currently expected to enter

service starting in late 2020. The MBTA will assess passenger comfort adherence once sufficient quantities of APC-equipped vehicles are in service on all heavy and light rail lines and resulting data has been compiled for a full fiscal year.

**Commuter Rail**

At this time, the MBTA is unable to assess directly passenger comfort adherence between minority-classified commuter rail lines and nonminority-classified commuter rail lines because very few commuter rail vehicles are equipped with functioning APCs. While the MBTA works to equip more commuter rail coaches with APCs, the MBTA conducted a supplemental assessment of vehicle load based on the percentage of trainsets on each line that had the required number of seats based on expected loads, as mandated by the contract with its commuter rail operator. To assess adherence to the required number of seats in the contract between minority-classified lines and nonminority-classified lines, the MBTA compared the performance of each line to the overall performance of the system.

On weekdays, the systemwide percentage of trainsets with the required number of seats was 98.2 percent.<sup>1</sup> Table 6C-4 shows that the one minority-classified line performed above the systemwide average and five out of 13 nonminority-classified lines (38.5 percent) performed above the systemwide average. The ratio of above-average minority lines to above-average nonminority lines is 2.60. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-4  
Commuter Rail Vehicle Load—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	13	5	38.5%
Ratio of minority to nonminority			2.60
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between July 1, 2018, and June 30, 2019.

On Saturdays, every trainset had the required number of seats, and so the systemwide percentage of trainsets with the required number of seats was 100 percent. Table 6C-5 shows that all trainsets on the one minority-classified line and all trainsets on the 12 nonminority-classified lines performed at the average.

<sup>1</sup> The systemwide average was calculated by taking the average of each route’s performance.

The ratio of average minority lines to average nonminority lines is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-5  
Commuter Rail Vehicle Load—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing at Average</b>	<b>Percentage of Lines Performing at Average</b>
Minority	1	1	100.0%
Nonminority	12	12	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between July 1, 2018, and June 30, 2019.

On Sundays, every trainset had the required number of seats, and so the systemwide percentage of trainsets with the required number of seats was 100 percent. Table 6C-6 shows that all trainsets on the one minority-classified line and all trainsets on the 11 nonminority-classified lines performed at the average. The ratio of average minority lines to average nonminority lines is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-6  
Commuter Rail Vehicle Load—Sunday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing at Average</b>	<b>Percentage of Lines Performing at Average</b>
Minority	1	1	100.0%
Nonminority	11	11	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between July 1, 2018, and June 30, 2019.

**Vehicle Headway (FTA C 4702.1B, IV-4.a.(2))**

**Bus**

The MBTA uses its standards for bus frequency to assess scheduled bus vehicle headway (see Appendix 5A, pages 13-15).<sup>2</sup> To calculate how often each bus route met the frequency standard on Saturdays, the number of passengers who rode buses that were meeting the frequency standard was divided by the total number of passengers riding the route. These individual route percentages were averaged to yield a systemwide average of 74.6 percent. Next, the performance

<sup>2</sup> As stated in the Service Delivery Policy, frequency of service standards are measured using either headway (minutes between trips) or frequency (trips per time period).



of each route was compared to the average. Finally, the number of minority bus routes that exceeded the average was counted, and the number of nonminority routes that exceeded the average was counted. Table 6C-7 shows that 47 out of 73 minority-classified routes (64.4 percent) performed better than average and 31 out of 39 nonminority-classified routes (79.5 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.81. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-7  
Bus Vehicle Headway—Saturday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	73	47	64.4%
Nonminority	39	31	79.5%
Ratio of minority to nonminority			0.81
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between September 2 and December 22, 2018.

On Sundays, the systemwide average for bus vehicle headway was 64.5 percent. Table 6C-8 shows that 40 out of 63 minority-classified routes (63.5 percent) performed better than average and 14 out of 29 nonminority-classified routes (48.3 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 1.32. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-8  
Bus Vehicle Headway—Sunday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	63	40	63.5%
Nonminority	29	14	48.3%
Ratio of minority to nonminority			1.32
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between September 2 and December 22, 2018.

***Heavy and Light Rail***

The MBTA uses its standards for rapid transit frequency to assess scheduled heavy and light rail vehicle headway (see Appendix 5A, pages 13-15). Following

the Service Delivery Policy, time periods were weighted by ridership in order to prioritize times when more passengers were riding. On weekdays, the ridership-weighted systemwide average was 98.6 percent. Table 6C-9 shows that all three minority-classified lines performed better than average and four out of five nonminority-classified lines (80.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 1.25. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-9  
Heavy and Light Rail Vehicle Headway—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	3	3	100.0%
Nonminority	5	4	80.0%
Ratio of minority to nonminority			1.25
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between September 2 and December 22, 2018.

On Sundays, the systemwide average for heavy and light rail vehicle headway was 81.3 percent. (The MBTA does not weight Sunday frequency by ridership because the Service Delivery Policy does not distinguish between peak and off-peak times on Sundays.) Table 6C-10 shows that two out of three minority-classified lines (66.7 percent) performed better than average and four out of five nonminority-classified lines (80.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 0.83. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-10  
Heavy and Light Rail Vehicle Headway—Sunday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	3	2	66.7%
Nonminority	5	4	80.0%
Ratio of minority to nonminority			0.83
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between September 2 and December 22, 2018.

**Commuter Rail**

The MBTA uses its standards for commuter rail frequency to assess scheduled commuter rail vehicle headway (see Appendix 5A, page 14). Following the Service Delivery Policy, time periods were weighted by ridership in order to prioritize times when more passengers were riding. On weekdays, the ridership-weighted systemwide average was 99.9 percent.<sup>3</sup> Table 6C-11 shows that on weekdays the one minority-classified line performed better than average and 10 out of 11 nonminority-classified lines (90.9 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 1.10. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-11  
Commuter Rail Vehicle Headway—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	11	10	90.9%
Ratio of minority to nonminority			1.10
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between September 2 and December 22, 2018.

On Saturdays, the average was 87.5 percent. Table 6C-12 shows that on Saturdays the one minority-classified line performed better than average and 9 out of 11 nonminority-classified lines (81.8 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 1.22. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-12  
Commuter Rail Vehicle Headway—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	11	9	81.8%
Ratio of minority to nonminority			1.22
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between September 2 and December 22, 2018.

<sup>3</sup> The systemwide average was calculated by taking the average of each route’s performance.

The MBTA has no service frequency standard for commuter rail on Sundays.

**On-Time Performance (FTA C 4702.1B, IV-4.a.(3))**

**Bus**

The MBTA uses its standards for bus reliability to assess bus on-time performance (see Appendix 5A, pages 20-22). First, for each bus route, the timepoints at which a vehicle was on time were summed for all trips on that route and divided by the total number of timepoints across all trips on that route. This calculation yielded an average on-time performance for each route. Second, the route averages were averaged to calculate a systemwide average on-time performance. On weekdays, this systemwide average was 63.4 percent. Third, the number of minority bus routes that exceeded the average was counted, and the number of nonminority routes that exceeded the average was counted. Table 6C-13 shows that 47 out of 99 minority-classified routes (47.5 percent) performed better than average and 35 out of 69 nonminority-classified routes (50.7 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.94. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-13  
Bus On-Time Performance—Weekday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	99	47	47.5%
Nonminority	69	35	50.7%
Ratio of minority to nonminority			0.94
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between July 1, 2018, and June 30, 2019.

On Saturdays, the systemwide average bus on-time performance was 65.4 percent. Table 6C-14 shows that 45 out of 80 minority-classified routes (56.3 percent) performed better than average and 25 out of 44 nonminority-classified routes (56.8 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.99. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-14**  
**Bus On-Time Performance—Saturday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	80	45	56.3%
Nonminority	44	25	56.8%
Ratio of minority to nonminority			0.99
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between July 1, 2018, and June 30, 2019.

On Sundays, the systemwide average bus on-time performance was 64.8 percent. Table 6C-15 shows that 40 out of 68 minority-classified routes (58.8 percent) performed better than average and 18 out of 31 nonminority-classified routes (58.1 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 1.01. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-15**  
**Bus On-Time Performance—Sunday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	68	40	58.8%
Nonminority	31	18	58.1%
Ratio of minority to nonminority			1.01
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between July 1, 2018, and June 30, 2019.

### ***Heavy and Light Rail***

The MBTA uses its standards for heavy and light rail reliability to assess on-time performance (see Appendix 5A, page 23). The on-time performance of each line was calculated, the averages by line were averaged to yield a systemwide average, and then the on-time performance of each minority line and each nonminority line was compared to the average. On weekdays, the systemwide average on-time performance was 84.3 percent. Table 6C-16 shows that both of the minority-classified lines performed better than average and one out of five nonminority-classified lines (20.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 5.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-16  
Heavy and Light Rail On-Time Performance—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	2	2	100.0%
Nonminority	5	1	20.0%
Ratio of minority to nonminority			5.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between July 1, 2018, and June 30, 2019.

On Saturdays, the systemwide average heavy and light rail on-time performance was 82.8 percent. Table 6C-17 shows that both of the minority-classified lines performed better than average and one out of five nonminority-classified lines (20.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 5.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-17  
Heavy and Light Rail On-Time Performance—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	2	2	100.0%
Nonminority	5	1	20.0%
Ratio of minority to nonminority			5.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between July 1, 2018, and June 30, 2019.

On Sundays, the systemwide average heavy and light rail on-time performance was 84.6 percent. Table 6C-18 shows that both minority-classified lines performed better than average and one out of five nonminority-classified lines (20.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 5.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-18  
Heavy and Light Rail On-Time Performance—Sunday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	2	2	100.0%
Nonminority	5	1	20.0%
Ratio of minority to nonminority			5.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between July 1, 2018, and June 30, 2019.

### ***Commuter Rail***

The MBTA uses its standards for commuter rail reliability to assess on-time performance (see Appendix 5A, pages 23-24). The on-time performance of each line was calculated, the averages by line were averaged to yield a systemwide average, and then the on-time performance of each minority line and each nonminority line was compared to the average. On weekdays, the systemwide average on-time performance was 89.8 percent. Table 6C-19 shows that the one minority-classified line performed better than average and five out of 11 nonminority-classified lines (45.5 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 2.20. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-19  
Commuter Rail On-Time Performance—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	11	5	45.5%
Ratio of minority to nonminority			2.20
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays from July 1, 2018, to June 30, 2019.

On Saturdays, the systemwide average commuter rail on-time performance was 90.2 percent. Table 6C-20 shows that the one minority-classified line performed better than average and six out of 11 nonminority-classified lines (54.5 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 1.83. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-20  
Commuter Rail On-Time Performance—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	11	6	54.5%
Ratio of minority to nonminority			1.83
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between July 1, 2018, and June 30, 2019.

On Sundays, the systemwide average commuter rail on-time performance was 91.1 percent. Table 6C-21 shows that the one minority-classified line performed better than average and six out of 10 nonminority-classified lines (60.0 percent) performed better than average. The ratio of above-average minority lines to above-average nonminority lines is 1.67. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-21  
Commuter Rail On-Time Performance—Sunday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	1	1	100.0%
Nonminority	10	6	60.0%
Ratio of minority to nonminority			1.67
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between July 1, 2018, and June 30, 2019.

**Service Availability (FTA C 4702.1B, IV-4.a.(4))**

To monitor its base level of transit coverage, the MBTA measured the percentage of the population that lives no more than one-half mile from a bus stop, rapid transit station, commuter rail station, or boat dock in the municipalities of its core service area, excluding municipalities that are members of another regional transit authority (see Appendix 5A, pages 15-16).

Table 6C-22 shows that on weekdays 90.9 percent of the minority population has access to transit, while 74.5 percent of the nonminority population has access to transit, as defined by the MBTA’s base level of transit coverage standard. The ratio of the percentage of the minority population with access to transit to the



percentage of the nonminority population with access to transit is 1.22. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-22  
Service Availability—Weekday**

<b>Population</b>	<b>Total Population</b>	<b>Population with Access to MBTA Transit</b>	<b>Percentage of Population with Access to MBTA Transit</b>
Minority	781,258	709,775	90.9%
Nonminority	1,676,878	1,248,516	74.5%
Ratio of minority to nonminority			1.22
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The service data pertain to weekdays between March 17, 2019, and June 22, 2019. The demographic data are from the 2010 US Census.

Table 6C-23 shows that on Saturdays 88.6 percent of the minority population has access to transit, while 68.8 percent of the nonminority population has access to transit, as defined by the MBTA’s base level of transit coverage standard. The ratio of the percentage of the minority population with access to transit to the percentage of the nonminority population with access to transit is 1.29. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-23  
Service Availability—Saturday**

<b>Population</b>	<b>Total Population</b>	<b>Population with Access to MBTA Transit</b>	<b>Percentage of Population with Access to MBTA Transit</b>
Minority	781,258	691,871	88.6%
Nonminority	1,676,878	1,154,056	68.8%
Ratio of minority to nonminority			1.29
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The service data pertain to Saturdays between March 17, 2019, and June 22, 2019. The demographic data are from the 2010 US Census.

Table 6C-24 shows that on Sundays 84.7 percent of the minority population has access to transit, while 61.7 percent of the nonminority population has access to transit, as defined by the MBTA’s base level of transit coverage standard. The ratio of the percentage of the minority population with access to transit to the percentage of the nonminority population with access to transit is 1.37. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-24  
Service Availability—Sunday**

<b>Population</b>	<b>Total Population</b>	<b>Population with Access to MBTA Transit</b>	<b>Percentage of Population with Access to MBTA Transit</b>
Minority	781,258	661,343	84.7%
Nonminority	1,676,878	1,034,700	61.7%
Ratio of minority to nonminority			1.37
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The service data pertain to Sundays between March 17, 2019, and June 22, 2019. The demographic data are from the 2010 US Census.

**Span of Service**

**Bus**

The MBTA assessed each bus route for adherence to its standards for span of service (see Appendix 5A, pages 11-12). Table 6C-25 shows that on weekdays 83 out of 92 minority-classified routes (90.2 percent) met the standard and 58 out of 64 nonminority-classified routes (90.6 percent) met the standard. The ratio of minority routes that met the standard to nonminority routes that met the standard is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-25  
Bus Span of Service—Weekday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Meeting the Standard</b>	<b>Percentage of Routes Meeting the Standard</b>
Minority	92	83	90.2%
Nonminority	64	58	90.6%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA’s weekday transit schedule from September 2 to December 22, 2018.

Table 6C-26 shows that on Saturdays 65 out of 73 minority-classified routes (89.0 percent) met the standard and 33 out of 40 nonminority-classified routes (82.5 percent) met the standard. The ratio of minority routes that met the standard to nonminority routes that met the standard is 1.08. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-26  
Bus Span of Service—Saturday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Meeting the Standard</b>	<b>Percentage of Routes Meeting the Standard</b>
Minority	73	65	89.0%
Nonminority	40	33	82.5%
Ratio of minority to nonminority			1.08
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's Saturday transit schedule from September 2 to December 22, 2018.

Table 6C-27 shows that on Sundays 55 out of 62 minority-classified routes (88.7 percent) met the standard and 27 out of 30 nonminority-classified routes (90.0 percent) met the standard. The ratio of minority routes that met the standard to nonminority routes that met the standard is 0.99. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-27  
Bus Span of Service—Sunday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Meeting the Standard</b>	<b>Percentage of Routes Meeting the Standard</b>
Minority	62	55	88.7%
Nonminority	30	27	90.0%
Ratio of minority to nonminority			0.99
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's Sunday transit schedule from September 2 to December 22, 2018.

### ***Heavy and Light Rail***

The MBTA assessed each heavy and light rail line for adherence to its standards for span of service (see Appendix 5A, pages 11-12). Table 6C-28 shows that on weekdays all three minority-classified lines and all five nonminority-classified lines met the standard. The ratio of minority lines that met the standard to nonminority lines that met the standard is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-28  
Heavy and Light Rail Span of Service—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Meeting the Standard</b>	<b>Percentage of Lines Meeting the Standard</b>
Minority	3	3	100.0%
Nonminority	5	5	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's weekday transit schedule from September 2 to December 22, 2018.

Table 6C-29 shows that on Saturdays all three minority-classified lines and all five nonminority-classified lines met the standard. The ratio of minority lines that met the standard to nonminority lines that met the standard is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-29  
Heavy and Light Rail Span of Service—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Meeting the Standard</b>	<b>Percentage of Lines Meeting the Standard</b>
Minority	3	3	100.0%
Nonminority	5	5	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's Saturday transit schedule from September 2 to December 22, 2018.

Table 6C-30 shows that on Sundays all three minority-classified lines and all five nonminority-classified lines met the standard. The ratio of minority lines that met the standard to nonminority lines that met the standard is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-30  
Heavy and Light Rail Span of Service—Sunday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Meeting the Standard</b>	<b>Percentage of Lines Meeting the Standard</b>
Minority	3	3	100.0%
Nonminority	5	5	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's Sunday transit schedule from September 2 to December 22, 2018.

***Commuter Rail***

The MBTA assessed each commuter rail line for adherence to its standards for span of service (see Appendix 5A, pages 11-12). Table 6C-31 shows that on weekdays the one minority-classified line met the standard and all 11 nonminority-classified lines met the standard. The ratio of minority lines that met the standard to nonminority lines that met the standard is 1.00. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-31  
Commuter Rail Span of Service—Weekday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Meeting the Standard</b>	<b>Percentage of Lines Meeting the Standard</b>
Minority	1	1	100.0%
Nonminority	11	11	100.0%
Ratio of minority to nonminority			1.00
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's weekday transit schedule from September 2 to December 22, 2018.

Table 6C-32 shows that on Saturdays the one minority-classified line met the standard and five out of 11 nonminority-classified lines (45.5 percent) met the standard. The ratio of minority lines that met the standard to nonminority lines that met the standard is 2.20. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-32  
Commuter Rail Span of Service—Saturday**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Meeting the Standard</b>	<b>Percentage of Lines Meeting the Standard</b>
Minority	1	1	100.0%
Nonminority	11	5	45.5%
Ratio of minority to nonminority			2.20
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results are based on the MBTA's Saturday transit schedule from September 2 to December 22, 2018.

The MBTA has no standard for span of service for commuter rail on Sundays.

## **Platform Accessibility**

### ***Gated Rapid Transit Stations***

The MBTA measured the amount of time that platforms are accessible for all gated heavy rail, light rail, and Silver Line Waterfront stations. The systemwide average of station platform hours that were accessible was 92.7 percent.<sup>4</sup> This average includes stations that do not have elevators—and which therefore have platforms that are either accessible at all times or are never accessible—along with those that do have elevators. (The MBTA conducted a separate analysis only for stations that have elevators, and that analysis is shown in Chapter 6). Table 6C-33 shows that all 24 minority-classified stations performed better than average and 33 out of 37 nonminority-classified stations (89.2 percent) performed better than average. The ratio of above-average minority-classified stations to above-average nonminority-classified stations is 1.12. This ratio is greater than 0.80, so no disparate impact is found.

<sup>4</sup> The systemwide average was calculated by taking the average of each station's performance.

**Table 6C-33  
Platform Accessibility—Gated Rapid Transit Stations, including Those  
without Elevators**

<b>Station Classification</b>	<b>Number of Stations</b>	<b>Number of Stations Performing Above Average</b>	<b>Percentage of Stations Performing Above Average</b>
Minority	24	24	100.0%
Nonminority	37	33	89.2%
Ratio of minority to nonminority			1.12
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.

***Commuter Rail Stations***

Because most MBTA commuter rail stations are located at surface level and very few have elevators, the MBTA compared platform accessibility between minority and nonminority commuter rail stations by comparing the percentage of minority stations that are built to be accessible to the percentage of nonminority stations that are built to be accessible. Table 6C-34 shows that 10 out of 11 commuter rail stations (90.9 percent) that are classified minority are built to be accessible, and 97 of 129 commuter rail stations (75.2 percent) that are classified nonminority are built to be accessible. The ratio of the percentage of minority-classified stations built to be accessible to the percentage of nonminority-classified stations built to be accessible is 1.21. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-34  
Platform Accessibility—Commuter Rail Stations**

<b>Station Classification</b>	<b>Number of Stations</b>	<b>Number of Stations Built to be Accessible</b>	<b>Percentage of Stations Built to be Accessible</b>
Minority	11	10	90.9%
Nonminority	129	97	75.2%
Ratio of minority to nonminority			1.21
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: This information reflects commuter rail station accessibility as of June 30, 2019.

## **Vehicle Accessibility**

### ***Bus***

All MBTA buses are fully accessible, so no disparate impact analysis is needed. As part of operator inspections each day, ramps are cycled on each bus to ensure they are functional before leaving the garage.

### ***Heavy and Light Rail***

A comparison of vehicle accessibility between minority and nonminority-classified heavy and light rail lines is not applicable. Each of the three heavy rail lines (the Red, Blue, and Orange Lines) operates with dedicated equipment, so the equipment on one line is not interchangeable with equipment on any of the other lines. The Mattapan Line operates as a short, stand-alone, light-rail extension of the Red Line's Ashmont Branch and also operates with a dedicated fleet. While the Green Line is an extensive light rail system with four surface branches and a central subway portion, each branch is classified as nonminority. Therefore, there are no comparisons to be made between minority and nonminority-classified lines for vehicle accessibility.

### ***Commuter Rail***

At this time, the MBTA lacks the data to assess full commuter rail vehicle accessibility (as measured by the percentage of stations where the accessible bathroom-equipped coaches can line up at an accessible boarding location). The MBTA is currently working to develop tools to accurately collect this data and expects to have the data to conduct an analysis during the next reporting period.

## **Service Operated**

### ***Bus***

The MBTA aims to operate all of the service it schedules, so it measures the percent of scheduled service that is actually provided on each bus route to assess the amount of bus service operated (see Appendix 5A, page 24). On weekdays, 98.9 percent of scheduled bus service was operated.<sup>5</sup> Table 6C-35 shows that 65 out of 101 minority-classified routes (64.4 percent) performed better than average and 47 out of 70 nonminority-classified routes (67.1 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.96. This ratio is greater than 0.80, so no disparate impact is found.

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<sup>5</sup> The systemwide average was calculated by taking the average of each route's performance.



**Table 6C-35  
Bus Service Operated—Weekday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	101	65	64.4%
Nonminority	70	47	67.1%
Ratio of minority to nonminority			0.96
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to weekdays between July 1, 2017, and June 30, 2018. Data from state fiscal year (SFY) 2019 were not available because the method for collecting bus service operated data changed in the middle of SFY 2019, and data collected from the two new methods are still being compared.

On Saturdays, 98.8 percent of scheduled bus service was operated. Table 6C-36 shows that 62 out of 83 minority-classified routes (74.7 percent) performed better than average and 43 out of 52 nonminority-classified routes (82.7 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 0.90. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-36  
Bus Service Operated—Saturday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	83	62	74.7%
Nonminority	52	43	82.7%
Ratio of minority to nonminority			0.90
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Saturdays between July 1, 2017, and June 30, 2018. Data from SFY 2019 were not available because the method for collecting bus service operated data changed in the middle of SFY 2019, and data collected from the two new methods are still being compared.

On Sundays, 99.3 percent of scheduled bus service was operated. Table 6C-37 shows that 55 out of 69 minority-classified routes (79.7 percent) performed better than average and 26 out of 33 nonminority-classified routes (78.8 percent) performed better than average. The ratio of above-average minority routes to above-average nonminority routes is 1.01. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-37  
Bus Service Operated—Sunday**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	69	55	79.7%
Nonminority	33	26	78.8%
Ratio of minority to nonminority			1.01
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to Sundays between July 1, 2017, and June 30, 2018. Data from SFY 2019 were not available because the method for collecting bus service operated data changed in the middle of SFY 2019, and data collected from the two new methods are still being compared.

**Heavy and Light Rail**

The MBTA aims to operate all of the service it schedules, and so it measures the percent of scheduled service that is actually provided on each heavy and light rail line to assess the amount of heavy and light rail service operated (see Appendix 5A, page 24). The systemwide percentage of scheduled heavy and light rail service operated was 97.7 percent.<sup>6</sup> Table 6C-38 shows that both of the lines that are classified minority performed above the systemwide average and neither of the two lines that are classified nonminority performed above the systemwide average. The ratio of above-average minority routes to above-average nonminority routes results in division by zero, which is undefined. Although a ratio cannot be calculated, no disparate impact is found because both minority routes performed above average and both nonminority routes performed below average.<sup>7</sup>

<sup>6</sup> The systemwide average was calculated by taking the average of each line’s performance.

<sup>7</sup> One of the nonminority lines is the Red Line. The other is a combination of the Green Line, which is a nonminority line, and the Mattapan Line, which is a minority line. The data were provided for all light rail lines combined and could not be separated to parse Green Line and Mattapan Line performance. However, the Green Line represents 81 percent of the light rail trips scheduled, so taken together they were evaluated as one nonminority line.

**Table 6C-38  
Heavy and Light Rail Service Operated**

<b>Line Classification</b>	<b>Number of Lines</b>	<b>Number of Lines Performing Above Average</b>	<b>Percentage of Lines Performing Above Average</b>
Minority	2	2	100.0%
Nonminority	2	0	0%
Ratio of minority to nonminority			N/A*
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.  
 N/A = Not applicable.  
 \* This value is undefined.

**SERVICE POLICIES (FTA C 4702.1B, IV-3.a.(2).(c))**

**Distribution of Transit Amenities (FTA C 4702.1B, IV-4.b.(1))**

***Bus Shelter and Bench Placement***

**Shelter Placement**

According to the MBTA’s Bus Stop Design Guidelines, any bus stop that has more than 70 average daily boardings is automatically eligible for consideration for a shelter, any stop with between 25 and 69 average daily boardings may be considered for a shelter, and stops that have fewer than 25 average daily boardings are not eligible for a shelter. To assess the placement of shelters in minority areas compared to nonminority areas the MBTA conducted two analyses: one of stops with more than 70 average daily boardings, and another of stops with more than 25 average daily boardings.

The first analysis compared the percentage of minority-classified bus stops with more than 70 average daily boardings that have shelters to the percentage of nonminority-classified bus stops with more than 70 average daily boardings that have shelters. Table 6C-39 shows that 299 of the 686 bus stops (43.6 percent) that have more than 70 average daily boardings and are classified minority had shelters and 107 of the 308 bus stops (34.7 percent) that have more than 70 average daily boardings and are classified nonminority had shelters. The ratio of the percentage of minority bus stops with more than 70 average daily boardings that have a shelter to the percentage of nonminority bus stops with more than 70 average daily boardings that have a shelter is 1.25. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-39  
Shelter Placement—Bus Stops with More than 70 Average Daily Boardings**

<b>Stop Classification</b>	<b>Number of Stops</b>	<b>Number of Stops with Shelters</b>	<b>Percentage of Stops with Shelters</b>
Minority	686	299	43.6%
Nonminority	308	107	34.7%
Ratio of minority to nonminority			1.25
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The results reflect bus stop shelter locations as of fall 2019.

