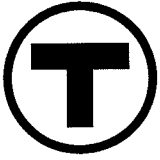


Title VI Report

MBTA *September 2008*





Massachusetts Bay Transportation Authority

Deval L. Patrick
Governor

Timothy P. Murray
Lt. Governor

Bernard Cohen
Secretary and MBTA Chairman

Daniel A. Grabauskas
General Manager

September 30th, 2008

Ms. Margaret Griffin
Region 1 Civil Rights Officer
Federal Transit Administration
Transportation Systems Center, Suite 920
Kendall Square
55 Broadway St.
Cambridge, MA 02142-1093

BY HAND DELIVERY

Re: Submission of MBTA Title VI Compliance Plan

Dear Ms. Griffin:

Enclosed please find for your review the MBTA 2008 Title VI Compliance Plan. This report is the product of an interdepartmental Title VI program planning process initiated with Federal Transit Administration (FTA) guidance to ensure that our services are delivered equitably in accord with federal requirements.

This Report has been prepared in a format based on the FTA's 2007 revised Circular on Title VI compliance.

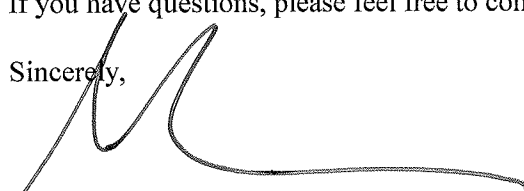
Among issues addressed by the MBTA since the 2005 report and referenced in this filing are:

- Centralized system implemented for processing of civil rights complaints and monitoring of agency responses;
- Policies and procedures formalized for promoting participation outreach and elimination of service barriers by people with limited English proficiency;
- Communications technologies installed to expand customer information delivery and enhance operations management capacity;
- Major organization commitment made in partnership with Boston Center for Independent Living to act on system-wide accessibility priorities;
- Significant service reliability improvements enacted including Key Route bus program and revenue fleet upgrade initiatives;
- Capital spending program focused on maintaining the core system infrastructure with 95% of the MBTA most recent capital budget funding dedicated to State of Good Repair projects.

On behalf of the Authority, I again want to thank you for the assistance you and your office have provided in helping to streamline maintenance of our Title VI planning and monitoring process.

If you have questions, please feel free to contact me @ (617) 222-3106.

Sincerely,



Daniel A. Grabauskas
General Manager

Driven by Customer Service

Massachusetts Bay Transportation Authority, Ten Park Plaza, Boston, MA 02116-3974

MBTA Title VI Report September 2008

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Prepared for the Massachusetts Bay Transportation Authority by the Central Transportation Planning Staff

CTPS is directed by the Boston Metropolitan Planning Organization. The MPO is composed of state and regional agencies and authorities, and local governments.

MBTA Title VI Report September 2008

MBTA Title VI Mission Statement

The MBTA is committed to providing a level and quality of service to minority and low-income individuals and communities that is equivalent to the services provided to nonminority and non-low-income individuals and communities.

MBTA Title VI Report Purpose

To document the steps the MBTA has taken and will take to ensure that, for all programs and activities receiving federal financial assistance, the MBTA provides services without excluding or discriminating against minority and low-income individuals and communities, or creating additional barriers to their use of the MBTA transit system.

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Chapter One

Introduction



Title VI of the Civil Rights Act of 1964 provides that “no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance.” To fulfill this basic civil rights mandate, each federal agency that provides financial assistance for any program is authorized and directed by the United States Department of Justice to apply provisions of Title VI to each program by issuing applicable rules, regulations, or requirements. The Federal Transit Administration (FTA) of the United States Department of Transportation issued guidelines on May 26, 1988, FTA C 4702.1, describing the contents of Title VI compliance programs to be adopted and maintained by recipients of FTA-administered funds for transit programs. On May 13, 2007, these guidelines were updated with the publication of FTA C 4702.1A, which now requires that Title VI compliance programs include income status in addition to minority status.

This document constitutes the Massachusetts Bay Transportation Authority’s Title VI Program, adopted in September 2008 with the approval of General Manager Daniel A. Grabauskas. It is the first Title VI program prepared in accordance with FTA C 4702.1A, and incorporates the new reporting requirements set forth therein. Table 1-1 summarizes the reporting requirements as they relate to the chapters in this report. As can be seen in this table, Chapter 2 addresses the MBTA’s general reporting requirements under the circular, including a description of the procedures for filing civil rights complaints; a list of Title VI investigations, complaints, and lawsuits; the agency’s plan for providing meaningful access to persons with limited English proficiency; a copy of the notice to the public regarding protection under Title VI; a list of construction projects currently under National Environmental Policy Act (NEPA) review; and a summary of public-outreach activities for involving minority and low-income populations. Chapter 3 includes several maps that show the MBTA’s extensive transit service network and the location of minority and low-income areas. Chapter 4 describes the service policies and standards under which the Authority operates to ensure high-quality and safe levels of service to the public. Chapter 5 evaluates the effects of major service changes and fare increases. Finally, Chapter 6 analyzes in depth the extent to which the MBTA has met its service standards and compares the levels and quality of service provided to the various communities served by the MBTA.

This report was developed by the MBTA 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 layout and production of the document. Questions or comments about the content of this program may be addressed to Joe Cosgrove, Director of Planning and Development, MBTA, Room 5750, 10 Park Plaza, Boston, MA 02116, or to Jeanne Morrison, AGM for Diversity and Civil Rights, MBTA, Room 5720, 10 Park Plaza, Boston, MA 02116.

Table 1-1: 2008 MBTA Triennial Title VI Report

Report Chapter	Provisions	Circular Reference	Reporting Requirement
Introduction			
General Reporting Requirements	Develop Title VI complaint procedures	IV. 2.	A copy of procedures for filing a Title VI complaint.
	Record Title VI investigations, complaints, and lawsuits	IV. 3.	A list of any Title VI investigations, complaints, or lawsuits filed with the agency since the time of the last submittal.
	Provide meaningful access to persons with limited English proficiency	IV. 4.	A copy of the agency's plan for providing access to meaningful activities and programs for persons with limited English proficiency.
	Notify beneficiaries of protection under Title VI	IV. 5.	A notice that the agency complies with Title VI and a list of the procedures the public may follow to file a discrimination complaint.
	Analyze construction projects for environmental justice	IV. 8.	Although the new guidance does not require that the MBTA report on this topic in this document, a summary of the status of current construction projects receiving federal funding is included.
	Promote inclusive public participation	IV. 9.	A summary of public outreach and involvement activities undertaken since the last submission and a description of steps taken to ensure that minority persons had meaningful access to these activities.
Demographic Data and Maps	Collect and map demographic data	V. 1. a.	Option A: Demographic maps and charts prepared since the most recent decennial census.
Service Standards and Policies	Set systemwide service standards	V. 2. a.	Systemwide service standards for vehicle load, vehicle headway, on-time performance, distribution of transit amenities, and service availability.
	Set systemwide service policies	V. 3. a.	Systemwide policies for vehicle assignment and transit security.
Service and Fare Changes	Evaluate service and fare changes	V. 4.	Option A: An analysis of the impacts on minority and low-income populations of any significant service and fare changes that occurred since the previous report was submitted.
Service Monitoring	Monitor transit service	V. 5.	Option A: The results of Level of Service monitoring. Option B: The results of Quality of Service monitoring.





Procedures for Filing a Civil Rights Complaint IFTA C4702.1A, IV. 2.1

MBTA Policy and Procedures for Filing Discrimination Complaints under Title VI and Related Statutes

Policy

It is the policy of the Massachusetts Bay Transportation Authority (MBTA) to utilize its best efforts to ensure that all programs, services, activities, and benefits are implemented without discrimination and with the inclusion of minority and protected-class interests through its civil rights policies and procedures. The MBTA's Title VI policy, in accordance with Title VI of the Civil Rights Act of 1964, assures that no person or groups of persons shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by its departments. Additionally, other laws provide similar protection on account of a person's gender, religion, age, disability, sexual orientation, or other protected status.

The Authority has a zero-tolerance policy prohibiting any form of unlawful discrimination against our customers. It prohibits discrimination, harassment, or retaliation against our customers as outlined in the policies on antidiscrimination and the prevention of harassment, which are distributed to all MBTA employees.

Toward this end, it is the objective of the MBTA to:

1. Ensure that the level and quality of transportation service is provided without regard to race, color, national origin, and other protected characteristics
2. Identify and address issues of environmental justice based on income status
3. Promote the full and fair participation of all affected populations in transportation decision making
4. Prevent the denial, reduction, or delay in benefits related to programs and activities that benefit minority populations or low-income populations
5. Ensure meaningful access to programs and activities by persons with limited English proficiency, disability, and veteran status.

The General Manager, as Chief Executive Officer of the Authority, has overall responsibility for carrying out the MBTA's commitment to the Title VI program. The Office of Diversity and Civil Rights (ODCR) has been delegated the responsibility of coordinating program procedures, overseeing implementation, and monitoring and reporting on the progress attained. The Title VI program is an Authority-wide initiative, and all managers, supervisors, and employees share the responsibility of identifying and reporting civil rights violators. Appropriate training is provided to customer support representatives, supervisors, superintendents, and other employees. Area superintendents and supervisors (or their designees) are responsible for receiving and investigating complaints, which come through various intake venues, including the Customer Support Services (CSS) department.

The MBTA has developed a complaint procedure related to Title VI and other civil rights customer complaints. However, it does not deny the complainant the right to file formal complaints with the

Massachusetts Commission Against Discrimination (MCAD) or the Federal Transit Administration (FTA), or to seek private counsel for complaints alleging discrimination, intimidation, or retaliation, of any kind that is prohibited by law.

Procedure

The following is a summary of the internal procedures that the MBTA uses for investigation and resolution of Title VI and other civil rights customer complaints. These procedures are employed for all complaints received by the departments that are responsible for complaint intake, investigation, and processing.

1. Any person or groups of persons who believe that they have been aggrieved by unlawful harassment, retaliation, or other discriminatory practice under Title VI or other statutes or have been excluded from participation in, denied the benefits of, or subjected to harassment, retaliation, or other forms of discrimination based on race, color, or national origin, under the program of transit service delivery or related benefits, may file a complaint with the MBTA. Complaints may be filed by contacting Customer Support Services, writing to "Write to the Top," or reporting to the officer on duty.

Allegations received do not have to use the key words "complaint," "civil rights," or "discrimination," or their near equivalents. It is sufficient if such allegations imply any form of harassment, retaliation, or unequal treatment in one or more of the Authority's programs or services to be considered and processed as an allegation of a discriminatory practice.

2. All complaints, written or verbal, shall be accepted. In the event a complainant sets forth allegations verbally and refuses to reduce such allegations to writing, the person to whom the complaint is made shall reduce the complaint to writing. Complaints should include the following information:
 - Name, address, and telephone number of the complainant, if provided.
 - Basis of the complaint: race, color, national origin, sex, age, or disability.
 - Date on which the alleged discriminatory event occurred.
 - Nature of the incident that led the complainant to believe that discrimination was a factor.
 - Location, date, time, and other identifying information, including the transit mode (if the incident occurred on the bus, rapid transit, commuter train, or boat; employee badge number; and number of vehicle, if known).
 - Names, addresses, and telephone numbers of persons (witnesses) who may have knowledge of the event.
 - Other agencies or courts where complaint may also be filed and a contact name for each.

All civil rights complaints received by any department should be forwarded to CSS and copied to ODCR; disability complaints should also be sent to the Department of System-Wide Accessibility (SWA). Complaints will then be transmitted to the appropriate area superintendent or supervisor to be jointly investigated.

3. The superintendent or supervisor for the area (or the designee) shall investigate regular civil rights complaints and assist ODCR or SWA in investigations of more serious and egregious complaints. Investigations may include identifying and interviewing persons with knowledge of the Title VI violation (e.g., the person making the complaint, witnesses, or anyone identified by the complainant) or anyone with relevant information. The person who has been accused of discriminating or committing a prohibited act will be notified and will be permitted to respond to the allegation. If necessary, additional information may be requested from the complainant and witnesses.
4. If warranted, meetings may also be held with the complainant to resolve the complaint. The investigator may request guidance from ODCR or from the Legal department, as deemed necessary.

5. Upon completion of the interviews and investigation, the investigator will develop a final report based on the facts and submit it to CSS. The report will contain the investigation team's findings and conclusions concerning the complaint and recommendations for corrective action and discipline, if necessary. If a civil rights violation is found to exist, appropriate action will be taken, monitored, and reported. Any actions taken as a result of the investigation team's findings and conclusions are the responsibility of the concerned department and other officials involved. If no violation is found and the complainant is not satisfied, complaints may be filed with MCAD or FTA's Office of Civil Rights.
 6. The complainant will receive a letter from the MBTA (CSS, the General Manager's Office, or the department involved) that details the findings, conclusion, and any corrective action taken.
 7. CSS will maintain a log of complaints, including those pertaining to Title VI, accessibility, and other customer complaints of discrimination, harassment, or retaliation; the date the complaint was filed; a summary of the allegation(s); the status of the complaint; and the actions taken in response to the complaint.
 8. Should the MBTA receive a Title VI complaint in the form of a formal charge or lawsuit, the Office of the General Counsel will be responsible for the investigation and for maintaining the log as described herein.
- ODCR, in collaboration with CSS, will be responsible for providing reports and analyses of civil rights customer complaints.

Title VI Investigations, Complaints, and Lawsuits [FTA C4702.1A, IV. 3.]

Table 2-1 lists all Title VI investigations, complaints, and lawsuits filed with the agency since the MBTA's 2005 submittal to FTA.

Table 2-1: MBTA Title VI Complaints, Lawsuits, and Investigations

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
1	MCAD	8/3/2005	Complainant alleged that he was being harassed for behavior that was accepted from other customers who were of a different color.	Lack of Probable Cause Finding.
2	MCAD	12/20/2005	Complainant alleged that he was asked to pay additional fare despite having TAP card. Claimed discrimination based on race and disability.	Lack of Probable Cause Finding.
3	MCAD	2/16/2006	Complainant alleged that operator directed her to move to the back of the bus in a manner that was racially and gender bias.	Voluntary Settlement.
4	MCAD	4/24/2006	Complainant claims that the validity of his transfer was questioned because of his race.	Lack of Probable Cause Finding.
5	MCAD	11/8/2006	Complainant alleged that he received different treatment based on his race after an assault on a Green Line train.	Lack of Probable Cause Finding.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
6	MCAD	4/24/2006	Complainant alleged treatment based on race when directed to fold up a fully-expanded double-wide baby carriage on a bus.	Lack of Probable Cause Finding.
7	MCAD	9/13/2007	While on the bus, two passengers referred to complainant using racial language; Complainant called the Chelsea Police.	Pending.
8	MBTA	6/5/2008	Customer accused the CSA of being verbally abusive and giving preferential treatment to Brazilians and blacks.	Closed. Information from complainant inadequate.
9	MBTA	2/28/2007	An African-American customer alleges that employee referred to him as "your kind" in a racially sensitive manner and an altercation ensued.	Open.
10	MBTA	6/11/2008	Customer reported that his 16-year-old sister was trying to board bus route 108 with other African-American students near Malden High School when the white male driver made a racial slur, shut the doors, and left.	Open.
11	MBTA	6/4/2008	Customer states that bus operator grabbed her and made verbally abusive comments.	Closed. Operators directed to attend anti-harassment training.
12	MBTA	6/19/2008	Customer accused bus operator of making racially insensitive statements about school-aged passengers.	No finding.
13	MBTA	5/2/2008	Customer accused operator of treating him unfairly due to his race.	Open.
14	MBTA	6/16/2008	Customer's bus was rerouted because of shooting in the Ashmont area. During conversation with a bus inspector, a bus driver interjected "Tell them to stop the shootings." Customer took comment as a racial insult.	Closed. Employee re-instructed on non-discrimination policy.
15	MBTA	4/25/2008	Customer called to support driver's action when the driver asked two African-American females to let other passengers ahead of them to upload money to their cards. The two women took his action as discriminatory and had unpleasant words with the driver.	Closed. No finding against Operator.
16	MBTA	5/4/2008	Customers with LEP complained that bus operator ignored their request for help based on their national origin.	Closed. Information given by complainant inadequate.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
17	MBTA	2/5/2008	Customer with LEP alleges that bus operator repeatedly refused to stop and, as a consequence, has been late for work.	Open.
18	MBTA	3/11/2008	Customer with a TAP ID card was asked to produced additional ID allegedly based on her race.	Closed. Apology made to customer. Operator re-instructed and sent to training.
19	MBTA	2/27/2008	Customer complained that she was made to fold up her baby carriage when she has never been asked to do so before. She believes she is being discriminated against because she is Hispanic.	Open.
20	MBTA	5/10/2007	Customer complained that his wife was trying to add money to her CharlieCard and the driver did not let her do it because of her race.	No finding.
21	MBTA	1/23/2008	Customer alleged that he offered to pay for two young female customers and that as a result he was harassed and threatened because the customers were African American.	Open. Matter referred to MBTA Police.
22	MBTA	10/4/2007	Customer claimed that bus operator was making racial slurs to customer.	Closed. Operator requested to attend diversity training.
23	MBTA	10/24/2007	Customer claims that her mother who is elderly, does not speak English, and was and wearing her Islamic headwrap, was forced off the bus, physically assaulted, and verbally abused by the bus operator.	Open. Referred to the Legal Department and MBTA police.
24	MBTA	11/7/2007	Customer with LEP requested assistance and was refused. Bus operator allegedly stated "Don't you speak English? You are in America. You should be speaking English."	Closed. Operator re-instructed on Rule No. 4 - Courtesy.
25	MBTA	12/17/2007	Customer observed altercation and overheard the bus operator saying "shut up and get off the bus and go back to Brazil." Allegedly, after this customer got off the bus, the driver told another passenger "They come here and think they have all the answers" also "welcome to the welfare line."	Open.
26	MBTA	9/27/2007	Bus operator allegedly made racial slurs to customer.	Closed. No finding.
27	MBTA	10/1/2007	Driver asked the customer to move to the back of the bus. The customer refused and the driver allegedly made a comment about the customer's ethnic group	Closed. Customer was called and matter resolved.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
28	MBTA	10/18/2007	Bus operator refused to stop after the customer pushed request stop button. Argument ensued and operator referenced the size of customer's daughter.	Closed.
29	MBTA	10/12/2007	Bus operator hurled racial epithet at Chinese customer and remarked "Why can't Chinese ever learn to read?"	Closed. Operator sent to be retrained.
30	MBTA	10/23/2007	Customer already on board claimed the bus operator activated "out of service" sign because he was uncomfortable that the customer was the only person on the bus.	Closed.
31	MBTA	11/5/2007	Customer claimed that his Hispanic wife was humiliated by employee because she did not know how to use the AFC machine.	Closed.
32	MBTA	11/13/2007	Employee ignored customer's request for help with CharlieCard and made a racial slur.	Open. Matter referred to Red Line for further investigation.
33	MBTA	11/20/2007	Bus operator allegedly made fun of Chinese customer who was unfamiliar with bus route.	Closed. Bus operator re-instructed and sent to diversity training.
34	MBTA	11/27/2007	Customer claimed that bus operator is racist as he constantly yells at customers of another race.	Closed. Operator re-instructed on Rule No. 4 and directed to attend class.
35	MBTA	12/6/2007	Customer claimed that bus operator refused to stop because she was Hispanic.	Closed.
36	MBTA	12/20/2007	Customer claimed that bus operator refused to stop at designated area because customer was Hispanic.	Closed.
37	MBTA	12/31/2007	Customer claimed that bus operator refused to stop because there were numerous black customers in the designated area.	Closed. Re-instructed on Rule 700 - Notification to Customers.
38	MBTA	3/19/2008	White customer claimed that African American bus operator refused to pick him up but picked up African American customers.	Closed. Operator re-instructed and directed to attend diversity training.
39	MBTA	2/13/2008	Customer claimed that a white male bus operator was disrespectful to black customers but was polite to white customers.	Closed.
40	MBTA	1/31/2008	Customer claimed that white bus operator gave preferential treatment to white customers by opening the door where there was a concentration of white customers, thus allowing them the opportunity to board first and get seats.	Closed.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
41	MBTA	1/2/2008	Customer claimed that bus operator was disrespectful to Hispanic customers on the route from Union Street to Haymarket Station.	Closed. Operator retired.
42	MBTA	2/28/2008	Customer claimed that African-American bus operator gave preferential treatment to African American customers by allowing them to ride without paying appropriate fare.	Closed. Operator re-instructed on anti-discrimination policy and directed to attend classes.
43	MBTA	1/10/2008	A disabled African-American customer complained that the driver refused to let him board, with the excuse that the bus was local.	Closed. Apology made to customer. Operator warned and sent for re-training.
44	MBTA	3/5/2008	Customer claimed that bus operator uttered racial slurs at African American customer and African American children at bus stop.	Closed. Operator given written warning.
45	MBTA	1/15/2008	An African-American customer experienced difficulty with LINK pass and the bus operator stated "You people are always trying to get over . . ."	Closed. Operator re-instructed and directed to attend public relations class.
46	MBTA	1/2/2008	Customer claimed that the conductor and a passenger were verbally abusive and gave him a hand gesture.	Closed.
47	MBTA	1/8/2008	Customer accused Spanish-speaking employee of being prejudice and that the employee refused to help customer with card.	Closed. Insufficient information to pursue investigations.
48	MBTA	2/4/2008	Customer with a problem felt treated differently by employee who was courteous to a customer of another race.	Closed.
49	MBTA	4/4/2008	Customer claimed operator on Green Line took her student pass and refused her entry because she was Asian.	Closed. Warning given to employee.
50	MBTA	5/27/2008	Customer claimed that Puerto Rican employee treated her badly because she was another race.	Closed. Information inadequate to ID employee.
51	MBTA	5/23/2008	Customer witnessed the white conductor ridiculing a black woman passenger when the conductor misunderstood her destination and fare requirement.	Closed. No finding but appeared insensitive.
52	MBTA	6/23/2008	Customer witnessed the white male driver bypassed a black student looking to board the bus and then stopping at the next stop for a white woman.	Closed. Apology made to customer. Operator re-instructed and sent to training.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
53	MBTA	5/31/2008	Customer was upset that an Asian driver would not allow him to ride on the bus because he didn't have his TAP card. The customer thought the driver was trying to play the race card because of his perception of black males.	Warning given to operator.
54	MBTA	4/10/2008	Customer and her 3-year-old son were verbally attacked by another passenger on bus and the driver did nothing.	Closed. Operator denied hearing argument between customers. No evidence.
55	MBTA	4/3/2008	Customer claimed that Bus operator bypassed bus stop and implied he liked driving in South Boston because of the racial make up.	Closed. Operator was discharged after finding.
56	MBTA	4/4/2008	Customer claimed that driver made a statement about African Americans because an African American customer sought to ride free as a result of difficulty with CharlieCard.	Closed. Apology made to customer. Operator sent to training.
57	MBTA	4/8/2008	Customer felt badly treated by white female bus operator for no known reason but his race.	Closed. Apology made to customer. Changed bus stop.
58	MBTA	5/10/2007	Caller's wife wanted to put money on her CharlieCard and driver would not let her and she ended up paying cash.	Open.
59	MBTA	4/25/2007	Customer, an Asian male, observed driver not charging a black woman and child. Stated that driver is always talking negatively about Chinese people with this woman.	Open.
60	MBTA	4/3/2007	Hispanic customer stated that the African-American conductor of the E Line trolley saw her walking fast to get on and closed the door.	Open.
61	MBTA	4/13/2007	Customer was trying to add value to the CharlieCard and the driver grabbed the card with an attitude. He treated the customer as if she was stupid. Customer told driver English was her 2nd language.	Apology made to customer.
62	MBTA	6/6/2007	Customer claimed that she was targeted and that she was searched by MBTA police because she is black.	Open. Matter referred to the MBTA police.
63	MBTA	4/27/2007	Customer stated that the bus driver refused to let her off at her stop and called her ignorant because of her race.	Open.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
64	MBTA	4/30/2007	Customer accused bus operator of referring to her as "you people . . ."	Closed.
65	MBTA	5/24/2007	Customer states that the driver of bus was very rude to several African-American passengers.	Closed.
66	MBTA	6/4/2007	Customer observed driver of bus insulting a customer trying to use her CharlieCard by calling her names because she was African American.	Open.
67	MBTA	6/2/2007	Customer complained that her 10-year-old son was denied riding for free because he is black.	Open. Forwarded to Green Line for more investigation.
68	MBTA	4/25/2007	Customer claimed that bus operator directed him to go to the back of the bus in a racially insensitive manner.	Closed.
69	MBTA	6/2/2007	The customer, a 7-months-pregnant Muslim woman, and her two children were on the bus going from Kenmore Station to Boston College. She claimed the driver verbally abused her.	Open.
70	MBTA	6/4/2007	Customer a black Hispanic female claimed that while bus operator allowed white passengers on the bus but not blacks at a non-stop area.	Closed. Apology made to customer.
71	MBTA	6/7/2007	African-American customer observed white bus operator picking up white passengers at a non-T stop but refused to do the same for black passengers.	Closed. Apology to customer. Operator re-instructed.
72	MBTA	6/14/2007	Customer reported that she observed bus operator making racially insensitive remarks about black kids.	Closed. Insufficient information to investigate.
73	MBTA	6/26/2007	A black customer claimed that bus operator allowed white, but not black, kids to eat on the bus.	Closed.
74	MBTA	5/4/2007	Customer claimed that that he was not allowed to board the bus because his LINK pass did not work.	Open.
75	MBTA	5/8/2007	Customer complained of bus operator's attitude toward passengers.	Open.
76	MBTA	5/9/2007	Customer claimed that bus operator treated Hispanic customers with LEP in an offensive manner.	Open.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
77	MBTA	5/14/2007	Customer with TAP pass claimed that bus operator made racially insensitive remarks to her.	Open. Matter under investigation.
78	MBTA	5/19/2007	African-American customer claimed that Jamaican driver harassed him about his slow use of his CharlieCard but did not do the same to white customer after him.	Closed.
79	MBTA	4/18/2007	Customer claimed that driver saw him and did not open the door because he is Hispanic.	Closed.
80	MBTA	4/19/2007	Customer claimed that driver disrespected him because the customer asked him the time.	Closed. Not enough information to identify operator.
81	MBTA	4/25/2007	Customer complained that a CSA would not assist her with the CharlieCard process, but when a white woman walked up to him, he assisted her with every detail.	Open.
82	MBTA	5/26/2007	Customer with a CharlieCard claimed that the farebox on the bus was not working, and the white driver told her she had to pay \$1.50 while he let others on the bus for free.	Closed.
83	MBTA	6/2/2007	Customer and her friends stopped to let bus pass, and the operator started yelling at them and made an offensive hand gesture as they passed.	Closed.
84	MBTA	6/2/2007	Customer got on bus and the farebox was not working, but the driver would not assist him. The driver was rude and told him to get off the bus. The customer stated he was very racist by the things he was saying.	Closed.
85	MBTA	5/2/2007	Customer claimed the conductor told him he could not ride with his pass, made him get off at Kendall Green, and threatened to call the police. Customer said that the conductor never checks white customers' passes, and that he is always harassed by this conductor.	Open. Apology made to operator.
86	MBTA	5/15/2007	Customer was at South Station with a white lady friend when he was approached by an inspector who told him he received a complaint about soliciting in the station. He believes he was approached because he was black and was with a white female.	Open.