The second analysis compared the percentage of minority-classified bus stops with more than 25 average daily boardings that have shelters to the percentage of nonminority-classified bus stops with more than 25 average daily boardings that have shelters. Table 6C-40 shows that 376 of the 1,295 bus stops (29.0 percent) that have more than 25 average daily boardings and are classified minority had shelters and 166 of the 751 bus stops (22.1 percent) that have more than 25 average daily boardings and are classified nonminority had shelters. The ratio of the percentage of minority-classified bus stops with more than 25 average daily boardings that have a shelter to the percentage of nonminority-classified bus stops with more than 25 average daily boardings that have a shelter is 1.31. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-40  
Shelter Placement—Bus Stops with More than 25 Average Daily Boardings**

<b>Stop Classification</b>	<b>Number of Stops</b>	<b>Number of Stops with Shelters</b>	<b>Percentage of Stops with Shelters</b>
Minority	1,295	376	29.0%
Nonminority	751	166	22.1%
Ratio of minority to nonminority			1.31
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The results reflect bus stop shelter locations as of fall 2019.

**Bench Placement**

According to the MBTA’s Bus Stop Design Guidelines, any bus stop that has more than 50 average daily boardings and does not have a shelter should have a bench. To assess the placement of benches in minority areas compared to nonminority areas, the MBTA conducted two analyses: one of stops with no shelter and more than 50 average daily boardings, and another of all stops with no shelter.

The first analysis compared the percentage of minority-classified bus stops without a shelter and more than 50 average daily boardings that have benches to the percentage of nonminority-classified bus stops without a shelter and more than 50 average daily boardings that have benches. Table 6C-41 shows that 151 of the 549 bus stops (27.5 percent) without a shelter and more than 50 average daily boardings that are classified minority had benches and 95 of the 299 bus stops (31.8 percent) without a shelter and more than 50 average daily boardings that are classified nonminority had benches. The ratio of the percentage of minority-classified bus stops without a shelter and more than 50 average daily boardings that have a bench to the percentage of nonminority-classified bus stops without a shelter and more than 50 average daily boardings that have a bench is 0.87. This ratio is above 0.80, so no disparate impact is found.

**Table 6C-41  
Bench Placement—Bus Stops without a Shelter and More than 50 Average Daily Boardings**

Stop Classification	Number of Stops	Number of Stops with Benches	Percentage of Stops with Benches
Minority	549	151	27.5%
Nonminority	299	95	31.8%
Ratio of minority to nonminority			0.87
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results reflect bus stop bench locations as of May 2019.

The second analysis compared the percentage of all minority-classified bus stops without a shelter that have benches to the percentage of all nonminority-classified bus stops without a shelter that have benches. Table 6C-42 shows that 221 of the 2,739 bus stops (8.1 percent) without a shelter that are classified minority had benches and 245 of the 4,149 bus stops (5.9 percent) without a shelter that are classified nonminority had benches. The ratio of the percentage of minority-classified bus stops without a shelter that have a bench to the percentage of nonminority-classified bus stops without a shelter that have a bench is 1.37. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-42  
Bench Placement—All Bus Stops without a Shelter**

<b>Stop Classification</b>	<b>Number of Stops</b>	<b>Number of Stops with Benches</b>	<b>Percentage of Stops with Benches</b>
Minority	2,739	221	8.1%
Nonminority	4,149	245	5.9%
Ratio of minority to nonminority			1.37
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results reflect bus stop bench locations as of May 2019.

***Bus Shelter Amenities***

To monitor the presence of amenities at bus shelters, the MBTA relies on the Central Transportation Planning Staff (CTPS) to assess every bus shelter in the system. CTPS field staff visited every bus shelter in the system between July 2019 and January 2020 and recorded the presence of seating, bus maps, and streetside signs.<sup>8</sup> Table 6C-43 shows that the ratios of the percentage of minority-classified bus shelters with each amenity to the percentage of nonminority-classified bus shelters with each amenity are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-43  
Bus Shelter Amenities**

<b>Stop Classification</b>	<b>Percentage with Seating Fixtures</b>	<b>Percentage with Bus Maps</b>	<b>Percentage with Streetside Signs</b>
Minority	97.8%	53.1%	81.6%
Nonminority	95.6%	32.5%	76.3%
Ratio of minority to nonminority	1.02	1.64	1.07
Disparate impact threshold	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each shelter was inspected once between July 15, 2019, and January 5, 2020.  
NDI = No disparate impact.

***Bus Shelter Conditions***

To monitor the conditions of bus shelters, the MBTA relies on CTPS to perform observations. CTPS field staff visited every bus shelter in the system between July 2019 and January 2020 and recorded the structural condition of the shelter, the presence of vandalism, and degree of cleanliness. Table 6C-44 shows that the ratios of the percentage of minority-classified bus shelters with acceptable conditions of each component to the percentage of nonminority-classified bus

<sup>8</sup> As stated in the MBTA’s Bus Stop Design Guidelines, seating for at least three people shall be located within a bus shelter.

shelters with acceptable conditions of each component are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-44  
Bus Shelter Conditions**

<b>Stop Classification</b>	<b>Percentage with Structure Condition Acceptable</b>	<b>Percentage with Vandalism Acceptable</b>	<b>Percentage with Cleanliness Acceptable</b>
Minority	87.0%	92.8%	94.8%
Nonminority	91.2%	93.4%	96.1%
Ratio of minority to nonminority	0.95	0.99	0.99
Disparate impact threshold	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each shelter was inspected once between July 15, 2019, and January 5, 2020.  
NDI = No disparate impact.

***Gated Rapid Transit Station Amenities***

To monitor the distribution of gated rapid transit station amenities, the MBTA relies on CTPS to record the presence of each amenity. CTPS field staff visited each gated rapid transit station between June and August 2019 and recorded the presence of each amenity in station lobbies and on platforms.

**Gated Rapid Transit Station Lobby Amenities**

In gated rapid transit station lobbies, the MBTA monitors the presence of trash receptacles, recycling receptacles, seating fixtures, and up-to-date system maps and neighborhood maps. Table 6C-45 shows that the ratios of the percentage of minority-classified gated rapid transit stations with each lobby amenity to the percentage of nonminority-classified gated rapid transit stations with each lobby amenity are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-45  
Gated Rapid Transit Station Lobby Amenities**

<b>Station Classification</b>	<b>Percentage with Trash Receptacles</b>	<b>Percentage with Recycling Receptacles</b>	<b>Percentage with Seating Fixtures</b>	<b>Percentage with System Map</b>	<b>Percentage with Neighborhood Map</b>
Minority	78.3%	34.8%	47.8%	95.7%	73.9%
Nonminority	80.0%	35.0%	42.5%	97.5%	80.0%
Ratio of minority to nonminority	0.98	0.99	1.13	0.98	0.92
Disparate impact threshold	0.80	0.80	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each gated rapid transit station was inspected once between June 4, 2019, and August 21, 2019.  
 NDI = No disparate impact.

**Gated Rapid Transit Station Platform Amenities**

On gated rapid transit station platforms, the MBTA monitors the presence of trash receptacles, recycling receptacles, seating fixtures, and up-to-date system maps and line maps. Table 6C-46 shows that the ratios of the percentage of minority-classified gated rapid transit stations with each platform amenity to the percentage of nonminority-classified gated rapid transit stations with each platform amenity are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-46  
Gated Rapid Transit Station Platform Amenities**

<b>Station Classification</b>	<b>Percentage</b>				
	<b>Percentage with Trash Receptacles</b>	<b>Percentage with Recycling Receptacles</b>	<b>Percentage with Seating Fixtures</b>	<b>Percentage with System Map</b>	<b>Percentage with Line Map</b>
Minority	100.0%	34.8%	100.0%	100.0%	100.0%
Nonminority	97.5%	37.5%	100.0%	97.5%	95.0%
Ratio of minority to nonminority	1.03	0.93	1.00	1.03	1.05
Disparate impact threshold	0.80	0.80	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each gated rapid transit station was inspected once between June 4, 2019, and August 21, 2019.  
 NDI = No disparate impact.

**Amenities at Gated Rapid Transit Stations with Bus Connections**

In gated rapid transit stations that have connections to local bus routes, the MBTA monitors the presence of bus transfer maps and variable-message signs displaying bus arrival information. Table 6C-47 shows that the ratios of the percentage of minority-classified gated rapid transit stations with each amenity to the percentage of nonminority-classified gated rapid transit stations with each



amenity are above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-47  
Amenities at Gated Rapid Transit Stations with Bus Connections**

<b>Station Classification</b>	<b>Percentage with Bus Transfer Maps</b>	<b>Percentage with VMSs Displaying Bus Arrival Information</b>
Minority	73.7%	15.8%
Nonminority	74.2%	16.1%
Ratio of minority to nonminority	0.99	0.98
Disparate impact threshold	0.80	0.80
Result of disparate impact analysis	<b>No Disparate Impact</b>	<b>No Disparate Impact</b>

Note: Each gated rapid transit station was inspected once between June 4, 2019, and August 21, 2019. VMS = Variable-message sign.

**Surface Rapid Transit Station Amenities**

To monitor the distribution of surface rapid transit station amenities, the MBTA relies on CTPS to record the presence of each amenity. CTPS field staff visited each surface rapid transit station between June and August 2019 and recorded the presence of each amenity.

For surface rapid transit stations, the MBTA monitors the presence of trash receptacles, recycling receptacles, seating fixtures, and up-to-date system maps and line maps. Table 6C-48 shows that the ratios of the percentage of minority-classified surface rapid transit stations with each amenity to the percentage of nonminority-classified surface rapid transit stations with each amenity are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-48  
Surface Rapid Transit Station Amenities**

<b>Station Classification</b>	<b>Percentage with Trash Receptacles</b>	<b>Percentage with Recycling Receptacles</b>	<b>Percentage with Seating Fixtures</b>	<b>Percentage with System Map</b>	<b>Percentage with Line Map</b>
Minority	84.0%	28.0%	88.0%	72.0%	64.0%
Nonminority	78.0%	22.0%	78.0%	52.0%	30.0%
Ratio of minority to nonminority	1.08	1.27	1.13	1.38	2.13
Disparate impact threshold	0.80	0.80	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each surface rapid transit station was inspected once between June 19, 2019, and August 2, 2019. NDI = No disparate impact.

**Commuter Rail Station Amenities**

To monitor the distribution of commuter rail station amenities, the MBTA relies on CTPS to record the presence of each amenity. CTPS field staff visited each commuter rail station between September 2019 and February 2020 and recorded the presence of each amenity.

For commuter rail stations, the MBTA monitors the presence of trash receptacles, seating fixtures, up-to-date system maps, line schedules, and Title VI notices. Table 6C-49 shows that the ratios of the percentage of minority-classified commuter rail stations to the percentage of nonminority-classified commuter rail stations with each amenity are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-49  
Commuter Rail Station Amenities**

<b>Station Classification</b>	<b>Percentage with Trash Receptacles</b>	<b>Percentage with Seating Fixtures</b>	<b>Percentage with System Map</b>	<b>Percentage with Line Schedule</b>	<b>Percentage with Title VI Notice</b>
Minority	100.0%	100.0%	81.8%	100.0%	100.0%
Nonminority	97.7%	98.4%	84.5%	95.3%	95.3%
Ratio of minority to nonminority	1.02	1.02	0.97	1.05	1.05
Disparate impact threshold	0.80	0.80	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each commuter rail station was inspected once between September 24, 2019, and February 3, 2020. NDI = No disparate impact.

**Commuter Rail Station Conditions**

Keolis staff inspect each commuter rail station at least quarterly in order to identify and correct cleanliness and maintenance issues as they arise. Staff review as many as 35 elements every time they inspect a station, including platform surface, station fencing, pedestrian walkways and ramps, and stairs and handrails. (Some stations have fewer than 35 elements.) Staff rate each element on a scale of 1 (worst condition) to 5 (best condition). For each station, the scores from each inspection during SFY 2018 were averaged, and the average of the station averages was 3.84. (SFY 2018 data was used because CTPS assesses rail station amenities and conditions data on even-numbered years.)

Table 6C-50 shows that seven out of nine minority-classified stations (77.8 percent) and 79 out of 123 nonminority-classified stations (64.2 percent) had average scores that exceeded the average score across all commuter rail stations. The ratio of above-average minority-classified stations to above-

average nonminority-classified stations is 1.21. This ratio is above 0.80, so no disparate impact is found.

**Table 6C-50  
Commuter Rail Station Conditions**

Station Classification	Number of Stations	Number of Stations Performing Above Average	Percentage of Stations Performing Above Average
Minority	9	7	77.8%
Nonminority	123	79	64.2%
Ratio of minority to nonminority			1.21
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: Each station was inspected at least quarterly between July 1, 2017, and June 30, 2018.  
Source: Keolis Commuter Services.

***Variable-Message Signs***

All gated rapid transit stations and most commuter rail stations have variable-message signs that alert customers to the approach and arrival of trains. There are also variable-message signs at surface rapid transit stations on the Green Line D Branch, the Silver Line Chelsea route (SL3), and the Silver Line Washington route (SL4/SL5). Because of the lack of power and communication connections to above-ground stations on the B, C, and E Branches of the Green Line, no variable-message signs can be installed to display next-train information at these stations in the near term.

As part of collecting station amenity data from June 2019 through February 2020, CTPS field staff conducted a one-time inspection of the operability of variable-message signs at each gated rapid transit station, surface rapid transit station, and commuter rail station that had variable-message signs. Table 6C-51 shows that the ratios of the percentage of minority-classified gated rapid transit stations, surface rapid transit stations, and commuter rail stations with all variable-message signs operating to the percentage of nonminority-classified gated rapid transit stations, surface rapid transit stations, and commuter rail stations with all variable-message signs operating are all above the MBTA’s disparate impact threshold of 0.80, and no disparate impacts are found.

**Table 6C-51  
Variable-Message Sign Operability**

Station Classification	Percentage with All		
	Percentage with All VMSs Operating: Gated Rapid Transit	VMSs Operating: Surface Rapid Transit*	Percentage with All VMSs Operating: Commuter Rail
Minority	95.7%	91.7%	100.0%
Nonminority	87.5%	100.0%	88.4%
Ratio of minority to nonminority	1.09	0.92	1.13
Disparate impact threshold	0.80	0.80	0.80
Result of disparate impact analysis	<b>NDI</b>	<b>NDI</b>	<b>NDI</b>

Note: Each gated rapid transit station, surface rapid transit station, and commuter rail station was inspected once between June 4, 2019, and February 3, 2020.  
 \* Green Line D Branch, Silver Line Chelsea route (SL3), and Silver Line Washington route (SL4/SL5).  
 NDI = No disparate impact. VMS = Variable-message sign.

**Automated Fare Collection**

**Faregates**

To assess faregate operability between minority-classified stations and nonminority-classified stations, the MBTA compared faregate performance at each station to the overall performance of the system. The systemwide percentage of time that faregates were operable was 96.4 percent.<sup>9</sup> Table 6C-52 shows that 14 of 24 stations (58.3 percent) that are classified minority performed above the systemwide average and 26 of 39 stations (66.7 percent) that are classified nonminority performed above the systemwide average. The ratio of above-average minority stations to above-average nonminority stations is 0.88. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-52  
Faregate Operability**

Station Classification	Number of Stations	Number of Stations Performing Above Average	Percentage of Stations Performing Above Average
Minority	24	14	58.3%
Nonminority	39	26	66.7%
Ratio of minority to nonminority			0.88
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.

<sup>9</sup> The systemwide average was calculated by taking the average of each station’s performance.

### Fare Vending Machines

To assess fare vending machine operability between minority-classified stations and nonminority-classified stations, the MBTA conducted two analyses.

The first analysis assessed the opportunity for customers to purchase fare media with cash at stations equipped with full-service fare vending machines that accept cash. This analysis was conducted by comparing the percentage of time customers could purchase fare media with cash at each station equipped with full-service fare vending machines to the systemwide average amount of time customers could purchase fare media with cash at each station equipped with full-service fare vending machines that accept cash, which was 98.2 percent of the time. Table 6C-53 shows that 19 of 26 stations (73.1 percent) that are classified minority performed above the systemwide average and 36 of 53 stations (67.9 percent) that are classified nonminority performed above the systemwide average. The ratio of above-average minority stations to above-average nonminority stations is 1.08. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-53  
Availability of Full-Service Fare Vending Machines**

<b>Station Classification</b>	<b>Number of Stations</b>	<b>Number of Stations Performing Above Average</b>	<b>Percentage of Stations Performing Above Average</b>
Minority	26	19	73.1%
Nonminority	53	36	67.9%
Ratio of minority to nonminority			1.08
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.

The second analysis assessed the opportunity for customers to purchase fare media either with cash or with credit or debit cards at stations equipped with both full-service and cashless fare vending machines. This analysis was conducted by comparing the percentage of time customers could purchase fare media using either cash, credit cards, or debit cards at stations equipped with fare vending machines to the systemwide average amount of time customers could purchase fare media using either cash, credit cards, or debit cards at any station equipped with fare vending machines, which was 99.4 percent of the time. Table 6C-54 shows that 23 of 26 stations (88.5 percent) that are classified minority performed above the systemwide average and 43 of 55 stations (78.2 percent) that are classified nonminority performed above the systemwide average. The ratio of above-average minority stations to above-average nonminority stations is 1.13. This ratio is greater than 0.80, and so no disparate impact is found.

**Table 6C-54**  
**Availability of All Fare Vending Machines (Full-Service and Cashless)**

<b>Station Classification</b>	<b>Number of Stations</b>	<b>Number of Stations Performing Above Average</b>	<b>Percentage of Stations Performing Above Average</b>
Minority	26	23	88.5%
Nonminority	55	43	78.2%
Ratio of minority to nonminority			1.13
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.

### CharlieCard Retail Sales Terminals

CharlieCard retail sales terminals are found at a variety of locations ranging from supermarkets and convenience stores to banks and check-cashing agencies. To assess the placement of retail sales terminals in minority areas compared to nonminority areas, the MBTA calculated the demographic make-up within one-quarter mile of each retail sales terminal using 2010-14 American Community Survey estimates from the US Census Bureau. Table 6C-55 shows that 8.5 percent of the total minority population in the MBTA's service area has access to a retail sales terminal within one-quarter mile of their home location, while 3.3 percent of the total nonminority population in the MBTA's service area has access to a retail sales terminal within one-quarter mile of their home location. The ratio of the percentage of the minority population with access to retail sales terminals to the percentage of the nonminority population with access to retail sales terminals is 2.60. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-55**  
**Populations Served by CharlieCard Retail Sales Terminals**

<b>Population</b>	<b>Total Population in MBTA Service Area</b>	<b>Population within One-Quarter Mile of an RST</b>	<b>Percentage of Population within One-Quarter Mile of an RST</b>
Minority	1,266,019	107,640	8.5%
Nonminority	3,567,587	116,494	3.3%
Ratio of minority to nonminority			2.60
Disparate impact threshold			0.80
<b>Result of disparate impact analysis</b>			<b>No Disparate Impact</b>

Note: The results reflect retail sales terminal locations as of March 28, 2019.

RST = Retail sales terminal.

Source: 2010-14 American Community Survey estimates.

**Escalator Operability**

To assess escalator operability between minority-classified stations and nonminority-classified stations, the MBTA compared escalator performance at each station to the overall performance of all escalators in the system. The systemwide percentage of time that escalators were operable was 99.2 percent.<sup>10</sup> Table 6C-56 shows that 13 of 20 stations (65.0 percent) that are classified minority performed above the systemwide average and 21 of 33 stations (63.6 percent) that are classified nonminority performed above the systemwide average. The ratio of above-average minority stations to above-average nonminority stations is 1.02. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-56  
Escalator Operability**

<b>Station Classification</b>	<b>Number of Stations</b>	<b>Number of Stations Performing Above Average</b>	<b>Percentage of Stations Performing Above Average</b>
Minority	20	13	65.0%
Nonminority	33	21	63.6%
Ratio of minority to nonminority			1.02
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The data pertain to the period between July 1, 2018, and June 30, 2019.

**Vehicle Assignment (FTA C 4702.1B, IV-4.b.(2))**

**Bus Vehicle Age and Air Conditioning Operability**

As outlined in the MBTA’s FY2010–FY2020 Bus Fleet Management Plan, the MBTA is committed to maintaining a bus fleet with an average age of 7.5 years or less. To assess bus vehicle age between minority-classified routes and nonminority-classified routes, the MBTA compared the percentage of minority routes that had an average bus age of 7.5 years or less to the percentage of nonminority routes that had an average bus age of 7.5 years or less. Table 6C-57 shows that 41 of the 98 bus routes (41.8 percent) that are classified minority had an average bus age of 7.5 years or less and 11 of the 70 bus routes (15.7 percent) that are classified nonminority had an average bus age of 7.5 years or less. The ratio of the percentage of minority-classified bus routes that had an average bus age of 7.5 years or less to the percentage of nonminority-classified bus routes that had an average bus age of 7.5 years or less is 2.66. This ratio is greater than 0.80, so no disparate impact is found.

<sup>10</sup> The systemwide average was calculated by taking the average of each station’s performance.

**Table 6C-57  
Bus Vehicle Age**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes with Average Bus Age Less than 7.5 Years</b>	<b>Percentage of Routes with Average Bus Age Less than 7.5 Years</b>
Minority	98	41	41.8%
Nonminority	70	11	15.7%
Ratio of minority to nonminority			2.66
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results reflect vehicle assignments on August 16, 2018.

To assess bus air conditioning operability between minority-classified routes and nonminority-classified routes, the MBTA compared air conditioning performance on each route on a hot day in the summer to the overall performance of the system. The systemwide percentage of trips that operated with functioning air conditioning was 99.0 percent.<sup>11</sup> Table 6C-58 shows that 85 of 98 routes (86.7 percent) that are classified minority performed above the systemwide average, and 59 of 70 routes (84.3 percent) that are classified nonminority performed above the systemwide average. The ratio of above-average minority-classified routes to above-average nonminority routes is 1.03. This ratio is greater than 0.80, so no disparate impact is found.

**Table 6C-58  
Bus Air Conditioning Operability**

<b>Route Classification</b>	<b>Number of Routes</b>	<b>Number of Routes Performing Above Average</b>	<b>Percentage of Routes Performing Above Average</b>
Minority	98	85	86.7%
Nonminority	70	59	84.3%
Ratio of minority to nonminority			1.03
Disparate impact threshold			0.80
Result of disparate impact analysis			<b>No Disparate Impact</b>

Note: The results reflect vehicle assignments on August 16, 2018.

**Heavy and Light Rail Vehicle Age**

A comparison of vehicle age between minority and nonminority-classified heavy and light rail lines is not applicable. Each of the three heavy rail lines (the Red, Blue, and Orange Lines) operates with dedicated equipment, so the equipment on one line is not interchangeable with equipment on any of the other lines. The

<sup>11</sup> The systemwide average was calculated by taking the average of each route’s performance.



Mattapan Line operates as a short, stand-alone, light-rail extension of the Red Line's Ashmont Branch and also operates with a dedicated fleet. While the Green Line is an extensive light rail system with four surface branches and a central subway portion, each branch is classified as nonminority, so there are no comparisons to be made for vehicle age between minority and nonminority-classified lines.



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# APPENDIX 7A

## FMCB APPROVAL OF MAJOR SERVICE CHANGE POLICY AND DISPARATE IMPACT POLICY



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**Fiscal and Management Control Board  
Transportation Board Room  
10 Park Plaza  
Boston, MA  
January 30, 2017  
*MEETING MINUTES***

---

**Present:** Chairman Joseph Aiello, Director Lisa Calise, Director Steven Poftak (arrived at 12:25 p.m.) and Director Monica Tibbits-Nutt

**Quorum Present:** Yes

**Others Present:** Secretary Pollack, Brian Shortsleeve, John Englander, Owen Kane, Nathan Peyton, Jackie Goddard, Michael Lambert, Mike Abramo, David Block-Schachter, David Mohler,

**PROCEEDINGS:**

At the call of Chairman Aiello, a meeting of the Fiscal and Management Control Board was called to order at 12:06 p.m. at the State Transportation Building, Transportation Board Room, 10 Park Plaza, Boston, Massachusetts.

Next, Chair Aiello opened up the public comment session.

The first speaker was state Representative Dooley from Norfolk who spoke against the proposed new service commuter rail pilot to Foxboro.

The next speaker was Paul Matthews, Executive Director of the 495 Metrowest Partnership who spoke in favor of expanding commuter rail service to Foxboro.

The following speakers commented on the RIDE means testing agenda item: James White, ACCT Chairman; Kathy Paul, Barbara Mann, Jeanne Repoza. Helene Azanow, Dorothy Maciaone, Carolyn Villers all of the Mass Senior Action Council; Bill Henning of BCIL; Rick Morin of Bay State Council for the Blind and Harriet Ramvek from Mass Adapt.

Next, Stephen Kaiser commented on future agenda items, capacity, service delivery and on-time performance.

Next, Marc Ebuna from TransitMatters commented on anticipating live streaming of the Board meetings and overnight transit service.

The next speaker, Louise Baxter from TRU commented on late night service and the cleaning contract.

The last speakers commented on the janitorial contract update: Roxanna Rivera, Vice President of 32 BJ SEIU and David Shea, President of SJ Services.

Next, was the approval of the minutes of January 9, 2017.

On motion duly made and seconded, it was

**VOTED: to approve the minutes of the January 9, 2017 meeting.**

Next, Chairman Aiello called upon Acting General Manager Brian Shortsleeve to give the Report from the General Manager, Agenda Item D – a discussion of financial performance and other related matters. Mr. Shortsleeve updated the Board on the FY2017 six-month operating budget; top earners; the Governor's FY2018 Budget – House 1; 2017 employee attendance strategy and

Commuter Rail On-Time Performance, as set forth in the attached presentation labeled “GM Remarks, January 30, 2017.” Discussion ensued.

Next, Chairman Aiello called upon Chief Operating Officer Jeff Gonneville to present Agenda Item F, the Report from the Chief Operating Officer. Mr. Gonneville updated the Board on weekly reliability and Power Department Employee Safety, and introduced the recently hired Senior Director of Vehicle Fleet Maintenance & Strategy William Griffiths to continue with the COO report. Mr. Griffiths discussed “Revenue Vehicles Fleet and Facilities Plan – Strategy, Scope and Schedule,” as set forth in the attached presentation labeled “COO Remarks, January 30, 2017.” Discussion ensued.