(continued)

Table 2-1 (continued)

#	Forum	Date Filed	Summary of Allegations	Status/Action Taken
87	MBTA	5/19/2007	Customer stated that her mother takes the bus at 6 AM and that she is consistently being bypassed by the white male driver.	Matter inconclusive.
88	MBTA	4/17/2007	Customer was at Ruggles Station and asked for CSA assistance with the Charlie Card. CSA, White female, called him "stupid."	Pending. Awaiting results of investigation.
89	MBTA	5/5/2007	Customer who was unaware of how the new fare system worked asked the driver for assistance. The driver refused and directed her to sit down. The driver abruptly pulled out almost causing injury to customer and her children, one of whom was in a stroller. Customer believes driver's action and comments were because of her race.	Closed.
90	MBTA	5/27/2007	White customer boarded the bus without her CharlieCard but had two CharlieTickets. She asked the driver if she could use her tickets to pay. They ended up in a shouting match over the fare and the customer got off the bus.	Apology made to customer.
91	MBTA	5/22/2007	Customer riding the commuter rail was told by the conductor "why don't you people stay in the city where you belong."	Closed.
92	MBTA	5/1/2007	A Hispanic customer has ongoing problems getting assistance adding value to CharlieCard	Closed.
93	MBTA	5/25/2007	An Armenian customer boarded a bus and tapped her fare card. The driver told her not to tap her card, called police, and claimed that she was being disruptive.	Open.
94	MBTA	6/25/2007	Customers reported that they observed the driver treating customers with LEP in an offensive manner.	Open.

Plan for Providing Access to Meaningful Activities and Programs for Persons with Limited English Proficiency (FTA C4702.1A, IV. 4.)

It is the policy of the MBTA to ensure that persons with limited English proficiency (LEP) are not discriminated against or denied meaningful access to and participation in the programs and services provided by the Authority. To carry out this policy, the MBTA has developed and implemented a strategic plan for the Authority that reflects the overall goal of improving language access for our customers who are limited in their English proficiency.

The strategic plan contained in the LEP Policy and Procedure manual provides a road map for addressing our goals while leaving room for growth and evolution as the Authority learns more about the needs of its customers. The vision is to fully implement the strategic plan over several years at all levels of the Authority. Attaining full implementation of the plan requires resources, and thus the pace and scope of implementation will be influenced by the increasing volumes of customers with LEP, the nature of the service, and the Authority's budgetary constraints.

The LEP Policy and Procedure shall apply to all of the Authority's programs, services, and facilities, regardless of whether or not they receive federal financial support. It is the intent of the MBTA, in providing language services to LEP persons, to achieve a balance that ensures meaningful access to programs and services while not incurring undue burdens on the Authority's resources.

The MBTA has designated ODCR as the department responsible for providing oversight and coordinating the implementation of the LEP Policy and Procedure. ODCR shall also direct the ongoing monitoring and periodic assessment of the effectiveness of the LEP Policy and Procedure. Revisions to the policy and procedures will be made periodically, as deemed necessary, to improve implementation. Reviews of the program will include the following factors:

- Changes in the demographic composition of the service area
- Substantial changes in the nature and type of services provided
- Variance in the frequency of encounters with LEP customers
- Availability of new technology and other new resources
- Assessment of whether language services meet the needs of the customers
- Feedback from LEP groups and the community at large

To improve the effectiveness of the program, the Authority will revise and update the policy and procedures, if necessary, based upon the findings and feedback compiled from the reviews.

Figure 2-1 shows the distribution of LEP populations using the top five languages other than English that are spoken in the MBTA service area: Spanish, Chinese, Portuguese/Portuguese Creole, Italian, and French (including Patois, Cajun).

Notification to Beneficiaries of Protection Under Title VI IFTA C4702.1A, IV. 5.1

The following text is quoted from the brochure designed to notify MBTA customers of their rights and protections under Title VI. This brochure, which has been translated from English into the five other primary languages spoken in the MBTA service area, is currently in production, and will be distributed imminently.

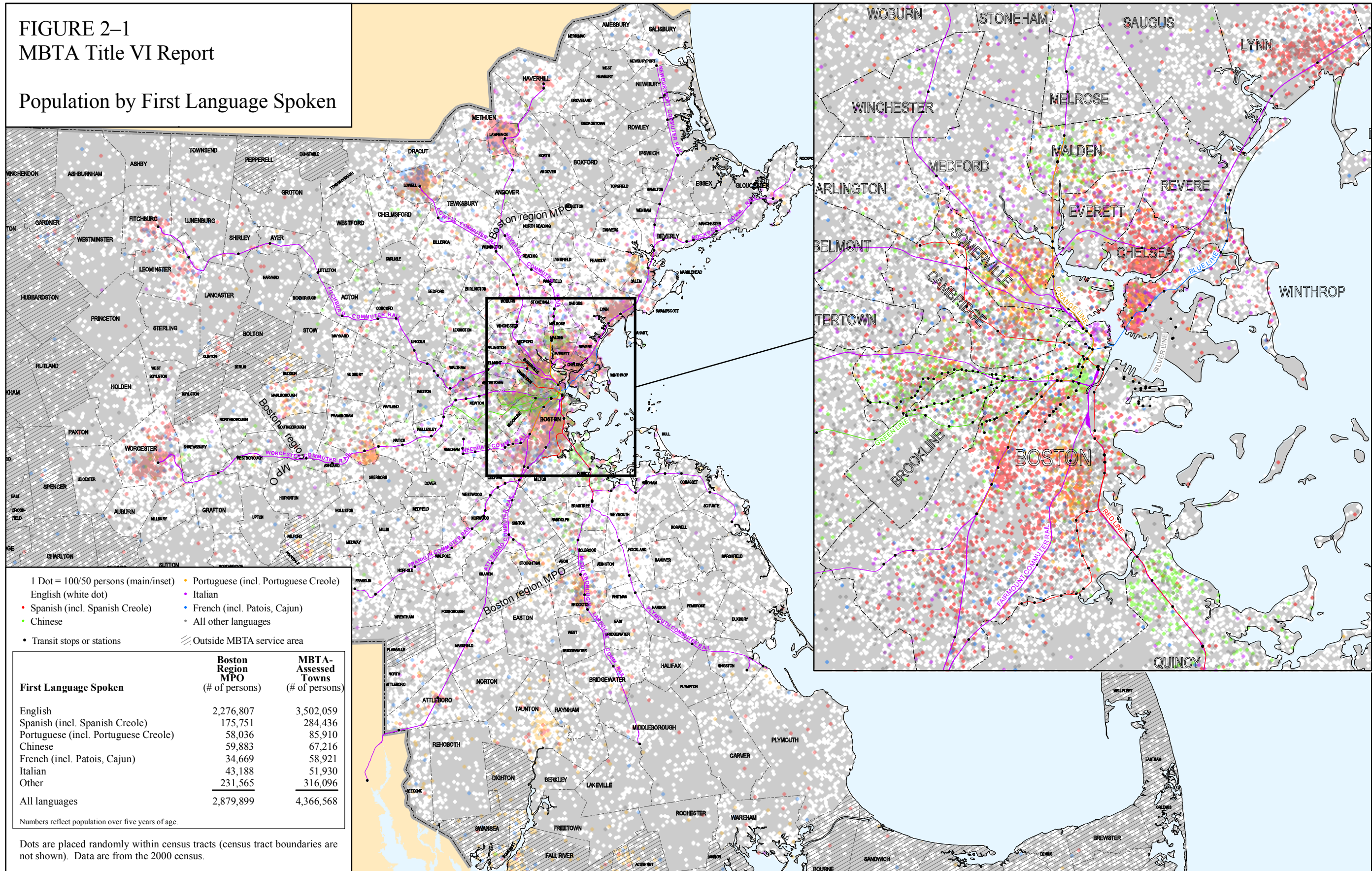
INFORMATION ON TITLE VI

Protecting Your Rights

What is Title VI?

Title VI of the Civil Rights Act of 1964 is a Federal statute that provides that no person shall be discriminated against or denied benefits on the ground of race, color, or national origin, in programs and services that receive federal financial assistance. As such, to ensure that MBTA customers are not discriminated against, we have adopted policies that promote equal access and quality service to all our customers.

FIGURE 2-1
MBTA Title VI Report
Population by First Language Spoken



What Does Title VI Mean To You?

Public transit agencies, such as the MBTA, are required to provide services in a fair and equitable manner to all passengers without regard to their race, color or national origin. Title VI also requires the MBTA to reduce language barriers that may impede access to important services by customers who may not be proficient in English.

In addition to the Title VI requirements there are other laws providing similar protection on account of a person's gender, religion, age, disability, sexual orientation, or other protected status.

The MBTA also has a zero-tolerance policy prohibiting any form of unlawful discrimination.

What Services Are Available To Customers Who Are Not Proficient In English?

Under Title VI, customers who are not proficient in English are entitled to assistance in accessing critical MBTA information. If deemed essential or upon request, we can translate materials in several languages, including Spanish, Chinese, Haitian Creole, Italian and Cape Verdean Creole.

Additionally:

- Our automated fare system provides audio and visual instruction in English, Spanish and Chinese;
- Our customer service agents and hub monitors are able to provide guidance to customers who are not proficient in English; and
- If deemed necessary or upon request translation services may be provided.

What Should You Do If You Have A Complaint?

All comments and suggestions for improvement in our service are welcome and will be considered.

You can:

- Submit your comments, suggestions or complaint via email to www.mbta.com; or
- Send a letter to MBTA's Customer Support Services Department, Ten Park Plaza, Boston, MA 02116; or
- Call MBTA's Customer Support Services Group at (617) 222-3200.
- For more information or for an alternate format of this document please call (617) 222-3200, TTY (617) 222-5416 or visit www.mbta.com.

When submitting complaints, please include your contact information as well as details of the incident including what occurred, where and when, and the names, addresses, phone numbers and e-mail addresses of witnesses.

We Welcome Your Feedback!

The MBTA is committed to providing safe, efficient and quality transportation services to all the communities that we serve. If you have comments or suggestions on how we can improve on our commitment to non-discrimination in our services or how we can better serve the needs of our customers who are not proficient in English, we would like to hear from you.

Analysis of Construction Projects IFTA C4702.1A, IV. 8.J

The new Title VI circular provides guidance on how recipients of federal funds should conduct environmental-justice reviews of construction projects through the National Environmental Policy Act (NEPA) process. Although the new guidance does not require that the MBTA report on this topic in this document, the Authority has chosen to include the following summary of the status of current construction projects that receive federal funding.

The MBTA includes, in its planning reviews of capital construction projects, an environmental-justice analysis identifying anticipated impacts on minority and low-income communities and defines proposed mitigation, if warranted. Table 2-2 lists the status and NEPA record of MBTA capital construction projects currently programmed in the Boston region's Transportation Improvement Program (TIP) by the Boston Region MPO. Backup documentation for NEPA reviews is maintained by the MBTA Environmental department.

Table 2-2: MBTA Capital Construction Projects in the TIP

Project Category	Project Status (as of July 2008)	NEPA Review/ Documentation Date	Impacts to Minority and Low-Income Areas
Section 5309 Rail Modernization			
Bridge Program			
Merrimack River Bridge	Preliminary design	Unsure what documentation will be required until design is developed and reviewed	
Concord Main Street	Design	Categorical Exclusion (CE) submitted to FTA 6/26/2008	Reviewed per FTA guidance, no impacts identified
Hyde Street-Green Line	In construction	CE approved 5/22/2003	Reviewed per FTA guidance, no impacts identified
Langley-Green Line	Design	CE approved 1/10/2008	Reviewed per FTA guidance, no impacts identified
Green Line ADA			
Government Center	In design	Environmental Assessment (EA) approved in 2004. Need overview of revised project to determine what additional environmental review will be required.	
Copley	In construction	Finding of no significant impact (FONSI) received on EA 12/30/2004	Reviewed per FTA guidance, no impacts identified
Arlington	In construction	FONSI received an EA 5/14/2004	Reviewed per FTA guidance, no impacts identified

(continued)

Table 2-2 (continued)

Project Category	Project Status (as of July 2008)	NEPA Review/ Documentation Date	Impacts to Minority and Low-Income Areas
Signal/Infrastructure			
Columbia Junction Haverhill Line Signal (Lawrence)	Phase 1 installation Installation	No documented CE required	
Lechmere Signaling	Preliminary design		
Section 5309 New Starts			
Silver Line Phase III	Preliminary engineering	Final Environmental Impact Report release pending FTA approval; anticipated in. Fall 2008	Reviewed per FTA guidance
Misc. FTA Funding			
Beverly Intermodal Facility	Project development	CE to be submitted at preliminary design	
Salem Intermodal Facility	Project development	CE to be submitted at preliminary design	
Wonderland Station	Project development	CE approved for busway on 9/7/2007	Reviewed per FTA guidance; no impacts identified
Harbor Park Pavilion	Project development	CE to be submitted at completion of project development	
Auburndale Station	Preliminary design	CE to be submitted at preliminary design	
Rockport Improvement	Project development	CE to be submitted at preliminary design	
Medford Downtown Parking	Project development	CE to be submitted at preliminary design	
Woburn Square Parking	Project development	CE to be submitted at preliminary design	
Section 5307 Formula *			
Elevator Replacement/ Rehabilitation	Design	No documented CE required	
Ashmont Station	Construction	CE approved 8/24/04	Reviewed per FTA guidance, no impacts identified
Everett Maintenance Facility	Construction	CE approved 2/28/2008	Reviewed per FTA guidance, no impacts identified
Arborway Maintenance Facility	Design	To be reviewed as design program advances	

(continued)

Table 2-2 (continued)

Project Category	Project Status (as of July 2008)	NEPA Review/ Documentation Date	Impacts to Minority and Low-Income Areas
High- Priority Projects			
Kenmore Square	Construction	106 Review Determination 12/3/03; CE approved 6/3/03	Reviewed per FTA guidance, no impacts identified
City of Revere Improvements	Project Development		

Public Outreach and Involvement Activities [FTA C4702.1A, IV. 9.]

Activities that Require Extensive Public Involvement

The MBTA makes a concerted effort to involve customers and the general public in its project planning, service evaluation, and policy development initiatives. Primary planning processes at the MBTA that include extensive civic engagement are:

- **Program for Mass Transportation (PMT):** the long-range master plan for capital improvements. The PMT defines the Authority’s vision and investment priorities for Boston area transit. The MBTA is required, under its enabling legislation, to prepare the PMT every five years. The MBTA is working to release the latest PMT update in 2008.
- **Capital Investment Program (CIP):** the Authority’s five-year capital spending plan, which is prepared annually. The CIP implements the system priorities outlined in the PMT.
- **Service Plan:** the plan through which the MBTA evaluates the performance of existing bus and rapid transit services and assesses the effectiveness of proposed service changes. The Service Plan is updated every two years.
- **Fare Changes:** In 2006–07, the MBTA introduced new fare media that replaced tokens with CharlieCards, which use smart-card technology, and Charlie Tickets. At the same time, the Authority implemented a new fare structure that took advantage of the new fare-collection capabilities and simplified the fare system. Also at that time, the Authority raised fares to meet pressing financial needs. Integral to the fare restructuring were the development and adoption of a new fare policy and a comprehensive process for public review of fare changes.
- **Boston Region Metropolitan Planning Organization (MPO) certification activities:** The MBTA, as an agency, is a voting member of the MPO and actively participates in MPO public-outreach activities and in the development of federally required planning and policy certification documents: the Regional Transportation Plan, the Transportation Improvement Program, and the Unified Planning Work Program.

The MBTA Rider Oversight Committee (MBTA ROC)

The MBTA established the Rider Oversight Committee in 2004 to meet monthly and discuss customer-service improvements and service-quality issues. Through the ROC, the MBTA has institutionalized ongoing public participation in all aspects of the Authority’s operations.