Next, the Chair called upon Byron Lynn, Deputy Director of Policy and Analysis to present Agenda Item F, a discussion of upcoming board agenda items as outlined in the attached presentation labeled “FMCB Calendar.” Discussion ensued.

Chairman Aiello called upon Erik Stoothoff, Deputy Chief Operating Officer of Infrastructure to present Agenda Item G, an update of the Janitorial Contract. Mr. Stoothoff announced this was a follow-up from a previous briefing at the 12/5/16 FMCB meeting, and began by giving an overview of the current contract, as set forth in the attached presentation labeled “Janitorial Contract Mgmt Update.” General Counsel John Englander participated in a discussion of the future of the existing contract. Discussion ensued.

Next, the Chair called upon Michael Lambert, Deputy Administrator of Transit to present Agenda Item H, RIDE Means Testing Pilot, Mr. Lambert began by giving an overview of the pilot and said the purpose was to test whether a means tested RIDE fare was an effective way to increase mobility for low income ride customers, and said the results showed low income RIDE customer could be better served, and at lower cost, by expanding other new alternatives to traditional paratransit service, as set forth in the attached presentation labeled “RIDE Means Testing Pilot Project – Report & Recommendation, January 30, 2017.” Discussion ensued.

Next, the Chair called upon John Lozada, Manager of Federal Programs for MassDOT/MBTA to present Agenda Item J, a discussion of the Disparate Impact/Disproportionate Burden Policy. Mr. Lozada said he was going before the Board for approval of a policy used to study the equity impacts of proposed service or fare changes at the MBTA, as set forth in the attached presentation labeled “Disparate Impact/Disproportionate Burden Policy, Recommendation for FMCB Approval.” Discussion ensued.

On motion duly made and seconded, it was;

**VOTED:**

**That the Fiscal and Management Control Board (FMCB) hereby adopts the Disparate Impact/Disproportionate Burden Policy as presented to the FMCB during the January 30, 2017 meeting and authorizes the General Manger or his designee, to take all necessary steps to implement said Policy, in the name and on behalf of the Massachusetts Bay Transportation Authority.**



Next, Chair Aiello called upon Dave Mohler, MassDOT Executive Director of Planning to present Agenda Item J, the Policy on Pilots for New Service. Mr. Mohler said he was seeking to determine a process for reviewing the four proposals for pilot transit service already before the MBTA, as set forth in the attached presentation labeled “Evaluation and Selection of Pilot Transit Services *Proposed Policy for Consideration.*” Discussion ensued.

Next, Chair Aiello called upon Laurel Paget-Seekins, Director of Research and Analysis to present Agenda Item K, the results of a survey for Overnight Service, as set forth in the attached presentation labeled “Survey of Potential Overnight Service Passengers, 1/30/17.” Discussion ensued.

On motion duly made and seconded, it was by roll call;

Chair Aiello	Yes
Director Calise	Yes
Director Poftak	Yes
Director Tibbits-Nutt	Yes

**VOTED: to enter into Executive Session to discuss strategy related to non-union personnel, collective bargaining and litigation at 3:20 p.m.**

**Documents relied upon for this meeting:**

Minutes of January 9, 2017

GM Remarks, January 30, 2017

COO Remarks, January 30, 2017

FMCB Calendar

Janitorial Contract Mgmt Update

RIDE Means Testing Pilot Project – Report & Recommendation, January 30, 2017

Disparate Impact/Disproportionate Burden Policy

Evaluation and Selection of Pilot Transit Services *Proposed Policy for Consideration.*

Survey of Potential Overnight Service  
Passengers, 1/30/17

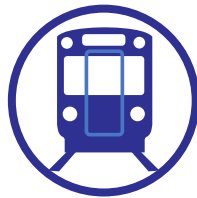
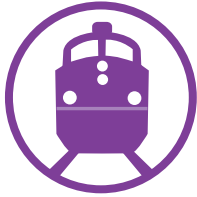


# APPENDIX 7B

## CTPS FARE EQUITY ANALYSIS OF SFY 2020 MBTA FARE CHANGE



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March 2019

# Potential MBTA Fare Changes in SFY 2020



# Potential MBTA Fare Changes in SFY 2020

## *Final Proposal: Impact Analysis*

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March 2019



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## Abstract

This study analyzes the various effects of a potential MBTA fare-pricing scenario aimed at raising revenue to help meet revenue targets in state fiscal year 2020. The proposed scenario would raise new revenue stemming from a 5.8 percent average fare increase.





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# Executive Summary

Before considering any changes in fares, the MBTA undertakes a comprehensive process to model the impacts of the changes. This modeling was conducted with the assistance of the Central Transportation Planning Staff (CTPS), which is the staff of the Boston Region Metropolitan Planning Organization (MPO). CTPS examined the impacts on ridership, revenue, and fare equity.

CTPS used an elasticity-based spreadsheet model known as the Fare Elasticity, Ridership, and Revenue Estimation Tool (FERRET) to estimate projected ridership loss associated with the proposed fare increase and the net revenue change that would result from lower ridership and higher fares. The table below summarizes these results. CTPS produced a range of estimates of potential impacts on ridership and revenue and conducted a Title VI of the Civil Rights Act of 1964 (Title VI) fare-equity analysis to determine if the fare changes would result in disparate impacts for minority populations or disproportionate burdens for low-income populations.

On January 28, 2019, a proposed set of fare changes and corresponding fare equity analysis were presented to the MBTA’s Fiscal and Management Control Board (FMCB). On March 11, 2019, the FMCB approved an updated set of fare changes. This report, an update of the January 2019 version, presents the impacts of the approved fares.

**Table  
Revenue and Ridership Projections  
for the Proposed Fare Increase: SFY 2020**

<b>Analysis Category</b>	<b>Existing Values</b>	<b>SFY 2020 Projections</b>	<b>Projected Change</b>	<b>Projected Pct. Change</b>
Ridership	359.4 M	355.1 M	-4.4 M	-1.2%
Revenue	\$710.9 M	\$740.3 M	\$29.5 M	4.1%

M = Million. SFY = State fiscal year.  
Source: Central Transportation Planning Staff.

In CTPS’s fare-equity analysis, staff compared the relative fare increases between riders who are minorities and all riders, and between riders who are low-income and all riders. We applied the MBTA’s disparate-impact and disproportionate-burden policies and found neither the presence of a disparate impact nor a disproportionate burden.



# Chapter 1—Introduction

In past years, the MBTA has managed to balance its budget through cost reductions, special appropriations by the Legislature, and fare and fee increases. In 2007, simultaneous with the introduction of the Automated Fare Collection (AFC) technology, the MBTA restructured its fare system and raised fares an average of 21 percent. The Authority did not raise fares again until July 2012 (State Fiscal Year [SFY] 2013), when it implemented a 23 percent average increase. Almost a year later, the state Legislature—in Chapter 46 of the Acts of 2013: An Act Relative to Transportation Finance—required that the MBTA attain revenue benchmarks, which it could satisfy by changing fares, fees, or any other funds directly collected by the Authority. In response, the MBTA established a pattern of modest, regularly scheduled fare changes, as needed, beginning with fare increases in SFY 2015 and SFY 2017. Following the SFY 2017 fare increase, the state Legislature—in Chapter 164 of the Acts of 2016: An Act Relative to MBTA Fare Increases—amended previous legislation to clarify the parameters by which the MBTA could raise fares. This legislation made it clear that no fare (including pass prices) shall be increased by more than 7 percent during a 24-month period. Under these specifications, the MBTA is continuing its pattern of frequent but modest fare increases by increasing fares in SFY 2020.

## 1.1 DOCUMENT STRUCTURE

The remainder of this document is organized as follows:

- Review of the methodology used for the analysis (Chapter 2)
- Description of the proposed fare changes (Chapter 3)
- Results of ridership and revenue analyses (Chapter 4)
- Results of a fare-equity analysis (Chapter 5)
- Conclusions (Chapter 6)

A detailed description of the FERRET methodology is provided in Appendix A.



# Chapter 2—Methods Used to Estimate Ridership and Revenue

In consultation with the MBTA, CTPS used the spreadsheet application, FERRET, specifically to perform fare-change calculations to estimate the impact of the proposed fare increase on MBTA's ridership and revenue.

## 2.1 CTPS FERRET APPROACH

FERRET estimates the revenue and ridership impacts of the proposed fare-increase scenario. This model reflects the many fare-payment categories of the MBTA pricing system and applies price elasticities to analyze various changes across these categories. CTPS determined that this methodology met expectations through two post-fare increase analyses: 1) following the SFY 2007 fare restructuring, and 2) following the SFY 2013 fare increase. Following the SFY 2017 fare increase, a researcher reviewed some of FERRET's features, structure, and assumptions. In response to this research, CTPS modified some of the underlying price elasticities.<sup>1</sup>

### 2.1.1 Modeling of Existing Ridership and Revenue

Inputs to FERRET include existing ridership in the form of unlinked trips by mode, fare-payment method, and fare-media type. An unlinked trip is an individual trip on any single transit vehicle; a single journey, often composed of many unlinked trips on multiple vehicles, is a "linked trip."

The MBTA provided CTPS with existing ridership statistics (to which FERRET applies price elasticity values) for local bus, express bus, and rapid transit networks in the form of AFC data. These data, by station for pre-payment stations and by route for buses and surface light rail segments, show fare payment type (for example, cash, monthly pass, and weekly pass) and fare media (for example, CharlieCard, CharlieTicket, cash).

Because the MBTA has not deployed AFC equipment on the commuter rail or commuter boat systems, CTPS estimated the number of trips made on these modes using sales figures. Single-ride trips on commuter rail and ferry were set equal to the number of single-ride fares sold. Staff estimated the number of trips made using passes on these modes by multiplying the number of pass sales by the estimated average number of trips made using the respective pass type (calculated using survey responses from a corporate pass-users survey

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<sup>1</sup> Stutz, Andrew. *Transit Fare Policy: Use of Automated Data to Improve Incremental Decision Making*. Cambridge: Massachusetts Institute of Technology, 2018.



conducted in spring 2008). In some cases, the total number of trips by fare type was scaled to match the total ridership reported by the MBTA during the state fiscal year being analyzed. The MBTA also provided data for the number of trips made on THE RIDE by fare payment type, and the number of cars parked at MBTA parking lots.

FERRET calculates revenue for single-ride trips by multiplying the number of trips in each fare/mode category by that category's price. FERRET calculates revenue for pass trips by pass type by multiplying the number of pass sales by the pass price. The model distributes pass revenue between mode categories based on each category's ridership and most-equivalent single-ride fare (generally, the lowest-priced adult fare).

### **2.1.2 Estimation of Ridership Changes Resulting from a Fare Increase**

Fares are one of many factors that influence the level of ridership on transit services. Price elasticity is a measure of the rate of change in ridership relative to a change in fares if all other factors remain constant. On a traditional demand curve that describes the relationship between price, on the y-axis, and demand, on the x-axis, elasticities are equivalent to the slope along that curve. Price elasticities are usually negative, meaning that a price increase will lead to a decrease in demand (with a price decrease having the opposite effect). The larger the negative value of the price elasticity (the greater its distance from zero), the greater the projected impact on demand. Larger (more negative) price elasticities are said to be relatively "elastic," while smaller negative values (closer to zero), are said to be relatively "inelastic." Thus, if the price elasticity of the demand for transit were relatively elastic, a given fare increase would cause a greater loss of ridership than if demand were relatively inelastic. Appendix A.5 presents an example of how the concept of price elasticity is applied.

FERRET permits the use of various ranges of elasticities to estimate different possible ridership impacts of price increases. Performing calculations in FERRET with the same prices but with a range of higher and lower elasticities provides a range of estimates. In the present analysis, the model uses the middle range of elasticities, called the base elasticities, as these represent the best estimate of where the elasticities should be set based on past experience. For a description of how we determined the base elasticities, see Appendix A.4. However, we also use both more inelastic and more elastic elasticity values to determine a range of possible effects; the lower and higher ranges are the base value plus or minus 0.10. If adding 0.10 to the base elasticity would result in an elasticity of 0.00, we added 0.05 instead. This serves as a sensitivity analysis of the model's projections of the ridership losses and revenue gains. Table 1 presents the three elasticity ranges used in FERRET for this study's analysis.

FERRET also uses ridership diversion factors. These factors reflect estimates of the likelihood of a switch in demand from one MBTA product type or mode to another resulting from a change in the relative prices of product types or modes. The diversion factors essentially work to redistribute demand between two product types or modes after the model applies the respective price elasticities. Appendix A.6 presents examples of applying diversion factors and the methodology for using combined price elasticities and diversion factors. While diversion factors estimate the migration of riders between MBTA product types and modes based on their price, FERRET can only estimate the total loss of riders from the MBTA transit system, not the diversion of riders to specific non-MBTA modes such as driving, biking, or walking.

**Table 1**  
**Single-Ride and Pass Elasticities by Fare Type and Mode**

<b>Mode Category</b>	<b>Low</b>	<b>Base</b>	<b>High</b>
<b>Cash Elasticities</b>			
<b><i>Bus and Trackless Trolley</i></b>			
Bus-Adult	(0.15)	(0.25)	(0.35)
Bus-Senior	(0.10)	(0.20)	(0.30)
Bus-Student	(0.05)	(0.15)	(0.25)
<b><i>Subway</i></b>			
Subway-Adult	(0.15)	(0.25)	(0.35)
Subway-Senior	(0.05)	(0.15)	(0.25)
Subway-Student	(0.05)	(0.10)	(0.20)
<b><i>Surface Light Rail</i></b>			
Surface Light Rail-Adult	(0.20)	(0.30)	(0.40)
Surface Light Rail-Senior	(0.10)	(0.20)	(0.30)
Surface Light Rail-Student	(0.05)	(0.15)	(0.25)
<b><i>Commuter Rail</i></b>			
Commuter Rail-Adult	(0.10)	(0.20)	(0.30)
Commuter Rail-Senior	(0.05)	(0.15)	(0.25)
<b><i>Commuter Boat</i></b>			
Commuter Boat-Adult	(0.20)	(0.30)	(0.40)
Commuter Boat-Senior	(0.15)	(0.25)	(0.35)
THE RIDE	(0.25)	(0.35)	(0.45)
Parking	(0.10)	(0.20)	(0.30)
<b>Pass Elasticities</b>			
Bus	(0.05)	(0.15)	(0.25)
Inner Express	(0.15)	(0.25)	(0.35)
Outer Express	(0.15)	(0.25)	(0.35)
LinkPass	(0.15)	(0.25)	(0.35)
1-Day LinkPass	(0.05)	(0.15)	(0.25)
7-Day LinkPass	(0.20)	(0.30)	(0.40)
Commuter Rail	(0.05)	(0.10)	(0.20)
Commuter Boat	(0.10)	(0.20)	(0.30)
Senior	(0.05)	(0.10)	(0.20)
Student/Youth	(0.05)	(0.10)	(0.20)

Source: SFY 2018 FERRET.

# Chapter 3—Description of Proposed Fare Increase Scenario

## 3.1 FARE CHANGE RATIONALE

It was the MBTA's goal to increase fares in a mostly uniform fashion across fare categories while respecting the 7 percent fare increase limit. When a fare would exceed the limit, the MBTA chose the next smallest fare using the following rounding methodology. Pass prices were generally rounded to the nearest dollar. Fares on the commuter rail and boats were generally rounded to the nearest quarter. Fares on buses and rapid transit were rounded to the nearest nickel. In some cases, the MBTA chose to depart from a uniform fare increase. These anomalies were allowed to prepare for future changes to the way people pay for their trips, to simplify and standardize the existing fare structure, and to address concerns from the public about the impacts of the initially proposed fares.

## 3.2 FARE CHANGES: SINGLE-RIDE FARES AND PASS PRICES

Table 2 shows key existing and proposed single-ride fares for each fare category, along with the percentage change from existing to proposed price. Table 3 shows the same information for the pass prices. Table 4 presents the value of monthly passes in terms of their single-ride equivalents, also known as a "multiple," a concept discussed at the end of this section. The MBTA is not implementing parking fee increases as part of this fare and fee structure change.

The overall proposed price increase across all modes and fare/pass categories is 5.8 percent. This systemwide average is based on the percentage change between the existing average fare (total revenue divided by existing ridership) and the proposed average fare (total projected revenue divided by total projected ridership). Table 4 presents these average percentage increases by mode category. Percentage changes in price can differ between modes that are similarly priced, such as local bus and the Silver Line–Washington Street, or subway and surface light rail, because of differences in how riders on these modes pay for their trips (if more riders were to use a monthly pass on the subway than on the surface light rail system, for example).

The percentage changes in prices are relatively consistent across fare payment types. The most notable departures from the baseline are:

- Commuter rail interzone 1–3 fares do not increase because the smallest desired increase of a quarter on these fares would exceed 7 percent

- Neither the outer express single-ride fares nor the outer express pass price increases in order to move toward creating a single express bus category
- The reduced inner express and outer express bus fares decrease to half the CharlieCard fare to match the same logic as the reduced fares on the other service types
- The fare for ferry riders traveling from Hingham and Hull to Logan Airport decreases to the same amount as the fare for Hingham and Hull to Boston

On January 28, 2019 a proposed set of fare changes and corresponding fare equity analysis were presented to the FMCB. On March 11, 2019, the FMCB approved an updated set of fare changes. The FMCB's final proposal includes the following departures from the January 2019 proposal:

- The fares on the MBTA's local bus system remain the same
- The reduced fares and passes on the local bus and rapid transit systems remain the same
- The weekend commuter rail pass was made permanent

In the tables in this document that contain specific fares (Table 2, Table 3, and Table 8), these changes from the initial proposal are highlighted in green.

**Table 2**  
**Key Single-Ride Fares: Existing and Proposed**

<b>Fare Category</b>	<b>Existing Fare</b>	<b>Proposed Fare</b>	<b>Percent Change</b>	<b>Absolute Change</b>
<b>CharlieCard</b>				
<b>Adult</b>				
Local Bus	\$1.70	\$1.70	0.0%	\$0.00
Rapid Transit	2.25	2.40	6.7%	0.15
Bus and Rapid Transit	2.25	2.40	6.7%	0.15
Inner Express	4.00	4.25	6.3%	0.25
Outer Express	5.25	5.25	0.0%	0.00
<b>Senior and Student</b>				
Local Bus	\$0.85	\$0.85	0.0%	\$0.00
Rapid Transit	1.10	1.10	0.0%	0.00
Bus and Rapid Transit	1.10	1.10	0.0%	0.00
Inner Express	2.50	2.10	-16.0%	-0.40
Outer Express	3.50	2.60	-25.7%	-0.90
<b>CharlieTicket or Cash</b>				
<b>Adult</b>				
Local Bus	\$2.00	\$2.00	0.0%	\$0.00
Rapid Transit	2.75	2.90	5.5%	0.15
Bus and Rapid Transit	4.75	4.90	3.2%	0.15
Inner Express	5.00	5.25	5.0%	0.25
Outer Express	7.00	7.00	0.0%	0.00
<b>Commuter Rail</b>				
Zone 1A	\$2.25	\$2.40	6.7%	\$0.15
Zone 1	6.25	6.50	4.0%	0.25
Zone 2	6.75	7.00	3.7%	0.25
Zone 3	7.50	8.00	6.7%	0.50
Zone 4	8.25	8.75	6.1%	0.50
Zone 5	9.25	9.75	5.4%	0.50
Zone 6	10.00	10.50	5.0%	0.50
Zone 7	10.50	11.00	4.8%	0.50
Zone 8	11.50	12.25	6.5%	0.75
Zone 9	12.00	12.75	6.3%	0.75
Zone 10	12.50	13.25	6.0%	0.75
Interzone 1	\$2.75	\$2.75	0.0%	\$0.00
Interzone 2	3.25	3.25	0.0%	0.00
Interzone 3	3.50	3.50	0.0%	0.00
Interzone 4	4.00	4.25	6.3%	0.25
Interzone 5	4.50	4.75	5.6%	0.25
Interzone 6	5.00	5.25	5.0%	0.25
Interzone 7	5.50	5.75	4.5%	0.25
Interzone 8	6.00	6.25	4.2%	0.25
Interzone 9	6.50	6.75	3.8%	0.25
Interzone 10	7.00	7.25	3.6%	0.25
<b>Ferry</b>				
F1: Hingham	\$9.25	\$9.75	5.4%	\$0.50
F2: Boston	9.25	9.75	5.4%	0.50
F2: Cross Harbor	9.25	9.75	5.4%	0.50
F2: Logan	18.50	9.75	-47.3%	-8.75
F4: Inner Harbor	3.50	3.70	5.7%	0.20
<b>THE RIDE</b>				
ADA Service Area	\$3.15	\$3.35	6.3%	\$0.20
Premium Service Area	5.25	5.60	6.7%	0.35

ADA = Americans with Disabilities Act.

Source: Central Transportation Planning Staff.

**Table 3**  
**Pass Prices: Existing and Proposed**

<b>Pass Category</b>	<b>Existing Fare</b>	<b>Proposed Fare</b>	<b>Percent Change</b>	<b>Absolute Change</b>	<b>Existing Multiple</b>	<b>Proposed Multiple</b>
Local Bus	\$55.00	\$55.00	0.0%	\$0.00	32.35	32.35
LinkPass	84.50	90.00	6.5%	5.50	37.56	37.50
Senior/TAP	30.00	30.00	0.0%	0.00	27.27	27.27
Youth Pass	30.00	30.00	0.0%	0.00	27.27	27.27
Student 7-Day Validity	30.00	30.00	0.0%	0.00	27.27	27.27
1-Day	12.00	12.75	6.3%	0.75	5.33	5.31
7-Day	21.25	22.50	5.9%	1.25	9.44	9.38
Inner Express	128.00	136.00	6.3%	8.00	32.00	32.00
Outer Express	168.00	168.00	0.0%	0.00	32.00	32.00
<b><i>Commuter Rail</i></b>						
Zone 1A	\$84.50	\$90.00	6.5%	\$5.50	37.56	37.50
Zone 1	200.25	214.00	6.9%	13.75	32.04	32.92
Zone 2	217.75	232.00	6.5%	14.25	32.26	33.14
Zone 3	244.25	261.00	6.9%	16.75	32.57	32.63
Zone 4	263.00	281.00	6.8%	18.00	31.88	32.11
Zone 5	291.50	311.00	6.7%	19.50	31.51	31.90
Zone 6	318.00	340.00	6.9%	22.00	31.80	32.38
Zone 7	336.50	360.00	7.0%	23.50	32.05	32.73
Zone 8	363.00	388.00	6.9%	25.00	31.57	31.67
Zone 9	379.50	406.00	7.0%	26.50	31.63	31.84
Zone 10	398.25	426.00	7.0%	27.75	31.86	32.15
Interzone 1	\$90.25	\$90.00	-0.3%	-\$0.25	32.82	32.73
Interzone 2	110.25	110.00	-0.2%	-0.25	33.92	33.85
Interzone 3	119.75	120.00	0.2%	0.25	34.21	34.29
Interzone 4	130.25	139.00	6.7%	8.75	32.56	32.71
Interzone 5	148.00	158.00	6.8%	10.00	32.89	33.26
Interzone 6	167.00	178.00	6.6%	11.00	33.40	33.90
Interzone 7	183.75	196.00	6.7%	12.25	33.41	34.09
Interzone 8	202.75	216.00	6.5%	13.25	33.79	34.56
Interzone 9	221.50	237.00	7.0%	15.50	34.08	35.11
Interzone 10	240.50	257.00	6.9%	16.50	34.36	35.45
Commuter Boat	\$308.00	\$329.00	6.8%	\$21.00	33.30	33.74

TAP = Transportation Access Pass.

Source: Central Transportation Planning Staff.

**Table 4**  
**Weighted Average Percentage Change in Average Fares,**  
**by Mode Category, for Unlinked Passenger Trips**

<b>Mode Category</b>	<b>Percent Change</b>
<b>Bus</b>	<b>0.7%</b>
<b>Rapid Transit</b>	<b>7.0%</b>
Subway	7.1%
Silver Line–Washington St.	0.2%
Silver Line–Waterfront	7.4%
Surface Light Rail	6.9%
<b>Commuter Rail</b>	<b>6.4%</b>
Zone 1A	6.9%
Zone 1	6.4%
Zone 2	6.1%
Zone 3	6.9%
Zone 4	6.8%
Zone 5	6.5%
Zone 6	6.7%
Zone 7	6.6%
Zone 8	6.7%
Zone 9	7.0%
Zone 10	7.0%
Interzone	3.7%
Onboard	5.3%
<b>Ferry</b>	<b>3.0%</b>
F1: Hingham-Boston	6.3%
F2: Boston	5.9%
F2: Cross Harbor	6.3%
F2: Logan	-51.2%
F4: Inner Harbor	5.6%
<b>THE RIDE</b>	<b>6.4%</b>
ADA Service Area	6.3%
Premium Service Area	6.7%
<b>Total System</b>	<b>5.8%</b>

Note: Price increases over 7 percent are a result of how pass revenue is allocated in the model. Because the bus fares remain constant, a relatively greater share of LinkPass revenue is shifted to the Rapid Transit system resulting in more revenue being allocated to that mode. No individual fares increase more than 7 percent.

ADA = Americans with Disabilities Act

Source: SFY 2018 FERRET.





# Chapter 4—Ridership and Revenue Impacts

## 4.1 OVERVIEW OF RESULTS

We estimate that these proposed fare changes would increase the MBTA's annual revenue by \$29.5 million and decrease annual unlinked passenger trips by 4.4 million.

## 4.2 FERRET ESTIMATES

### 4.2.1 Projections

Table 5 presents CTPS's estimates of the fare revenue and ridership impacts of the fare increase produced using FERRET and its base elasticities.<sup>2</sup> The existing fare revenue and ridership numbers in the table represent adjusted existing conditions prior to the fare increase.

The total estimated annual fare revenue increase in this scenario is \$29.5 million, a 4.1 percent increase. We estimate that the total estimated annual ridership loss would be 4.4 million unlinked passenger trips, a 1.2 percent decrease. The estimated revenue increases are, on a relative basis, similar for all modes except for the bus and commuter boat systems. The MBTA will derive the plurality of its new fare revenue from the commuter rail system (\$13.6 million). A similar amount would be derived from the heavy and light rail systems combined. We expect THE RIDE's fare increase to result in decreased use of the service; we estimate a decline of approximately 47,000 annual trips on THE RIDE.

The model uses diversion factors that account for riders shifting between some modes and fare products. The model does not account for riders shifting from a LinkPass to a monthly bus pass, which may be an option for some riders who can shift most of their travel to buses. The model's diversion factors between the bus and rapid transit system may not be calibrated to account for such a large differential between the two modes' fare increases. As a result, riders may switch from the rapid transit system to the bus system in larger numbers than the values reported here.