The MBTA Rider Oversight Committee's mission statement is:

The MBTA ROC, a diverse group of riders, advocates and MBTA employees, provides recommendations to the MBTA that communicate the needs and concerns of all riders in order to assist the MBTA in providing affordable, safe and quality service.

The MBTA and members of the ROC come together to address the concerns of public-transit customers. The 24-member committee addresses various transit-related issues, including but not limited to the MBTA's Fare Policy, fare structure, fare equity issues, service improvements, service-quality standards, ridership data collection, and alternative funding sources for both the capital program and the operating budget. In addition to monthly meetings, the committee meets quarterly with the MBTA's General Manager and Deputy General Manager/Chief Financial Officer, and the Secretary of Transportation, who also serves as Chairman of the MBTA board of Directors, who also serves as Chairman of the MBTA Board of Directors.

Dissemination of Information Regarding Service Changes

Any change in MBTA service—whether it is a delay caused by bad weather, a modification in scheduling, or an increase in service levels to handle a special event—is of importance to the hundreds of thousands of people who depend on the MBTA to get to work, school, medical appointments, and countless other destinations. Thus an aggressive program is in place, targeted to the area's minority and low-income populations, to inform passengers of these changes. In all of its communications with the public, the MBTA takes steps to ensure that important notices comply with the LEP (limited-English-proficiency) policy.

The Authority makes service changes of varying magnitude for a variety of reasons, including: (1) emergency situations, (2) construction activity, (3) periodic service-plan reviews, and (4) regular quarterly schedule updates. The magnitude of and reasons for the changes determine which of the following methods are used to inform the public of these changes.

Television and Radio

The MBTA uses television and radio on a 24-hours-a-day basis to inform the public of emerging conditions or events that might impact the Authority's provision of service. The MBTA also provides routine service reports twice a day for television and radio stations; during the morning and evening peak periods. A staff member from the SmartRoutes travel-information service is present in the MBTA Operations Control Center (OCC) during peak periods to ensure rapid dissemination of service advisories to the public via SmartRoute information outlets that include telephone, television, Internet, and pager options.

Newspaper

Pertinent and timely service information is distributed via press releases to citywide and community-oriented newspapers, including newspapers geared to minority communities. Press releases of interest to a specific area are targeted to newspapers in that area. Press releases of more general interest are broadcast by fax to area newspapers that reach a broad range of ethnic and racial groups with varying income levels.

Internet

The MBTA website (www.mbta.com), which was revamped in 2006, has been recognized within the transit industry for its design and content, which focus on ease of use for transit customers. Features include an interactive-scheduling Trip Planner, MBTA service maps, and multilingual translations. In 2007, the MBTA introduced MBTA alerts that offer customized service updates to

customers via e-mail, mobile phones, and personal-digital-assistant (PDA) devices. Customers can sign up for “MyMBTA,” which allows them to store their selected schedules and maps, save addresses and trip plans, and customize their service updates. “Mobile MBTA.com” provides Web-enabled mobile phones with easy-to-read, specially formatted views of www.mbta.com.

The MBTA website is used to disseminate information regarding ongoing MBTA projects, project proposals, and transit services, including dates and times of public meetings, hearings, and project procurements; schedules, route maps, and schedule changes; and service and escalator/elevator advisories and alerts. The website is also used as a means of soliciting input from interested parties regarding MBTA plans, projects, and services. In addition, the website offers customers an avenue for registering complaints and commendations about MBTA services.

Press releases are posted automatically on the MBTA website and are sent to the Usenet Newsgroup ne.transportation (an Internet-based forum for those interested in transportation topics in New England).

E-mail and Text Messaging

Customers can sign up for “T-Alerts” to receive instant notification by e-mail, mobile phone, pager, or PDA of delays of 15 minutes or more on their designated service. Customers can also provide input to the MBTA by sending an e-mail to feedback@mbta.com.

Public Meetings and Workshops

Public meetings and workshops are hosted by the MBTA to share information and to solicit input from the public in an informal setting. These meetings are publicized through press releases, mailings, and/or the distribution of informational flyers. Notices of public meetings are also posted on the MBTA website. Informational materials are disseminated at these meetings.

In the case of construction projects, public-review meetings of planning and design projects are held at the conceptual, 30% design review, 60% design review, and final design phases. Notices are mailed to community groups for public hearings and meetings regarding planned construction projects. Notices of public hearings related to service changes are also available on the MBTA website.

In addition, the monthly meetings of the MBTA Board of Directors always include a time for public comments. This time provides an open forum for individuals to present their concerns regarding transit operations and policies directly to the General Manager and Directors.

Public Hearings

Public hearings are held to solicit formal comments from the public regarding planned construction projects and the impacts of proposed service changes. Advance notice of public hearings is published in urban newspapers with a general circulation, as well as newspapers published for specific local communities or neighborhoods. In addition, one week before a hearing, informational flyers are distributed or signs are posted, as appropriate.

Community Group Meetings

Upon request, MBTA personnel attend regularly scheduled or special civic and community-organization meetings to address construction or service changes that are of interest to the group. The MBTA staff attempts to maintain close working relationships with communities to ensure that relevant service- and construction-related issues and concerns are addressed or resolved. MBTA personnel often serve on community task forces, through which they also disseminate information to the public.

Billboards, Paid Advertisements, and Variable Message Signs

Where it is appropriate, the MBTA uses billboards, paid advertisements, and variable message signs to publicize construction and service disruptions.

Posters and Flyers

The Authority displays posters on vehicles, in stations, and at high-volume bus shelters detailing any service changes that would impact customers. The Authority also distributes flyers to individual passengers, area homes, businesses, and/or community organizations, where appropriate, by the most effective means.

Schedule Cards

The MBTA produces and distributes 2.5 million schedule cards every quarter (10 million annually) to ensure that the public has access to route and schedule information for the bus routes operated by the MBTA. The MBTA publishes new timetables four times per year. To assist the public, if a route or schedule has changed since the publication of the previous schedule, the front panel of the schedule card notes the type of change. Major bus terminals have a display case where schedule card information can be easily referenced. Also at these terminals are racks where passengers may obtain schedule cards. Signs at schedule racks inform passengers about routes that have had some type of change since the last schedule was published.

Customer Care Center

In 2006–07, the MBTA enhanced its customer responsiveness by creating the centralized Customer Support Services Department. All service-related inquiries, commendations, and complaints are received and monitored through the Customer Care Center. The tracking of customer interactions is accomplished via a state-of-the-art customer service management system. Translation services are available. Reporting and management of call flow are done through the newly installed Automated Call Distributor.

Outreach for Biennial Service Plan

For the 2006 Service Plan, initial outreach began in April 2005. In May 2005, seven outreach workshops were held in five locations to discuss service and the service-planning process. In addition, suggestions were accepted via e-mail, letter, and other customer-service channels within the MBTA.

The *Preliminary 2006 Service Plan* was released in December 2005. It was posted on the MBTA website, and alternative-format review copies were made available upon request. A copy of the full plan was mailed to the main branch of public libraries in the bus service area. A letter announcing the plan was sent to MBTA Advisory Board members or designees, and to state senators and state representatives in the MBTA bus service area. Copies were also made available to the MBTA Advisory Board.

Upon the Plan's release, the MBTA published a legal notice that identified the route proposals under discussion and provided details about the public meetings. This notice appeared online at the MBTA website and was published in the *Boston Metro*, the *Boston Globe*, *El Mundo*, *Sampan*, and the *Bay State Banner*.

Seven public meetings and one public hearing were held in January and February 2006 to obtain public comments regarding proposed service changes and proposed modifications to the MBTA's *Service Delivery Policy* that were described in the *Preliminary 2006 Service Plan*. Community workshops consisted of a presentation by MBTA staff that was followed by an informal discussion between MBTA staff and the public. The workshops and hearing were conducted in the following communities: downtown Boston (two workshops, one hearing), Cambridge (one workshop), Chelsea (one workshop), Lynn (one workshop), and Roxbury (two workshops). Sign-language interpreters were made available with advance notice, and assistive-listening devices were also available. Written comments sent by U.S. mail or e-mail were accepted through February 17, 2006.

The planning process for the 2008 Service Plan began in May 2007. Community workshops were held in seven locations in May and June 2007, in conjunction with the public outreach for the Program for Mass Transportation, to solicit ideas from the public for service improvements. Written comments sent by U.S. mail and e-mail were accepted through September 30, 2007.

A draft Service Plan was released in early September 2008. Ten additional community workshops and one public hearing were scheduled for September to take comments regarding the changes to bus routes and the rapid transit system proposed in the *Preliminary 2008 Service Plan*. Modifications to the *Service Delivery Policy* that were proposed in the preliminary plan were discussed as well. These community workshops will consist of a brief presentation of the draft Service Plan by MBTA staff, followed by an informal discussion between MBTA staff and the public regarding the *Preliminary 2008 Service Plan*. The workshops and hearing are scheduled to take place in the following communities: downtown Boston (one workshop, one hearing), Allston (one workshop), Jamaica Plain (one workshop), Longwood Medical Area (two workshops), Lynn (one workshop), Malden (one workshop), Quincy (one workshop), Waltham (one workshop),

The *Preliminary 2008 Service Plan* will be posted on www.mbta.com alongside previous Service Plans and the current *Service Delivery Policy*. A summary of changes will be provided to the media to accompany press release for workshop locations, dates, and times. The public process for the *Final 2008 Service Plan* will follow the same format as the process for the *Final 2006 Service Plan*.

Outreach for the 2008 Program for Mass Transportation

The Program for Mass Transportation (PMT) is the MBTA's long-range capital planning document. The 2008 PMT is currently in development and is scheduled for release by the end of 2008. Public outreach for the PMT began in the spring and summer of 2007 with a series of five regional-corridor public workshops (accessible to persons with disabilities). Through these workshops, the MBTA provided information to the public regarding the PMT and the MBTA's capital planning process, and actively solicited ideas and comments on mobility issues.

The first round of public workshops was held in several municipalities: Braintree, Wakefield, Roxbury, Cambridge, and Newton. The second round of public meetings will be held in the fall of 2008, and will be followed by a 30-day comment period.

Press releases on public workshops are sent to local and regional newspapers in the service area. Flyers announcing the public workshops are distributed on MBTA bus routes, and posters are displayed in transit stations.

To advise the MBTA as it develops the 2008 PMT, the Authority established a PMT Stakeholder Advisory Committee that represents key agencies and organizations, transportation advocacy groups, businesses, community-development interests, and academia. This committee serves as the MBTA's principal public-advisory body in developing the PMT, and usually meets once a month during the development of the PMT. Meeting times and locations are posted on the MBTA website. The committee for the 2008 PMT is chaired by the MBTA, and includes representatives of the following organizations:

- A Better City
- Access Advisory Committee to the MBTA
- Blue Cross Blue Shield of Massachusetts
- Boston Transportation Department
- Central Transportation Planning Staff
- Chelsea Collaborative
- City of Medford
- Codman Square Neighborhood Development Corporation

- Massachusetts Department of Housing and Community Development
- Executive Office of Energy and Environmental Affairs
- Executive Office of Transportation and Public Works
- Livable Streets Alliance
- Massachusetts Institute of Technology
- MassRIDES
- MBTA Advisory Board
- MBTA Rider Oversight Committee
- Medical Academic and Scientific Community Organization Inc.
- Metropolitan Area Planning Council
- Regional Transportation Advisory Committee
- Town of Acton
- Town of Needham
- University of Massachusetts Boston

The Boston Region MPO also plays an important role in the development of the PMT. Its Regional Transportation Plan provided the early inputs for the PMT Universe of Projects. The PMT vision, goals, and objectives are consistent with the MPO's policies, and MPO members were provided several briefings and opportunities for comment.

The Boston Region MPO uses a wide variety of communication tools to involve the public in the development and review of the PMT. It established a project website that is linked to both the MBTA and the MPO websites. The site includes general information on the PMT, notices of public workshops, and information on the Stakeholder Advisory Committee. Through the website, interested parties can link to related documents, including those produced during the development of the PMT, such as the vision statement, goals and objectives; project screening criteria; performance measures; and the results of both the screening and project evaluations. The site also provides an electronic form for registering ideas and comments or requesting more information.

The PMT Reporter, the project's newsletter, also provides information on the development of the PMT and on Stakeholder Advisory Committee activities. The newsletter is posted on the PMT website and was mailed to chief elected officials and executive officers and planning boards in the MBTA service area. Individuals who attended public meetings and were interested in receiving the newsletter and other PMT updates via e-mail are on the PMT listserv, which includes over 1,700 e-mail addresses.

Throughout the development of the 2008 PMT, the MBTA has consulted with the Advisory Board on several levels. The board's Executive Director is a member of the Stakeholder Advisory Committee, and the MBTA briefs the Board as necessary on the project. The MBTA Advisory Board Executive Director has provided input on the PMT vision, goals, and objectives, as well as the process for selecting and evaluating projects. The Advisory Board will also be the decision-maker on which projects will be included in the PMT, as the Board must approve the final document before it can be implemented.

Outreach for the MBTA Capital Investment Program

Each year, the MBTA reviews and updates the MBTA Capital Investment Program (CIP), which is a financially constrained document. It provides an overview of the Authority's planned capital expenditures for a five-year planning horizon; describes the MBTA's infrastructure and the capital needs for maintaining the system; outlines ongoing and programmed capital projects; and details planned expansion projects.

The Authority encourages public participation by requesting input on the draft CIP. The public can provide its input by attending public meetings (hearings and workshops) and writing their comments (by U.S. mail and e-mail). The feedback is collected, synthesized, and forwarded to the MBTA Board of Directors and the MBTA Advisory Board for review.

Public Meetings

After the release of the draft CIP (usually in early November), the MBTA holds public meetings and hearings throughout its service district. The public meetings allow members of the public to give their input on the proposed capital program in person. Various MBTA departments designate key personnel to be present at each of the meetings in order to respond to questions from the general public. The public meetings have one of the following two formats.

- 1. Public Hearing Format:** During a public hearing, the MBTA presents an overview of the draft CIP, with highlights of key existing and new projects. Members of the public are then invited to provide formal comments; however, no questions are answered during the hearing. A court reporter records the entire hearing, including the comments provided by each of the participants, and this becomes part of the public record. After a hearing has been completed, members of the public can meet informally with MBTA personnel to have their questions answered.
- 2. Workshop Format:** Each public workshop begins with an overview of the draft CIP, including highlights of key existing and new projects. Since members of the public often come to the meetings with the expectation of having their questions answered, the workshop format includes a question-and-answer segment. No court reporter is present to record the program under this format. However, MBTA staff take notes of the session to later incorporate the information into a summary report on the public-participation process.

During the past three years, public-participation events have been held at the following locations:

CIP Workshops and Public Hearings – November and December 2007

Workshops

- Ayer** – Town Hall (November 27)
- Attleboro** – City Hall (November 28)
- Boston** – State Transportation Building (November 29)
- Framingham** – Town Hall (December 3)
- Chelsea** – Public Library (December 4)
- Andover** – Public Library (December 5)
- Roxbury** – Dudley Square Branch Library (December 6)
- Quincy** – City Hall (December 11)

Public Hearing

- Mattapan** – Mildred Avenue Community Center (December 18)

CIP Public Hearings – November and December 2006

- Newton** – City Hall War Memorial Auditorium (November 29)
- Lowell** – Regional Transit Authority-Community Room (November 30)
- Attleboro** – Attleboro City Hall (December 4)
- Quincy** – City Hall Annex (December 5)
- Mattapan** – Mildred Ave. Community Center (December 6)
- Worcester** – Public Library, Saxe Room (December 7)

Salem – City Hall Annex (December 11)

Cambridge – City Senior Center (December 12)

Boston – State Transportation Building, 10 Park Plaza (December 14)

CIP Public Hearings – December 2005

Andover – Memorial Hall, Public Library

Worcester – Public Library, Saxe Room

Framingham – Town Hall

Roxbury – Roxbury Community College

Brockton – Plouffe Elementary School

Somerville – Somerville High School

Lynn – North Shore Community College

Boston – State Transportation Building

Fitchburg – Intermodal Transportation Center

Outreach for the 2007 Fare Restructuring and Increase

In conjunction with the recent restructuring of fares, the MBTA developed a new fare policy and new procedures for public involvement for any future fare restructuring or increase. This process was put into action to inform the public about the proposed 2007 fare restructuring and increase and to engage them in the process. The following actions were taken as a part of this public process.

- MBTA staff met with the MBTA Advisory Board to discuss the proposed fare restructuring and increase.
- Public hearing notices were posted approximately 30 days in advance of the fare increase on the MBTA website and in 14 newspapers. Notices were also posted at MBTA stations and were distributed on vehicles.
- Public officials were formally notified in writing and provided with a briefing on the need for a fare increase.
- Eleven public workshops were held, in Boston (two), Newton, Quincy, Dorchester, Andover, Roxbury, Cambridge, Chelsea, Worcester, and Malden.
- Six public hearings were held, in Boston, Framingham, Lynn, Attleboro, Arlington, and Mattapan.
- A multipage pamphlet explaining the fare restructuring and the need for a fare increase was distributed to customers at stations, on vehicles, and at public workshops and hearings, and was posted on the MBTA website.
- The fare increase impact analysis, fare policy statement, and information about the public process were posted on the MBTA website.
- The fare policy statement, public process information, and a multipage pamphlet explaining the fare proposal were translated into five languages (Spanish, Chinese, Russian, Cape Verdean, and Vietnamese); the translated materials were distributed at public hearings and workshops and also posted on the MBTA website.

Approximately 800 people attended the public workshops and hearings, and the Authority received approximately 700 letters and e-mails regarding the fare proposal.





The new circular provides recipients with three options that can be used to fulfill the requirement to collect demographic data. The MBTA has chosen Option A for its reporting.

Option A: Demographic and Service Profile Maps and Charts

For each Title VI triennial report, the MBTA provides numerous maps, overlays, and summary statistics for the MBTA Service Area, using demographic data from the previous U.S. Census. These materials are useful both for describing the current composition of neighborhoods in terms of minority and low-income residents, and for understanding the spatial relationships of these neighborhoods in the context of the MBTA's service area. When additional information about service coverage, planned system improvements, transit amenities, etc., is added to basic maps and tables that identify minority and low-income neighborhoods, the MBTA's performance with respect to Title VI guidelines can be understood more fully through graphical means.

Under Option A, the circular requires demographic maps that shade those census tracts or transportation analysis zones where the percentage of the total minority or low-income population residing in these areas exceeds the average minority or low-income population, respectively, for the service area as a whole. As in past Title VI reports, the MBTA has defined two different service areas: one for the urban fixed-route transit system and another for the commuter rail system. This has been done because the minority and low-income thresholds are lower when averaged over the much larger commuter rail area, which could lead to overidentification of minority and low-income areas in the urban core.

For the urban fixed-route transit service area, the average percentage of minority residents is 24.7%, and for the commuter rail service area, the average is 19.9%. To define low-income, the MBTA is using a different threshold than is used in FTA guidance. The low-income definition used in this report is comparable to that adopted by the Boston Region Metropolitan Planning Organization (MPO) to designate environmental-justice areas: a low-income area is defined as one in which the median household income is less than 60% of the median household income for the service area. Hence, for the urban fixed-route transit service area, low-income is defined as less than \$32,120. For the commuter rail service area, low-income is defined as less than \$32,582.¹

Figure 3-1 highlights the minority and low-income census tracts in the MBTA's urban fixed-route transit service area, and Figure 3-2 highlights the minority and low-income census tracts in the commuter rail service area. Subsequent figures show additional required information, superimposed over the highlighted minority and low-income census tracts. The figures that show additional information include:

- **Figures 3-3 and 3-4:** Fixed guideways and transit stations, depots, maintenance and garage facilities, and administrative buildings in the urban fixed-route transit service area and the commuter rail service area, respectively
- **Figures 3-5 and 3-6:** Major activity centers and transit trip generators, including town halls, shopping centers, hospitals, and public libraries in the two service areas

¹ The Circular defines low-income persons as those whose median household income is at or below the U.S. Department of Health and Human Services' poverty guidelines, which are the same for all 48 contiguous states. Because the cost of living in Massachusetts is much higher than the national average, tying the definition of low-income to the median income for the MBTA's two service areas provides a more accurate representation of areas that are low-income in relation to the region.

- **Figures 3-7 and 3-8:** Major activity centers and transit trip generators, including K–12 schools, colleges, and universities in the two service areas
- **Figure 3-9 and 3-10:** Transit facilities that were recently modernized or are scheduled for modernization in the next five years in the two service areas.

FIGURE 3-1
MBTA Title VI Report
Minority and Low-Income
Census Tracts:
Urban Fixed-Route Service Area

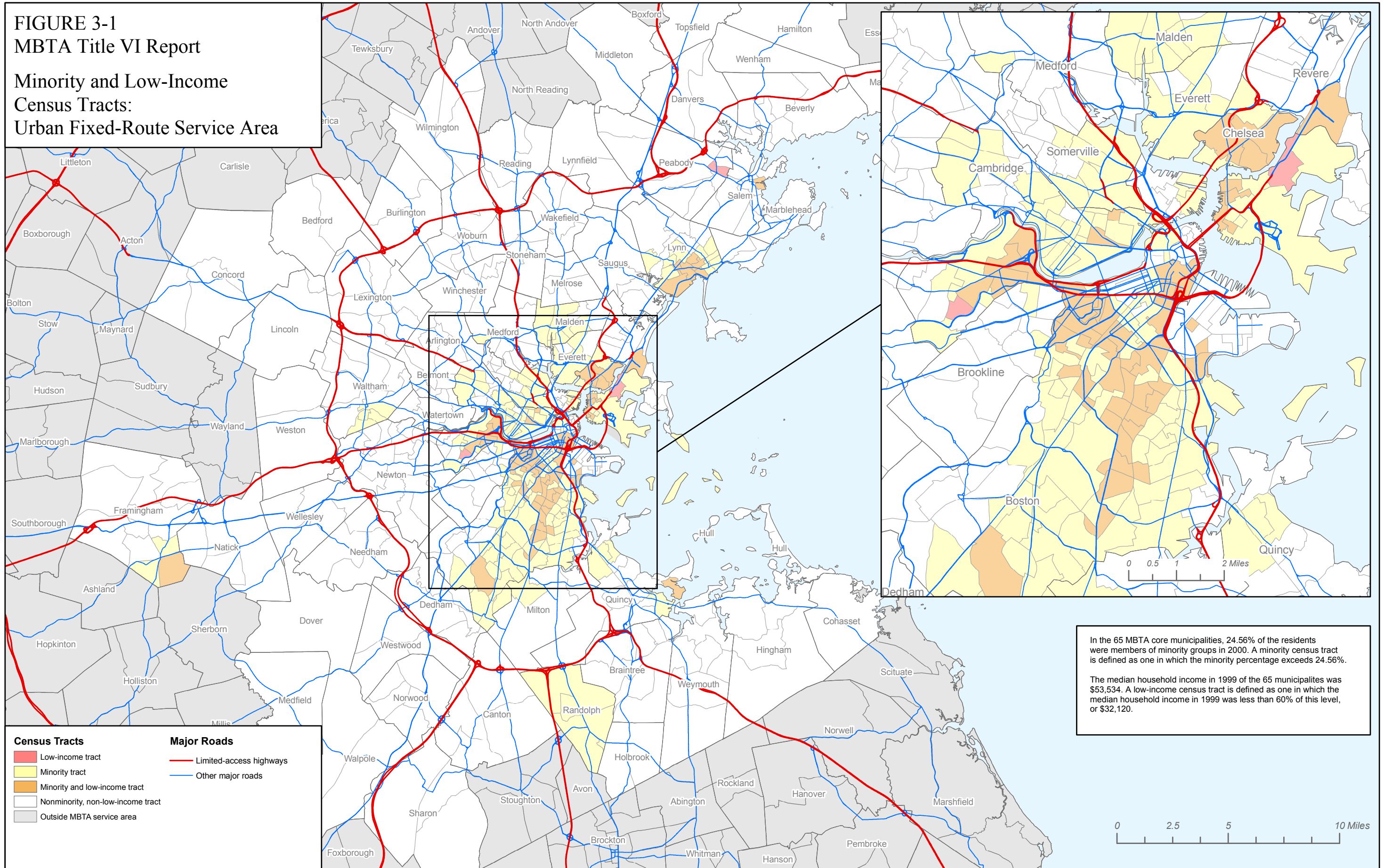
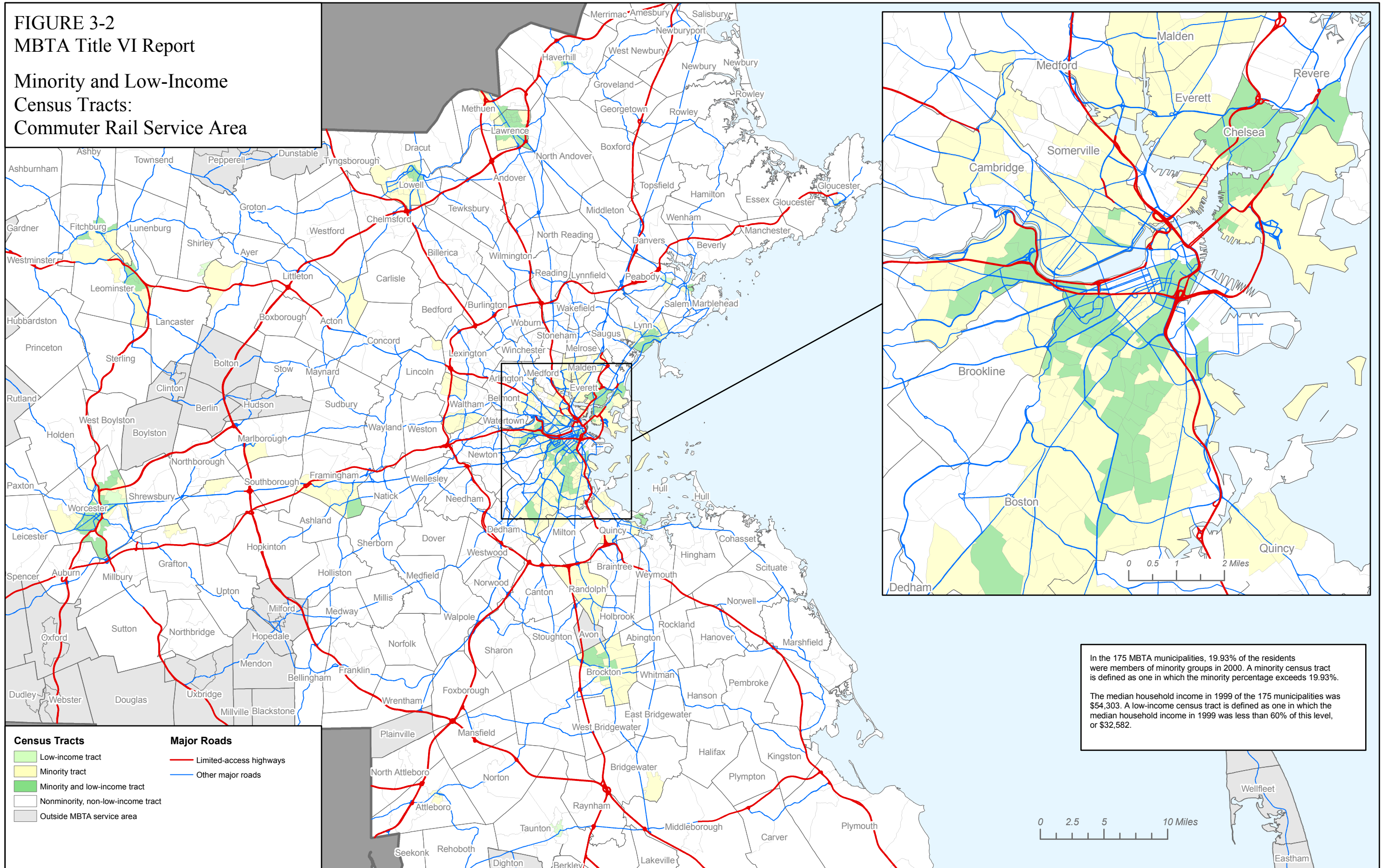


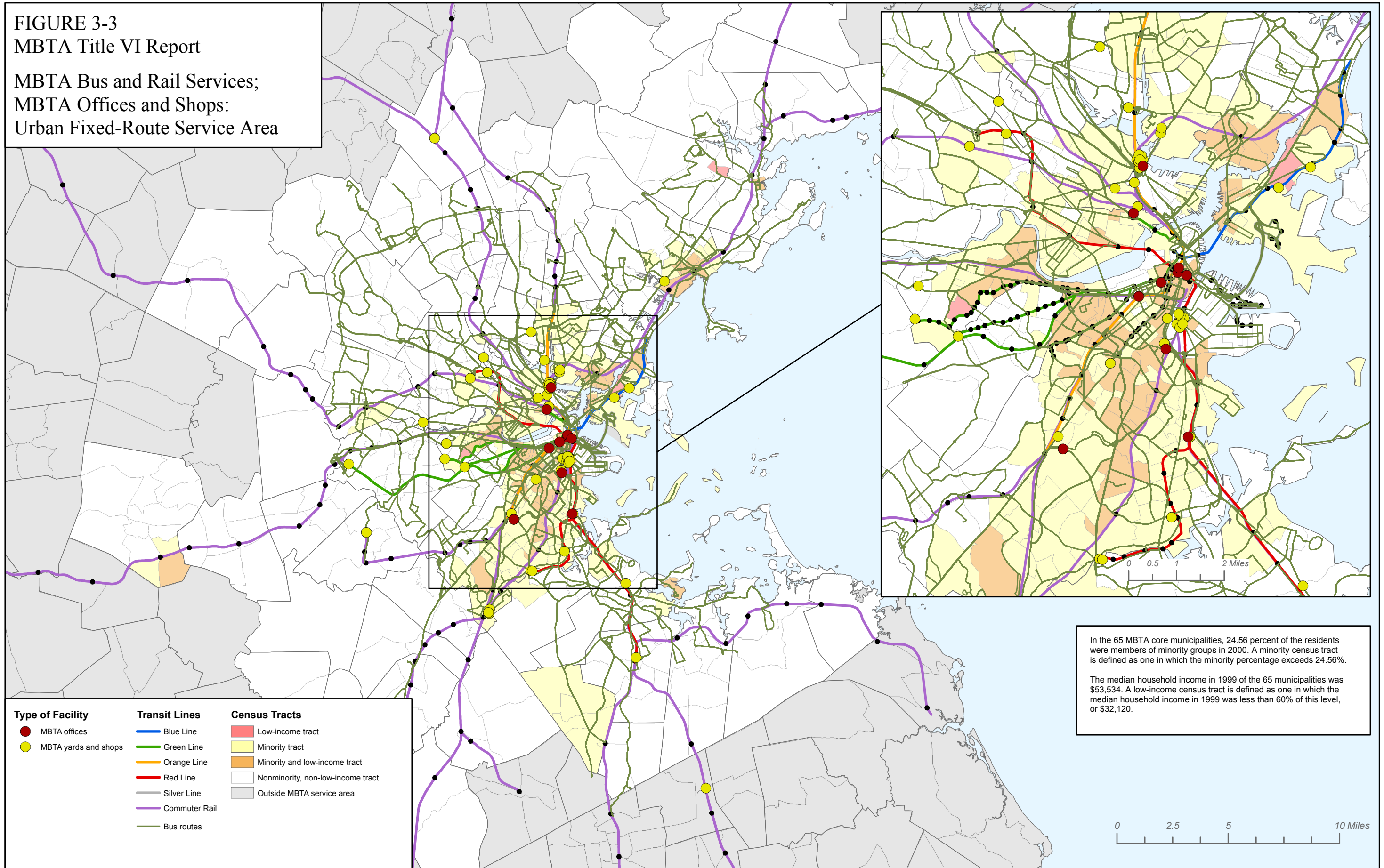
FIGURE 3-2
MBTA Title VI Report
Minority and Low-Income
Census Tracts:
Commuter Rail Service Area



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 19.93%.

The median household income in 1999 of the 175 municipalities was \$54,303. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.

FIGURE 3-3
MBTA Title VI Report
MBTA Bus and Rail Services;
MBTA Offices and Shops;
Urban Fixed-Route Service Area



Type of Facility	Transit Lines	Census Tracts
● MBTA offices	Blue Line	Low-income tract
● MBTA yards and shops	Green Line	Minority tract
	Orange Line	Minority and low-income tract
	Red Line	Nonminority, non-low-income tract
	Silver Line	Outside MBTA service area
	Commuter Rail	
	Bus routes	

In the 65 MBTA core municipalities, 24.56 percent of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 24.56%.

The median household income in 1999 of the 65 municipalities was \$53,534. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,120.

FIGURE 3-4
MBTA Title VI Report
MBTA Rail Services;
MBTA Offices and Shops:
Commuter Rail Service Area

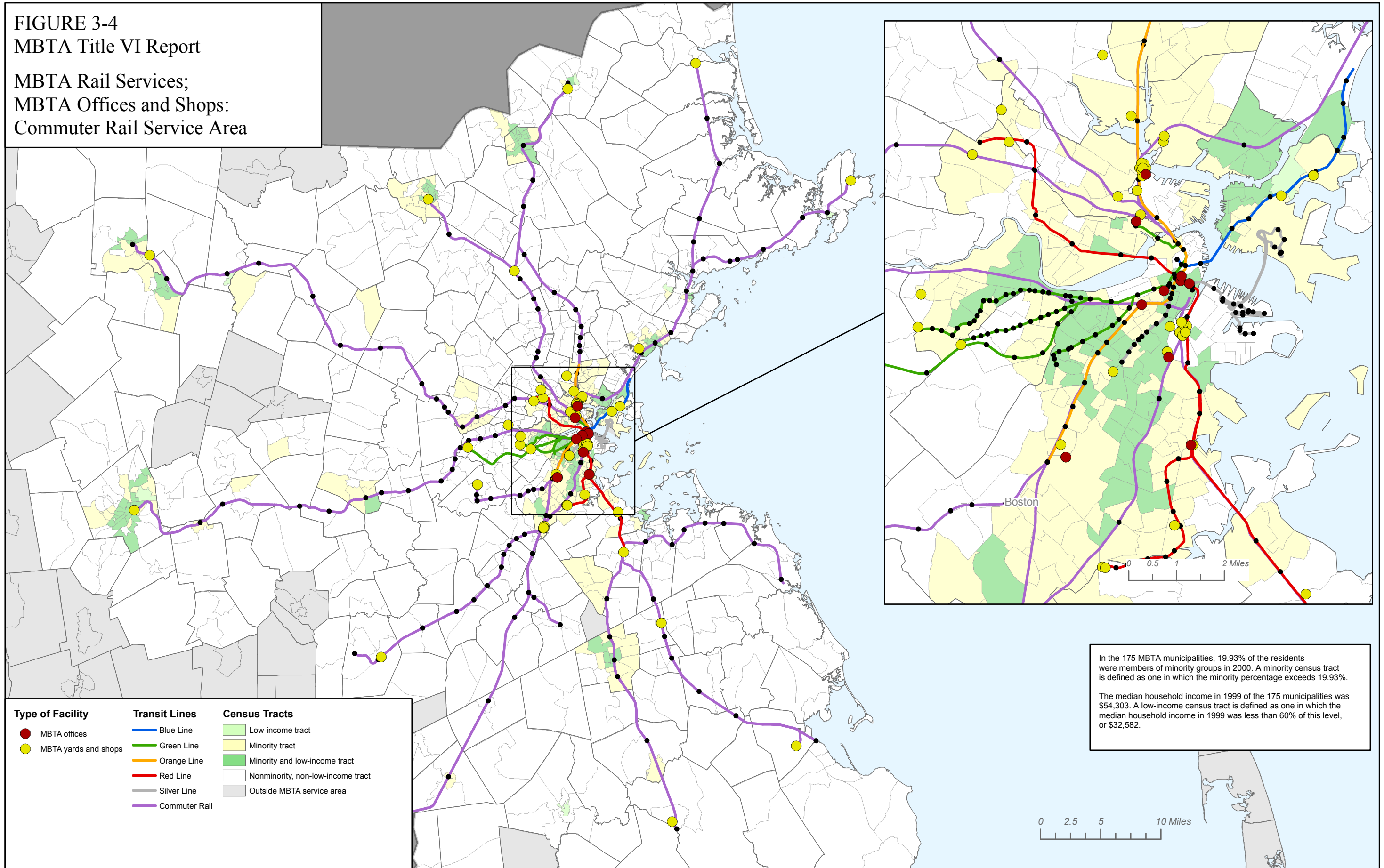
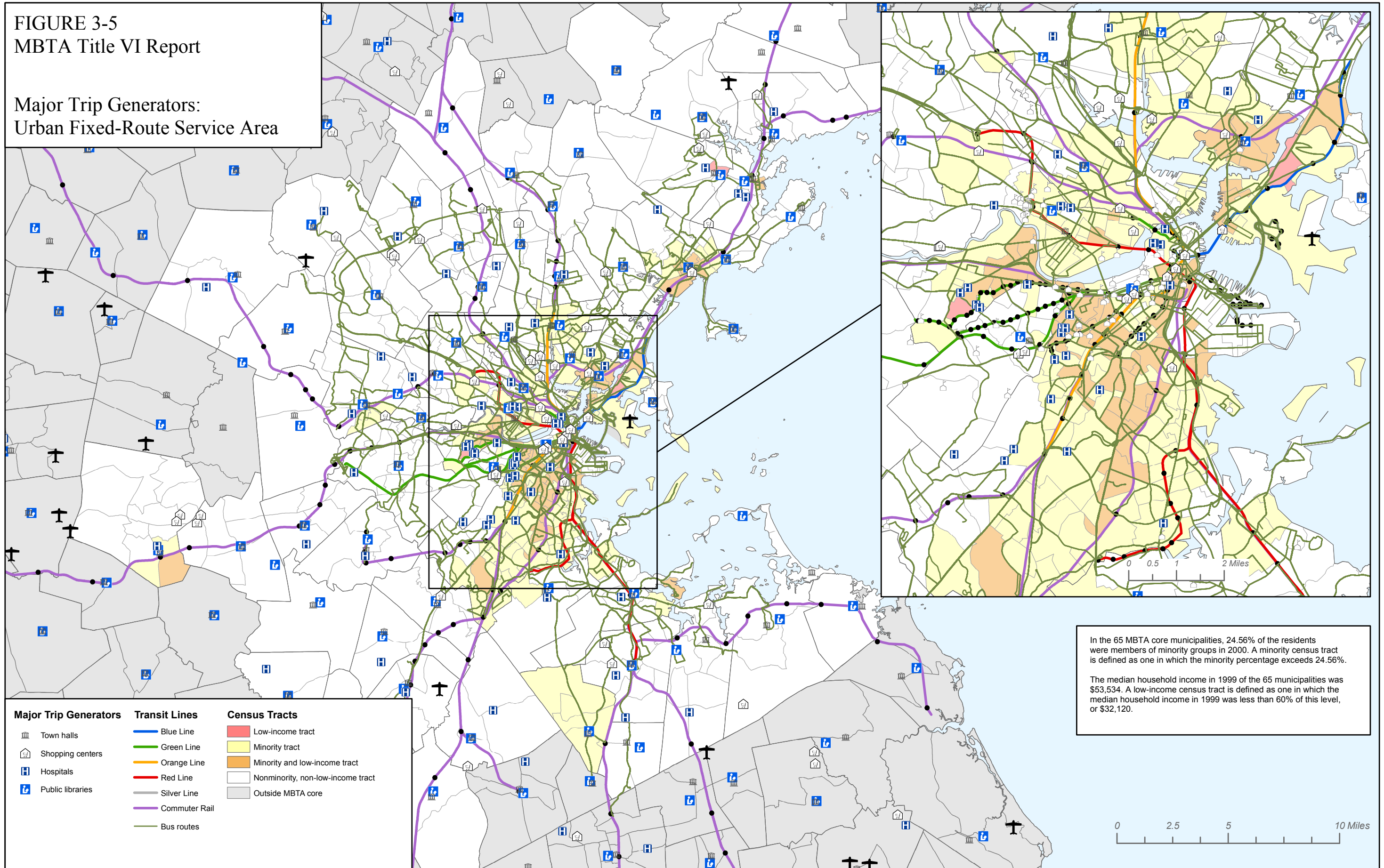


FIGURE 3-5
MBTA Title VI Report

Major Trip Generators:
Urban Fixed-Route Service Area

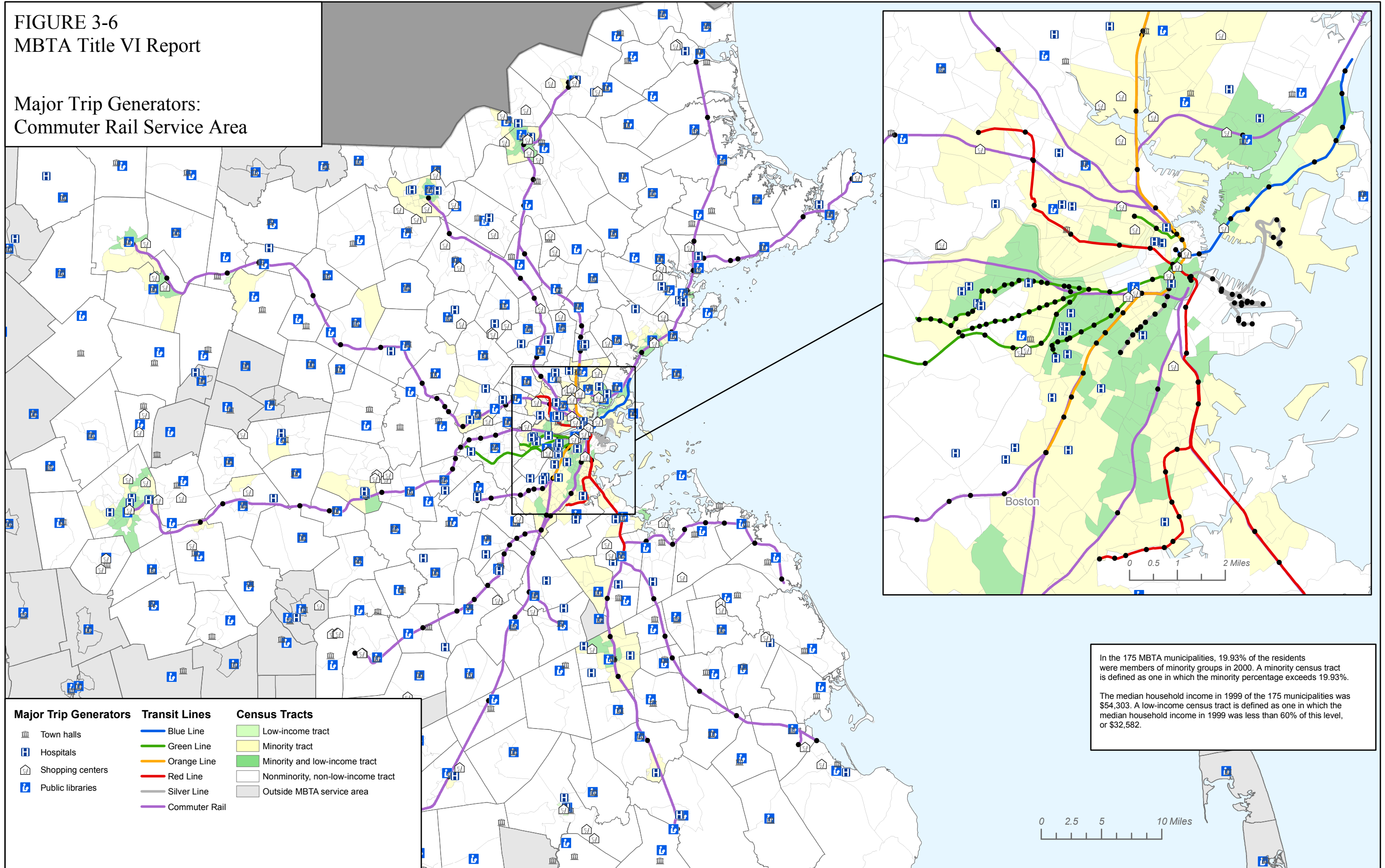


In the 65 MBTA core municipalities, 24.56% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 24.56%.