Changes in the relative proportions of revenue derived from each mode in the January 2019 version of this document are largely a result of how pass revenue is allocated. Because the single-ride rapid transit prices are proposed to increase and the bus fares remain constant, the model attributes more of the LinkPass revenue to the heavy and light rail systems.

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<sup>2</sup> See Chapter 2 for a discussion of the range of elasticities used in this analysis.

**Table 5**  
**FERRET Estimates of Annual Revenue and Ridership Impacts**  
**(in Unlinked Passenger Trips)**

<b>Mode</b>	<b>Existing Fare Revenue</b>	<b>Revenue Change</b>	<b>Revenue Change</b>	<b>Existing Ridership</b>	<b>Ridership Change</b>	<b>Ridership Change</b>
Bus	\$111,783,295	\$243,511	0.2%	102,987,254	-621,474	-0.6%
Heavy Rail	217,679,243	11,915,781	5.5%	176,745,633	-2,753,627	-1.6%
Light Rail	69,322,123	3,634,583	5.2%	40,663,085	-645,752	-1.6%
Commuter Rail	245,306,776	13,646,730	5.6%	35,606,990	-287,533	-0.8%
Ferry	9,585,967	185,246	1.9%	1,338,167	-14,017	-1.0%
THE RIDE	6,300,957	253,826	4.0%	2,106,558	-47,154	-2.2%
Parking	50,887,162	-425,801	-0.8%	8,362,257	-63,714	-0.8%
<b>Total System</b>	<b>710,865,523</b>	<b>29,453,876</b>	<b>4.1%</b>	<b>367,809,944</b>	<b>-4,433,271</b>	<b>-1.2%</b>

Parking ridership and revenue losses are not a result of parking price increases; rather they are a result of riders who once parked no longer parking because another part of their trip became more expensive. In this table, "Fare Revenue" represents the gross revenue generated from parking at lots where the MBTA retains the revenue. "Ridership" includes the number of vehicles that parked at these lots. Ridership losses on the bus system are primarily the result of FERRET predicting people will purchase fewer LinkPasses. The underlying diversion factors in the model are not calibrated to account for such a stark difference in price increases between the bus and rapid transit fare products. The model does not account for riders shifting from a LinkPass to a monthly bus pass.

Source: SFY 2018 FERRET.

#### 4.2.2 Sensitivity Analysis

Table 5 shows the results of FERRET using the base elasticities. Table 6 presents a sensitivity analysis of the model's results, showing the range of estimated fare revenue and ridership impacts using the range of elasticities shown in Table 1. In the ranges of ridership-change estimates in the table, the greater losses are those resulting from higher elasticity assumptions; while in the ranges of fare-revenue-increase estimates, the greater increases are those resulting from lower elasticity assumptions.

**Table 6**  
**FERRET Estimate Ranges of Fare Revenue and**  
**Annual Ridership Impacts using Low and High Elasticities**

<b>Mode</b>	<b>Range of Increases in Revenue (\$ in Millions)</b>	<b>Range of Revenue Percent Increases</b>	<b>Difference between Maximum and Minimum</b>	<b>Range of Ridership Changes (Trips in Millions)</b>	<b>Range of Ridership Percent Changes</b>	<b>Difference between Maximum and Minimum</b>
Bus	-\$0.2 to 0.6	-0.1 to 0.6%	\$0.8	-0.91 to -0.34	-0.9 to -0.3%	0.57
Heavy Rail	\$10.5 to 13.3	4.8 to 6.1%	\$2.9	-3.81 to -1.73	-2.2 to -1.0%	2.08
Light Rail	\$3.2 to 4.1	4.6 to 5.9%	\$0.9	-0.88 to -0.41	-2.2 to -1.0%	0.47
Commuter Rail	\$12.0 to 14.8	4.9 to 6.0%	\$2.7	-0.51 to -0.14	-1.4 to -0.4%	0.37
Ferry	\$0.1 to 0.2	1.4 to 2.4%	\$0.1	-0.02 to -0.01	-1.5 to -0.6%	0.01
THE RIDE	\$0.2 to 0.3	3.3 to 4.7%	\$0.1	-0.06 to -0.03	-2.9 to -1.6%	0.03
Parking	-\$0.6 to -0.3	-1.3 to -0.5%	\$0.4	-0.10 to -0.04	-1.2 to -0.4%	0.06
<b>Total System</b>	<b>\$25.2 to 33.1</b>	<b>3.5 to 4.7%</b>	<b>\$7.9</b>	<b>-6.29 to -2.70</b>	<b>-1.7 to -0.7%</b>	<b>3.59</b>

\*These values refer to the percentage increase for the total changes in revenue or ridership systemwide compared to existing systemwide values. The 4.7 percent relative revenue increase corresponds to a \$33.1-million increase. The larger percentage revenue increase and smaller ridership decreases relate to the lower set of elasticity assumptions.

In this table, "Fare Revenue" includes revenue generated from parking at lots where the MBTA retains the revenue. "Ridership" includes the number of vehicles that parked at these lots.

Source: SFY 2018 FERRET.



# Chapter 5—Fare Equity Analysis

## 5.1 REQUIREMENTS

Title VI of the Civil Rights Act of 1964 prohibits discrimination, either intentionally or unintentionally, by recipients of federal financial assistance based on race, color, or national origin. To comply with 49 CFR Section 21.5(b) (2), 49 CFR Section 21.5(b) (7), and Appendix C to 49 CFR Part 21, the MBTA must evaluate any fare changes to fixed-route modes prior to implementation to determine if the proposed changes would have a discriminatory effect. The FTA provides guidance for conducting fare equity analyses in FTA Circular 4702.1B (“Circular”), Section IV.7.b. Prior to a fare change, the MBTA must analyze any available information generated from ridership surveys that indicates whether minority and/or low-income riders would be disproportionately more likely than overall riders to use the mode of service, payment type, or payment media that would be subject to a fare change. In addition, the MBTA must describe the datasets and collection methods used in its analysis.

The Circular states that the transit provider shall:

- Determine the number and percentage of users of each fare media subject to change
- Review fares before and after the change
- Compare the relative cost burden impacts of the proposed fare change between minority and overall users for each fare media
- Compare the relative cost burden impacts of the proposed fare change between low-income and overall users for each fare media

Under Title VI and other directives, the FTA requires that transit agencies develop a policy to assess whether a proposed fare change would have a “disparate impact” on minority populations or “disproportionate burden” on low-income populations. The FTA Title VI guidelines define “disparate impact” as “a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient’s policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives, but with less disproportionate effects on the basis, of race, color, or national origin,” and “disproportionate burden” as “a neutral policy or practice that disproportionately affects low-income populations more than non-low income populations.” A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.

## 5.2 MBTA TITLE VI DISPARATE-IMPACT AND DISPROPORTIONATE-BURDEN POLICY

### 5.2.1 Policy Thresholds

The MBTA's January 30, 2017, Disparate Impact/Disproportionate Burden (DI/DB) Policy explains the methodology to be used for fare equity analyses.

For all fare changes, the MBTA will compare the percentage change in the average fare for minority and overall riders and for low-income and overall riders. For fare-type changes across all modes, the MBTA will assess whether minority and low-income customers are more likely to use the affected fare type or media than overall riders. Any or all proposed fare changes will be considered in the aggregate and results evaluated using the fare DI/DB threshold, below.

The MBTA's threshold for determining when fare changes may result in disparate impacts or disproportionate burdens on minority or low-income populations, respectively, is 10%.

#### *MBTA Disparate Impact/Disproportionate Burden (DI/DB) Policy*

The policy thresholds are encapsulated in the following equations:

A disparate impact would be found if:

$$\begin{aligned} \text{Minority Average Fare Decrease} &< 90\% \times \text{All-Rider Average Fare Decrease} \\ \text{Minority Average Fare Increase} &> 110\% \times \text{All-Rider Average Fare Increase} \end{aligned}$$

A disproportionate burden would be found if:

$$\begin{aligned} \text{Low-income Average Fare Decrease} &< 90\% \times \text{All-Rider Average Fare Decrease} \\ \text{Low-income Average Fare Increase} &> 110\% \times \text{All-Rider Average Fare Increase} \end{aligned}$$

Upon finding a potential disparate impact on minority populations from a proposed fare change, the MBTA will analyze alternatives/revisions to the proposed change that meet the same goals of the original proposal. Any proposed alternative fare change would be subject to a fare equity analysis. The MBTA will implement any proposal in accordance with then current FTA guidance.

Where potential disparate impacts are identified, the MBTA will provide a meaningful opportunity for public comment on any proposed mitigation measures, including any less discriminatory alternatives that may be available.

Upon finding a potential disproportionate burden on low-income populations from a proposed fare change, the MBTA may take steps to avoid, minimize, or mitigate these impacts, where practicable.

*MBTA Disparate Impact/Disproportionate Burden (DI/DB) Policy*

**5.2.2 Demographics and Definitions**

***Demographics***

The systemwide demographic profile in Table 7 shows how the MBTA’s ridership characteristics in terms of minority and low-income status vary by mode. Minority and low-income profile data of the MBTA’s ridership are from the MBTA 2015–17 Systemwide Passenger Survey report published in May 2018.

**Table 7  
Demographic Profiles of MBTA Riders by Mode**

<b>Mode</b>	<b>Minority</b>	<b>Non-minority</b>	<b>Low-Income</b>	<b>Non-Low-Income</b>
Rapid Transit	30.8%	69.2%	26.5%	73.5%
Bus and Trackless Trolley	48.0%	52.0%	41.5%	58.5%
Silver Line (BRT)	41.7%	58.3%	24.9%	75.1%
Commuter Rail	14.6%	85.4%	6.8%	93.2%
Commuter Ferry and Boat	1.7%	98.3%	3.7%	96.3%
<b>Total</b>	<b>34.3%</b>	<b>65.7%</b>	<b>28.8%</b>	<b>71.2%</b>

Source: 2015–17 MBTA Systemwide Passenger Survey.

***Minority- and Low-Income Populations***

Respondents to the 2015–17 Systemwide Passenger Survey were classified as having minority status if they self-identified as a race other than white and/or were Hispanic or Latino/Latina. Respondents whose household income is less than \$43,500—the income category from the survey that most closely matched 60 percent of the median household income for the MBTA service area from the 2013 American Community Survey—were classified as low-income.



### 5.3 DATASETS, DATA COLLECTION EFFORTS, AND DESCRIPTIONS

CTPS used several datasets in the fare equity analysis:

- CTPS FERRET (which incorporates MBTA ridership and sales data)
- MBTA 2015–17 Systemwide Passenger Survey, published in May 2018

FERRET is an elasticity-based spreadsheet model. CTPS has used this model in the past to provide inputs to the fare-increase analysis process. FERRET takes existing ridership in the form of unlinked trips by mode, fare-payment type, and fare media as inputs. The MBTA provides CTPS with ridership data from the automated fare collection system. For modes that are not part of the AFC system, the MBTA provides data (most notably, sales data for transit passes) to estimate ridership. Using these input data, FERRET employs elasticities and diversion factors to model a range of possible impacts resulting from changes in the MBTA's fares. (See Chapter 2 and Appendix A for further detail.)

The MBTA 2015–17 Systemwide Passenger Survey report, published in May 2018, included all of the transit modes provided by the MBTA—the heavy rail Red, Blue, and Orange Lines; the light rail Green Line and Mattapan Trolley; the Silver Line bus rapid transit; the commuter rail system; the bus system; and the ferry system. The survey did not capture riders of the MBTA's purchased service bus routes; the MBTA is currently planning to conduct a supplemental survey effort to collect data about these routes. The survey asked questions regarding trip origins, destinations, and most important to this equity analysis, fare payment method, trip frequency, race, ethnicity, and income.

CTPS first launched the survey online and advertised its availability throughout the MBTA system. When the response rate to the online survey slowed, staff distributed the survey on paper forms at stations/stops and on vehicles. To compensate for differences in response rates among services, responses from each unlinked trip segment were weighted in proportion to the number of typical daily boardings for a corresponding station, group of stations, route, or route segment. The systemwide survey results were used in conjunction with FERRET to estimate the number of riders using each fare type, and the magnitude of the fare changes for low-income, minority, and all riders.

### 5.4 EQUITY ANALYSIS AND RESULTS

CTPS used the MBTA Systemwide Survey in conjunction with FERRET to determine the number of riders using each fare type and the price change by fare type for minority, low-income, and all riders. Because the model's ridership values are in trips and the survey's values are in riders, CTPS used the survey responses for the frequency of travel, fare type, and minority/income status to

translate surveyed riders into trips per surveyed rider by fare type by minority status and income status.

We used the equation below to determine the number of days per week a fare is used by riders of a specific demographic classification. We weighted each survey response by the number of days per week the rider made that trip—data we also obtained from the systemwide survey. For example, if 1,000 minority riders use monthly passes to make a trip five days per week and 200 minority riders use monthly passes to make a trip seven days per week, the average weighted usage per week for the minority riders using passes is equal to 5.33 days per week:

$$\text{Minority Rider Pass Usage} = \frac{1,000 \times 5 + 200 \times 7}{1,000 + 200} = 5.33$$

The response selections for the question “I make this trip on the MBTA...” were “6–7 days a week,” “5 days a week,” “3–4 days a week,” “1–2 days a week,” “1–3 days a month,” and “Less than once a month.” When calculating the above formula, we set the weekly usage rate to 6.5, 5.0, 3.5, 1.5, 0.5, and 0.125 days per week.

We used the equation below to determine the percentage of all users of a given fare type accounted for by minority riders. For example, if minority riders used passes 5.33 days per week, and nonminority riders used passes 4.25 days per week, and minority riders made up 25 percent of the total pass fare responses, the percentage of minority riders using that fare type is:

$$\text{Minority Rider Pass Percentage} = \frac{5.33 \times 25\%}{(5.33 \times 25\%) + (4.25 \times 75\%)} = 29.5\%$$

We used this procedure for each type of fare to estimate the share of riders by demographic classification who use that fare type. We multiplied the resulting percentage by the total number of trips made using a fare type to estimate the number of riders by classification by fare. For example, if the MBTA recorded 50 million total trips made using passes, the minority rider usage would be:

$$\text{Total Minority Rider Usage} = 29.5\% \times 50 \text{ million trips} = 14.8 \text{ million trips}$$

Table 8 provides a snapshot of fare type usage by demographic group.<sup>3</sup> Low-income riders are somewhat less likely to use the monthly LinkPass. When using a single-ride fare, minority riders and low-income riders are more likely to be on a bus and paying a student or senior fare. In an effort to decrease the impact of the fare increase on minority and low-income riders, the MBTA proposal maintains the existing reduced bus and rapid transit fares and passes. The MBTA proposal also maintains the existing bus fares. Riders who currently use a CharlieTicket or pay cash can obtain a CharlieCard to gain access to lower single-ride fares.

Minority and low-income riders are more likely to use a 7-Day LinkPass than a monthly LinkPass compared to all riders.<sup>4</sup> The 7-Day LinkPass allows passengers who cannot afford to—or for some other reason do not—purchase a monthly pass at the beginning of the month to spread their purchases out over a longer period. Four 7-Day LinkPasses cost the same as a monthly LinkPass. The 7-Day LinkPass is also somewhat more flexible—if someone knows they are not going to make enough trips in a given week for the pass to be worthwhile (say, during the winter holidays or school vacation), they can choose not to purchase it for that week.

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<sup>3</sup> Minority and low-income riders share some of the same payment characteristics; however, the difference between how low-income riders and all riders pay is significantly more notable than the difference between payment trends of minority riders and all riders.

<sup>4</sup> The 7-Day LinkPass and the monthly LinkPass provide unlimited access to all local bus and rapid transit services.

**Table 8**  
**Minority, Low-Income, and All Riders Using**  
**Each Principal Fare-Payment Type**

Fare-Payment Type	Price		Change		Annual Usage in Unlinked Trips			Annual Usage Share of Group Total		
	Existing	Proposed SFY 2020	Absolute	Percent	Minority	Low-Income	All Riders	Minority	Low-Income	All Riders
<b>Local Bus</b>										
Local Bus Pass	\$55.00	\$ 55.00	\$ 0.00	0.0%	2,441,000	1,876,000	4,651,000	1.8%	1.5%	1.3%
Local Bus (Adult)	1.70	\$ 1.70	0.00	0.0%	6,580,000	5,689,000	13,627,000	4.7%	4.6%	3.7%
Local Bus (Senior)	0.85	\$ 0.85	0.00	0.0%	1,357,000	2,308,000	3,245,000	1.0%	1.9%	0.9%
Local Bus (Student)	0.85	\$ 0.85	0.00	0.0%	1,145,000	969,000	1,501,000	0.8%	0.8%	0.4%
Local Bus (CharlieTicket)	2.00	\$ 2.00	0.00	0.0%	380,000	460,000	692,000	0.3%	0.4%	0.2%
Local Bus (Cash)	2.00	\$ 2.00	0.00	0.0%	856,000	1,045,000	1,676,000	0.6%	0.8%	0.5%
<b>Express Bus</b>										
Inner Express Pass	128.00	136.00	8.00	6.3%	740,000	350,000	2,123,000	0.5%	0.3%	0.6%
Inner Express (Adult)	4.00	4.25	0.25	6.3%	173,000	186,000	496,000	0.1%	0.2%	0.1%
Inner Express (Senior)	2.50	2.10	-0.40	-16.0%	24,300	29,600	65,100	0.0%	0.0%	0.0%
Inner Express (Student)	2.50	2.10	-0.40	-16.0%	16,700	24,000	26,300	0.0%	0.0%	0.0%
Inner Express (CharlieTicket)	5.00	5.25	0.25	5.0%	8,800	10,900	15,100	0.0%	0.0%	0.0%
Inner Express (Cash)	5.00	5.25	0.25	5.0%	23,700	39,600	62,700	0.0%	0.0%	0.0%
Outer Express Pass	168.00	168.00	0.00	0.0%	125,000	17,900	359,000	0.1%	0.0%	0.1%
Outer Express (Adult)	5.25	5.25	0.00	0.0%	11,000	7,700	95,800	0.0%	0.0%	0.0%
Outer Express (Senior)	3.50	2.60	-0.90	-25.7%	NR	NR	14,500	0.0%	0.0%	0.0%
Outer Express (Student)	3.50	2.60	-0.90	-25.7%	NR	NR	500	0.0%	0.0%	0.0%
Outer Express (CharlieTicket)	7.00	7.00	0.00	0.0%	NR	NR	2,400	0.0%	0.0%	0.0%
Outer Express (Cash)	7.00	7.00	0.00	0.0%	NR	NR	3,900	0.0%	0.0%	0.0%
<b>Bus and Rapid Transit</b>										
Bus and Rapid Transit (Adult)	2.25	2.40	0.15	6.7%	2,958,000	2,455,000	7,160,000	2.1%	2.0%	2.0%
Bus and Rapid Transit (Senior)	1.10	1.10	0.00	0.0%	474,000	824,000	1,347,000	0.3%	0.7%	0.4%
Bus and Rapid Transit (Student)	1.10	1.10	0.00	0.0%	360,000	313,000	483,000	0.3%	0.3%	0.1%
Bus and Rapid Transit (CharlieTicket)	4.75	4.90	0.15	3.2%	4,000	4,900	7,900	0.0%	0.0%	0.0%
<b>Rapid Transit</b>										
LinkPass	84.50	90.00	5.50	6.5%	27,712,000	19,738,000	80,844,000	19.9%	16.0%	22.2%
Senior/TAP Pass	30.00	30.00	0.00	0.0%	5,517,000	7,232,000	12,227,000	4.0%	5.9%	3.4%
Youth Pass	30.00	30.00	0.00	0.0%	716,000	653,000	1,000,000	0.5%	0.5%	0.3%
Student 7-Day	30.00	30.00	0.00	0.0%	8,589,000	7,633,000	11,821,000	6.2%	6.2%	3.3%
1-Day Pass	12.00	12.75	0.75	6.3%	631,000	587,000	791,000	0.5%	0.5%	0.2%
7-Day Pass	21.25	22.50	1.25	5.9%	24,991,000	23,781,000	36,669,000	18.0%	19.3%	10.1%
Rapid Transit (Adult)	2.25	2.40	0.15	6.7%	11,035,000	8,466,000	33,710,000	7.9%	6.9%	9.3%
Rapid Transit (Senior)	1.10	1.10	0.00	0.0%	906,000	1,668,000	3,714,000	0.7%	1.4%	1.0%
Rapid Transit (Student)	1.10	1.10	0.00	0.0%	918,000	873,000	1,331,000	0.7%	0.7%	0.4%
Rapid Transit (CharlieTicket)	2.75	2.90	0.15	5.5%	4,050,000	4,874,000	12,703,000	2.9%	4.0%	3.5%
Rapid Transit (Cash)	2.75	2.90	0.15	5.5%	NR	41,300	196,000	0.0%	0.0%	0.1%
<b>Commuter Rail</b>										
Zone 1A-10 Pass	\$84.50-	\$90.00-	\$5.50-	6.5%-	5,648,000	2,197,000	31,540,000	4.1%	1.8%	8.7%
	\$398.25	\$426.00	\$27.75	7.0%						
Zone 1A	\$ 84.50	\$ 90.00	\$ 5.50	6.5%	1,501,000	680,000	4,631,000	1.1%	0.6%	1.3%
Zone 1	200.25	214.00	13.75	6.9%	380,000	38,500	1,892,000	0.3%	0.0%	0.5%
Zone 2	217.75	232.00	14.25	6.5%	592,000	208,000	4,625,000	0.4%	0.2%	1.3%
Zone 3	244.25	261.00	16.75	6.9%	709,000	263,000	4,761,000	0.5%	0.2%	1.3%
Zone 4	263.00	281.00	18.00	6.8%	737,000	218,000	4,428,000	0.5%	0.2%	1.2%
Zone 5	291.50	311.00	19.50	6.7%	397,000	218,000	2,432,000	0.3%	0.2%	0.7%
Zone 6	318.00	340.00	22.00	6.9%	681,000	277,000	4,417,000	0.5%	0.2%	1.2%
Zone 7	336.50	360.00	23.50	7.0%	347,000	130,000	2,072,000	0.2%	0.1%	0.6%
Zone 8	363.00	388.00	25.00	6.9%	294,000	152,000	2,215,000	0.2%	0.1%	0.6%
Zone 9	379.50	406.00	26.50	7.0%	6,500	8,500	43,500	0.0%	0.0%	0.0%
Zone 10	398.25	426.00	27.75	7.0%	3,500	4,600	23,600	0.0%	0.0%	0.0%

Fare-Payment Type	Price		Change		Annual Usage in Unlinked Trips			Annual Usage Share of Group Total		
	Existing	Proposed SFY 2020	Absolute	Percent	Minority	Low-Income	All Riders	Minority	Low-Income	All Riders
Zone 1A–10 Single Ride	\$2.25– 12.50	\$2.40– 13.25	\$0.15– 0.75	3.7%– 6.7%	1,313,000	855,000	10,662,000	1.0%	0.8%	2.9%
Interzone 1–10 Pass	\$90.25– 221.50	\$90.00– 237.00	-\$0.25– 15.50	-0.3%– 7.0%	19,000	7,500	127,900	0.0%	0.0%	0.0%
Interzone 1–10 Single Ride	\$2.75– 6.50	\$2.75– 6.75	\$0.00– 0.25	0.0%– 6.3%	44,800	29,100	363,600	0.0%	0.0%	0.1%
<b>Ferry</b>										
Commuter Boat Pass	\$ 308.00	\$ 329.00	\$ 21.00	6.8%	13,200	19,900	361,000	0.0%	0.0%	0.1%
F1: Hingham	9.25	9.75	0.50	5.4%	5,700	NR	438,000	0.0%	0.0%	0.1%
F2: Boston	9.25	9.75	0.50	5.4%	14,000	21,100	288,000	0.0%	0.0%	0.1%
F2: Cross Harbor	9.25	9.75	0.50	5.4%	NR	NR	1,200	0.0%	0.0%	0.0%
F2: Logan	18.50	9.75	-8.75	-47.3%	NR	NR	25,200	0.0%	0.0%	0.0%
F4: Inner Harbor	3.50	3.70	0.20	5.7%	NR	700	261,000	0.0%	0.0%	0.1%
<b>Free Transfers and Other Fares</b>										
In-station Transfers	Free	Free	-	-	17,665,000	16,029,000	46,745,000	12.7%	13.0%	12.9%
AFC Noninteraction <sup>1</sup>	Free	Free	-	-	7,790,000	7,790,000	22,508,000	5.6%	6.3%	6.2%
Free trips <sup>2</sup>	Free	Free	-	-	1,153,000	1,608,000	3,851,000	0.8%	1.3%	1.1%
Short fares <sup>3</sup>	Variable	Variable	-	-	1,321,000	1,686,000	2,940,000	0.9%	1.4%	0.8%

Notes: Values greater than 100,000 are rounded to the nearest 1,000. Values less than 100,000 are rounded to the nearest 100.

Percentages are calculated using unrounded values. NR indicates that no riders from a given classification responded to the survey.

<sup>1</sup> AFC noninteraction is an estimate of the number of riders who do not interact with the AFC. The noninteraction categories include children aged 11 or younger, who are not required to pay a fare when riding with an adult; MBTA employees who are waved onto vehicles or otherwise bypass the AFC equipment; passengers who are allowed by MBTA employees to enter the paid area of a station without interacting with the AFC equipment; passengers who show an operator a valid pass rather than interacting with the farebox; passengers who board certain vehicles via the rear door; and passengers who simply do not pay a fare (not all of these categories apply to every mode).

<sup>2</sup> Free trips include people who are not required to pay a fare. Some of these people pay with the Blind Access Card.

<sup>3</sup> Short fares are fares paid less than the full fare.

AFC = Automated fare collection. NR = No responses to the 2015–17 systemwide passenger survey. SFY = State Fiscal Year.

TAP = Transportation Access Pass.

Source: Central Transportation Planning Staff.

#### 5.4.1 Minority Riders Compared to All Riders and Low-Income Riders Compared to All Riders

Table 9 presents existing and proposed average fares, and absolute and relative price changes for minority riders, low-income riders, and all riders. As the Circular indicates, fare equity analyses are applicable only to fixed-route modes; neither THE RIDE nor parking is included in the following analysis. Minority and low-income riders pay lower average fares compared to the overall average fare for all riders. This is largely because nonminority and non-low-income riders use the commuter rail system and other more expensive modes more than minority and low-income riders. At the proposed fare levels, minority and low-income riders would continue to pay lower average fares.