The median household income in 1999 of the 65 municipalities was \$53,534. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,120.

FIGURE 3-6
MBTA Title VI Report

Major Trip Generators:
Commuter Rail Service Area



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 19.93%.

The median household income in 1999 of the 175 municipalities was \$54,303. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.

FIGURE 3-7
MBTA Title VI Report

Educational Facilities:
Urban Fixed-Route Service Area

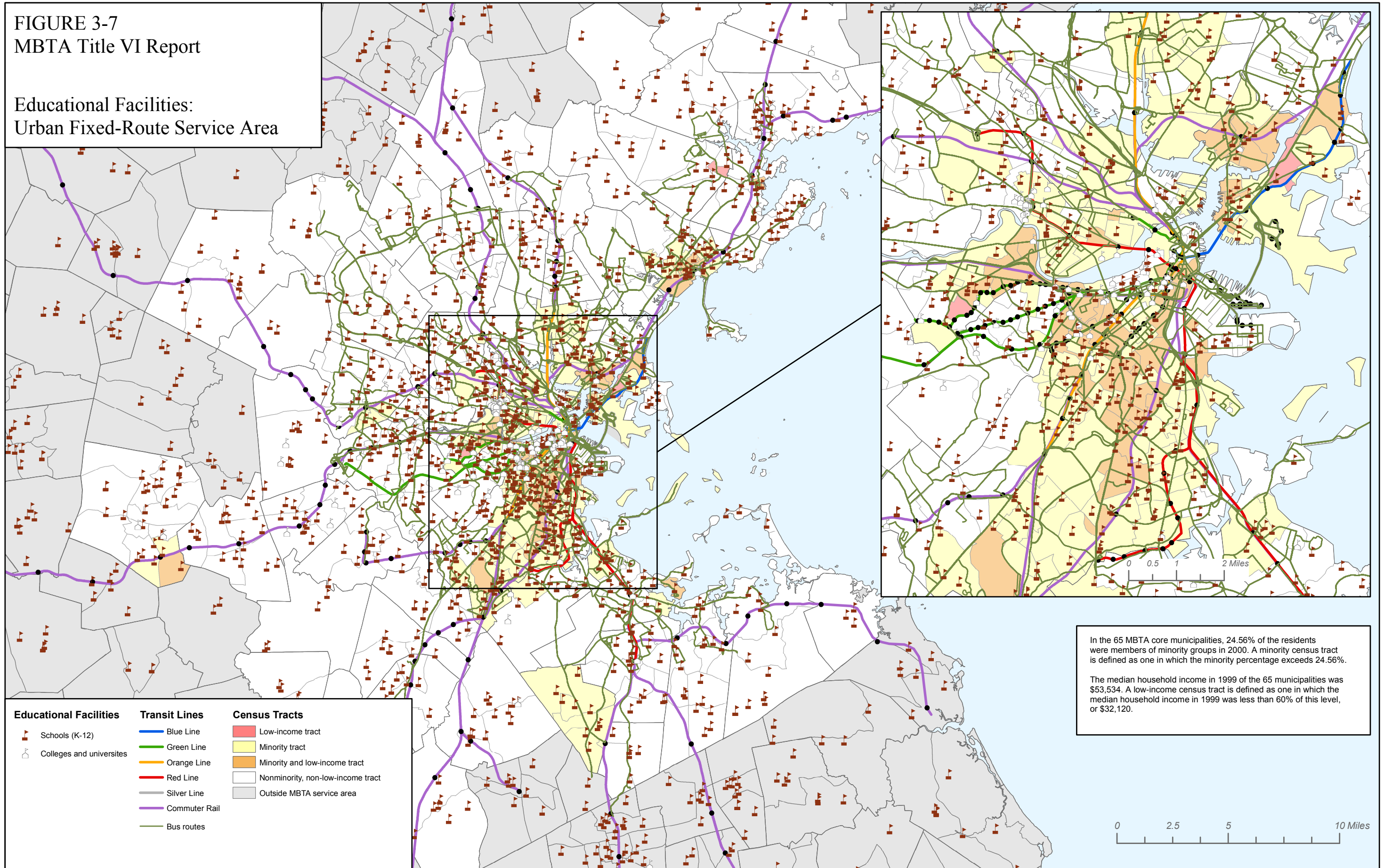
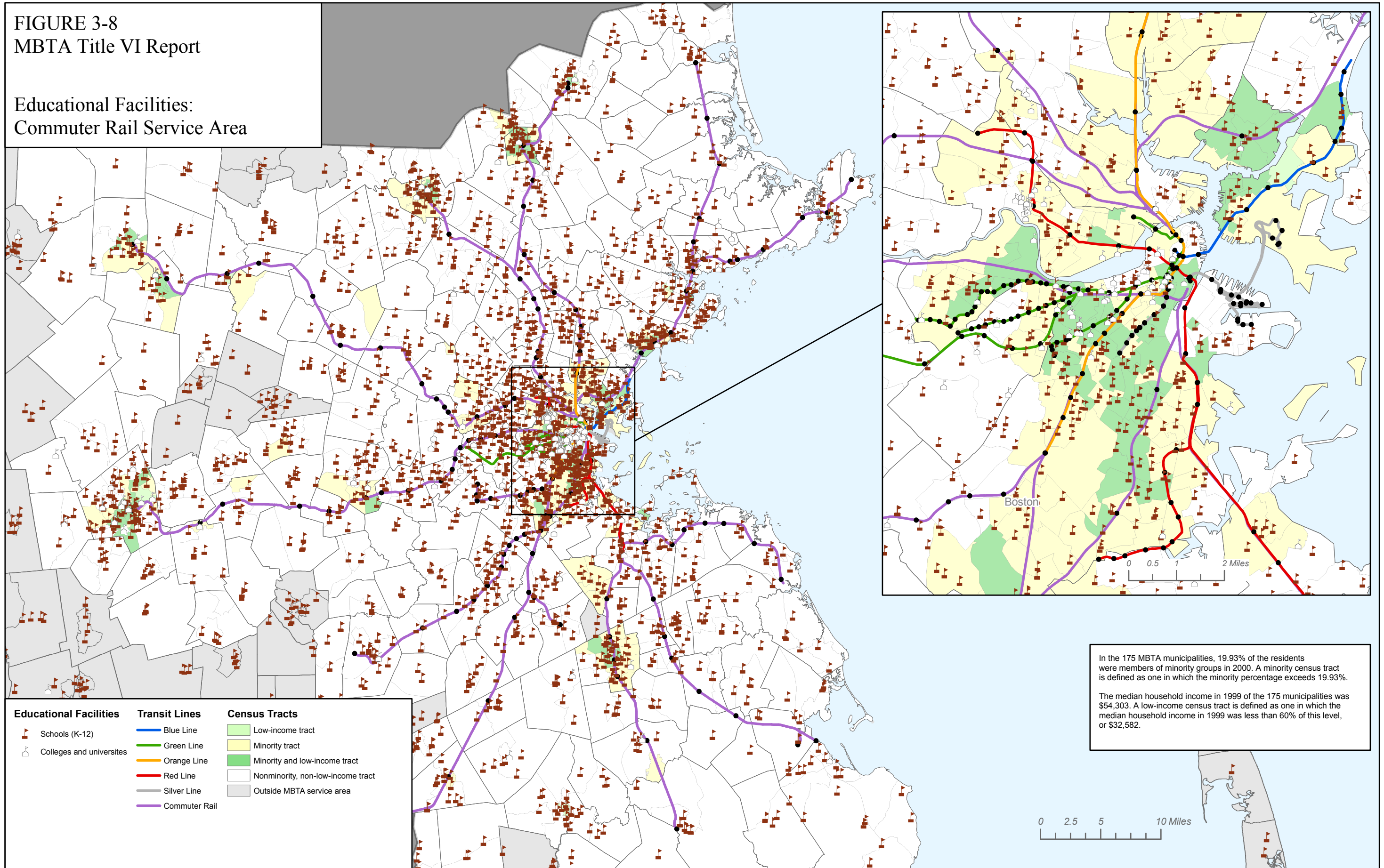


FIGURE 3-8
MBTA Title VI Report

Educational Facilities:
Commuter Rail Service Area



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 19.93%.

The median household income in 1999 of the 175 municipalities was \$54,303. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.

FIGURE 3-9
MBTA Title VI Report

**Major Facility Modernization Projects,
 SFY 2008-SFY 2013, in Minority and
 Low-Income Census Tracts:
 Urban Fixed-Route Service Area**

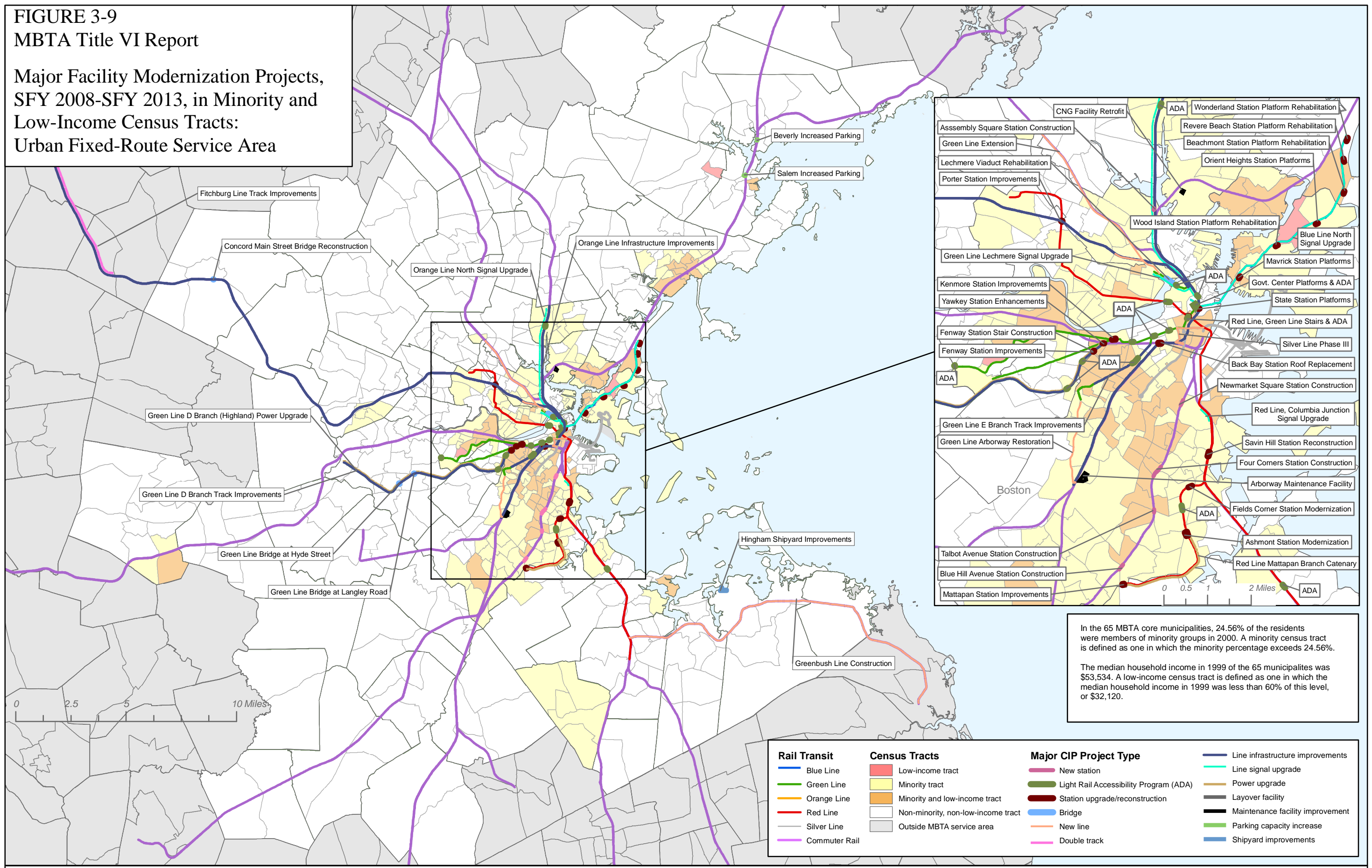
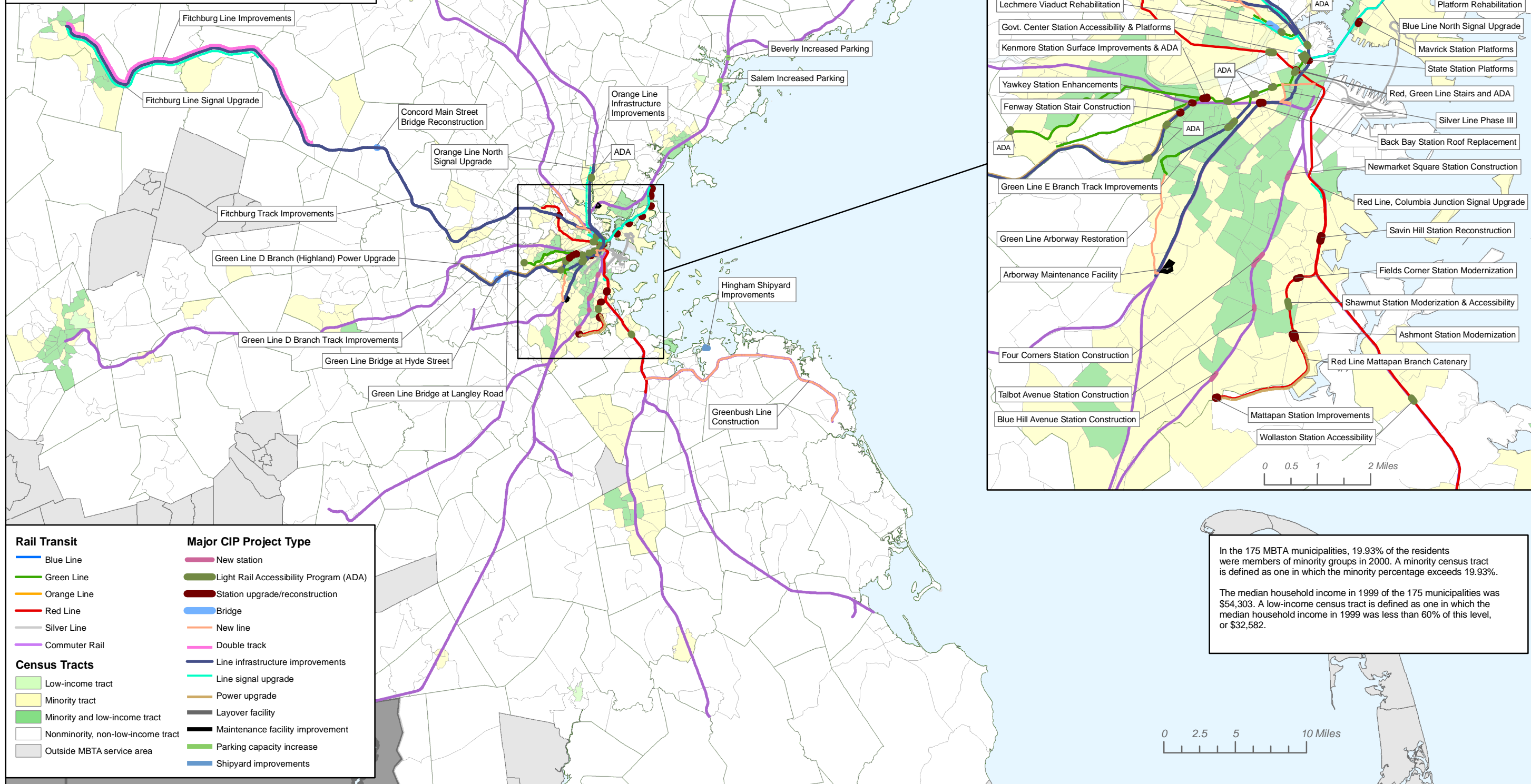


FIGURE 3-10
MBTA Title VI Report

**Major Facility Modernization Projects,
 SFY 2008-SFY 2013, in Minority
 and Low-Income Census Tracts:
 Commuter Rail Service Area**



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 19.93%.

The median household income in 1999 of the 175 municipalities was \$54,303. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.





Systemwide Service Standards IFTA C4702.1A, V. 2.a.1

To guard against discriminatory service design or operation, the new circular requires that the MBTA adopt quantitative systemwide service standards and systemwide service policies, which may not be based on a quantitative threshold.

Systemwide standards are required for vehicle load, vehicle headway, on-time performance, service availability, and the distribution of transit amenities. Standards for the first four categories are found in the *Service Delivery Policy*. This policy, first adopted in 1996, was created to implement objective standards and consistent decision-making procedures for evaluating existing and proposed services. Since 1996, the *Service Delivery Policy* has been revised three times: in 2002, 2004, and 2006. These revisions were proposed during the development of the 2002, 2004, and 2006 Service Plans, and were discussed and commented on at the public meetings and hearings that were held for all three service plans. The proposed revisions were also posted on the MBTA's website, through which additional public comments were accepted. All revisions were ultimately approved by the MBTA Board of Directors before taking effect. Any future revisions to the service standards found in the *Service Delivery Policy* will also undergo a public-review process and MBTA Board approval.

Vehicle Load

The MBTA's vehicle load standard applies to the maximum number of passengers allowed on a service vehicle in order to ensure the safety and comfort of customers. The load standard is expressed as the ratio of passengers to the number of seats on the vehicle, and it varies by mode and by time of day. The following description of vehicle load standards is quoted directly from the 2004 update of the *Service Delivery Policy*.

As indicated in the Frequency of Service Standard, the level of service provided by the MBTA is primarily a function of the demand for that service, as demonstrated through the number of customers utilizing the service at different times during the day. On weekends and during some weekday time 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 time periods when some passengers will be standing, the MBTA will provide sufficient service so that vehicles are not excessively crowded. The purpose of the Vehicle Load Standard is to define the levels of crowding that are acceptable by mode and time period. The time periods used by the MBTA for all modes, for both the Frequency of Service and Vehicle Load Standards, are defined earlier in this chapter (see Frequency of Service Standard).

Because heavy and light rail in the core area are heavily used throughout the day, some standees can be expected during all time periods. For the purposes of this policy, the core area, as it relates to the heavy rail and light rail Vehicle Load Standard, is defined as follows [Table 9 in the *Service Delivery Policy* is called Table 4-1 in this report.]:

Table 4-1: MBTA Core Area Boundaries

Light Rail & Heavy Rail Core Area

Blue Line	Bowdoin to Maverick
Orange Line	Back Bay to North Station
Red Line	Kendall to South Station
Green Line	All underground stations as well as Lechmere and Science Park

By mode and time period, the acceptable levels of crowding are shown in the following table. The load standards in the table are expressed as a ratio of the number of passengers on the vehicle to the number of seats on the vehicle.¹ To determine whether a service has an acceptable level of crowding, the vehicle loads are averaged over specified periods of time. Due to scheduling constraints and peaking characteristics, some individual trips may exceed the load levels expressed in the standards.

For most modes the load standards shown represent average maximum loads over any time period on weekdays and over the whole day on weekends. For bus, on weekdays the loads cannot exceed the standard when averaged over any 30-minute segment of an Early AM, AM Peak, Midday School or PM Peak period, or any 60-minute segment of a Midday Base, Evening, Late Evening or Night/Sunrise period. On weekend days, the loads cannot exceed the standard when averaged over any 60-minute segment of the whole service day.

Table 4-2: Vehicle Load Standards by Mode

[Called Table 10 in the *Service Delivery Policy*]

Mode	Time Period	Passengers/ Seats**
Bus*	Early AM, AM Peak, Midday School & PM Peak	140%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Surface routes	100%
	Tunnel portions of BRT routes	140%
Green Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Surface	100%
Red Line #1 & 2 Cars	Early AM, AM Peak, Midday School & PM Peak	270%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%
Red Line #3 Cars	Early AM, AM Peak, Midday School & PM Peak	334%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	174%
	Outside Core Area	100%
Orange Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%

(continued)

¹ For Bus, Light Rail and Heavy Rail, the Vehicle Load Standard is based on the ratio of passengers to seated capacity at maximum load. For Commuter Rail and Ferry services, the load standard is based on the ratio of boarding passengers per vehicle to seated capacity.

Table 4-2 (continued)

Mode	Time Period	Passengers/ Seats**
Blue Line	Early AM, AM Peak, Midday School & PM Peak	225%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	
	Core Area	140%
	Outside Core Area	100%
Commuter Rail	Early AM, AM Peak, Midday School & PM Peak	110%
	Midday Base, Evening, Late Evening, Night/Sunrise & Weekends	100%
Ferry	Inner Harbor – All time periods	125%
	Outer Harbor – All time periods	100%

*For the purposes of the Vehicle Load Standard, “bus” encompasses all rubber-tired vehicles, including diesel, CNG, trackless trolley, dual-mode, etc.