### 5.4.2 Results from Applying the Disparate-Impact and Disproportionate-Burden Policy Thresholds

The results of the equity analysis, shown in Table 9, show that there is no disparate impact on minority riders and no disproportionate burden on low-income riders when considering the relative fare changes.

**Table 9**  
**Existing and Proposed Average Fares and Price Changes**  
**(Weighted by Fare Usage Frequency)**

<b>Rider Classification</b>	<b>Existing Average Fare</b>	<b>Proposed Average Fare</b>	<b>Absolute Price Change</b>	<b>Percentage Price Change</b>
Minority	\$1.39	\$1.45	\$0.06	4.40%
Low-income	\$1.25	\$1.30	\$0.05	3.85%
All Riders	\$1.83	\$1.92	\$0.10	5.21%

Note: The values in this table are rounded to the nearest cent or the nearest hundredth of a percent. All calculations were performed using unrounded values. The systemwide "All Riders" percentage price change reported here is different from the values reported in other parts of the report because we exclude revenue changes associated with THE RIDE or parking.

Source: SFY 2018 FERRET.

Application of the disparate-impact policy threshold shows the relative increase (or the change taken as a percentage of the initial fare) in the average fare for minority riders is 85 percent of the relative increase in the average fare for all riders.

Application of the disproportionate-burden policy threshold shows the relative increase in the average fare for low-income riders is 74 percent of the relative increase in the average fare for all riders.

Because all differences in impacts are less than the 10 percent threshold in the disparate-impact and disproportionate-burden policy, we do not find a disparate impact on minority populations or disproportionate burden for low-income populations.

### 5.4.3 A New Fare Product: Weekend Commuter Rail Pass

On the weekend of June 9, 2018, the MBTA started a pilot program that offered a \$10 weekend pass, which is valid for unlimited travel on the commuter rail system for a single weekend. Riders are able to purchase this fare product at ticket windows, onboard the train, and using the mTicket mobile app. The MBTA decided to offer this product to encourage people to try the commuter rail service on weekends, when there is typically capacity for additional riders.

This section of the fare equity analysis presents a more detailed look at the riders who use this new fare type, the benefits they receive in fare savings, and how those benefits relate to the larger fare change analysis.

### ***Weekend Pass User Surveys***

Over three weekends, MBTA staff conducted in-person surveys of commuter rail riders at North and South stations.<sup>5</sup> Riders primarily completed the surveys in the afternoons between 2 PM and 6 PM. The MBTA asked riders questions to gather the following information:

- whether they planned to purchase their ticket at a ticket window, onboard a train, or through the mTicket app
- the destination of their trip
- how many one-way trips they planned to make during the given weekend
- their race, ethnicity, and income

To conduct the equity analysis, CTPS analyzed the responses from riders who said they planned to travel using a weekend pass.

In total, 180 surveyed riders said they planned to use the weekend pass to travel, although not all of those riders provided enough information to determine their minority and income statuses.

During a similar period, the MBTA also sent a survey to a sample of mTicket users and asked the same demographic questions. The intent of this survey was to attach demographic classifications to data for actual trips instead of relying on riders to accurately recall and report their trips. After reviewing the results, we determined that the trip-making data were not complete enough to use confidently for its intended purpose. However, the survey provides some insight about the demographics of riders who used the weekend pass over a longer period than the in-person survey. Riders who used the service from the onset of the pilot could have been selected to participate in the survey.

### ***Demographics of Weekend Pass Users***

While the new weekend pass fare product will be included in the equity analysis as part of the aggregate package of fare changes, CTPS first compared the demographics of weekend pass users to systemwide averages. Table 10 shows the number and proportion of In-person Commuter Rail Survey respondents by rider classification. The proportion of weekend pass riders who are classified as minority riders or low-income riders is significantly higher than the commuter rail

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<sup>5</sup> MBTA staff surveyed riders in 2019 at North Station on February 10, 16, 17, and 24, and South Station on February 16, 17, and 24.

rider population, 15 percent and 7 percent, respectively, based upon the 2015–17 MBTA systemwide survey. The demographics of these riders are more similar to those of the rapid transit, bus, and trackless trolley riders based on the systemwide survey (see Table 7).

**Table 10**  
**Number and Proportion of Survey Respondents by Rider Classification**

<b>Rider Classification</b>	<b>Number of Respondents</b>	<b>Proportion</b>	<b>Margin of Error</b>
Minority	58	37.6%	± 6.1%
Low-income	65	41.1%	± 6.8%

Note: 141 respondents provided enough information to determine their minority status, and 173 respondents provided enough information to determine their income status. The margin of error is based on a 90 percent confidence level. Source: MBTA In-person Commuter Rail Survey (February 2019).

Of the mTicket users who took the online survey, approximately 25 percent ± 3 percent of the riders were classified as minority riders and approximately 31 percent ± 3 percent of the riders were classified as low income. Based on the in-person survey, riders classified as minority riders or low-income riders were more likely to pay in person rather than use the mTicket app.

Using the in-person survey, the estimate of the proportion of riders classified as minority riders is greater than the system average from the systemwide passenger survey (34.3 percent), but the lower bound of the estimate is lower than the systemwide average. Using the mTicket rider survey, the proportion of riders classified as minority riders is likely lower than the system average. Using either the in-person or the mTicket survey, the proportion of low-income riders is greater than the system average from the systemwide survey (28.8 percent).

***The Weekend Pass in Combination with the Full Fare Increase***

Even though the in-person survey suggests that the proportions of riders in protected classes who are benefitting from this new pass product are likely greater than the proportion of riders in the MBTA’s general population, we included the effects of this new fare product as part of the larger fare change package. To complete this analysis, CTPS converted the benefit of the weekend pass into values we could incorporate into FERRET’s fare equity analysis methodology.

The MBTA provided the number of weekend passes sold by sales channel for the first nine months of the weekend pass pilot. CTPS scaled those numbers up to annual sales values.



CTPS used the in-person survey data to estimate what riders would have paid for all of their trips if those riders had paid full price. We then subtracted the purchase price of the weekend pass from the full price of their trips to estimate the net benefit of each weekend pass. We calculated the average savings by rider classification and sales channel.

For each sales channel, we estimated the total benefit attributable to each protected class of riders by multiplying the number of passes sold by the proportion of tickets sold to each class of rider by the estimated benefit per weekend pass for the respective class.

We used the total savings by class of rider to adjust their proposed average fare. Table 11 presents the existing average fares and the proposed average fares with the weekend pass.

**Table 11  
Existing and Proposed Average Fares and Price Changes**

<b>Rider Classification</b>	<b>Existing Average Fare</b>	<b>Proposed Average Fare with Weekend Pass</b>	<b>Absolute Price Change</b>	<b>Percentage Price Change</b>
Minority	\$1.39	\$1.42	\$0.04	2.63%
Low-income	\$1.25	\$1.27	\$0.02	1.67%
All Riders	\$1.83	\$1.90	\$0.07	3.95%

Note: The values in this table are rounded to the nearest cent or the nearest hundredth of a percent. All calculations were performed using unrounded values. The existing average fare column matches the column in Table 9. The new proposed average fares with the weekend pass are lower than the proposed average fares in Table 9.

Source: SFY 2018 FERRET.

Application of the disparate-impact policy threshold shows the relative increase (or the change taken as a percentage of the initial fare) in the average fare for minority riders is 67 percent of the relative increase in the average fare for all riders.

Application of the disproportionate-burden policy threshold shows the relative increase in the average fare for low-income riders is 42 percent of the relative increase in the average fare for all riders.

Because all differences in impacts are less than the 10 percent threshold in the disparate-impact and disproportionate-burden policy, we do not find a disparate impact on minority populations or disproportionate burden for low-income populations.

## Chapter 6—Conclusions

CTPS conducted an analysis of the impacts of fare changes on ridership and revenue using a methodology based on established data inputs. These analyses show that the MBTA fare proposal would generate approximately \$29.5 million of additional revenue, with an anticipated ridership decrease of 4.4 million trips annually.

Staff applied the MBTA's disparate-impact and disproportionate-burden policy thresholds to assess the estimated Title VI and environmental justice impacts of the proposed fare changes. We do not expect the fare increase to cause disparate impacts or disproportionate burdens.



# Appendix A: FERRET Methodology

## A.1 APPORTIONMENT OF EXISTING RIDERSHIP

One of the first steps in starting a new iteration of Fare Elasticity, Ridership, and Revenue Estimation Tool (FERRET) is collecting new Automated Fare Collection (AFC) and sales data—these data represent the largest share of the MBTA’s ridership and revenue—and revenue and ridership reports for the ferries, THE RIDE, and the MBTA’s parking lots.

The MBTA provides CTPS with AFC data summarized by hour, by day, for the various combinations of fare type, fare mode, and fare media (Table A-1). After processing, AFC data can be attributed to each mode, fare type, and station (or Green Line branch). The fares for approximately 87 percent of all trips made on the system are paid using the AFC system.

The remaining trips are made using transit modes on which fares are not paid using the AFC system: commuter rail, commuter boat, THE RIDE, and parking. For these modes, we rely on fare-mix reports (that indicate how riders pay), various CTPS passenger surveys, and other ridership and revenue reports provided by the MBTA.

**Table A-1  
AFC Fare Categories**

<b>Fare Type</b>	<b>Fare Mode</b>	<b>Fare Media</b>
Adult/Senior/TAP/Student/Free	Single-Ride	CharlieCard CharlieTicket Onboard Cash
Adult/Senior/TAP/Student	Transfer	CharlieCard CharlieTicket
Short (fares below the full value)	Single-Ride	Onboard Cash
Bus/Inner Express/Outer Express	Pass	CharlieCard CharlieTicket
LinkPass: Monthly/1-Day/7-Day	Pass	CharlieCard CharlieTicket
Commuter Rail Zone and Interzone/Commuter Boat	Pass	CharlieCard CharlieTicket
Senior/TAP/Student/Youth	Pass	CharlieCard CharlieTicket

AFC = Automated Fare Collection. TAP = Transportation Access Pass.  
Source: Central Transportation Planning Staff.

## A.2 PRICE ELASTICITY

Price elasticity measures the rate of change in ridership relative to a change in fares if all other factors remain constant. On a traditional demand curve that describes the relationship between price, on the y-axis, and demand, on the x-axis, elasticities are equivalent to the slope along that curve. Price elasticities generally are expected to be negative, meaning that a positive price increase would lead to a decrease in demand (with a price decrease having the opposite effect). The more negative (farther from zero) the value of a price elasticity, the larger the projected decrease in demand. More negative price elasticities are said to be relatively “elastic,” while smaller negative values, closer to zero, are said to be relatively “inelastic.” Thus, if the price elasticity of the demand for transit is assumed to be elastic, a given fare increase would cause a greater loss of ridership than if demand were assumed to be inelastic.

At its most elemental, FERRET is based on this simple price elasticity relationship, and requires four inputs: 1) original demand, 2) original fare, 3) new fare, and 4) price elasticity. The formula for calculating new demand is:

$$\text{New Demand} = \text{Original Demand} \times [1 + \text{Price Elasticity} \times (\text{New Fare} \div \text{Old Fare} - 1)]$$

As an example, assume that original demand equals 100 and that the impact we are modeling is a 10 percent fare increase from \$1.00 to \$1.10. Also assume that the price elasticity is -0.25.

$$\text{New Demand} = 100 \times [1 + -0.25 \times (\$1.10 \div \$1.00 - 1)] = 97.50$$

Thus, using an elasticity of -0.25, a simple price elasticity model projects that a 10 percent increase in price will lead to a 2.50 percent decrease in demand. With the fare increased from \$1.00 to \$1.10, this simplified example projects a 7.25 percent increase in revenue (\$100.00 to \$107.25).

## A.3 DIVERSION FACTORS

FERRET’s calculations are more comprehensive than a simple elasticity calculation. The model’s greater detail lays in its use of ridership diversion factors. Diversion factors reflect estimates of the likelihood of a switch in demand for one type of good or service to another resulting from a change in the relative prices of those goods or services. In FERRET, we use such factors to estimate the number of riders who would choose to divert from one fare/mode to another.

Using cash tickets and passes as an example, assume that original ridership equals 100 cash riders and 1,000 pass riders. Also assume that original prices for cash tickets and passes equal \$2.00 and \$100.00, respectively, and that the

new prices are set at \$1.50 for cash tickets and \$50.00 for passes, representing price decreases of 25 percent and 50 percent, respectively. Assume that the cash price elasticity equals -0.35 and the pass price elasticity equals -0.25. Finally, assume a cash-to-pass diversion factor of 0.05 and a pass-to-cash diversion factor of 0.00.

In these calculations, one of the diversion factors must always equal zero, indicating that the diversion is expected to occur in one direction only. The direction of the diversion, and thus the diversion factor value, depends on the respective price changes of the two types of goods. The category with the greater relative price decrease (or the smaller relative price increase)—in this case, passes, for which the price decrease is 50 percent, compared to cash tickets, for which the price decrease is 25 percent—would gain riders from the diversion, while the other category, with the smaller relative price decrease (or the greater relative price increase), would lose riders from the diversion. Therefore, one would therefore expect that cash customers would switch to passes, but not that pass customers would switch to cash tickets, resulting in the 0.05 cash-to-pass and 0.00 pass-to-cash diversion factors.

The diversion factors essentially work to redistribute demand between the two categories after the respective price elasticities have been applied. For instance, after the cash fare is decreased from \$2.00 to \$1.50, the projected effect of price elasticity is that cash demand grows to 108.75 riders. Similarly, the pass price decrease from \$100 to \$50 leads to a projected increase in pass demand, because of price elasticity, to 1,125, for a total ridership of 1,233.75. However, the percentage decrease in the pass price is larger than that in cash fares (50 percent versus 25 percent); thus, one would expect some customers to switch from cash to pass.

This diversion is estimated by taking the ratio of new-to-original cash prices (\$1.50 ÷ \$2.00, or 75 percent), dividing that ratio by the ratio of new-to-original pass prices (\$50 ÷ \$100, or 50 percent), subtracting 1, and multiplying this result by the 0.05 diversion factor and the price-elasticity-estimated cash ridership (108.75). The number of riders “diverted” from cash to pass equals 2.72, giving final ridership estimates of 106.03 for cash and 1,127.72 for pass (still summing to a total ridership of 1,233.75).

New Cash Demand (Price Effect):

$$C_p = 100 \times [1 + -0.35 \times (\$1.50 \div \$2.00 - 1)] = 108.75$$

New Pass Demand (Price Effect):

$$P_p = 1,000 \times [1 + -0.25 \times (\$50 \div \$100 - 1)] = 1,125.00$$

$$\text{Total Demand} = 108.75 + 1,125.00 = 1,233.75$$

$$\text{Diverted Riders from Cash to Pass} = \left( \frac{\$NewCash/\$OldCash}{\$NewPass/\$OldPass} - 1 \right) \times \text{Diversion} \times C_p$$

$$\text{Diverted Riders from Cash to Pass} = \left( \frac{\$1.50/\$2.00}{\$50/\$100} - 1 \right) \times 0.05 \times 108.75 = 2.72$$

$$\text{New Cash Demand} = C_p - \text{Diverted Riders from Cash to Pass} = 106.03$$

$$\text{New Pass Demand} = P_p + \text{Diverted Riders from Cash to Pass} = 1,127.72$$

$$\text{Total Demand} = 106.03 + 1,127.72 = 1,233.75$$

We used diversion factors to estimate diversions between

- Cash and pass categories (for example, bus cash versus bus pass, subway cash versus subway pass)
- Bus and rapid transit (in other words, bus cash versus subway cash, bus pass versus subway pass)
- CharlieTicket/onboard cash and CharlieCard (for example, bus onboard cash versus bus CharlieCard, subway CharlieTicket versus subway CharlieCard)

Initially, we developed a range of diversion factors based on results of the 2007 Post-Fare Increase Impacts Analysis. We used these factors in the SFY 2013 fare increase analysis, and continued to use them in the SFY 2015 analysis. After reviewing the impacts of the SFY 2013 fare increase, we found sufficient evidence that the willingness of people to divert between passes and cash on the subway and light rail system would increase slightly.

Following a review by Andrew Stuntz, we increased the cash-pass diversion ratio even higher.<sup>6</sup> His research suggested that approximately 3 percent to 5 percent of riders switched from using passes to some form of single-ride fare. We changed the cash-pass diversion factor in the SFY 2017 version of FERRET until we found a decrease in pass usage by approximately 3 percent. This resulted in the factor increasing from 0.08 to 0.70—a significant increase.

## A.4 PRICE ELASTICITY ESTIMATION

CTPS estimated the price elasticity of demand for the both the SFY 2015 and the SFY 2017 versions of the fare increase model based on a review of the changes in ridership, revenue, and price following implementation of the SFY 2013 fare increase. We used the demonstrated elasticities, which we calculated following our analysis of the impact of the SFY 2013 fare increase to guide our decisions about modifying the previously used set of elasticities. However, because factors

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<sup>6</sup> Stutz, Andrew. Transit fare policy: use of automated data to improve incremental decision making. Cambridge: Massachusetts Institute of Technology, 2018.

in addition to fare changes also likely influenced the changes in ridership, we did not use the demonstrated elasticities for the SFY 2015 or SFY 2017 iterations of FERRET directly.

The following sections explain the process CTPS used to modify elasticities for the SFY 2015 and SFY 2017 iterations of FERRET, using the SFY 2013 demonstrated elasticities. The latest iteration of FERRET used most of the elasticities from previous years.

**A.5 CALCULATING THE DEMONSTRATED ELASTICITY OF EACH FARE TYPE**

To calculate the demonstrated elasticity for a given fare, we used two pieces of information: the percentage change in fares and the percentage change in ridership. For each fare payment type on each mode, we calculated the percentage change between full SFY 2012 (before the fare increase) and full SFY 2013 (after the fare increase) ridership and fares using the formula:

$$\text{Percentage Change} = \frac{X_2 - X_1}{\left(\frac{X_2 + X_1}{2}\right)}$$

Where:

X1 = SFY 2012 value (the year before the fare changes)

X2 = SFY 2013 value (the year after the fare changes)

This formula provides the percentage change between X1 and X2 relative to the midpoint of X1 and X2. For example, if X1 = 10 and X2 = 20, the formula would indicate that the percentage change relative to the midpoint (15) is equal to 66 percent.

For example, in SFY 2012, single-ride bus ridership was 22,441,080. SFY 2013 ridership was 21,237,096. The percentage change in ridership between these two years is:

$$\text{Percentage Change} = \frac{21,237,096 - 22,441,080}{\left(\frac{21,237,096 + 22,441,080}{2}\right)} = -5.5\%$$

For each relevant fare payment type, we calculated the demonstrated elasticity with respect to fares using the following formula:

$$\text{Elasticity} = \frac{\Delta \text{Ridership (in \%)}}{\Delta \text{Fare (in \% )}}$$



For example, the percentage change in single-ride ridership on MBTA buses from SFY 2012 to SFY 2013 was -5.5 percent. The percentage change in the fare was 19.5 percent. The demonstrated elasticity is calculated as follows:

$$\text{Elasticity} = \frac{\Delta\text{Ridership (in \%)}}{\Delta\text{Fare (in \%)}} = \frac{-5.5\%}{19.5\%} = -0.28$$

As another example, the total change in LinkPass ridership was -0.3 percent. The change in the average LinkPass trip price was 17.4 percent. The demonstrated elasticity is calculated as follows:

$$\text{Elasticity} = \frac{\Delta\text{Ridership (in \%)}}{\Delta\text{Fare (in \%)}} = \frac{-0.3\%}{17.4\%} = -0.02$$

**A.5.1 Modifying the Elasticities of Each Fare Type for the Current Projection**

Because the demonstrated elasticity values only incorporate the changes in fares and do not account for other factors that affect transit ridership—such as gas prices, employment levels, and development—we do not advise using the elasticities calculated based on results of the SFY 2013 fare increase in the SFY 2017 model. Some of the demonstrated elasticities could indicate that other factors are affecting ridership, especially for those results with positive values that appeared to indicate that ridership increased in response to the fare increase. Therefore, we only used the demonstrated elasticities, along with the following heuristics, to inform the modification of the SFY 2012 elasticities:

- If the value of a demonstrated elasticity was close to zero or positive, we modified the value to make it more inelastic (closer to zero)
- No elasticity was set to be greater than -0.10 (closer to zero)
- If an elasticity was used in SFY 2012 and the demonstrated elasticity was roughly similar, we did not modify the elasticity
- If the demonstrated elasticity was significantly more negative than the one we used in SFY 2012, we decreased the elasticity (made it more negative or more elastic)

Table A-2 presents the elasticities we used to predict what might have happened following the SFY 2013 fare increase, the elasticities we calculated based on the actual changes between SFY 2012 and SFY 2013, the elasticities we used to project the effects of the SFY 2015 fare changes, and the estimated 2017 base elasticity.

Andrew Stuntz estimated elasticities for the LinkPass users in the corporate pass program and LinkPass users who are not in the corporate pass program. His analysis suggests that our selected elasticities for the LinkPass fare product are too low. To address these points, we increased the base elasticities for the LinkPass (a combination of people participating and not participating in the corporate pass program). We increased the elasticity of the 7-Day LinkPass to a value slightly above the monthly LinkPass.

**Table A-2**  
**SFY 2012, Demonstrated, and SFY 2015 and SFY 2020 Elasticities**

<b>Mode Category</b>	<b>Estimated SFY 2013 Elasticity</b>	<b>Demonstrated SFY 2013 Elasticity</b>	<b>Values from A. Stuntz Thesis</b>	<b>Selected SFY 2020 Base Elasticity</b>
<b>Cash Elasticities</b>				
Bus and Trackless Trolley				
Bus-Adult ( <i>from example</i> )	(0.20)	(0.28)		(0.25)
Bus-Senior	(0.15)	(0.26)		(0.20)
Bus-Student	(0.15)	0.30		(0.15)
Subway				
Subway-Adult	(0.25)	(0.26)		(0.25)
Subway-Senior	(0.15)	(0.18)		(0.15)
Subway-Student	(0.15)	1.80		(0.10)
Surface Light Rail				
Surface Light Rail-Adult	(0.25)	(0.29)		(0.30)
Surface Light Rail-Senior	(0.20)	(0.19)		(0.20)
Surface Light Rail-Student	(0.20)	1.96		(0.15)
Commuter Rail				
Commuter Rail-Adult	(0.35)	0.01		(0.20)
Commuter Rail-Senior	(0.25)	0.37		(0.15)
Commuter Boat				
Commuter Boat-Adult	(0.30)	(0.34)		(0.30)
Commuter Boat-Senior	(0.20)	(0.75)		(0.25)
THE RIDE	(0.12)	(0.39)		(0.35)
Parking	(0.20)	(0.18)		(0.20)
<b>Pass Elasticities</b>				
Bus	(0.30)	(0.09)		(0.15)
Inner Express	(0.20)	(0.33)		(0.25)
Outer Express	(0.20)	(0.33)		(0.25)
LinkPass ( <i>from example</i> )	(0.30)	(0.02)	Greater than -0.15, less than -0.30	<b>(0.25)</b>
1-Day LinkPass	(0.35)	0.41		(0.15)
7-Day LinkPass	(0.35)	0.09	Set to slightly higher than LinkPass	<b>(0.30)</b>
Commuter Rail	(0.10)	(0.17)		(0.10)
Commuter Boat	(0.25)	(0.17)		(0.20)
Senior	(0.15)	0.23		(0.10)
Student/Youth	(0.15)	(0.04)		(0.10)

Notes: The estimated SFY 2013 elasticity is the one we used to estimate the effects of the SFY 2013 fare increase.

The demonstrated SFY 2013 elasticity is the one we calculated based on ridership changes following the SFY 2013 fare increase.

The estimated SFY 2020 base elasticity is the elasticity we used to estimate the effects of the SFY 2020 fare increase.

SFY = State Fiscal Year.

Source: Central Transportation Planning Staff; A. Stuntz 2018.

## A.6 EXAMPLES OF RIDERSHIP AND REVENUE CALCULATIONS

### A.6.1 Simple Example: Price Elasticity Only

**Given:**

Original Demand: 100,000

Original Fare: \$1.50

New Fare: \$2.50

Price Elasticity: -0.05

New Demand =

$$\text{Original Demand} \times [1 + \text{Price Elasticity} \times (\text{New Fare} \div \text{Old Fare} - 1)]$$

New Demand =

$$100,000 \times [1 + -0.05 \times (\$2.50 \div \$1.50 - 1)] = 96,666.67$$

### A.6.2 More Complex Example: Price Elasticity plus Ridership Diversion—Cash to Pass

**Given:**

Original Cash Demand: 10,000

Original Cash Fare: \$2.25

New Cash Fare: \$2.00

Cash Price Elasticity: -0.30

New Demand =

$$\text{Original Demand} \times [1 + \text{Price Elasticity} \times (\text{New Fare} \div \text{Old Fare} - 1)]$$

New Cash Demand (Price Effect),

$$C_p = 10,000 \times [1 + -0.30 \times (\$2.00 \div \$2.25 - 1)] = 10,333.33$$

**Given:**

Original Pass Demand: 5,000

Original Pass Price: \$71.00

New Pass Price: \$50.00

Pass Price Elasticity: -0.25

New Pass Demand (Price Effect),

$$P_p = 5,000 \times [1 + -0.25 \times (\$50 \div \$71 - 1)] = 5,369.72$$

Total Demand = 10,333.33 + 5,369.72 = 15,703.05

Percentage Change in Cash Price: \$2.25 to \$2.00: -11%

Percentage Change in Pass Price: \$71 to \$50: -30%

**Given:**

Cash-to-Pass Diversion Factor: 0.05

Pass-to-Cash Diversion Factor: 0.00

$$\text{Diverted Riders from Cash to Pass} = \left( \frac{\$NewCash/\$OldCash}{\$NewPass/\$OldPass} - 1 \right) \times \text{Diversion} \times C_p$$

$$\text{Diverted Riders from Cash to Pass} = \left( \frac{\$2.00/\$2.25}{\$50/\$71} - 1 \right) \times 0.05 \times C_p = 135.48$$

$$\text{New Cash Demand} = C_p - \text{Diverted Riders from Cash to Pass} = 10,197.85$$

$$\text{New Pass Demand} = P_p + \text{Diverted Riders from Cash to Pass} = 5,505.20$$

$$\text{Total Demand} = 10,197.85 + 5,505.20 = 15,703.05$$

### A.6.3 Another Complex Example: Price Elasticity plus Two Ridership Diversions

Single-Ride CharlieCard (SR-CC) to Pass, and Single-Ride CharlieTicket (SR-CT) to Single-Ride CharlieCard (SR-CC)

**Given:**

Original Single-Ride CharlieCard Demand: 10,000

Original Single-Ride CharlieCard Fare: \$2.20

New Single-Ride CharlieCard Fare: \$3.50

Single-Ride CharlieCard Price Elasticity: -0.30

New SR-CC Demand (Price Effect),

$$CC_p = 10,000 \times [1 + -0.30 \times (\$3.50 \div \$2.20 - 1)] = 8,227.27$$

**Given:**

Original Pass Demand: 50,000

Original Pass Price: \$71.00

New Pass Price: \$90.00

Pass Price Elasticity: -0.25

New Pass Demand (Price Effect),

$$P_p = 50,000 \times [1 + -0.25 \times (\$90 \div \$71 - 1)] = 46,654.93$$

**Given:**

Original Single-Ride CharlieTicket Demand: 5,000

Original Single-Ride CharlieTicket Fare: \$2.50

New Single-Ride CharlieTicket Fare: \$4.50

Single-Ride CharlieTicket Price Elasticity: -0.30

New SR-CT Demand (Price Effect),

$$CT_p = 5,000 \times [1 + -0.30 \times (\$4.50 \div \$2.50 - 1)] = 3,800.00$$

$$\text{Total Demand} = 8227.27 + 46,654.93 + 3,800.00 = 58,682.20$$

**Given:**

Single-Ride CharlieCard-to-Pass Diversion Factor: 0.05

Pass-to-Single-Ride CharlieCard Diversion Factor: 0.00

Single-Ride CharlieCard to Single-Ride CharlieTicket Diversion Factor: 0.00

Single-Ride CharlieTicket to Single-Ride CharlieCard Diversion Factor: 0.25

Percentage Change in Single-Ride CharlieCard Fare: \$2.20 to \$3.50: 59.09%

Percentage Change in Pass Price: \$71 to \$90: 26.76%

Percentage Change in Single-Ride CharlieTicket Fare: \$2.50 to \$4.50: 80.00%

$$\text{Diverted Riders from SR-CC to Pass} = \left( \frac{\$3.50/\$2.20}{\$90/\$71} - 1 \right) \times 0.05 \times CC_p = 104.92$$

$$\text{Diverted Riders from SR-CT to SR-CC} = \left( \frac{\$4.50/\$2.50}{\$3.50/\$2.20} - 1 \right) \times 0.25 \times CT_p = 124.86$$

New Single-Ride CharlieCard Demand =

$$CC_p - \text{Diverted Riders from SR-CC to Pass} + \text{Diverted Riders from}$$

$$\text{SR-CT to SR-CC} = 8,247.21$$

$$\text{New Pass Demand} = P_p + \text{Diverted Riders from SR-CC to Pass} = 46,759.85$$

New Single-Ride CharlieTicket Demand =

$$CT_p - \text{Diverted Riders from SR-CT to SR-CC} = 3,675.14$$

$$\text{Total Demand} = 8,202.15 + 46,759.85 + 3,720.20 = 58,682.20$$

**Note:** As we introduce additional ridership diversion factors, and more cells in the spreadsheet become linked, the complexity of FERRET increases significantly. However, the basics of the methodology explained above regarding price elasticities and ridership diversion factors remain the same.



# APPENDIX 7C

## FMCB APPROVAL OF FARE EQUITY ANALYSIS OF SFY 2020 MBTA FARE CHANGE



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Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, MassDOT Secretary & CEO  
Steve Poflak, General Manager

**massDOT**  
Massachusetts Department of Transportation

**WHEREAS**, throughout its history, the Authority has managed service delivery under an operating budget marked by structural deficits; and

**WHEREAS**, a state of good repair backlog, large debt burden and limited growth in sales tax revenue has constrained MBTA finances and compelled the MBTA to balance budgets in recent years either with combinations of major fare increases, service reductions or special legislative appropriations, and other actions; and

**WHEREAS**, the Legislature has enacted transportation finance legislation that provides diversified, additional funding for transportation improvements and operations that anticipate that the Authority shall implement a pattern of smaller, predictable fare increases to minimize impacts on MBTA customers; and

**WHEREAS**, the Authority has proposed a fare increase that fits within the parameters set by the Legislature; and

**WHEREAS**, under Title VI of the Civil Rights Act of 1964, all recipient agencies of federal funds are prohibited from discrimination based on race, color or national origin in delivering services; and

**WHEREAS**, the Authority is obligated to ensure that impacts of service and fare changes are distributed equitably and are not discriminatory to minority and low-income populations; and

**WHEREAS**, an equity analysis of the fare proposal has been completed and concluded that neither a disproportionate burden on low-income communities nor a disparate impact on minority populations would ensue from adoption of the new MBTA fares; and

**WHEREAS**, having been Informed by public comment received on the fare proposal and mindful of the need to maintain revenue growth to support service and operations;

**VOTED:**

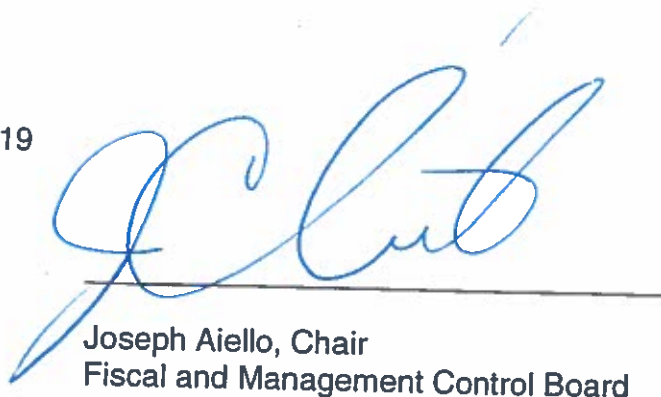
That the Fiscal and Management Control Board hereby approves the Authority's FY2020 Fare Proposal as attached hereto, which shall include an overall system-wide fare increase of approximately 6%, effective July 1, 2019, and subject to the following conditions:

- The fare levels shall be set at those levels as presented to the Board during the meeting of March 11, 2019, with the exception of the following:
  - No increase shall apply to the reduced Fares for the Transportation Access Pass (TAP), Senior Charlie Card, Student Pass (S-Card or M7 Card), or Youth Pass.
  - No increase shall apply to local bus Fares including cash, Charlie Ticket, Charlie Card, or bus passes.
  - The \$10 Weekend Commuter Rail pass will be made permanent and the equity analysis of this new fare product will be included as part of the equity analysis for the entire fare proposal.
  - The MBTA will make administrative changes to increase participation in the Youth Pass and Semester Pass programs and seek University partners to pilot a University Pass product.
  
- No fare increase shall take effect for three years after July 1, 2019; this shall not affect making tariff rule changes or introducing new fare products as part of the AFC 2.0 "day one" tariff.

A true copy,

Attest: March 11, 2019



  
Joseph Aiello, Chair  
Fiscal and Management Control Board



# APPENDIX 7D

## CTPS SERVICE EQUITY ANALYSIS OF BETTER BUS PROJECT



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***MBTA***

***Title VI Program***

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***DISPARATE IMPACT AND  
DISPROPORTIONATE BURDEN  
ANALYSIS***

TITLE: Better Bus Project

TYPE: Service

DATE COMPLETED: May 1<sup>st</sup>, 2019

DATE ACCEPTED BY FMCB:

## **TECHNICAL MEMORANDUM**

**DATE:** May 1, 2019  
**TO:** Steve Poftak, General Manager  
**CC:** John Lozada, Manager of Federal Programs, Office of Diversity and Civil Rights and Marie Breen, General Counsel  
**FROM:** Kat Benesh, Chief of Operations Strategy, Policy, & Oversight  
**RE:** Better Bus Project Title VI Service Equity Analysis

This memorandum details the results of a Title VI service equity analysis performed on the entire package of the Massachusetts Bay Transportation Authority's (MBTA) Better Bus Project service change proposals. The Central Transportation Planning Staff (CTPS) conducted the analysis for the Massachusetts Bay Transportation Authority's (MBTA) Better Bus Project, and applied the MBTA's Disparate Impact and Disproportionate Burden Policy to the results.

**The results of the service equity analysis indicate that implementation of the Better Bus Project proposals will not result in disparate impacts to minority populations, disparate benefits to nonminority populations, disproportionate burdens to low-income populations, or disproportionate benefits to non-low-income populations.**

This memorandum reviews the details of the service change, the requirements of a service analysis, and the results of the analysis, which the MBTA has reviewed and accepted.

### **1 INTRODUCTION**

In the spring of 2018, the MBTA launched its Better Bus Project to improve bus service by developing a package of suggested near-term changes to the agency's bus network. During the Better Bus Project, planners evaluated the existing bus services, developed profiles of the existing bus routes, and created a market analysis. The MBTA held public meetings in Boston, Cambridge, Quincy, Lynn, Somerville, and Chelsea to get insight from the riders about existing conditions. The MBTA also invited riders and other interested parties to provide comments via a feedback form on the project's website.<sup>1</sup>

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<sup>1</sup> [blog.mass.gov/transportation/mbta/mbta-launches-the-better-bus-project-schedules-regional-public-meetings/](http://blog.mass.gov/transportation/mbta/mbta-launches-the-better-bus-project-schedules-regional-public-meetings/)

Following the analysis and public process, the MBTA developed an initial set of near-term proposals for 63 of the MBTA's approximately 170 bus routes. The MBTA held public meetings about the initial proposals in Boston, Cambridge, Quincy, Lynn, Chelsea, and Watertown.<sup>2</sup> After reviewing public comments about the initial proposals, the MBTA developed an updated set of service change proposals, which affect 45 routes.

Further, as part of the Better Bus Project, the MBTA is planning to hire 45 new full-time bus operators beginning in fall 2019. The MBTA plans to use these operators to improve the off-peak service on the routes (or corridors) with the highest weekly ridership and to improve bus reliability.

This document serves as the requisite service equity analysis for the final set of proposals from the Better Bus Project.

## 1.1 The Better Bus Project Proposals

Each Better Bus Project proposal was intended to improve service in one or more specific ways, including by improving connectivity, redistributing resources, reducing travel time, simplifying service, and improving off-peak service. The proposals would benefit the following bus routes:

### **Improve Connectivity:**

Routes 34, 60, 65, 70/70A, 72, 75, 95, 120, 225/226, and 350

### **Redistribute Resources:**

Routes CT1 into 1, 5 into 16, 34E into 34, 448/449 into 441/442, and 459 into 455

### **Reduce Travel Time:**

Routes 4, 9, 35, 74, 90, 111, 120, 220, 222, 411, 424, 501, 502, 504, and SL2 (742)

### **Simplify Service:**

Routes 36, 37, 44, 52, 59, 70/70A, 89, 92, 201, 202, 220, and 435

### **Improve Off-Peak Service:**

Routes 1, 7, 9, 15, 16, 21, 22, 23, 28, 31, 32, 34/34E, 35/36/37, 39, 44, 47, 57/57A, 66, 70/70A, 71, 73, 77, 86, 87, 88, 89, 93, 101, 104, 109, 110, 111, 116/117, 220/221/222, 441/442, SL1 (741), SL2 (742), SL3 (743), SL4 (751), and SL5 (749)

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<sup>2</sup> [mbta.com/projects/better-bus-project/update/mbta-community-meetings](http://mbta.com/projects/better-bus-project/update/mbta-community-meetings)

Appendix A contains a summary of the initially proposed changes for each route, with notes about items that were changed in the final proposal. Appendix B contains maps provided by the MBTA showing the detailed changes and impacts of the initial proposals with notes about modifications in the final proposals. Detailed changes about the off-peak service improvements are shown in Table 13.

## 1.2 The MBTA's Disparate Impact/Disproportionate Burden Policy

The Federal Transit Administration's (FTA) Title VI Circular 4702.1B, issued in October 2012, under the authority of Title VI of the Civil Rights Act of 1964 (Title VI), directs transit providers to study proposed major service changes and all fare changes for possible disparities in impacts on minority and low-income riders or communities.

This requirement is part of the MBTA's Title VI assurance that no person shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance.

The MBTA's Disparate Impact/Disproportionate Burden (DI/DB) Policy describes the general procedure for conducting service and fare equity analyses. Appendix C contains the full text of the current January 30, 2017, version of the MBTA's DI/DB Policy.<sup>3</sup> This service equity analysis was performed using the information contained in the DI/DB Policy.

## 1.3 The Need to Conduct a Service Equity Analysis

The MBTA must conduct a service equity analysis when it is proposing a major service change. The MBTA defines a "major service change" in its DI/DB Policy as a service change that meets one or more of the following conditions:

- A change in revenue vehicle hours (RVH) per week of at least 10 percent by mode
- For routes with at least 80 RVH per week, a change in RVH per week of at least 25 percent
- For all routes, a change in route length of at least 25 percent or three miles

Major service changes also include elimination of existing routes or the addition of new routes. If there is a major service change on any route in a package of

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<sup>3</sup> [mbta.com/policies/fairness](http://mbta.com/policies/fairness)



changes, the equity analysis must consider all concurrently proposed changes in the aggregate.

The MBTA's Better Bus Project proposals are considered a major service change.

## 2 EVALUATION OF ADVERSE IMPACTS

The MBTA defines adverse effects as changes to

- the amount of service scheduled, by route and by mode, as measured by changes to weekly RVH; and
- access to the service, by route, as measured by changes to route length.

In accordance with the DI/DB Policy, the MBTA analyzes the changes to RVH and route length as relative and absolute changes. The relative change and another measure, which compares the protected population group's share of the net benefit or burden relative to its existing share of the metric, account for the existing share of RVH and route miles. However, the absolute change does not take into account the existing allocation of service between protected and nonprotected population groups.

As a result, when a protected population group makes up a small share of a population, broad-reaching positive changes would be shown, on an absolute basis, to benefit the protected population less than the nonprotected group. For example, if a protected population group represented 40 percent of riders and a transit agency distributed 200 RVH based on the existing share of riders, the protected population group would receive 40 percent of the hours, or 80 RVH. The nonprotected population group would receive 120 hours. While each group received a proportional amount of service, the protected population group received only 67% (80/120) of the absolute benefit given to the nonprotected population group.

Similarly, were service levels to decrease, protected population groups that make up a small share of the population would be, on an absolute basis, burdened less than the nonprotected population group. If the agency from the previous example removed 20 miles of route length proportionately from each group, the protected population group would lose 8 miles of service while the nonprotected population group would lose 12 miles of service. While each group lost a proportional amount of service, the protected population group lost only 67 percent (8/12) of the absolute miles lost by the nonprotected population group.

In each of these examples, the transit agency must determine if the adverse impact to the protected population group indicates a potential risk of wrongful bias or if the disproportionality is a function of how absolute changes are measured. If the agency determines that real bias would result from the proposal, the agency must consider how to mitigate the identified adverse impact, and would engage with executive leadership and the public toward alternatives that would reduce the risk of bias to the extent practicable, consistent with FTA guidance.

## 2.1 Analysis Framework

### *Demographic Datasets*

FTA guidance allows agencies to conduct a service equity analysis using either census data or survey data, depending on the specific changes an agency is proposing. If an agency is making both headway (or in this case, RVH) changes and alignment changes, the latter of which require use of census data, the agency is not required to use different data sources to evaluate each type of change. In either case, FTA requires the agency to document the reason the data source was chosen.<sup>4</sup>

Central Transportation Planning Staff (CTPS) used the US Census Bureau's American Community Survey (ACS) dataset instead of the 2015-17 MBTA Systemwide Passenger Survey because the MBTA is proposing both changes in RVH and the alignment of bus routes. Riders who participated in the survey on the MBTA's existing network may not represent the riders of the proposed network. Further, survey sample sizes associated with sections of routes that are likely candidates for elimination are generally small—these sections tend to be the less utilized parts of routes, and thus more likely to be cut.

The 2010-14 ACS's five-year estimates provided demographic information about the people living near bus routes. The 2010 US Census Summary File 1 (Table P001001: total population) provided the total population for each census tract. The 2010 US Census Summary File 1 (Table H003002: total occupied housing units) provided the total number of households for each census tract. CTPS opted to use the demographics of census tracts rather than block groups or other smaller geometries because the census tract estimates are more precise.

Appendix D contains maps showing the existing route alignments, proposed alignments, and demographic data for each route with proposed changes. Appendix E shows the same for routes that will benefit from additional RVHs from the new operators.

### *Definitions of Minority and Low-Income Populations*

CTPS used the 2010 Census Summary File 1 Table P005003 (Hispanic or Latino origin by race: not Hispanic or Latino, white alone) and Table B01001001 (total population) to assign minority status to people living in census tracts. Residents who were classified as "white alone, not Hispanic or Latino" were classified as nonminority residents; all others were classified as minority residents.

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<sup>4</sup> FTA C 4702.1B Chapter 4.7.a.1.f: Assessing Service Impacts.

CTPS used the 2010-14 ACS Tables B19001002-B19001017 (household income in the past 12 months) and the associated Table B19001001 (total households) to assign low-income status to households in census tracts. Households were classified as low-income if they earned less than 60 percent of the median household income for the MBTA service area (a threshold of \$44,152).<sup>5</sup>

### ***Using ACS Data to Assign Demographics to Routes***

CTPS used the following methodology to estimate the demographics attributable to a given route alignment:

Determine the geographic area.

- 1) Create a 400-meter buffer (approximately a quarter mile) around all of the variations of a route traveling in the same direction (for example, inbound).
- 2) Dissolve the buffer such that overlapping segments are not double-counted.

Calculate proportions of each census tract in the buffer.

- 3) For each census tract that is included in the buffer, calculate the length of roads within the buffer.
- 4) For each census tract that is included in the buffer, calculate the total length of roads in the census tract.
- 5) Calculate the percentage of total road length within the buffer in each census tract.

Calculate demographics within the buffer.

- 6) For each census tract, multiply the percentage of road length within the buffer by the number of people (or households) in each population group (minority, nonminority, low-income, and non-low-income).
- 7) Sum the number of people (or households) in each population group within the buffer for all census tracts near the route.
- 8) Repeat for the other direction of the route.
- 9) Sum the number of people (or households) in each population group for both directions.
- 10) Calculate the percentage of people (or households) in each population group for the route.

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<sup>5</sup> Households in the census category “\$40,000 to \$44,999” were separated into each population group by multiplying the number of households in that category by 0.83, a value derived by the following equation:  $(\$44,152 - 40,000) / (44,999 - 40,000) = 83\%$ . The equation distributes the households in the category based on how far the threshold extends into the category. The equation assumes household incomes are distributed equally within the category.

When calculating the length of roads in a census tract or buffer, only roads in the walkable network were counted; highways, on-ramps, and other limited-access roads were excluded. The total number of residents in each population group in a census tract was obtained by multiplying the total population in each tract from the 2010 US Census by the percentage of the households in each population group as derived from the 2010-14 ACS. The total number of people in each minority status-based population group in a census tract was obtained from the 2010 US Census.

### ***The Comparison Population***

In this analysis, the comparator is the amount of each metric, RVH, and route miles of service, attributed to each population.

## **2.2 Change in Weekly Revenue Vehicle Hours**

The MBTA must evaluate the implications of its proposed changes on RVH. CTPS distributed the number of RVH by the proportion of the residents in each population group that are attributable to a route. For example, if a route operated with 10 RVH and 30 percent of the route was classified as low-income, three RVH were attributed to the low-income population group.

In some cases, the MBTA is proposing to shift resources from one route to another route (for example, eliminating Route CT1 and adding the resources to Route 1). In these cases, the MBTA provided information about the change in RVH for each route affected by the change. The MBTA provided the daily number of service hours per route. CTPS multiplied weekday RVH by five and added Saturday and Sunday RVH to calculate the weekly number of RVH. The impacts of these changes in aggregate are shown in Table 1.

In other cases, the MBTA is proposing to make changes to the alignments of routes that will result in different populations having access to RVH of service. CTPS used shapefiles provided by the MBTA to estimate the demographics of people living near the existing and proposed alignments using the methodology described in the previous section. These demographics were used to distribute a route's RVH between population groups. The impacts of these changes are shown in Table 2.

The MBTA is also proposing to use 30 of 45 planned new full-time equivalent bus operators to improve off-peak service.<sup>6</sup> The MBTA provided an estimate of the

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<sup>6</sup> An additional 15 full-time equivalent bus operators will be used to decrease the number of dropped trips and improve reliability. While these operators will increase reliability, they will not increase scheduled RVH.

distribution of these hours for weekdays, Saturdays, and Sundays. The impacts of these changes are shown in Table 3.

Table 4 presents the combined impacts of all three types of RVH changes. The DI/DB analysis for change in RVH is based on the numbers in this table.

Tables 9, 10, 11, 12, and 13 present detailed RVH changes by route.

**Table 1**  
**Gain, Loss, and Net Change in Weekly Revenue Vehicle Hours for Each Population Group based on Shifting Resources**

<b>Population Group</b>	<b>Gain of Hours</b>	<b>Loss of Hours</b>	<b>Net Change</b>	<b>Percent Change</b>
Minority	338.2	-312.7	25.5	0.12%
Nonminority	535.6	-521.1	14.5	0.06%
Low-Income	349.4	-325.4	24.0	0.13%
Non-Low-Income	524.4	-508.4	16.0	0.06%

Sources: MBTA route alignments and shapefiles. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 2**  
**Gain, Loss, and Net Change in Weekly Revenue Vehicle Hours for Each Population Group based on Alignment Changes**

<b>Population Group</b>	<b>Gain of Hours</b>	<b>Loss of Hours</b>	<b>Net Change</b>	<b>Percent Change</b>
Minority	70.1	-20.6	49.5	0.2%
Nonminority	20.6	-70.1	-49.5	-0.2%
Low-Income	31.8	-10.4	21.5	0.1%
Non-Low-Income	10.4	-31.8	-21.5	-0.1%

Sources: MBTA route alignments and shapefiles. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 3  
Gain in Weekly Revenue Vehicle Hours for Each Population Group based on New Operators**

<b>Population Group</b>	<b>Gain of Hours</b>	<b>Percent Change</b>
Minority	590.3	2.8%
Nonminority	584.7	2.3%
Low-Income	503.8	2.6%
Non-Low-Income	671.2	2.4%

Sources: MBTA proposed operator distribution plan. MBTA route alignments and shapefiles. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 4  
Gain, Loss, and Net Change in Weekly Revenue Vehicle Hours for Each Population Group based on All Types of Change**

<b>Population Group</b>	<b>Existing Hours</b>	<b>Share of Existing</b>	<b>Gain of Hours</b>	<b>Loss of Hours</b>	<b>Net Change</b>	<b>Share of Net Change</b>	<b>Percent Change</b>
Minority	21,238.4	45%	998.6	-333.3	665.3	55%	3.1%
Nonminority	25,592.0	55%	1,140.9	-591.2	549.7	45%	2.1%
Low-Income	19,102.2	41%	884.9	-335.7	549.2	45%	2.9%
Non-Low-Income	27,728.2	59%	1,206.0	-540.3	665.8	55%	2.4%

Sources: MBTA daily revenue vehicle hour spreadsheets as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

***Weekly Revenue Vehicle Hours: Disparate Impact/Disproportionate Burden Analysis***

Table 5 summarizes the results of the service equity analysis relating to RVH changes. As shown in Table 5, the results do not indicate a disparate benefit to nonminority populations or a disproportionate benefit to non-low-income populations.

**Table 5  
Summary of DI/DB Results Relating to Revenue Vehicle Hour Changes**

<b>Analysis Method</b>	<b>Impacts on Minority Populations</b>	<b>Impacts on Low-Income Populations</b>
Absolute Change (Protected / Nonprotected)	<b>No Disparate Benefit</b> Ratio: 665 / 550 > 80%	<b>No Disproportionate Benefit</b> Ratio: 549 / 666 > 80%
Relative Change (Protected / Nonprotected)	<b>No Disparate Benefit</b> Ratio: 3.1% / 2.1% > 80%	<b>No Disproportionate Benefit</b> Ratio: 2.9% / 2.4% > 80%
Protected Share of Change / Protected Share of Existing	<b>No Disparate Benefit</b> Ratio: 55% / 45% > 80%	<b>No Disproportionate Benefit</b> Ratio: 45% / 41% > 80%

Source: CTPS.

***Supplemental Analysis: Impacts of New Operators using Survey Data***

CTPS chose to use census data in the prior analysis because some of the Better Bus Project proposals include route alignment changes and survey data only exists for the current route alignments. The recent MBTA Systemwide Passenger Survey may no longer represent riders of the altered (or new) routes. Further, the alignment changes also affect the access to RVH (as shown in Table 2). An analysis of the change in access to RVH based on survey data would likely be unreliable given the low sample sizes at the sub-route level, especially on the less utilized sections of the system.

However, when adding additional operators (and the corresponding additional RVH) to high-ridership routes, most of which are not undergoing significant alignment changes, survey data may be a more appropriate data source. Although the service equity analysis must be completed in aggregate using one demographic data source, CTPS performed a supplemental analysis on the RVH impacts of the new operators using survey data. This analysis acts as a valuable check on the previous analysis performed using census data. Table 6 presents a modified version of Table 3 based on survey data instead of census data.<sup>7</sup> Table 14 presents a detailed summary.

<sup>7</sup> CTPS used data from the MBTA’s 2015-17 Systemwide Passenger Survey. Respondents were classified as having minority status if they self-identified as a race other than white and/or were Hispanic or Latino/a/x. Respondents who indicated their household income was less than \$43,500 were classified as low income. More information about the survey may be found at <https://www.ctps.org/apps/mbtasurvey2018/#>.



**Table 6  
Gain in Weekly Revenue Vehicle Hours for Each Population Group based  
on New Operators Using Survey Data**

<b>Population Group</b>	<b>Gain of Hours</b>	<b>Share of Change</b>
Minority	563.2	49%
Nonminority	587.2	51%
Low-Income	500.5	44%
Non-Low-Income	649.9	56%

Note: The “share of existing” values published here will not match the “share of population” values published in the MBTA Systemwide Passenger Survey. The “share of existing” values are weighted based on revenue vehicle hours instead of ridership. The additional hours (24.6) for Route SL3 were not assigned to population groups because the route did not exist at the time of the survey. The route operates between Chelsea and South Station.

Sources: MBTA revenue vehicle hours spreadsheets as processed by CTPS. 2015-17 MBTA Systemwide Passenger Survey.

Comparing Table 6 to Table 3, we can determine that the two methods produce similar results. Using survey data, the minority population group and the low-income population group receive 49 percent and 44 percent of the total additional RVH, respectively. Using census data, these values are 50 percent and 43 percent. The absolute changes are also similar.

### 2.3 Change in Route Length

The MBTA must evaluate the implications of its proposed changes on route length. CTPS used shapefiles provided by the MBTA to evaluate the length of the routes operating each day.