**For Bus, Light Rail and Heavy Rail, the Vehicle Load Standard is based on the ratio of passengers to seated capacity at maximum load. For Commuter Rail and Ferry services, the load standard is based on the ratio of boarding passengers per vehicle to seated capacity.

In addition to looking at loads within time periods, the MBTA will routinely evaluate loads at the beginning and end of the service day to determine whether changes in frequency and/or span of service are warranted. The Net Cost/Passenger Standard will be used as one means of flagging routes that may be candidates for such changes.

Vehicle Headway

Vehicle headway—or frequency of service—is an indication of the time interval between vehicles on a route that allows passengers to gauge how long they will have to wait for the next vehicle. Vehicle headway varies by mode and time of day, just as vehicle load does. The following description of frequency-of-service standards is quoted directly from the 2004 update of the *Service Delivery Policy*.

To maintain accessibility to the transportation network within a reasonable waiting period, the MBTA has established minimum frequency of service levels for each mode, by time of day. On less heavily traveled services, these minimum levels dictate the frequency of service, regardless of customer demand.

Table 4 [called Table 4-3 in this report] shows the weekday Time Period definitions used by the MBTA for all modes for both the Frequency of Service and Vehicle Load Standards. Because travel patterns on the weekend are different than on weekdays, specific time periods are not defined for Saturdays and Sundays. Table 5 [called Table 4-4 in this report] shows the Minimum Frequency of Service levels for each mode by time period.

Table 4-3: MBTA Weekday Time Period Definitions

Time Period	Definition
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/Sunrise	12:00 AM – 5:59 AM

Table 4-4: Minimum Frequency of Service Standards

Mode	Weekday Time Periods	Minimum Frequency*
Bus**		
Local/Community Rts.	AM & PM Peak	30-minute headway
	All Other Periods	60-minute headway (Mid-day policy objective of 30-minute headway in high density areas)
	Saturday & Sunday – all day	60-minute headway
Express/Commuter Rts.	AM Peak	3 trips in the peak direction
	PM Peak	3 trips in the peak direction
Key Routes	AM & PM Peak	10-minute headway
	Early AM & Midday Base/ School	15-minute headway
	Evening & Late Evening	20-minute headway
	Saturday – all day	20-minute headway
	Sunday – all day	20-minute headway
Light Rail/Heavy Rail	AM & PM Peak Periods	10-minute headway
	All Other Periods	15-minute headway
	Saturday & Sunday – all day	15-minute headway
Commuter Rail	AM & PM Peak Periods	3 trips in peak direction
	All Other Periods	180-minutes in each direction
	Saturday – all day	180-minutes in each direction
Ferry/Commuter Boat	AM & PM Peak Periods	30-minute headway in peak direction
	Off-Peak Periods	120-minute headway

*The Minimum Frequency of Service standards are primarily expressed as “Headways,” which indicate the number of minutes scheduled between trips on a route.

**For the purposes of the Frequency of Service standard, “Bus” encompasses all rubber-tired vehicles, including diesel, CNG, trackless trolley, dual-mode, etc. The definitions of types of bus routes are found in Chapter 2.

On heavily used services, the minimum frequency of service levels may not be sufficient to meet customer demand. When load levels indicate that additional service is warranted, as defined in the Vehicle Load Standard, the frequency of service will be increased to provide a sufficient number of vehicles to accommodate passenger demand.

On-Time Performance

In 2006, a number of changes to the standards in the *Service Delivery Policy* were adopted. These included a complete revamping of the schedule-adherence standards for bus services, since the previous standards were not useful for effectively diagnosing on-time performance problems. One major addition to the new bus standards is adherence to midroute time points. Use of this new measure is being phased in as CAD/AVL (computer-assisted design [CAD] and automated-vehicle-location [AVL]) equipment becomes available for effective data collection.

The updated standards for schedule adherence, as they appear in the 2006 update of the *Service Delivery Policy*, are quoted below.

Schedule Adherence Standards vary by mode and provide the tools for evaluating the on-time performance of the individual MBTA routes/services within each mode. The Schedule Adherence Standards also vary, based on frequency of service; because, passengers using high-frequency services are generally more interested in regular, even headways than in strict adherence to published timetables, whereas, on less frequent services passengers expect arrivals/departures to occur as published.

Bus Schedule Adherence Standards: The environment in which buses operate makes it difficult to provide bus service with the same degree of precision that is possible for some other modes. Therefore, the Schedule Adherence Standards for bus routes are designed to ensure that routes operate as reliably as possible—given their uncertain environment—without early departures, chronic delays, or unpredictable wait and/or travel times.

The Bus Schedule Adherence Standards establish two separate thresholds to measure on-time performance. The first measures the on-time performance of each trip on the route. The second measures the on-time performance of the route itself, based on the percent of trips throughout the day that operate on time.

1. Bus Trip Tests: To determine whether or not individual trips on a route are on time, the MBTA uses two different tests. These tests are based on the type of service, as determined by its frequency. For the purposes of the Bus Schedule Adherence Standards, the two types of services are defined as follows:

- ◇ **Scheduled Departure Service:** A route is considered to provide scheduled departure service for any part of the day in which it operates less frequently than one trip every 10 minutes (headway ≥ 10 minutes). For scheduled departure services, customers generally time their arrival at bus stops to correspond with the specific scheduled departure times.
- ◇ **Walk-Up Service:** A route is considered to provide walk-up service for any part of the day in which it operates more frequently than one bus every 10 minutes (headway < 10 minutes). For walk-up service, customers can arrive at a stop without looking at a schedule and expect only a brief wait. There are two important indicators of on-time performance for walk-up service. One is how evenly spaced the buses are, and the other is how closely the actual duration of the trip approximates the scheduled travel time.

A route might operate entirely with walk-up 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 measured individually to determine whether or not it is on time, according to the type of service that it provides. Therefore, there are two separate trip tests that are applied to the trips on any given route before the whole route can be tested for Schedule Adherence.

- ◇ **On Time Test for Scheduled Departure Trips:** To be considered on time, any trip with a leading headway scheduled for 10 minutes or more must meet all of the following conditions:
 - The trip must start between 0 minutes before and 3 minutes after its scheduled departure time.

- The trip must leave the route midpoint(s) between 0 minutes before and 7 minutes after its scheduled departure time (midpoints are calculated only for routes on which the data is collected using CAD/AVL).
 - The trip must arrive at its destination between 3 minutes before and 5 minutes after its scheduled arrival time.
- ◇ **On Time Test for Walk-Up Trips:** To be considered on time, any trip with a leading headway scheduled for less than 10 minutes must meet all of the following conditions:
- The trip must start within 25% of its scheduled headway (but not necessarily within 25% of its scheduled departure time). For example, if “trip A” is scheduled to start at 7:30 AM and the route’s next trip “trip B” is scheduled to start at 7:38 AM, trip B has an 8-minute scheduled headway. Therefore, trip B must start 6 to 10 minutes after trip A actually starts to be considered on time.
 - The trip must leave the midpoint(s) within 50% of its scheduled headway (midpoints are calculated only for routes on which the data is collected using CAD/AVL). Continuing the above example, if trip B is scheduled to leave a midpoint 8 minutes after trip A is scheduled to leave it, then trip B must leave the midpoint 4 to 12 minutes after trip A actually departs the midpoint to be considered on time.
 - The trip’s running time must be within 20% of its scheduled running time. *Continuing the above example, if trip B is scheduled to take 30 minutes from the beginning of the route to the end, the actual trip time must be 24 to 36 minutes to be considered on time.*

2. Bus Route Test: The second part of the Bus Schedule Adherence Standard determines whether or not a route is on time, based on the proportion of trips on the route that are on time over the entire service day (regardless of which types of trips they are).

- ◇ **On Time Test for a Bus Route:** For a Bus Route to be considered on time, 75% of all trips on the route (in both directions) over the entire service day must pass their trip on-time tests.

Table 4-5: Summary of Bus Schedule Adherence Standard

[Called Table 6 in the *Service Delivery Policy*]

Trip Test	Beginning of Route	Mid-Route Time Point(s)*	End of Route
Scheduled Departure Trips (Headways \geq 10 minutes):	Start 0 minutes early to 3 minutes late	Depart 0 minutes early to 7 minutes late	Arrive 3 minutes early to 5 minutes late
Walk-up Trips (Headways <10 minutes):	Start within 25% of scheduled headway	Leave within 50% of scheduled headway	Running time within 20% of scheduled running time
Route Test	For any given bus route to be in compliance with the Schedule Adherence Standard, 75% of all trips on must adhere to the above measures over the entire service day.		

*For Schedule Adherence, mid-route time points will be used only for routes on which the on-time performance data has been collected using CAD/AVL equipment.

Exceptions:

- Express routes that serve only two points do not have a midpoint. Other routes must have at least one midpoint. The MBTA will add additional time points to certain routes based on their distance, running time and frequency.
- Express routes may arrive more than 3 minutes early at their final destinations.
- A schedule may note that certain trips will not leave until another vehicle arrives and allows passengers to transfer. (For instance, the last bus trip of the day might wait for passengers from the last train of the day.) When applying the standard to these trips the scheduled departure, midpoint and arrival times may be shifted forward by the amount of time the bus had to hold for connecting passengers.
- If a series of trips alternate 9- and 10-minute headways, they may all be considered walk-up trips.
- The first trip of the day, which does not have a leading headway, is considered a scheduled departure trip.

Light Rail & Heavy Rail Schedule Adherence Standards: As with frequent bus services, passengers on light rail and heavy rail do not rely on printed schedules, but expect trains to arrive at prescribed headways. Therefore, schedule adherence for light rail and heavy rail is measured similarly to the way in which frequent bus service is measured. The percent of individual trips that are on time is calculated, based on a measure of how well actual headways correlate to scheduled headways. In addition, the percent of trip times that correspond to scheduled trip times is measured.

Two different measures are used to evaluate headway performance. For surface light rail and heavy rail, Schedule Adherence is measure based on the percent of trips that operate within 1.5 scheduled headways. For example, a trip with a 4-minute headway would be considered late if the observed headway were greater than 6 minutes (1.5 x 4 minutes). Because the headways in the core area for light rail are less than two minutes, Schedule Adherence is measured by the percent of trips with headways less than 3 minutes. Table 7 [called Table 4-6 in this report] provides a summary of the Schedule Adherence standards for Light Rail and Heavy Rail services.

Table 4-6: Schedule Adherence Standards for Light Rail & Heavy Rail

Mode	Headway Performance	Trip Time Performance
Light Rail – Surface	85% of all trips operated within 1.5 scheduled headways over the entire service day.	95% trips operated within 5 minutes of scheduled total trip time over the entire service day.
Light Rail – Subway	95% of all service operated with headways less than 3 minutes over the entire service day.	95% of all trips operated within 5 minutes of scheduled trip time over the entire service day.
Heavy Rail	95% of all trips within 1.5 headways over the entire service day.	95% of all trips operated within 5 minutes of scheduled trip time over the entire service day.

Commuter Rail & Ferry/Commuter Boat: The Schedule Adherence standards for Commuter Rail and Ferry/Commuter Boat measure the percent of trips that depart/arrive within 5 minutes of scheduled departure/arrival times. These standards reflect the long distances and wide station spacing of commuter rail, and the absence of intermediate stations on most boat services. Table 8 [called Table 4-7 in this report] shows the Schedule Adherence standards for Commuter Rail and Ferry/Commuter Boat services.

Table 4-7: Schedule Adherence Standards for Commuter Rail & Ferry/Commuter Boat

Mode	Standard
Commuter Rail	95% of all trips departing and arriving at terminals within 5 minutes of scheduled departure and arrival times
Ferry/Commuter Boat	95% of all trips departing and arriving at ports within 5 minutes of scheduled departure and arrival times

Service Availability (Coverage)

The MBTA's coverage guidelines are only for the bus and rapid transit system service area, where customers are most likely to walk to transit. The guidelines are established to indicate the maximum distance that a passenger who lives in a densely populated area should need to walk to access some transit service (regardless of the mode). The following description of the coverage guidelines is quoted directly from the *Service Delivery Policy*.

An important aspect of providing the region with adequate access to transit services is the geographic coverage of the system. Coverage is expressed as a guideline rather than a standard, because uniform geographic coverage cannot always be achieved due to constraints such as topographical and street network restrictions. In addition, coverage in some areas may not be possible due to the infeasibility of modifying existing routes without negatively affecting their performance.

The Coverage guidelines are established specifically for the service area in which bus, light rail, and heavy rail operate, as riders most frequently begin their trips on these services by foot. Because commuter rail is usually accessed via the automobile, the coverage guidelines do not apply in areas where commuter rail is the only mode provided by the MBTA.

Table 4-8: Coverage Guidelines

Service Days	Minimum Coverage
Weekdays & Saturday	Access to transit service will be provided within a ¼ mile walk to residents of areas served by bus, light rail and/or heavy rail with a population density of greater than 5,000 persons per sq/mile.
Sunday	On Sunday, this range increases to a ½ mile walk.

Distribution of Transit Amenities

The new Title VI circular requires that the MBTA adopt service standards for the distribution of various transit amenities, including bus shelters, benches, timetables, route maps, trash receptacles, intelligent transportation systems (ITS), elevators, escalators, and park-and-ride facilities. Each of these amenities is described below.

Bus Shelter Placement

There are essentially three categories of bus shelters in the MBTA system. The first category is MBTA-owned and managed: shelters that are purchased, installed, and maintained by the MBTA. Historically, most shelters were of this variety. More recently, two other categories of shelters, both of which are privately owned, have been placed at MBTA bus stops. For stops located in the city of Boston, the City entered into a contractual agreement with Wall USA to provide shelters that are manufactured, owned, and maintained by Wall. These shelters display advertisements, and the cost of their upkeep is paid for through advertising revenues. Outside of Boston, the MBTA entered into an agreement with a different company, Cemusa, to provide shelters in other municipalities. The manufacture, placement, and maintenance of these shelters are also supported by advertising revenues. Although the MBTA does not set standards for privately owned shelters, it coordinates with both companies to ensure that the placement of their shelters does not disadvantage minority and low-income areas.

In 2005, the MBTA updated its standards for determining the eligibility of bus stops for shelter placements, regardless of the source. The following description of how decisions are made for bus shelter placements is quoted directly from the *2005 Bus Shelter Policy*.

A. Purpose

The purpose of this policy is to provide guidance for the placement of MBTA bus shelters and to establish a procedure for evaluating shelter requests. In areas or locations where the MBTA, or its contractors, are the primary suppliers of shelters at bus stops, placements will be evaluated using two steps:

- (1) Conformance with eligibility standards, and
- (2) a site suitability test.

Central to any placement decision will be a commitment to meeting the requirements of Title VI of 1964 Civil Rights Act as defined in the FTA Circular C 4702.1. Title VI ensures that MBTA services are distributed in such as manner that minority communities

receive benefits in the same proportion as the total service area. This policy in no way establishes a requirement for placement, since all placements will be dependent on available resources.

B. Background

The previous shelter policy was established in 1984, having been extracted from the 1977 Service Policy for Surface Public Transportation. This older policy considered three major factors when evaluating stops: number of boardings, frequency of service, and percentage of persons using the stop that were elderly or had disabilities.

The current policy continues to include these important measures; however, it more systematically quantifies each factor in determining eligibility.

C. Evaluation Procedure

MBTA Operations will be responsible for evaluating placement requests and ensuring compliance with Title VI.

The first step in the evaluation process is a determination if the bus stop conforms with shelter eligibility standards. As in the previous shelter policy, the number of boardings at a bus stop is a major determinant for eligibility. As described in the table below, all bus stops that meet the required number of boardings will be eligible. However, a number of other criteria can also be considered. To standardize the process, the various types of criteria have been given values. The following table 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.

Table 4-9: Shelter Eligibility Criteria for MBTA Bus Stops

[This table did not have a title or number in the *Service Delivery Policy*.]

Eligibility Criteria	Points
60+ Average weekday daily boardings (ADB)	70
50-59 ADB	60
20-49 ADB	40
Less than 20 ADB	30
MBTA initiative to strengthen route identity	20
Seniors, disabled, medical, social service, or key municipal facility in close proximity to stop	15
Official community recommendation	10
Bus route transfer point	10
Infrequent service (minimum of 30minute peak/ 60minute off peak headway)	10
Poor site conditions (weather exposure etc.)	5
Shelter promotes adjacent development/increased ridership	5
Passing Score:	70

Any bus stop that has more than 60 boardings is eligible for a shelter, with an automatic score of 70 points. For bus stops with fewer boardings, a combination of the factors listed above will be considered in determining eligibility. Operations will keep records of all requests that document the assignment of scores. All bus stops that currently have shelters will be grandfathered into the program without need for additional analysis.

The second step in the evaluation process is the site suitability test. There are physical and practical requirements that must be met before a shelter can be placed. These include:

- (1) Property ownership,
- (2) abutter approval,
- (3) compliance with the Americans with Disabilities Act requirements,
- (4) adequate physical space and clearances,
- (5) close proximity to an existing bus stop, and
- (6) community approval

D. Reporting

The Operations Department will retain the necessary documents to ensure correct application of the policy. The Service Planning Department and CTPS will submit the required Title VI reports. Title VI ensures that MBTA services are distributed in such a manner that minority communities receive benefits in the same proportion as the total service area.

In terms of the shelter policy, once a bus stop is eligible for a shelter it will be included in all analyses for Title VI purposes, until such time that it is indicated otherwise. Consequently, all bus stops with 60 or more boardings will be included in Title VI reports, as well as any bus stops with less than 60 boardings that meet the 70-point eligibility requirement. Any bus stop that meets the eligibility standard, but is found not to meet the site suitability test, will be noted and not included in the analysis. Bus stops in the MBTA service area that have pre-existing shelters, but do not meet the policy requirements, will be noted and included in the total comparisons.

Benches

It is the MBTA's policy that all bus shelters have benches, whether the shelters are provided by the MBTA or through one of the two private companies (Wall and Cemusa) that install shelters under contract to individual municipalities. Benches are also provided at all subway and light rail station platforms, with the exception of certain Green Line surface stops where the platform is too narrow to accommodate a bench.

Timetables and Route Maps

Historically, the MBTA did not post timetables (schedules) in bus shelters; however, the MBTA requires that Cemusa, which provides bus shelters to municipalities outside of Boston, post bus timetables in all of their shelters. In addition, timetables are provided at all bus stops located at terminals, and pole-mounted "tubes" and/or "cubes" with timetable information are located at most stops on Key Bus Routes. Transit maps are provided at all Cemusa and Wall shelters.

Neighborhood Maps and Trash Receptacles in Rapid Transit Stations

The neighborhood map program involves the placement of two types of maps at rapid transit 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.

The objectives that the program hopes to accomplish at each station 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.

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. Due to space constraints, maps are not located at many surface Green Line stops.

The MBTA provides bombproof trash barrels at all high-volume stations on the rapid transit system.

Intelligent Information Systems (ITS): Automated Fare Collection (AFC) Fare Gates and Fare Vending Machines

The automated fare-collection system was rolled out during 2006. The number and location of fare gates and fare vending machines to be placed at each rapid transit station were determined based on the number of customers entering the station, the number of station entrances, and the general configuration and available space at the station.

Retail sales outlets were initially placed so that they would be convenient to customers who use the Key Bus Routes, as they are the most heavily used routes in the system and operate in the urban core, where minority and low-income populations are most prevalent.

The AFC equipment relays monitoring data on device status to the AFC Central Computer System, which is located at 10 Park Plaza. These data are also available to AFC field technicians via workstations located in each of the booths in the subway system formerly used by toll collectors, and at each of the locations used by AFC farebox technicians to store fares collected on buses and the Green Line.

Each AFC device is monitored for cash and ticket levels so that Revenue Service personnel and management can schedule the necessary resources to maintain the ticket and coin levels in all devices.

The MBTA has established performance metrics that are based on the availability for use of the fare gates and fare vending machines.

- The minimum acceptable device availability threshold is 95%.
- The device availability goal is 98%.

Intelligent Transportation Systems (ITS); Variable Message Signs (VMS)

The MBTA currently has three different types of electronic message signs in use on the bus rapid transit (BRT), rapid transit, and commuter rail systems. These include: (1) signs that display public-service announcements, (2) signs that alert passengers that trains are approaching and arriving at the station, and (3) signs that count down the number of minutes until the next vehicle arrives at the station.

Bus Rapid Transit VMS

VMS that count down the minutes until the arrival of the next BRT vehicle are placed at 18 of the 22 stops on Silver Line Washington Street. There is one sign at each end of the route—one at Dudley Station and one at Temple Place—and one sign at each of the 16 new stops (8 per direction) on Washington Street. These VMS were installed as a part of the Washington Street reconstruction/Silver Line ITS project and were bound to the project in two key ways. First, as part of

station construction, this project included construction of kiosks along Washington Street that were used to house the signs. Second, Washington Street service has a dedicated fleet that wirelessly relays vehicle location data to a central computer, so that the arrival time can be displayed on the VMS.

Rapid Transit VMS

The MBTA is currently installing 256 VMS at rapid transit stations throughout the system and plans to have these in place by March 2009. Two of the stations that are undergoing renovations, Maverick and Copley, will not have VMS installed through this project, but will have VMS installed as a part of the rehabilitation work. Through the agreement between the MBTA and the Boston Center for Independent Living (BCIL), 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.