When using census data to estimate the equity impacts of the changes, CTPS calculated the change in route length accounting for the change in the demographics of nearby residents. If multiple variations of a bus route travel over a given roadway segment in a given direction, the segment was only counted once. A roadway segment was counted two times if the route traveled over the same segment in multiple directions. To estimate the miles attributable to a population group, CTPS multiplied the route length by the proportion of nearby residents in a population group. For example, if a route was 10 miles long, and 30 percent of the route was classified as low-income, three route miles were attributed to the low-income population group.

Table 7 shows the total change in weekly route length for each population group. Tables 15, 16, and 17 present detailed route mile changes by route for weekday, Saturday, and Sunday service, respectively.

**Table 7  
Gain, Loss, and Net Change in Route Length for Each Population Group**

<b>Population Group</b>	<b>Existing Miles</b>	<b>Share of Existing</b>	<b>Gain of Miles</b>	<b>Loss of Miles</b>	<b>Net Loss</b>	<b>Share of Net Loss</b>	<b>Percent Loss</b>
Minority	6,812.3	40%	21.1	-448.9	-427.9	39%	-6.3%
Nonminority	10,136.6	60%	95.1	-763.7	-668.6	61%	-6.6%
Low-Income	6,535.4	39%	34.9	-460.9	-426.0	39%	-6.5%
Non-Low-Income	10,413.5	61%	81.1	-751.6	-670.5	61%	-6.4%

Note: The values here weight weekday route lengths by “5” and Saturday and Sunday route lengths by “1.”

Source: MBTA spreadsheets as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

***Route Length: Disparate Impact/Disproportionate Burden Analysis***

Table 8 summarizes the results of the service equity analysis relating to route length changes. The changes in route length do not result in a disparate impact or disproportionate burden.

**Table 8  
Summary of DI/DB Results Relating to Route Length Changes**

<b>Analysis Method</b>	<b>Impacts on Minority Populations</b>	<b>Impacts on Low-Income Populations</b>
Absolute Change (Protected / Nonprotected)	<b>No Disparate Impact</b> Ratio: -428 / -669 < 120%	<b>No Disproportionate Burden</b> Ratio: -426 / -671 < 120%
Relative Change (Protected / Nonprotected)	<b>No Disparate Impact</b> Ratio: -6.3% / -6.6% < 120%	<b>No Disproportionate Burden</b> Ratio: -6.5% / -6.4% < 120%
Protected Share of Change / Protected Share of Existing	<b>No Disparate Impact</b> Ratio: 39% / 40% < 120%	<b>No Disproportionate Burden</b> Ratio: 39% / 39% < 120%

Source: CTPS.

**Enclosures:**

- Appendix A: Better Bus Service Proposals, Executive Summary of Proposed Route Changes (Note: Routes with changes from the original proposal are noted in red.)
- Appendix B: Better Bus Service Proposals, Detailed Proposed Route Changes (Note: Routes with changes from the original proposal are identified in red, and the changes are described at the bottom of the page.)
- Appendix C: Disparate Impact/Disproportionate Burden (DI/DB) Policy, January 30, 2017

- Appendix D: Existing and Proposed Bus Route Alignments, 400-Meter Buffers, and Minority and Low-Income Percentages in Surrounding Census Tracts
- Appendix E: Route Alignments, 400-Meter Buffers, and Minority and Low-Income Percentages in Surrounding Census Tracts for Routes Benefiting from Additional Operators
- Appendix F: Summary of DI/DB Analysis Results for Better Bus Proposals

**Table 9**  
**Shifting of Service Hours by Route Pairs**

Route	DOW	Weekly Hours	Minority Pct.	Low-Inc. Pct.	Minority Hours	Nonmin. Hours	Low-Inc. Hours	Non-Low-Inc. Hours
1	WD	163.4	45%	45%	72.9	90.5	74.3	89.1
CT1	WD	-163.4	43%	46%	-70.5	-92.9	-75.0	-88.4
16	WD	28.3	74%	55%	20.9	7.3	15.5	12.8
16	SA	5.7	74%	55%	4.2	1.5	3.1	2.6
5	WD	-28.3	23%	34%	-6.4	-21.9	-9.7	-18.5
5	SA	-5.7	23%	34%	-1.3	-4.4	-2.0	-3.8
226	WD	93.2	14%	31%	13.2	80.0	29.1	64.1
226	SA	2.5	14%	31%	0.3	2.1	0.8	1.7
225	WD	-93.2	24%	37%	-22.7	-70.5	-34.4	-58.7
225	SA	-2.5	24%	37%	-0.6	-1.9	-0.9	-1.5
442	WD	-34.8	39%	42%	-13.4	-21.3	-14.4	-20.3
448	WD	-3.8	42%	47%	-1.6	-2.2	-1.8	-2.0
441	WD	78.3	43%	47%	33.7	44.5	37.0	41.2
449	WD	-39.8	39%	41%	-15.6	-24.2	-16.4	-23.3
455	WD	200.8	48%	49%	95.9	105.0	98.4	102.4
459	WD	-200.8	48%	46%	-97.4	-103.5	-92.0	-108.8
70	WD	165.4	35%	33%	58.2	107.2	54.0	111.4
70	SA	23.1	35%	33%	8.2	15.0	7.6	15.6
70A	SU	11.6	32%	30%	3.7	7.9	3.5	8.1
70A	WD	-125.4	33%	31%	-41.9	-83.5	-38.3	-87.1
70A	SA	-23.1	33%	31%	-7.7	-15.4	-7.1	-16.1
70	SU	-11.6	35%	33%	-4.1	-7.5	-3.8	-7.8
75	WD	87.9	26%	26%	23.3	64.6	22.6	65.4
75	SA	13.7	26%	26%	3.6	10.0	3.5	10.2
72	WD	-87.9	29%	29%	-25.6	-62.3	-25.7	-62.2
72	SA	-13.7	29%	28%	-3.9	-9.7	-3.9	-9.8
<b>Total</b>					<b>25.5</b>	<b>14.5</b>	<b>24.0</b>	<b>16.0</b>

DOW = Day of the week. Nonmin. = Nonminority. Non-Low-Inc. = Non-Low-Income. Pct. = Percent.  
WD = Weekday. SA = Saturday. SU = Sunday.

Source: MBTA revenue vehicle hour spreadsheets as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 10  
Change of Weekly Revenue Vehicle Hours based on Alignment Changes  
(Weekday)**

Route	Existing Hours	Proposed Hours	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Hours Minority	Change in Hours Nonminority	Change in Hours Low-Income	Change in Hours Non-Low-Income
1	166.6	166.6	0.0	44%	45%	45%	45%	0.4	-0.4	0.3	-0.3
4	14.5	14.5	0.0	21%	30%	21%	30%	0.0	0.0	0.0	0.0
9	119.2	119.2	0.0	27%	31%	27%	31%	0.0	0.0	0.0	0.0
35	48.1	48.1	0.0	37%	31%	38%	31%	0.1	-0.1	0.0	0.0
36	56.9	56.9	0.0	36%	29%	36%	29%	0.1	-0.1	0.0	0.0
37	32.4	32.4	0.0	35%	28%	35%	28%	0.0	0.0	0.0	0.0
44	61.4	61.4	0.0	80%	66%	80%	66%	0.0	0.0	0.0	0.0
52	26.2	26.2	0.0	21%	22%	20%	22%	-0.2	0.2	0.1	-0.1
59	35.3	35.3	0.0	20%	20%	20%	20%	0.0	0.0	0.0	0.0
60	43.2	43.2	0.0	34%	41%	34%	42%	0.1	-0.1	0.2	-0.2
64	46.1	46.1	0.0	41%	39%	42%	40%	0.3	-0.3	0.8	-0.8
70	111.8	111.8	0.0	35%	33%	35%	33%	0.0	0.0	0.0	0.0
72	26.8	26.8	0.0	29%	29%	29%	29%	0.0	0.0	0.0	0.0
74	23.4	23.4	0.0	29%	25%	29%	26%	0.1	-0.1	0.1	-0.1
75	14.4	14.4	0.0	28%	26%	26%	26%	-0.2	0.2	0.0	0.0
90	27.4	27.4	0.0	31%	30%	31%	30%	-0.2	0.2	0.0	0.0
92	35.5	35.5	0.0	23%	32%	20%	31%	-1.0	1.0	-0.3	0.3
95	36.7	36.7	0.0	31%	34%	30%	33%	-0.5	0.5	-0.4	0.4
106	50.2	50.2	0.0	40%	36%	47%	40%	3.4	-3.4	1.6	-1.6
111	169.7	169.7	0.0	48%	40%	50%	40%	2.7	-2.7	-0.5	0.5
120	49.8	49.8	0.0	64%	45%	63%	45%	-0.3	0.3	-0.2	0.2
134	49.8	49.8	0.0	22%	29%	22%	29%	-0.1	0.1	-0.1	0.1
220	47.2	47.2	0.0	22%	39%	22%	39%	0.0	0.0	0.0	0.0
222	40.5	40.5	0.0	21%	39%	22%	40%	0.4	-0.4	0.2	-0.2
225	69.8	69.8	0.0	24%	37%	28%	38%	2.5	-2.5	1.1	-1.1
350	55.2	55.2	0.0	23%	27%	23%	27%	0.0	0.0	0.0	0.0
411	24.7	24.7	0.0	42%	42%	42%	42%	0.0	0.0	0.0	0.0
424	6.6	6.6	0.0	53%	43%	54%	46%	0.1	-0.1	0.2	-0.2

Route	Existing Hours	Proposed Hours	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Hours Minority	Change in Hours Nonminority	Change in Hours Low-Income	Change in Hours Non-Low-Income
428	6.6	6.6	0.0	38%	37%	38%	37%	0.0	0.0	0.0	0.0
435	28.6	28.6	0.0	40%	46%	39%	46%	-0.4	0.4	0.3	-0.3
441	34.4	34.4	0.0	42%	47%	42%	47%	0.0	0.0	0.0	0.0
442	48.8	48.8	0.0	43%	47%	43%	47%	0.0	0.0	0.0	0.0
455	47.7	47.7	0.0	48%	49%	48%	49%	0.0	0.0	0.0	0.0
34/34E	143.5	143.5	0.0	33%	32%	36%	33%	2.9	-2.9	1.2	-1.2
70A	44.6	44.6	0.0	33%	31%	32%	30%	-0.6	0.6	-0.2	0.2
SL2 (742)	70.0	70.0	0.0	30%	30%	30%	30%	0.0	0.0	0.0	0.0
<b>Daily Total</b>								<b>9.7</b>	<b>-9.7</b>	<b>4.3</b>	<b>-4.3</b>
<b>Weekly Total</b>								<b>48.5</b>	<b>-48.5</b>	<b>21.5</b>	<b>-21.5</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income.

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS. MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 11  
Change of Weekly Revenue Vehicle Hours based on Alignment Changes  
(Saturday)**

Route	Existing Hours	Proposed Hours	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Hours Minority	Change in Hours Nonminority	Change in Hours Low-Income	Change in Hours Non-Low-Income
1	152.0	152.0	0.0	44%	45%	45%	45%	0.4	-0.4	0.2	-0.2
9	58.3	58.3	0.0	27%	31%	27%	31%	0.0	0.0	0.0	0.0
35	27.9	27.9	0.0	37%	31%	38%	31%	0.0	0.0	0.0	0.0
36	32.6	32.6	0.0	36%	29%	36%	29%	0.1	-0.1	0.0	0.0
44	47.6	47.6	0.0	80%	66%	80%	66%	0.0	0.0	0.0	0.0
59	12.9	12.9	0.0	19%	20%	20%	20%	0.1	-0.1	0.0	0.0
60	34.0	34.0	0.0	34%	42%	34%	42%	0.0	0.0	0.1	-0.1
64	19.9	19.9	0.0	40%	40%	40%	40%	0.0	0.0	0.0	0.0
70	84.8	84.8	0.0	35%	33%	35%	33%	0.0	0.0	0.0	0.0
74	12.1	12.1	0.0	29%	25%	29%	26%	0.1	-0.1	0.0	0.0
75	11.4	11.4	0.0	28%	26%	26%	26%	-0.1	0.1	0.0	0.0
90	14.8	14.8	0.0	31%	30%	31%	30%	-0.1	0.1	0.0	0.0
92	23.9	23.9	0.0	23%	32%	20%	31%	-0.7	0.7	-0.2	0.2
95	26.7	26.7	0.0	32%	35%	31%	33%	-0.5	0.5	-0.3	0.3
120	30.7	30.7	0.0	64%	45%	63%	45%	-0.2	0.2	-0.1	0.1
201	14.6	14.6	0.0	53%	36%	57%	37%	0.6	-0.6	0.2	-0.2
202	10.2	10.2	0.0	53%	37%	60%	38%	0.7	-0.7	0.1	-0.1
220	31.2	31.2	0.0	22%	39%	22%	39%	0.2	-0.2	0.2	-0.2
225	29.5	29.5	0.0	24%	37%	28%	38%	1.1	-1.1	0.4	-0.4
350	31.6	31.6	0.0	23%	27%	23%	27%	0.0	0.0	0.0	0.0
34/34E	89.8	89.8	0.0	36%	33%	36%	33%	-0.2	0.2	-0.2	0.2
70A	36.8	36.8	0.0	33%	31%	32%	30%	-0.5	0.5	-0.2	0.2
SL2 (742)	37.1	37.1	0.0	30%	30%	30%	30%	0.0	0.0	0.0	0.0
<b>Daily Total</b>								<b>1.0</b>	<b>-1.0</b>	<b>0.2</b>	<b>-0.2</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income.

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS. MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 12  
Change of Weekly Revenue Vehicle Hours based on Alignment Changes  
(Sunday)**

Route	Existing Hours	Proposed Hours	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Hours Minority	Change in Hours Nonminority	Change in Hours Low-Income	Change in Hours Non-Low-Income
1	103.5	103.5	0.0	44%	45%	45%	45%	0.3	-0.3	0.2	-0.2
9	37.0	37.0	0.0	27%	31%	27%	31%	0.0	0.0	0.0	0.0
35	10.1	10.1	0.0	37%	31%	37%	31%	0.0	0.0	0.0	0.0
36	32.2	32.2	0.0	36%	29%	36%	29%	0.1	-0.1	0.0	0.0
44	19.3	19.3	0.0	80%	66%	80%	66%	0.0	0.0	0.0	0.0
59	11.3	11.3	0.0	19%	20%	20%	20%	0.0	0.0	0.0	0.0
60	16.1	16.1	0.0	34%	42%	34%	42%	0.0	0.0	0.0	0.0
64	10.7	10.7	0.0	40%	40%	40%	40%	0.0	0.0	0.0	0.0
70	79.1	79.1	0.0	35%	33%	35%	33%	0.0	0.0	0.0	0.0
89	15.3	15.3	0.0	33%	33%	31%	32%	-0.3	0.3	-0.2	0.2
90	7.7	7.7	0.0	31%	30%	31%	30%	0.0	0.0	0.0	0.0
95	11.2	11.2	0.0	32%	35%	31%	33%	-0.2	0.2	-0.1	0.1
120	19.3	19.3	0.0	64%	45%	63%	45%	-0.1	0.1	-0.1	0.1
201	7.2	7.2	0.0	56%	36%	57%	37%	0.1	-0.1	0.1	-0.1
202	4.0	4.0	0.0	55%	36%	60%	38%	0.2	-0.2	0.1	-0.1
350	19.6	19.6	0.0	23%	27%	23%	27%	0.0	0.0	0.0	0.0
34/34E	59.0	59.0	0.0	38%	34%	37%	34%	-0.2	0.2	-0.2	0.2
SL2 (742)	35.0	35.0	0.0	30%	30%	30%	30%	0.0	0.0	0.0	0.0
<b>Daily Total</b>								<b>0.0</b>	<b>0.0</b>	<b>-0.2</b>	<b>0.2</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income.

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS. MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.



**Table 13**  
**Change of Daily Revenue Vehicle Hours from the Addition of 30 Full-Time**  
**Bus Operator Equivalents**

Route	WD Increase (RVH)	SA Increase (RVH)	SU Increase (RVH)	WD: Pct. Min	WD: Pct. Low-Inc.	SA: Pct. Min	SA: Pct. Low-Inc.	SU: Pct. Min	SU: Pct. Low-Inc.	WD: Min. Increase	WD: Nonmin. Increase	WD: Low-Inc. Increase	WD: Non-Low-Inc. Increase	SA: Min. Increase	SA: Nonmin. Increase	SA: Low-Inc. Increase	SA: Non-Low-Inc. Increase	SU: Min. Increase	SU: Nonmin. Increase	SU: Low-Inc. Increase	SU: Non-Low-Inc. Increase
1	4.1	6.9	4.1	45%	45%	45%	45%	45%	45%	1.9	2.3	1.9	2.3	3.1	3.8	3.2	3.8	1.8	2.3	1.9	2.2
7	0.7	0.4	NA	17%	27%	17%	27%	NA	NA	0.1	0.6	0.2	0.5	0.1	0.4	0.1	0.3	NA	NA	NA	NA
9	1.9	2.0	2.2	27%	31%	27%	31%	27%	31%	0.5	1.4	0.6	1.3	0.5	1.5	0.6	1.4	0.6	1.6	0.7	1.5
15	11.6	16.4	9.2	82%	57%	81%	55%	81%	55%	9.5	2.1	6.6	5.0	13.2	3.2	9.1	7.3	7.4	1.8	5.1	4.1
16	1.9	0.5	3.0	74%	55%	78%	53%	78%	53%	1.4	0.5	1.1	0.9	0.4	0.1	0.2	0.2	2.4	0.7	1.6	1.4
21	3.5	2.3	0.3	82%	46%	82%	46%	82%	46%	2.9	0.6	1.6	1.9	1.9	0.4	1.0	1.2	0.2	0.0	0.1	0.1
22	6.1	7.6	4.8	81%	60%	81%	60%	81%	60%	5.0	1.2	3.7	2.4	6.1	1.4	4.6	3.0	3.9	0.9	2.9	1.9
23	4.6	5.1	6.3	84%	61%	84%	61%	84%	61%	3.9	0.7	2.8	1.8	4.3	0.8	3.1	2.0	5.3	1.0	3.8	2.5
28	7.1	2.0	5.9	88%	64%	88%	64%	88%	64%	6.3	0.9	4.6	2.6	1.7	0.2	1.3	0.7	5.1	0.7	3.7	2.1
31	1.8	0.7	0.2	85%	49%	85%	49%	85%	49%	1.5	0.3	0.9	0.9	0.6	0.1	0.3	0.4	0.1	0.0	0.1	0.1
32	4.3	2.7	0.5	67%	37%	66%	37%	67%	37%	2.9	1.4	1.6	2.7	1.8	0.9	1.0	1.7	0.3	0.2	0.2	0.3
34/34E	5.1	2.0	0.9	36%	33%	36%	33%	37%	34%	1.8	3.3	1.7	3.4	0.7	1.3	0.7	1.4	0.4	0.6	0.3	0.6
35	2.4	0.7	4.3	38%	31%	38%	31%	37%	31%	0.9	1.5	0.7	1.6	0.3	0.5	0.2	0.5	1.6	2.7	1.3	3.0
36	2.4	0.7	4.3	36%	29%	36%	29%	36%	29%	0.8	1.5	0.7	1.7	0.3	0.5	0.2	0.5	1.6	2.7	1.3	3.0
37	2.4	0.7	NA	35%	28%	36%	29%	NA	NA	0.8	1.5	0.7	1.7	0.3	0.5	0.2	0.5	NA	NA	NA	NA
39	6.6	7.8	7.1	36%	41%	36%	41%	36%	41%	2.4	4.2	2.7	3.9	2.8	5.0	3.2	4.6	2.6	4.6	2.9	4.2
44	0.6	1.1	0.5	80%	66%	80%	66%	80%	66%	0.5	0.1	0.4	0.2	0.9	0.2	0.7	0.4	0.4	0.1	0.4	0.2
47	7.4	2.3	3.3	49%	52%	49%	52%	49%	52%	3.6	3.8	3.9	3.5	1.1	1.2	1.2	1.1	1.6	1.7	1.7	1.6
57	2.5	1.8	0.1	34%	46%	34%	46%	34%	46%	0.9	1.6	1.1	1.4	0.6	1.2	0.8	1.0	0.0	0.1	0.0	0.0
66	15.0	3.7	6.1	42%	46%	42%	46%	42%	46%	6.4	8.6	6.8	8.2	1.6	2.1	1.7	2.0	2.6	3.5	2.8	3.3
70	1.8	1.7	1.0	35%	33%	35%	33%	35%	33%	0.6	1.2	0.6	1.2	0.6	1.1	0.5	1.1	0.3	0.6	0.3	0.7
70A	1.8	1.7	1.0	32%	30%	32%	30%	32%	30%	0.6	1.2	0.5	1.3	0.5	1.1	0.5	1.2	0.3	0.7	0.3	0.7
71	5.5	6.4	20.3	25%	26%	25%	26%	25%	25%	1.4	4.2	1.4	4.1	1.6	4.8	1.6	4.7	5.0	15.3	5.2	15.1
73	5.1	4.5	16.2	25%	27%	25%	27%	24%	27%	1.2	3.8	1.4	3.7	1.1	3.4	1.2	3.3	4.0	12.2	4.3	11.9
77	4.5	1.6	2.2	24%	27%	24%	27%	24%	27%	1.1	3.4	1.2	3.3	0.4	1.2	0.4	1.2	0.5	1.7	0.6	1.6
86	1.4	4.9	1.6	33%	39%	33%	39%	33%	39%	0.5	0.9	0.5	0.8	1.6	3.3	1.9	3.0	0.5	1.1	0.6	1.0
87	1.5	0.6	0.3	25%	30%	25%	30%	26%	30%	0.4	1.1	0.5	1.0	0.2	0.5	0.2	0.4	0.1	0.2	0.1	0.2
88	0.3	0.5	1.0	27%	31%	27%	31%	27%	31%	0.1	0.2	0.1	0.2	0.1	0.4	0.2	0.3	0.3	0.7	0.3	0.7
89	1.1	0.6	2.8	31%	32%	31%	32%	31%	32%	0.4	0.8	0.4	0.8	0.2	0.4	0.2	0.4	0.9	1.9	0.9	1.9
93	2.7	2.0	0.9	24%	32%	23%	32%	23%	32%	0.6	2.0	0.9	1.8	0.5	1.6	0.6	1.4	0.2	0.7	0.3	0.6
101	2.5	3.5	12.5	39%	37%	39%	37%	39%	37%	1.0	1.6	0.9	1.6	1.4	2.2	1.3	2.2	4.8	7.7	4.7	7.9
104	3.6	2.1	7.1	49%	42%	49%	42%	49%	42%	1.7	1.8	1.5	2.1	1.0	1.1	0.9	1.2	3.5	3.7	3.0	4.2
109	7.8	1.7	6.6	44%	41%	44%	41%	44%	41%	3.4	4.3	3.2	4.6	0.7	0.9	0.7	1.0	2.9	3.7	2.7	3.9
110	1.9	3.0	7.5	46%	45%	46%	45%	46%	45%	0.9	1.0	0.8	1.0	1.4	1.6	1.3	1.6	3.5	4.1	3.4	4.1
111	7.3	0.5	1.9	50%	40%	50%	40%	50%	40%	3.6	3.7	2.9	4.4	0.2	0.2	0.2	0.3	1.0	1.0	0.8	1.2

Route	WD Increase (RVH)	SA Increase (RVH)	SU Increase (RVH)	WD: Pct. Min	WD: Pct. Low-Inc.	SA: Pct. Min	SA: Pct. Low-Inc.	SU: Pct. Min	SU: Pct. Low-Inc.	WD: Min. Increase	WD: Nonmin. Increase	WD: Low-Inc. Increase	WD: Non-Low-Inc. Increase	SA: Min. Increase	SA: Nonmin. Increase	SA: Low-Inc. Increase	SA: Non-Low-Inc. Increase	SU: Min. Increase	SU: Nonmin. Increase	SU: Low-Inc. Increase	SU: Non-Low-Inc. Increase
116	5.6	4.3	6.7	65%	47%	65%	47%	65%	47%	3.6	2.0	2.6	2.9	2.8	1.5	2.0	2.3	4.3	2.4	3.2	3.6
117	5.6	4.3	6.7	56%	42%	56%	42%	56%	42%	3.1	2.4	2.3	3.2	2.4	1.9	1.8	2.5	3.8	2.9	2.8	3.9
220	0.5	2.0	0.9	22%	39%	22%	39%	22%	39%	0.1	0.4	0.2	0.3	0.4	1.5	0.8	1.2	0.2	0.7	0.3	0.5
221	0.5	NA	NA	26%	42%	NA	NA	NA	NA	0.1	0.4	0.2	0.3	NA	NA	NA	NA	NA	NA	NA	NA
222	0.5	2.0	0.9	22%	40%	22%	40%	22%	40%	0.1	0.4	0.2	0.3	0.4	1.5	0.8	1.2	0.2	0.7	0.3	0.5
441	2.3	1.9	2.9	42%	47%	37%	46%	37%	46%	1.0	1.3	1.1	1.2	0.7	1.2	0.9	1.1	1.1	1.8	1.3	1.6
442	2.3	1.9	2.9	43%	47%	38%	45%	43%	47%	1.0	1.3	1.1	1.2	0.7	1.2	0.9	1.1	1.3	1.7	1.4	1.5
SL1	3.6	0.5	3.0	32%	30%	32%	30%	32%	30%	1.1	2.5	1.1	2.5	0.2	0.3	0.1	0.3	1.0	2.1	0.9	2.1
SL2	1.6	1.3	2.1	30%	30%	30%	30%	30%	30%	0.5	1.1	0.5	1.1	0.4	0.9	0.4	0.9	0.6	1.5	0.6	1.5
SL3	3.4	3.1	4.3	66%	41%	66%	41%	66%	41%	2.3	1.2	1.4	2.0	2.1	1.0	1.3	1.9	2.9	1.5	1.8	2.6
SL4	2.3	2.2	1.9	60%	50%	60%	50%	60%	50%	1.4	0.9	1.2	1.1	1.3	0.9	1.1	1.1	1.2	0.8	1.0	1.0
SL5	2.6	6.5	4.7	59%	50%	59%	50%	59%	50%	1.6	1.1	1.3	1.3	3.8	2.6	3.2	3.2	2.8	1.9	2.3	2.4
<b>Total</b>										<b>87</b>	<b>85</b>	<b>74</b>	<b>98</b>	<b>69</b>	<b>64</b>	<b>59</b>	<b>74</b>	<b>85</b>	<b>98</b>	<b>74</b>	<b>109</b>
<b>Weekly</b>										<b>436</b>	<b>423</b>	<b>371</b>	<b>488</b>	<b>69</b>	<b>64</b>	<b>59</b>	<b>74</b>	<b>85</b>	<b>98</b>	<b>74</b>	<b>109</b>

Notes: NA indicates that there is no scheduled service for the given route-day of the week pair. Hours added to routes in corridors (such as the 441/442) were evenly split between the routes in the corridor (for example, 50 percent of the 4.6 weekday hours provided to the 441/442 corridor were attributed to Route 441).