Two types of VMS will be in use: those that display next-train information, and those that display only public-service announcements. All Red, Orange, and Blue Line stations are being equipped with electronic message signs that display “next train approaching” and “next train arriving” messages. The information displayed on these signs is triggered through the train’s signal system. Because the Green Line has a different type of signal system than the other rapid transit lines, next-train signs cannot be used at this time on that line. However, VMS that display public-service information will be installed at stations in the Green Line central subway and on the Green Line’s D Branch. Due to the lack of power and communications connections to stations on the B, C, and E Branches of the Green Line, no VMS can be used at those stations in the near term.

Commuter Rail VMS

In the early 1990s, “Passenger Information Centers” (blue boxes approximately 2 by 3 feet in size) that displayed a one-line message were installed at stations on the Framingham/Worcester Line. There was only one message center at each station located on or near the inbound platform. These signs were primitive at best and were essentially large pagers.

In 1997, in conjunction with the opening of the Old Colony’s Middleborough/Kingston Line, “PENTA” LED (light-emitting diode) message boards were installed at all stations on those lines. Although these signs used the current technology of that period, they had limited display capability—only one message at a time could 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. All of the “blue box” passenger information centers were replaced with these newer signs; at least one sign was added on each inbound platform, and, at stations with mini-high platforms, an additional sign was added. The PENTA signs were not replaced, however. The new signs can display multiple messages and have a capacity of up to 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.

Currently a new next train sign project is underway. This \$5.3 million project will upgrade all signs and utilize state-of-the-art global-positioning-system (GPS) technology to automatically display next-train arrival information at stations. Additionally, the system will make automatic station announcements onboard the train, consistent with the Americans with Disabilities Act (ADA) requirements. Evidence of the new system will be seen starting in 2009, and full implementation should be completed by the second quarter of 2011.

Elevators and Escalators

The MBTA contracts for the complete maintenance, service testing, and inspection of all transit system and facility elevators and escalators. There are 167 escalators and 153 elevators in operation, for a total of 320 pieces of equipment under this contract. This equipment is maintained by KONE Inc., in accordance with an all-inclusive contract, which is one of the largest conveyance-system contracts ever issued in the Commonwealth of Massachusetts. KONE is currently two-and-a-half years into a new maintenance contract.

New equipment is introduced to the transit system via the Design and Construction Department. Elevators and escalators are included as part of Design and Construction's overall station modernization and improvement program. Over the next five years, approximately 25 pieces of these types of equipment will be added to the transit system.

Elevators and escalators provide a vital access to the system, particularly for persons with disabilities. In 2006 the MBTA formalized a partnership with the Boston Center for Independent Living (BCIL) through a consent agreement that sets operational protocols and standards, as well as a proactive agenda for making the transit system more accessible. The MBTA is working toward the goal of making the system a model for accessibility within the U.S. transit industry. More than \$170 million is allocated in the Authority's current Capital Investment Program (almost 5% of the capital budget) for accessibility enhancements including redundant elevator installation, completion of the key station program, elevator/escalator maintenance, and wayfinding improvements. In addition, the MBTA has adopted an organization-wide commitment and desire to comply not only with the letter but also the spirit of the Americans with Disabilities Act, with the complete understanding that all people with disabilities must have every opportunity to be fully participating members of our community and that fundamental to this opportunity is the right and ability to use public transportation in an equal, effective, and dignified manner.

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 elevator and escalator service requests, which are transmitted to the MCC via MBTA personnel and field inspectors. The MCC transmits the service-request information to the elevator/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.

Distribution of Station Parking

While the supply of parking is only one element of transit access, it is particularly important in the commuter rail system, where 54% of users drive to stations to access service. Through the Program for Mass Transportation, the MBTA applied evaluation criteria prioritizing capital improvement parking programs. The evaluation standards are:

- Customer access – Quality of auto access to the station parking lot from major arterial roadways
- Land and air rights – MBTA ownership of (or access to) land and/or air rights for expansion of the parking facility
- Projected demand – Magnitude of expected future demand for parking at the station
- Potential utilization – Ability of potential parking expansion to meet the needs of projected demands
- Cost per parking space – Expected cost per parking space, in either a surface lot or garage
- Environmental status – Barriers to parking expansion resulting from existing environmental issues
- Ease of construction – Barriers to parking expansion resulting from issues such as space constraints, land acquisition issues, and challenging terrain

Systemwide Service Policies IFTA C4702.1A, V. 3.a.I

The new circular requires systemwide service policies for vehicle assignment and for transit security. Policies differ from standards in that policies are not necessarily based on a quantitative threshold.

Vehicle Assignment

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 33 electric trackless trolleys; 360 compressed-natural-gas (CNG) vehicles; 32 dual-mode vehicles; 348 emission-control diesel (ECD) vehicles; and 215 older diesel buses. Currently, the procurement program for an additional 155 ECD vehicles has been finalized. These vehicles are currently being delivered, and all of them are expected to be in service by the fall of 2008. Many of the older diesel buses (94 and 95 Series Nova) will be retired as new ECD vehicles become available. The MBTA has acquired over 500 clean-fuel vehicles to provide new service on Silver Line Washington Street bus rapid transit (BRT) routes and to replace the oldest diesel vehicles in the fleet. In accordance with the September 1, 2000, Administrative Consent Order, Number ACO-BO-00-7001, issued by the Commonwealth of Massachusetts, the Department of Environmental Protection (DEP), under the Executive Office of Environmental Affairs (now the Executive Office of Energy and Environmental Affairs), the MBTA will, "Insofar as possible, operate 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 4-10 provides additional information on the vehicles in the bus fleet.

In general, each bus is assigned to one of nine MBTA bus storage and maintenance facilities and operates only on routes served by the garage to which it is assigned. Daily, within each garage, individual vehicles are not assigned to specific routes, but circulate among routes based on a number of operating constraints and equipment criteria. The following section summarizes the guidelines used by inspectors when assigning vehicles in the current bus fleet to routes.

Table 4-10: Bus Fleet Roster

Propulsion	Active Vehicle	Year Built	Builder	Air Cond.	Accessible	Over-Hauled	Length	Width	Seats	Planning Capacity
Straight Electric	5	1976	Flyer	N	No	Mini - 96, 99	40'	102"	44	61
	28	2003-04	Neoplan	Y	Ramp	None	40'	102"	31	43
Diesel Series 60 500HP (dual-mode)	24	2004-05	Neoplan	Y	Ramp	None	60'	102"	47	65
	8	2005	Neoplan	Y	Ramp	None	60'	102"	38	~65
CNG Cummins C8.3	175	2004	NABI	Y	Ramp	None	40'	102"	39	54
	124	2003	NABI	Y	Ramp	None	40'	102"	39	54
CNG Series 60 400 HP	44	2003	Neoplan	Y	Ramp	None	60'	102"	57	79
CNG Series 50G	15	2001	New Flyer	Y	Ramp	None	40'	102"	39	54
	2	1999	New Flyer	Y	Ramp	None	40'	102"	39	54
Diesel Caterpillar C9	193	2004-05	Neoplan	Y	Ramp	None	40'	102"	38	53

(continued)

Table 4-10 (continued)

Propulsion	Active Vehicle	Year Built	Builder	Air Cond.	Accessible	Over-Hauled	Length	Width	Seats	Planning Capacity
Diesel Series 50	237	1994-95	TMC/Nova BUS	Y	Lift	2004-05	40'	102"	40	56
Diesel Cummins ISL	155	2006-07	New Flyer	Y	Ramp	None	40'	102"	39	54
Diesel Cummins ISL	On order	2008	New Flyer	Y	Ramp	None	40'	102"	39	54

28 Trackless Trolleys

The trackless trolley fleet currently consists of 28 new vehicles. These vehicles are limited to use on three routes, in Belmont, Cambridge, and Watertown, where overhead catenary lines provide electric power. The vintage 1976 Flyer vehicles will be retired, except for 5 vehicles that are maintained for contingencies.

360 Compressed-Natural-Gas (CNG) Buses

This fleet is composed of 316 40-foot nonarticulated vehicles and 44 60-foot articulated vehicles. Service is currently provided on Route 39 and Silver Line Washington Street with the 60-foot vehicles, all of which are housed at the Southampton facility; 17 of the 44 60-foot vehicles are dedicated to the Silver Line. Most of the 316 40-foot buses are housed at the Arborway and Cabot garages; they provide service on many routes in the urban core. With the exception of the vehicles at Southampton, which currently serve only three routes, inspectors assign these buses daily, on a random basis, within each garage.

563 Diesel Buses

The diesel buses are assigned to the suburban garages, as well as to the Albany Street and Charlestown garages. Of the 348 new ECDs in the fleet, 155 are New Flyer vehicles and 193 are Neoplan vehicles. These ECDs have been divided among the following facilities: Charlestown (162), Lynn (78), Quincy (61), Fellsway (10), Albany (28), and Cabot (9) garages. In addition to 348 new ECD vehicles, a second order, for 155 additional New Flyer ECD vehicles, has been executed. These vehicles are scheduled for delivery in the summer or fall of 2008. Many of the 215 older (94 and 95 Series) Nova vehicles will be retired as new ECD vehicles become available.

Due to their unique markings, the three crosstown bus routes use a dedicated fleet of 20 vehicles, all of which are diesel buses that were built in 1994 or 1995. These routes provide a limited-stop, circumferential service that complements the radial rail system.

32 Diesel-Electric (Dual-Mode) Buses

All of the new 60-foot, articulated dual-mode vehicles are designed for operation on the Waterfront portion of the new Silver Line BRT service between South Station, various locations in South Boston, and Logan Airport.

Light Rail and Heavy 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.

Type 7 Green Line vehicles can be operated on any Green Line branch. However, all of the Type 8 cars are currently assigned to the B, C, and E branches. Type 8 cars will be introduced on the D Branch pending a review of track conditions on the branch by the Department of Public Utilities.

The Mattapan High Speed Line has weight, curve, and power limitations that prevent the use of current Green Line light rail vehicles. Instead, PCC (President's Conference Committee) cars are

used for that line. All of the PCCs have recently undergone extensive rehabilitation, including the replacement of major structural components. These cars were equipped in 2008, for the first time, with air conditioners. Table 4-11 lists the vehicles in the light rail fleet.

Table 4-11: Light Rail Fleet Roster

Line	Type/Class of Vehicle	Fleet Size	Year Built	Builder	Length	Width	Seats	Planning Capacity
Mattapan High Speed Line	“Wartime” PCC	10	1945-46	Pullman Standard (USA)	46'	100"	40	84
Green Line	Type 7 (1)	94	1986-88	Kinki-Sharyo (Japan)	74'	104"	46	104
Green Line	Type 7 (2)	20	1997	Kinki-Sharyo (Japan)	74'	104"	46	104
Green Line	Type 8	95	1998-2007	Breda (Italy)	74'	104"	44	99

Heavy rail vehicles are operated on the three subway lines: the Red Line, Orange Line, and Blue Line. The specific operating environments of these lines 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 Orange Line or the Blue Line, and there is only one type of Orange Line car and one type of Blue Line car, no distribution guidelines are necessary for either of these lines. The Blue Line is in the process of introducing a new replacement fleet, and for a short time span in 2008 and 2009, both older cars and new cars will be in service on the line. The Red Line has two branches, and operates using three types of cars. There are no set distribution policies for the assignment of Type 1, 2, and 3 cars to the two Red Line branches (Ashmont and Braintree). All three types are put into service on both branches as available. Table 4-12 lists the vehicles that are currently in the heavy rail fleet.

Table 4-12: Heavy Rail Fleet Roster

Line	Type/Class of Vehicle	Fleet Size	Year Built	Builder	Length	Width	Seats	Planning Capacity
Blue Line	No. 4 East Boston	70	1978-80	Hawker-Siddeley (Canada)	48' 10"	111"	42	95
	No. 5 East Boston	94 on order	2007/2008	Siemens	48' 10"	111"	42	95
Orange Line	No. 12 Main Line	120	1979-81	Hawker-Siddeley (Canada)	65' 4"	111"	58	131
Red Line	No. 1 Red Line	74	1969-70	Pullman Standard (USA)	69' 9 3/4"	120"	63	167
	No. 2 Red Line	58	1987-89	UTDC (Canada)	69' 9 3/4"	120"	62	167
	No. 3 Red Line	86	1993-94	Bombardier (USA)	69' 9 3/4"	120"	52	167

Planning and design are underway for the next generation of vehicles for the Red and Orange Lines as well as for accommodation of expanded Green Line service associated with the Commonwealth’s commitment to extend the Green Line to Somerville and Medford by December 2014.

Commuter Rail Vehicle Assignment

Vehicle assignments are developed to based on specific standards of commuter rail service. These standards include providing a minimum number of seats for each scheduled trip, providing one functioning toilet car in each trainset, maintaining the correct train length to accommodate infrastructure constraints, and providing 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.

Railroad Operations operates a 377-route-mile regional rail system in the Boston metropolitan area composed of 13 lines that serve 125 stations. The existing system consists of two separate rail networks: a five-route northern system, which operates north and east from North Station to terminals at Rockport, Newburyport, Haverhill, Lowell, and Fitchburg; and an eight-route southern system, which operates south and west from South Station to terminals at Worcester, Needham, Franklin, Attleboro, Providence, Stoughton, Readville, 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 when arriving in Boston.

The commuter rail coach fleet is composed of four types of coaches and two types of locomotives, which are assigned to the 13 commuter rail routes. Both coaches and locomotives have a service life of 25 years. Table 4-13 lists the vehicles in the current fleet.

Train consists are assembled 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 122 coaches in 22 north-side trains and 213 coaches in 33 south-side trains. Most train consists generally are not dedicated to a specific line, but are cycled throughout the system (either north or south). The following vehicle characteristics must also be considered when assigning vehicles:

- **Kawasaki Coaches (bilevel)** – There is no specific policy restricting the use of these vehicles in the commuter rail system. Currently they are used exclusively in the south-side commuter rail system, since it carries approximately 65% of the total boardings of the system. The bilevel coaches offer substantially more seating than the single-level coaches. This allows Railroad Operations to maintain consist seating capacity while minimizing the impacts of platform and layover facility constraints. The MBTA intends to purchase only bilevel coaches in future procurements in order to accommodate increasing ridership demands and to allow for greater flexibility when scheduling vehicle assignments.
- **Messerschmitt-Bolkow-Blohm (MBB) Coaches**– Every train consist has at least one MBB coach equipped with toilet facilities. MBB blind-trailer coaches have also been modified to guarantee priority seating for eight wheelchair spaces on all trains on the Worcester Line commuter rail line in accordance with agreements made at the time of the commuter rail extension to Worcester. There are only 14 trains that are cycled on the Worcester Line daily; however, 33 coaches were modified to provide for greater vehicle assignment flexibility.
- **Old Colony Lines** – 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 platforms. This enables a crew member to 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.
- **Advanced Civil Speed Enforcement System (ACSES)** – All control coaches and locomotives operating on the Providence Line must be equipped with a functioning ACSES system. ACSES is a Federal Railroad Administration (FRA)–mandated requirement. All locomotives except the GP40 series have ACSES installed and functioning. The GP40 locomotives have ACSES installed but have not yet been qualified to use it. The Bombardier control coaches do not have ACSES installed as of yet, and therefore are limited to the north-side service. There are more locomotives and control coaches equipped with ACSES than are required to meet the daily Attleboro scheduled trips. This provides for greater flexibility in vehicle assignments.
- Every train consist must have a control coach.

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

Table 4-13: Commuter Rail Fleet Roster

Manufacturer	Fleet Size	Date	Classification*	Rebuilt	Seats
Pullman	57	1978–79	BTC-1C	1995–96	114
MBB	33	1987–88	BTC-3		94
MBB	34	1987–88	CTC-3		96
Bombardier A	40	1987	BTC-1A		127
Bombardier B	54	1989–90	BTC-1B		122
Bombardier C	52	1989–90	CTC-1B		122
Kawasaki	50	1990–91	BTC-4		185
Kawasaki	25	1990–91	CTC-4		175
Kawasaki	17	1997	BTC-4		182
Kawasaki	15	2001–02	BTC-4		182
Kawasaki	33	2005–07	BTC-4C		180

*BTC = Blind Trailer Coach; CTC = Control Trailer Coach

Modernization of the commuter rail fleet is currently underway through the procurement of 28 locomotives and 75 bilevel coaches that will be delivered in 2012/2013.

Transit Security

This is the first Title VI report in which recipients are required to report on transit security measures that are taken to protect employees and the public against any intentional act or threat of violence or personal harm, either from criminal activities or terrorist acts. The following section summarizes the security measures for which the MBTA has developed and implemented policies.

Placement of Callboxes at Stations

The locations for placement of callboxes at MBTA stations are selected as part of the Crime Prevention Through Environmental Design (CPTED) program, which is governed by the following MBTA guidelines:

"Crime Prevention Through Environmental Design (CPTED) is the proper design and effective use of the built environment which may lead to a reduction in the fear and incidence of crime, and an improvement of the quality of life."

– National Crime Prevention Institute

CPTED theories contend that law enforcement officers, architects, transit and city planners, landscape and interior designers and resident volunteers can create a climate of safety in a community, right from the start. CPTED's goal is to prevent crime through designing a physical environment that positively influences human behavior – people who use the area regularly perceive it as safe, and would-be criminals see the area as a highly risky place to commit crime.

CPTED studies ways to design physical spaces to reduce undesired behavior and crime. It can be used when developing new areas, reviewing plans, or revising existing space. CPTED is helpful with large projects such as multi-unit housing, transit systems, parks, business centers and shopping centers, as well as single family homes and offices.

The Four Strategies of CPTED

- 1. Natural Surveillance** - A design concept directed primarily at keeping intruders easily observable. This can be promoted by features that maximize visibility of people, parking areas and building entrances: doors and windows that look out on to streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; adequate nighttime lighting.
- 2. Territorial Reinforcement** - Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. This can be promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments, and "CPTED" fences.
- 3. Natural Access Control** - A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. This can be gained by designing streets, sidewalks, building entrances and neighborhood gateways to clearly indicate public routes and discouraging access to private areas with structural elements.
- 4. Target Hardening** - Accomplished by features that prohibit entry or access, such as window locks, dead bolts for doors, interior door hinges.

An example of CPTED:

Loitering is not a very common occurrence in Boston, but when it is reported in or around the Massachusetts Bay Transportation Authority's (MBTA) major transportation centers, the MBTA and the MBTA Transit Police address the issue quickly. The MBTA Transit Police Department provides security and law enforcement for the entire MBTA system and works closely with the MBTA in using CPTED methods. An example of this can be seen in making physical changes to bus stops and benches to deter loitering. By adding seat dividers, each individual seated at a bus stop bench have a clear defined area that temporarily belongs to them, while at the same time the seat dividers deter individuals from taking over an entire bench by sprawling their body across as if to use the bench as a bed. Most implementations of CPTED occur solely within the "built environment" to dissuade offenders from loitering. These tactics have been proven to dissuade those who loiter in and around transportation centers.

Transit Facility Safety and Security Review

The concept of Crime Prevention through Environmental Design (CPTED) has evolved as a means to reduce the opportunities for crimes to occur. This is accomplished by employing physical design features that discourage crime, while at the same time encouraging legitimate use of the environment. CPTED design considerations, which have been employed in recent years by transit agencies in the design of safer public facilities, such as transit stations and bus stops, can be used to secure and harden elements of an agency's infrastructure from hazards and threats. Major elements of the CPTED concept are defensible space, territoriality, surveillance, lighting, landscaping, and physical security planning. These facilities include transit stops, transit stations and vehicle storage yards.

- **Access Management**

Controlling who (or what) may access restricted areas and assets in the system plays an important role in protecting transit infrastructure from all of the major threats identified in this section. A core principle of access management is that

valuable assets are protected behind multiple “layers” of secure spaces, with security measures becoming more stringent for deeper layers. Access control may focus on discerning between employees and visitors, on maintaining locks, on screening for weapons, or on barring unauthorized vehicle entry to a transit property. Access management techniques may include procedures and policies, physical barriers, identification and credentialing technology, security personnel, communications systems, surveillance, and intrusion-detection systems.

- **Surveillance**

Surveillance can include closed-circuit televisions, security personnel, or vigilant bus operators/drivers or station clerks, who are often the first line in security defense. The presence of agency staff can deter an attack. The presence of surveillance equipment acts as a deterrent not only because an area is being watched remotely, but also because activities are recorded and intruders are aware of the possibility of detection and capture. Surveillance is also useful in warding off attacks upon remote, unmanned infrastructure, such as communications towers and power substations. Transit agencies should consider what combination of equipment and personnel are needed to achieve optimal security coverage. Placement should be based on the volume of human and vehicular traffic, the layout of the watched or guarded asset, as well as the location of any blind spots resulting from overlapping or peripheral areas.

- **Facility Inspection**

Safety and security reviews should also include inspection of all facilities with special attention directed to:

- Hazardous material storage, security and record-keeping
- Fuel storage and servicing
- Personnel safety equipment (e.g. automatic defibrillators, eye wash stations, first aid and blood borne pathogen kits)
- Fire prevention (e.g., fire extinguishers, alarms, sprinklers)
- Maintenance infrastructure (e.g., pits, lifts, electrical feeds, no-walk areas, parts storage)
- Lighting
- Entrances, exits, intrusion detection, CCTV
- Communication equipment
- Sensitive employee and customer information
- High-risk facilities and activities near transit facilities and operations
- Emergency supply cabinet or shed (food, water, medical, generator)
- Perimeter fencing, physical barriers, barricades
- Utility mains/shutoffs
- Traffic calming

Placement of Surveillance Cameras on Buses

In 2006, the MBTA began placing cameras on some buses for surveillance and crime-prevention purposes. All buses that have been purchased since then are equipped with cameras, and all buses in future procurements will have cameras.