WD = Weekday. SA = Saturday. SU = Sunday. Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income.

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS. MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 14**  
**Change of Daily Revenue Vehicle Hours from the Addition of 30 Full-Time**  
**Bus Operator Equivalents (Based on Survey Data)**

Route	Value in Survey (if different)	WD Increase (RVH)	SA Increase (RVH)	SU Increase (RVH)	Pct. Min	Pct. Low-Inc.	WD: Min. Increase	WD: Nonmin. Increase	WD: Low-Inc. Increase	WD: Non-Low-Inc. Increase	SA: Min. Increase	SA: Nonmin. Increase	SA: Low-Inc. Increase	SA: Non-Low-Inc. Increase	SU: Min. Increase	SU: Nonmin. Increase	SU: Low-Inc. Increase	SU: Non-Low-Inc. Increase
1		4.1	6.9	4.1	37%	34%	1.5	2.6	1.4	2.7	2.5	4.4	2.4	4.6	1.5	2.6	1.4	2.7
7		0.7	0.4	NA	9%	6%	0.1	0.6	0.0	0.6	0.0	0.4	0.0	0.4	NA	NA	NA	NA
9		1.9	2.0	2.2	11%	15%	0.2	1.7	0.3	1.6	0.2	1.8	0.3	1.7	0.2	1.9	0.3	1.9
15		11.6	16.4	9.2	75%	67%	8.8	2.9	7.8	3.8	12.3	4.0	11.0	5.4	6.9	2.3	6.2	3.0
16		1.9	0.5	3.0	74%	50%	1.4	0.5	1.0	1.0	0.3	0.1	0.2	0.2	2.2	0.8	1.5	1.5
21		3.5	2.3	0.3	87%	48%	3.1	0.5	1.7	1.8	2.0	0.3	1.1	1.2	0.2	0.0	0.1	0.1
22	22 and 29	6.1	7.6	4.8	91%	70%	5.6	0.6	4.3	1.9	6.9	0.7	5.3	2.3	4.3	0.4	3.3	1.4
23		4.6	5.1	6.3	85%	59%	3.9	0.7	2.7	1.9	4.3	0.8	3.0	2.1	5.4	1.0	3.7	2.6
28		7.1	2.0	5.9	92%	65%	6.6	0.6	4.6	2.5	1.8	0.2	1.3	0.7	5.4	0.5	3.8	2.0
31		1.8	0.7	0.2	93%	58%	1.7	0.1	1.0	0.8	0.6	0.1	0.4	0.3	0.2	0.0	0.1	0.1
32		4.3	2.7	0.5	76%	43%	3.3	1.1	1.8	2.5	2.1	0.7	1.2	1.6	0.3	0.1	0.2	0.3
34/34E		5.1	2.0	0.9	42%	37%	2.1	3.0	1.9	3.2	0.8	1.2	0.7	1.3	0.4	0.6	0.3	0.6
35		2.4	0.7	4.3	33%	24%	0.8	1.6	0.6	1.8	0.2	0.5	0.2	0.6	1.4	2.9	1.0	3.3
36		2.4	0.7	4.3	37%	33%	0.9	1.5	0.8	1.6	0.3	0.5	0.2	0.5	1.6	2.7	1.4	2.9
37		2.4	0.7	NA	32%	31%	0.8	1.6	0.7	1.6	0.2	0.5	0.2	0.5	NA	NA	NA	NA
39		6.6	7.8	7.1	36%	27%	2.4	4.2	1.8	4.8	2.8	5.0	2.1	5.6	2.6	4.6	2.0	5.2
44	42 and 44	0.6	1.1	0.5	91%	66%	0.6	0.1	0.4	0.2	1.0	0.1	0.7	0.4	0.5	0.0	0.4	0.2
47		7.4	2.3	3.3	33%	26%	2.4	5.0	2.0	5.5	0.8	1.6	0.6	1.7	1.1	2.2	0.9	2.4
57		2.5	1.8	0.1	28%	43%	0.7	1.8	1.1	1.4	0.5	1.3	0.8	1.1	0.0	0.1	0.0	0.0
66		15.0	3.7	6.1	40%	40%	6.0	9.0	6.0	9.0	1.5	2.2	1.5	2.2	2.5	3.7	2.5	3.7
70	70/70A	1.8	1.7	1.0	35%	36%	0.6	1.2	0.6	1.1	0.6	1.1	0.6	1.1	0.3	0.6	0.3	0.6
70A	70/70A	1.8	1.7	1.0	35%	36%	0.6	1.2	0.6	1.1	0.6	1.1	0.6	1.1	0.3	0.6	0.3	0.6
71		5.5	6.4	20.3	24%	21%	1.3	4.2	1.2	4.4	1.5	4.8	1.3	5.0	4.9	15.4	4.3	16.0
73		5.1	4.5	16.2	19%	21%	1.0	4.1	1.0	4.0	0.9	3.6	0.9	3.6	3.2	13.0	3.3	12.9
77		4.5	1.6	2.2	24%	35%	1.1	3.5	1.6	3.0	0.4	1.2	0.6	1.0	0.5	1.7	0.8	1.4
86		1.4	4.9	1.6	26%	36%	0.4	1.0	0.5	0.9	1.3	3.6	1.7	3.1	0.4	1.2	0.6	1.0
87		1.5	0.6	0.3	22%	25%	0.3	1.2	0.4	1.1	0.1	0.5	0.2	0.5	0.1	0.3	0.1	0.3
88	88 and 90	0.3	0.5	1.0	25%	24%	0.1	0.2	0.1	0.2	0.1	0.4	0.1	0.4	0.2	0.7	0.2	0.7
89		1.1	0.6	2.8	25%	24%	0.3	0.8	0.3	0.9	0.1	0.4	0.1	0.4	0.7	2.1	0.7	2.2
93	92 and 93	2.7	2.0	0.9	23%	30%	0.6	2.1	0.8	1.9	0.5	1.6	0.6	1.4	0.2	0.7	0.3	0.6
101		2.5	3.5	12.5	31%	40%	0.8	1.7	1.0	1.5	1.1	2.4	1.4	2.1	3.9	8.6	5.1	7.5
104		3.6	2.1	7.1	56%	56%	2.0	1.6	2.0	1.6	1.2	0.9	1.2	0.9	4.0	3.1	4.0	3.1
109		7.8	1.7	6.6	38%	61%	3.0	4.8	4.8	3.0	0.6	1.0	1.0	0.6	2.5	4.1	4.0	2.6
110		1.9	3.0	7.5	51%	43%	0.9	0.9	0.8	1.1	1.5	1.5	1.3	1.7	3.8	3.7	3.2	4.3
111		7.3	0.5	1.9	63%	60%	4.6	2.7	4.4	2.9	0.3	0.2	0.3	0.2	1.2	0.7	1.2	0.8

Route	Value in Survey (if different)	WD Increase (RVH)	SA Increase (RVH)	SU Increase (RVH)	Pct. Min	Pct. Low-Inc.	WD: Min. Increase	WD: Nonmin. Increase	WD: Low-Inc. Increase	WD: Non-Low-Inc. Increase	SA: Min. Increase	SA: Nonmin. Increase	SA: Low-Inc. Increase	SA: Non-Low-Inc. Increase	SU: Min. Increase	SU: Nonmin. Increase	SU: Low-Inc. Increase	SU: Non-Low-Inc. Increase
116	114, 116, and 117	5.6	4.3	6.7	60%	55%	3.3	2.2	3.1	2.5	2.6	1.7	2.4	1.9	4.0	2.7	3.7	3.0
117	114, 116, and 117	5.6	4.3	6.7	60%	55%	3.3	2.2	3.1	2.5	2.6	1.7	2.4	1.9	4.0	2.7	3.7	3.0
220	220 and 221	0.5	2.0	0.9	28%	43%	0.2	0.4	0.2	0.3	0.6	1.4	0.8	1.1	0.2	0.6	0.4	0.5
221	220 and 221	0.5	NA	NA	28%	43%	0.2	0.4	0.2	0.3	NA	NA	NA	NA	NA	NA	NA	NA
222		0.5	2.0	0.9	34%	40%	0.2	0.3	0.2	0.3	0.7	1.3	0.8	1.2	0.3	0.6	0.3	0.5
441		2.3	1.9	2.9	47%	68%	1.1	1.2	1.6	0.7	0.9	1.0	1.3	0.6	1.4	1.5	2.0	0.9
442		2.3	1.9	2.9	38%	54%	0.9	1.4	1.3	1.1	0.7	1.2	1.1	0.9	1.1	1.8	1.6	1.3
SL1	SL1/SL2 Waterfront	3.6	0.5	3.0	24%	14%	0.9	2.7	0.5	3.1	0.1	0.4	0.1	0.4	0.7	2.3	0.4	2.6
SL2	SL1/SL2 Waterfront	1.6	1.3	2.1	24%	14%	0.4	1.2	0.2	1.4	0.3	1.0	0.2	1.2	0.5	1.6	0.3	1.8
SL3	No Data	3.4	3.1	4.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SL4	SL4/SL5 Washington St.	2.3	2.2	1.9	61%	36%	1.4	0.9	0.8	1.5	1.3	0.9	0.8	1.4	1.2	0.8	0.7	1.2
SL5	SL4/SL5 Washington St.	2.6	6.5	4.7	61%	36%	1.6	1.0	0.9	1.7	3.9	2.5	2.3	4.1	2.9	1.9	1.7	3.0
<b>Total</b>							<b>84</b>	<b>85</b>	<b>74</b>	<b>94</b>	<b>66</b>	<b>64</b>	<b>57</b>	<b>72</b>	<b>79</b>	<b>99</b>	<b>72</b>	<b>106</b>
<b>Weekly</b>							<b>418</b>	<b>424</b>	<b>371</b>	<b>471</b>	<b>66</b>	<b>64</b>	<b>57</b>	<b>72</b>	<b>79</b>	<b>99</b>	<b>72</b>	<b>106</b>

Notes: NA indicates that there is no scheduled service for the given route-day of the week pair. Route SL3 did not exist at the time of the systemwide survey. Its values are noted with NS (No Survey). Hours added to routes in corridors (such as the 441/442) were evenly split between the routes in the corridor (for example, 50 percent of the 4.6 weekday hours provided to the 441/442 corridor were attributed to Route 441).

WD = Weekday. SA = Saturday. SU = Sunday. Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income.

Sources: MBTA revenue vehicle hour spreadsheets as processed by CTPS. 2015-17 MBTA Systemwide Passenger Survey.

**Table 15  
Change of Route Miles (Weekday)**

Route	Existing Length	Proposed Length	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Length Minority	Change in Length Nonminority	Change in Length Low-Income	Change in Length Non-Low-Income
1	9.5	9.1	-0.4	44%	45%	45%	45%	-0.2	-0.3	-0.2	-0.2
4	11.2	11.1	-0.2	21%	30%	21%	30%	0.0	-0.1	-0.1	-0.1
5	6.6	X	-6.6	23%	34%	X	X	-1.5	-5.1	-2.3	-4.3
9	8.5	8.0	-0.5	27%	31%	27%	31%	-0.1	-0.4	-0.1	-0.3
16	16.8	16.9	0.0	74%	55%	74%	55%	0.0	0.0	0.0	0.0
35	12.7	12.4	-0.3	37%	31%	38%	31%	-0.1	-0.2	-0.1	-0.2
36	10.4	10.1	-0.3	36%	29%	36%	29%	-0.1	-0.2	-0.1	-0.2
37	11.2	11.2	0.0	35%	28%	35%	28%	0.0	0.0	0.0	0.0
44	8.1	7.7	-0.4	80%	66%	80%	66%	-0.3	-0.1	-0.2	-0.1
52	29.3	20.6	-8.7	21%	22%	20%	22%	-2.0	-6.7	-1.9	-6.8
59	21.4	21.5	0.0	20%	20%	20%	20%	0.0	0.0	0.0	0.0
60	13.2	11.4	-1.8	34%	41%	34%	42%	-0.6	-1.3	-0.7	-1.1
64	13.4	11.4	-2.0	41%	39%	42%	40%	-0.7	-1.2	-0.6	-1.4
70	22.0	21.9	-0.1	35%	33%	35%	33%	0.0	-0.1	0.0	-0.1
72	5.1	5.1	0.0	29%	29%	29%	29%	0.0	0.0	0.0	0.0
74	9.0	7.8	-1.2	29%	25%	29%	26%	-0.3	-0.9	-0.3	-0.9
75	9.6	8.8	-0.8	28%	26%	26%	26%	-0.3	-0.4	-0.2	-0.5
90	11.5	8.8	-2.6	31%	30%	31%	30%	-0.9	-1.7	-0.8	-1.8
92	7.9	5.9	-2.0	23%	32%	20%	31%	-0.6	-1.4	-0.7	-1.3
95	13.4	16.0	2.7	31%	34%	30%	33%	0.6	2.0	0.8	1.9
106	17.5	12.0	-5.5	40%	36%	47%	40%	-1.4	-4.1	-1.6	-3.9
111	13.7	11.4	-2.3	48%	40%	50%	40%	-0.9	-1.4	-1.0	-1.3
120	9.1	9.0	-0.1	64%	45%	63%	45%	-0.1	0.0	-0.1	0.0
134	27.4	25.6	-1.8	22%	29%	22%	29%	-0.5	-1.3	-0.6	-1.2
220	19.1	17.8	-1.3	22%	39%	22%	39%	-0.3	-1.0	-0.5	-0.8
222	19.2	15.8	-3.3	21%	39%	22%	40%	-0.6	-2.8	-1.2	-2.1
225	19.9	12.0	-7.9	24%	37%	28%	38%	-1.5	-6.4	-2.7	-5.1
226	NS	12.90	12.90	NS	NS	14%	31%	1.8	11.1	4.0	8.9

Route	Existing Length	Proposed Length	Change	Existing Pct. Min.	Existing Pct. Low-Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Length Minority	Change in Length Nonminority	Change in Length Low-Income	Change in Length Non-Low-Income
350	29.4	29.5	0.1	23%	27%	23%	27%	0.0	0.1	0.0	0.1
411	21.3	21.3	0.0	42%	42%	42%	42%	0.0	0.0	0.0	0.0
424	20.4	16.1	-4.3	53%	43%	54%	46%	-2.0	-2.3	-1.4	-2.9
428	31.0	27.3	-3.7	38%	37%	38%	37%	-1.2	-2.5	-1.2	-2.4
435	34.4	29.9	-4.6	40%	46%	39%	46%	-2.2	-2.3	-1.8	-2.8
441	27.8	27.8	0.0	42%	47%	42%	47%	0.0	0.0	0.0	0.0
442	26.8	26.9	0.1	43%	47%	43%	47%	0.0	0.0	0.0	0.0
448	41.8	X	-41.8	39%	42%	X	X	-16.2	-25.7	-17.4	-24.5
449	40.9	X	-40.9	39%	41%	X	X	-16.1	-24.9	-16.9	-24.0
455	27.1	27.1	0.1	48%	49%	48%	49%	0.0	0.0	0.0	0.0
459	41.8	X	-41.8	48%	46%	X	X	-20.3	-21.5	-19.2	-22.6
34/34E	42.2	30.1	-12.1	33%	32%	36%	33%	-3.5	-8.7	-3.6	-8.5
70A	31.0	10.4	-20.6	33%	31%	32%	30%	-7.0	-13.6	-6.3	-14.3
CT1	6.81	X	-6.8	43%	46%	X	X	-2.9	-3.9	-3.1	-3.7
SL2 (742)	4.8	4.5	-0.3	30%	30%	30%	30%	-0.1	-0.2	-0.1	-0.2
<b>Daily Total</b>								<b>-81.9</b>	<b>-129.4</b>	<b>-82.1</b>	<b>-129.1</b>
<b>Weekly Total</b>								<b>-409.3</b>	<b>-646.9</b>	<b>-410.6</b>	<b>-645.6</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income. NS = New Service. X = Eliminated Service.

Sources: MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 16  
Change of Route Miles (Saturday)**

Route	Existing Length	Proposed Length	Change	Existing Pct. Min.	Existing Pct. Low Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Length Minority	Change in Length Nonminority	Change in Length Low-Income	Change in Length Non-Low-Income
1	9.5	9.1	-0.4	44%	45%	45%	45%	-0.2	-0.3	-0.2	-0.2
5	6.6	X	-6.6	23%	34%	X	X	-1.5	-5.1	-2.3	-4.3
9	8.5	8.0	-0.5	27%	31%	27%	31%	-0.1	-0.4	-0.1	-0.3
16	11.4	11.4	0.0	78%	53%	78%	53%	0.0	0.0	0.0	0.0
35	12.7	12.4	-0.3	37%	31%	38%	31%	-0.1	-0.2	-0.1	-0.2
36	9.2	8.7	-0.5	36%	29%	36%	29%	-0.1	-0.4	-0.1	-0.4
44	8.1	7.7	-0.4	80%	66%	80%	66%	-0.3	-0.1	-0.2	-0.1
59	18.3	21.5	3.1	19%	20%	20%	20%	0.7	2.4	0.7	2.5
60	12.0	11.4	-0.6	34%	42%	34%	42%	-0.2	-0.4	-0.2	-0.3
64	10.7	9.9	-0.8	40%	40%	40%	40%	-0.3	-0.5	-0.3	-0.4
70	22.0	20.0	-1.9	35%	33%	35%	33%	-0.7	-1.3	-0.6	-1.3
74	9.0	7.8	-1.2	29%	25%	29%	26%	-0.3	-0.9	-0.3	-0.9
75	9.6	8.8	-0.8	28%	26%	26%	26%	-0.3	-0.4	-0.2	-0.5
90	11.5	8.8	-2.6	31%	30%	31%	30%	-0.9	-1.8	-0.8	-1.8
92	7.9	5.9	-2.0	23%	32%	20%	31%	-0.6	-1.4	-0.7	-1.3
95	11.1	13.6	2.6	32%	35%	31%	33%	0.6	2.0	0.7	1.9
120	9.1	9.0	-0.1	64%	45%	63%	45%	-0.1	0.0	-0.1	0.0
201	11.2	6.6	-4.6	53%	36%	57%	37%	-2.2	-2.4	-1.6	-3.0
202	12.2	6.4	-5.8	53%	37%	60%	38%	-2.7	-3.1	-2.1	-3.8
220	17.8	15.1	-2.7	22%	39%	22%	39%	-0.5	-2.2	-1.0	-1.7
225	19.9	12.0	-7.9	24%	37%	28%	38%	-1.5	-6.4	-2.7	-5.1
226	NS	12.9	12.9	NS	NS	14%	31%	1.8	11.1	4.0	8.9
350	29.4	29.5	0.1	23%	27%	23%	27%	0.0	0.1	0.0	0.1
34/34E	30.6	30.1	-0.6	36%	33%	36%	33%	-0.3	-0.3	-0.3	-0.3
70A	31.0	10.4	-20.6	33%	31%	32%	30%	-7.0	-13.6	-6.3	-14.3
SL2 (742)	4.8	4.5	-0.3	30%	30%	30%	30%	-0.1	-0.2	-0.1	-0.2
<b>Daily Total</b>								<b>-16.8</b>	<b>-25.6</b>	<b>-14.9</b>	<b>-27.5</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income. NS = New Service. X = Eliminated Service.

Sources: MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.

**Table 17  
Change of Route Miles (Sunday)**

Route	Existing Length	Proposed Length	Change	Existing Pct. Min.	Existing Pct. Low Inc.	Proposed Pct. Min.	Proposed Pct. Low-Inc.	Change in Length Minority	Change in Length Nonminority	Change in Length Low-Income	Change in Length Non-Low-Income
1	9.5	9.1	-0.4	44%	45%	45%	45%	-0.2	-0.3	-0.2	-0.2
9	8.5	8.0	-0.5	27%	31%	27%	31%	-0.1	-0.4	-0.1	-0.3
35	12.1	11.7	-0.3	37%	31%	37%	31%	-0.1	-0.2	-0.1	-0.2
36	9.2	8.7	-0.5	36%	29%	36%	29%	-0.1	-0.4	-0.1	-0.4
44	8.1	7.7	-0.4	80%	66%	80%	66%	-0.3	-0.1	-0.2	-0.1
59	18.3	21.5	3.1	19%	20%	20%	20%	0.7	2.4	0.7	2.5
60	12.0	11.4	-0.6	34%	42%	34%	42%	-0.2	-0.4	-0.2	-0.4
64	10.7	9.9	-0.8	40%	40%	40%	40%	-0.3	-0.5	-0.3	-0.4
70	22.0	20.0	-1.9	35%	33%	35%	33%	-0.7	-1.3	-0.6	-1.3
89	7.1	8.4	1.4	33%	33%	31%	32%	0.3	1.1	0.3	1.0
90	11.5	8.8	-2.6	31%	30%	31%	30%	-0.9	-1.8	-0.8	-1.8
95	11.1	13.6	2.6	32%	35%	31%	33%	0.6	2.0	0.7	1.9
120	9.1	9.0	-0.1	64%	45%	63%	45%	-0.1	0.0	-0.1	0.0
201	9.1	6.6	-2.5	56%	36%	57%	37%	-1.3	-1.2	-0.8	-1.7
202	10.6	6.4	-4.3	55%	36%	60%	38%	-2.1	-2.2	-1.5	-2.8
350	29.1	29.5	0.4	23%	27%	23%	27%	0.1	0.3	0.1	0.3
34/34E	26.1	25.5	-0.6	38%	34%	37%	34%	-0.3	-0.3	-0.3	-0.3
70A	NS	10.4	10.4	NS	NS	32%	30%	3.3	7.1	3.1	7.3
SL2 (742)	4.8	4.5	-0.3	30%	30%	30%	30%	-0.1	-0.2	-0.1	-0.2
<b>Daily Total</b>								<b>-1.7</b>	<b>3.8</b>	<b>-0.6</b>	<b>2.6</b>

Pct. = Percent. Min. = Minority. Low-Inc. = Low-Income. NS = New Service.

Sources: MBTA shapefiles as processed by CTPS. 2010-14 American Community Survey five-year estimates. 2010 US Census.





# APPENDIX 7E

## FMCB APPROVAL OF SERVICE EQUITY ANALYSIS OF BETTER BUS PROJECT



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Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, MassDOT Secretary & CEO  
Steve Poftak, General Manager



**WHEREAS**, the Massachusetts Bay Transportation Authority (the "Authority") created the Better Bus Project to improve bus service in the Authority's bus network by developing a package of near-term changes to the Authority's bus routes; and

**WHEREAS**, the Better Bus Project evaluated existing bus routes and, based on its analysis and feedback from the public, proposed implementing changes to several bus routes in the Authority's network and the hiring of additional full-time bus operators to improve off-peak services on high volume routes and to improve reliability ("the Proposals"); and

**WHEREAS**, the Authority has engaged in a public process and has conducted public meetings with respect to the Proposals; and

**WHEREAS**, the Proposals are considered a major service change pursuant to the Federal Transit Administrator (FTA) Title VI Circular 4702.1B, triggering a Service Equity Analysis (the "Equity Analysis") to determine whether the implementation of the Proposals will result in disparate impacts to minority populations or disproportionate burdens to low-income populations; and

**WHEREAS**, such Equity Analysis has been completed in accordance with MBTA's Disproportionate Impact/Disproportionate Burden Policy; and

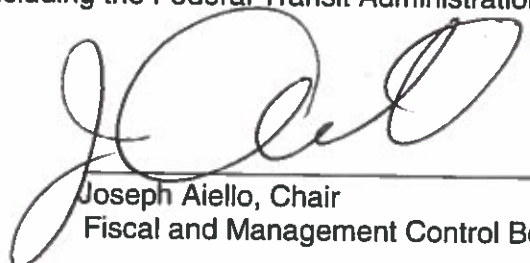
**WHEREAS**, the results of the Equity Analysis indicate that the implementation of the Proposals will not result in disparate impacts to minority populations, disparate benefits to nonminority populations, disproportionate burdens to low-income populations, or disproportionate benefits to non-low-income populations; and

**WHEREAS**, the FMCB is aware of and has considered the Equity Analysis for the Better Bus Project; and

**NOW, THEREFORE, BE IT VOTED** by the members of the FMCB, as follows:

The FMCB hereby approves the Title VI Service Equity Analysis and directs the Authority, through the General Manager to take all steps necessary to provide notice of such acceptance to all interested parties, including the Federal Transit Administration.

A true copy,  
Attest: May 6, 2019



Joseph Aiello, Chair  
Fiscal and Management Control Board



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# APPENDIX 7F

## FTA WAIVER FOR REVERSE COMMUTE FARE PILOT



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U.S. Department  
of Transportation  
**Federal Transit  
Administration**

Headquarters

East Building, 5th Floor – TCR  
1200 New Jersey Avenue, SE  
Washington, DC 20590

September 17, 2019

John Lozada  
Manager of Federal Programs  
MassDOT and MBTA  
Ten Park Plaza  
Boston, MA 02116

Dear Mr. Lozada:

This correspondence is to confirm receipt and approval of Massachusetts Bay Transportation Authority's (MBTA) request for a waiver of the requirement to conduct a fare equity analysis after implementing a promotional fare for six months, as outlined in the Federal Transit Administration (FTA) Title VI Circular 4702.1B, Chapter 4, Section 7(b). This exemption grants MBTA an additional six months (twelve months total) after implementing the pilot program to gather data. This extension is granted until September 30, 2020, the proposed expiration of the pilot program; however, it only applies to the pilot program and activities identified in MBTA's August 13, 2019 request.

As described to FTA, the proposed pilot program is a weekday commuter rail service called "Fairmont to Foxboro," coupled with an off-peak fare. The pilot is slated to begin in October 2019. If MBTA keeps the pilot program permanently (*i.e.* for more than one year), it will conduct a fare equity analysis as required by FTA Circular 4702.1B and submit it to FTA within three months of the end of the data-gathering period.

The FTA Office of Civil Rights is available to offer support or technical assistance during the data collection and equity analysis periods upon request. If you have any questions, please contact Monica McCallum directly at (206) 220-7519 or [monica.mccallum@dot.gov](mailto:monica.mccallum@dot.gov).

Sincerely,

A handwritten signature in cursive script that reads "Selene Faer Dalton-Kumins".

Selene Faer Dalton-Kumins  
Associate Administrator  
Office of Civil Rights

cc: Peter Butler, Regional Administrator, FTA Region 1