Security Inspection Program

In response to the terrorist attacks of September 11, 2001, in the United States, and subsequent terrorist attacks in other countries, the MBTA Transit Police developed a station inspection program through which searches of passengers’ handbags, briefcases, and other carry-on items can be implemented. The purpose of this program is to deter passengers from carrying explosives or

other weapons onto MBTA vehicles; and the Transit Police are currently scheduling random inspections throughout the system. The full text of the policy, which is spelled out in General Order No. 2006-12, Chapter 152, of the MBTA Transit Police department manual, can be found in Appendix B of this report. Some of the provisions dictated by this policy include the requirement that supervisors record the race and gender of passengers who are inspected to assure that there is no actual or perceived bias-based profiling. In addition, the Police Department must translate information regarding inspections into multiple languages, and will use the Department's contracted "Language Line" interpreter service when inspecting a non-English-speaking passenger.





Requirement to Evaluate Service Changes (FTA C4702.1A, IV. 4.a.(1))

Service Changes Since 2005

The MBTA's Service Delivery Policy, as revised in 2006, defines major service changes as ones that will have a significant effect on riders, resource requirements, route structure, or service delivery, including:

- Major service restructuring
- Implementation of new routes or services
- Elimination of a route or service
- Elimination of part of a route
- Span of service changes greater than one hour

With the exception of new services associated with a major capital investment, major service changes are generally evaluated and implemented through development of the Biennial Service Plan. As a part of the service-planning process, the MBTA has incorporated the Title VI Level of Service analysis for vehicle load, vehicle headway, and on-time performance into the evaluation of the changes proposed in each preliminary and final service plan. The Quality of Service analysis is performed before the final service recommendations are implemented to ensure that, overall, the service changes do not disadvantage minority and low-income populations.

Since the 2005 Title VI report was completed, the MBTA has implemented the following major service changes:

Fall 2005: The Night Owl pilot program was discontinued due to high costs and low ridership.

Spring 2006: Bus Route 245 was changed to serve the Quarry Street apartment buildings in Quincy, adding six minutes to the trip times. In addition, one hour of service was added at the end of the day on Saturdays.

Winter 2007:

- Service on Route 60 was extended into Chestnut Hill Mall.
- The Saturday span of service on Routes 40 and 50 was extended two hours by eliminating the last two Route 40 trips and the last two Route 50 trips, and replacing them with four 40/50 loop trips.
- Service on Route 5 was extended to JFK/UMass Station in the outbound direction.
- Fall 2007: Sunday Service was added on Route 90.
- The Greenbush commuter rail line was opened for service.

Requirement to Evaluate Fare Changes (FTA C4702.1A, IV. 4.a.(1))

Evaluation of Proposed 2007 Fare Increase

In 2007, the MBTA restructured its fares to simplify them and to take advantage of new flexibilities offered by the new fare-vending technology that became operational in the same time frame. Also at that time, the MBTA raised its fares to help close a budget gap. As a part of the analysis for the proposed fare restructuring and increase, the Central Transportation Planning Staff (CTPS) of the Boston Region Metropolitan Planning Organization (MPO) looked at the effects these changes would have on transit users in environmental- justice communities. The following text is from *Technical Report: Impact Analysis of a Potential MBTA Fare Increase and Restructuring in 2007*.

ENVIRONMENTAL JUSTICE IMPACTS

Definition of Environmental Justice Neighborhoods

To assess the impacts of the potential 2007 fare increase and restructuring on minority and low-income communities, an environmental justice impacts analysis was undertaken. Environmental justice neighborhoods were identified based on a methodology developed from Federal Transit Administration guidance to the MBTA's ongoing Title VI program and past practice of the Boston Region MPO. First, the income levels and percentages of minority populations in all traffic analysis zones (TAZs) in the region were identified. Low-income TAZs were then defined as areas with income levels at or below 75% of the MBTA service area median household income (\$41,850). Minority TAZs are those in which the non-white or Hispanic population is greater than the average for the MBTA service area (approximately 20%). Any TAZ which qualifies as either minority or low-income is considered an environmental justice community.

Equity Determination of Proposed Fares

After identifying the minority and low-income communities, the equity of the system's fare structure and levels was assessed, in terms of both the existing and proposed conditions, using the Boston Region MPO's regional travel demand model. Under the current fare structure, the average fare for low-income TAZs is estimated to be \$1.15, which is \$0.04 below the systemwide average¹ of \$1.19. The estimated average fare for minority TAZs is lower, at \$1.11. Under the proposed fare increase and restructuring, the average fares for low-income and minority TAZs are estimated to be \$1.43 and \$1.38, respectively, while the systemwide average is estimated to be \$1.46. Table 11 compares these average fare values and Table 12 [called Table 5-1 in this report] compares the monetary increases associated with each category.

¹ "Systemwide" refers to the entire modeled area of the regional travel-demand model, which encompasses the entire bus, rapid transit, and commuter rail networks.

Table 5-1: Existing and Proposed Average Fares for Environmental Justice TAZs

	Existing Average Fare	Proposed Average Fare
Low-income TAZs	\$1.15	\$1.43
Minority TAZs	1.11	1.38
Systemwide Average	1.19	1.46

Table 11 [called Table 5-2 in this report] indicates that the proposed fare structure and fare levels, as well as the current structure and prices, do not place a disproportionate burden on environmental justice communities. Indeed, low-income and minority TAZs pay lower average fares than the systemwide average. In moving from the existing to the proposed fare structure, as shown by Table 12, the difference between the monetary increase in average fares paid by low-income and minority TAZs and the systemwide average is less than \$0.012. Since these differences are approximately equal for each of the three categories shown in Table 12, the proposed fare structure maintains lower fares on average for environmental justice communities. Note that pass users typically pay lower average fares than customers who pay for one ride at a time. This benefits the MBTA’s most committed ridership and those who are transit-dependent.

Table 5-2: Projected Absolute Changes in Fares for Low-Income and Minority TAZs

	\$ Change in Fare
Low-income TAZs	+ \$0.281
Minority TAZs	+ 0.273
Systemwide Average	+ 0.269

Comparative Percentage Changes in Average Fare

While the proposed fare structure clearly does not place a disproportionate burden on environmental justice communities, as described above, one may note that when the absolute price changes shown in Table 12 are converted to percentage changes, minority and low-income neighborhoods appear to experience slightly higher impacts than the system as a whole. The systemwide increase in revenue per trip projected by the travel demand model equals 22.5%, while the percentage change estimated for low-income TAZs is 24.4% and for minority TAZs is 24.7%. However, these differences should be understood with two qualifications.

First, since the existing average fare for environmental justice communities is lower than the systemwide average, the nearly equal absolute price increases shown in Table 12 will affect these environmental justice communities relatively more on a percentage basis. Second, even though the regional travel demand model has no defined margin of error, it is reasonable to assume that such differences, or at least part of such differences, may lie within the inevitable error of a model trying to predict human behavior. This margin of error applies as much to the average fare values shown in Tables 11 and 12 as to the differences in the percentage changes.

In an effort to better understand the cause of this difference in percentage changes, several attempts were made to reduce or eliminate them by modeling variations on the proposed fare structure. None of these attempts was entirely successful, either alone or in combination, at eliminating them; however, each did have the effect of lowering the absolute changes in average fares for environmental justice communities, and therefore, the percentage changes as well. Reducing rapid transit prices from the original proposal, for example, did reduce the percentage differences slightly. This is because there is a greater proportion of environmental justice TAZs than systemwide TAZs within a one-mile radius of rapid transit stations. Thus any decrease in rapid transit prices will affect environmental justice communities relatively more than the system, thereby reducing, but not eliminating, the difference between their estimated percentage change in average fare and that of the system as a whole.

The inability of price adjustments to totally eliminate the modeled differences in percentage increases suggests that the proposed structural changes to fare payment categories, irrespective of any price increases, may be contributing factors. It should be noted that several aspects of the proposed fare structure were incorporated to promote equity upon recommendations of the MBTA Rider Oversight Committee. These new features actually appear to result in relatively higher percentage price changes for environmental justice communities, according to the model. The step-up transfer, for example, was intended by the Rider Oversight Committee to eliminate the perceived penalty faced by riders who live beyond a reasonable walking distance to rapid transit and must therefore transfer between bus and rapid transit. Under the current fare structure, these residents pay a bus fare plus a rapid transit fare, for a total of \$2.15, when transferring. The step-up transfer will lower the cost of this trip to \$1.70, undoubtedly benefiting many transit-dependent low-income and minority residents, especially those in sections of Dorchester (such as the Grove Hall and Four Corners neighborhoods) and all of the City of Chelsea, who tend to transfer between bus and rapid transit.

However, the regional travel demand model projections suggest that this transfer privilege would actually benefit non-low income and non-minority communities more (since a greater proportion of non-environmental justice TAZs lie outside the radius of rapid transit stations that is considered to be a reasonable walking distance by the model). In addition, the elimination of premium fare zones on the rapid transit system in Newton, Quincy, and Braintree was intended by the Rider Oversight Committee to simplify the fare structure and make it easier to understand. However, the model projects that this simplification would provide greater benefits to residents of non-low income and non-minority TAZs, thus lowering the systemwide average percentage increase in comparison to that of environmental justice TAZs.

While these efforts to explore various adjustments to the proposed fare structure are instructive, no changes are ultimately necessary in the context of environmental justice or Title VI considerations. First, the results shown above in Tables 11 and 12 clearly indicate that environmental justice communities will continue to pay average fares that are less than the systemwide average, even after the implementation of the proposed fare increase and restructuring. Second, each of the potential adjustments suggested above is inconsistent with the intent of the proposed structural changes to create a simpler and fairer pricing system. In particular, the proposed step-up transfer responds to the legal mandate included in the MBTA enabling legislation to provide free or substantially reduced transfers between bus and rapid transit. This was a key component of the MBTA's discussions regarding the fare structure with the Rider Oversight Committee, whose participation and recommendations consistently emphasized a concern for equity--Per those recommendations, a single fare of \$1.70 will now allow one to travel from one end of the core network to the other on any combination of bus or rapid transit routes: one trip equals one fare.





Requirement to Monitor Transit Service IFTA C4702.1A, V.5.1

The revised FTA Circular 4702.1A requires that, to comply with Title VI, recipients must undertake periodic service-monitoring activities to compare the level and quality of service provided to predominantly minority and low-income areas with service provided in other areas. Although the circular requires that monitoring be conducted every three years at a minimum, the MBTA conducts annual monitoring to ensure that potential problems are found and rectified in a timely fashion. The following two tables present the framework for the MBTA's Title VI monitoring procedures. The subsequent text reports the findings of the most recent Title VI data collection and analysis.

Table 6-1: MBTA Title VI Level-of-Service Monitoring

Service Indicator	Department(s) Responsible	Planned Frequency of Compliance Assessments
1. Vehicle Load, Vehicle Headway, and On-Time Performance		
• Bus	Service Planning	Every 2 years
• Heavy Rail & Light Rail	Subway Operations & Service Planning	Every 2 years
• Commuter Rail	Railroad Operations	Every 2 years
• Data Collection - Bus	CTPS	Ongoing
2. Transit Access		
• All Modes	Service Planning	Every 2 years
3. Distribution of Transit Amenities		
• Bus shelters, benches, timetables, and route maps	Operations and Services Development	Annually
• Neighborhood maps	Operations and Services Development	Annually
• Trash receptacles	Operations and Services Development	Annually
• AFC fare gates & fare vending machines	AFC	Annually
• Variable message signs	Subway, Silver Line, & Railroad Operations	Every 3 years
• Station elevator & escalator location & operability	Operations Support	Annually
• Station parking & utilization	Long-Range Planning	Annually

(continued)

Table 6-1 (continued)

Service Indicator	Department(s) Responsible	Planned Frequency of Compliance Assessments
4. Vehicle Assignment		
• Bus	Bus Operations	Annually
• Heavy Rail & Light Rail	Subway Operations	Annually
• Commuter Rail	Railroad Operations	Annually
5. Transit Security		
• Callboxes	Transit Police	Every 3 years
• Surveillance cameras	Bus Operations & Transit Police	Every 3 years
• Passenger inspections	Transit Police	Annually

Table 6-2: MBTA Title VI Quality-of-Service Monitoring

Travel Pattern Analysis	Department Responsible	Planned Frequency of Compliance Assessments
All modes	Service Planning	Every 2 years

Option A: Level-of-Service Monitoring

For the Level-of-Service monitoring of MBTA services, all bus routes, rapid transit lines, and commuter rail lines must be designated as minority or nonminority and as low-income or non-low-income. In the previous circular (FTA C4702.1), a route was defined as minority if it had one-third of its route miles in minority census tracts. Using this definition, some express bus routes and commuter rail lines were designated as minority, even though they did not stop in the minority census tracts through which they passed. Therefore, the MBTA developed an alternative way of defining minority routes for these services: routes were designated as minority if one-third of the stops/stations were in minority census tracts.

Because the new circular does not specify exactly how routes should be defined as minority and low-income, CTPS explored methods that would avoid the problems encountered when using route miles. The method selected is based on the percentage of boardings on a route that occur at stops/stations in minority and low-income census tracts. CTPS evaluated different ridership thresholds in several ways, including mapping the routes, comparing the new definitions with the route-mile definitions, relying on a good working knowledge of the system, and applying professional judgment to determine a new threshold. Using this new definition, for the purposes of this report, all bus routes, rapid transit lines, and commuter rail lines are defined as minority or low-income if 40% of boardings occur in minority or low-income census tracts. Appendix C lists all bus, rapid transit, and commuter rail lines and indicates their minority and low-income status.

Vehicle Load, Vehicle Headway, and On-Time Performance

Bus and Trackless Trolley

Through its regular service-planning process, the MBTA Service Planning Department evaluates the performance of all bus routes in relation to the Authority's *Service Delivery Policy*, which includes service standards for vehicle load, vehicle headway (frequency of service), and on-time performance (schedule adherence). In keeping with the *Service Delivery Policy*, minor service

changes are made routinely in response to changes in service demand, whereas major changes can only be made through a Service Plan. Every two years, all bus routes (with the exception of those that were subject to major restructuring in the previous Service Plan) are evaluated through a comparative analysis for all of the service standards in the *Service Delivery Policy*. Based on this analysis, proposed changes to existing services, as well as suggestions for new services, are compiled into a Preliminary Service Plan. The goals of the Service Plan are to bring all routes into compliance with the service standards to meet changing demands for transit services. The draft plan is presented to the public in a variety of ways, including public meetings and hearings. Based on public input, additional service changes may be made before the final recommendations are compiled, approved, and implemented.

The following table shows the vehicle load and frequency of service performance that would result from the changes that are proposed in the *Preliminary 2008 Service Plan*. Because all low-income routes are also minority routes, a separate analysis for routes that are both minority and low-income is not necessary.

Table 6-3: Bus—Vehicle Load and Frequency of Service

	Vehicle Load: % of Routes Passing the Standard			Frequency of Service: % of Routes Passing the Standard		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Minority	88.1%	91.2%	91.8%	81.0%	91.2%	78.7%
Nonminority	95.4%	95.0%	94.7%	62.1%	81.7%	73.7%
Low-income	92.9%	86.4%	80.0%	78.6%	95.5%	75.0%
Non-low-income	91.6%	94.3%	96.2%	69.9%	84.9%	77.2%
Systemwide	91.8%	93.0%	92.9%	71.3%	86.7%	76.8%

As can be seen in Table 6-3, on weekdays, Saturdays, and Sundays, the percentage of minority routes that pass the vehicle load standard is lower than the percentage of nonminority routes passing the standard. In addition, the percentage of low-income routes that pass the vehicle load standard is lower than for non-low-income routes on Saturdays and Sundays. For frequency of service, the percentage of routes that pass the standard is higher for minority routes than for non-minority routes on all days of the week, and the percentage of low-income routes that pass the standard is higher than the percentage of non-low-income routes that pass on weekdays and Saturdays.

Historically, schedule adherence data were collected through direct observations. Due to the size of the MBTA bus system, data for each route were collected on only one composite day every two or more years. The ongoing installation of a CAD/AVL system on buses allows the MBTA to collect data for each route on a daily basis at multiple timepoints. The Service Planning Department has been using this increased volume of data to refine current public timetables that better reflect actual running times along an entire route to improve the printed schedules used by customers.

The current schedule-adherence standard was written in anticipation of the CAD/AVL rollout. However, as the Service Planning Department has begun to apply the existing standard using the new data, it has become apparent that the schedule-adherence standard needs more refinement to be used to evaluate the performance of a bus route over its entire length as well as to compare the performance of each bus route with all others. Therefore, a modification of the schedule-adherence standard has been proposed that would be based on the proportion of monitored timepoints at which the bus is on time for all scheduled trips over the effective period of a set of timetables. The schedule-adherence results reported in the *Preliminary 2008 Service Plan* use

this revised methodology and are based on data collected over the entire fall 2007 period. Using this new technique, a bus route is considered to meet the schedule-adherence standard if 75% of all measured timepoints are on time.

The following table reports the schedule-adherence performance of all routes evaluated in the *Preliminary 2008 Service Plan*, showing the percentage of timepoints at which buses were on time. Because these percentages could not be predicted based on the service improvements proposed in the *Preliminary 2008 Service Plan*, the numbers reported below represent the current schedule adherence. Because all low-income routes are also minority routes, a separate analysis for routes that are both minority and low-income is not necessary.

Table 6-4: Bus – On-Time Performance

Schedule Adherence: % of Timepoints at Which Routes Are On Time			
	Weekday	Saturday	Sunday
Minority	60.0%	63.4%	65.3%
Nonminority	59.4%	60.6%	63.1%
Low-income	59.5%	60.9%	63.7%
Non-low-income	59.7%	62.3%	64.7%
Systemwide	59.7%	62.1%	64.5%

As can be seen in Table 6-4, on weekdays, Saturdays, and Sundays, minority routes outperform nonminority routes, and the performance of low-income routes is slightly lower than non-low-income routes. However, ongoing adjustments to the public timetables based on the new CAD/AVL data should improve the schedule adherence on all routes. In addition, increases in service frequency that are proposed in the Service Plan to reduce crowding can also be expected to improve schedule adherence.

Heavy and Light Rail: Vehicle Load, Headway, and Schedule Adherence

For the purposes of Title VI, the MBTA’s three heavy rail lines (Red Line, Blue Line, and Orange Line) are considered minority and non-low-income; therefore, comparative monitoring of minority vs. nonminority and of low-income vs. non-low-income service performance is not necessary.

However, the light rail system, which includes the four branches of the Green Line, and the Mattapan High Speed Line, shows variability in the minority and low-income status, with the Green Line B and E Branches being classified as both minority and low-income, and the C and D Branches being classified as neither minority nor low-income. The Green Line central subway and the Mattapan Line are minority, but are not low-income.

Table 6-5: Heavy and Light Rail – Minority and Low-Income Status

Line	Branch	Minority	Low-Income	Both
Light Rail				
Green	B	Y	Y	Y
	C	N	N	N
	D	N	N	N
	E	Y	Y	Y
Mattapan (Red)		Y	N	N
Heavy Rail				
Red		Y	N	N
Blue		Y	N	N
Orange		Y	N	N

To monitor the light rail system, Green Line trains were observed inbound at Copley Station between 6:00 AM and 9:00 PM on July 2, 2008, and outbound at Arlington Station between 6:00 AM and 9:00 PM on July 1, 2008. The Mattapan High Speed Line was observed inbound and outbound at Ashmont Station on July 8, 2008.

Vehicle load standards for light rail, as defined in the *Service Delivery Policy*, allow for loads equal to 225% of the seated capacity in the Early AM, AM Peak, Midday School, and PM Peak periods. During all other time periods (Midday Base, Evening, Late Evening, Night/Sunrise, and Weekends), loads in the core area should not exceed 140% of seated capacity.

Using a five-point rating system, with “1” equal to an empty train and “5” equal to full crush load, the average observed load for all Green Line branches and the Mattapan High Speed Line during the peak periods of both days combined was 2.8. During the off-peak period, the average load was 2.5.

Table 6-6 shows that, for minority branches, the average peak load was 2.8, and for low-income branches the average peak-load was 3.17, while for all branches it was 2.9. The average off-peak load for minority branches was 2.4, and the average off-peak load for low-income branches was 2.61, while the average load for all branches was 2.4. Since the 225% load factor allowed during peak periods equates roughly to an observed load rating of 4, and the 140% load factor allowed during the off-peak period equates roughly to an observed load rating of 3, none of the branches— neither the minority, the low-income, the nonminority, nor the non-low-income branches— exhibits violations of the vehicle load standard.

With respect to scheduled headways, almost all light-rail service meets the MBTA service standards for frequency of service. Those standards are headways of 10-minutes or less in the peak, and 15-minutes or less at all other times. The only light-rail service that does not meet the frequency standards is the Mattapan High Speed Line, a minority route. This route operates every 30 minutes on Sunday mornings before 10:00 AM, but is in compliance at all other times.

Light-rail-surface schedule adherence policies call for 85% of all trips to operate at intervals less than or equal to 1.5 times the scheduled headway. All individual Green Line branches and the Mattapan Line met the schedule-adherence policy based on observations from automatic-vehicle identification systems.

Table 6-6: Light Rail Vehicle Load

Line Classification	Average Vehicle Load*	
	Peak Periods	Off-Peak Periods
Minority	2.80	2.36
Nonminority	3.02	2.37
Low-income	3.17	2.61
Non-low-income	2.70	2.16
Total	2.90	2.36

* Numbers shown are based on observations that use a rating scale of 1 to 5, where 1 equals an empty train and 5 equals full crush load.

Commuter Rail: Vehicle Load, Vehicle Headway, and Schedule Adherence

As a part of its ongoing planning process, every six months Railroad Operations evaluates the performance of commuter rail services against the MBTA's standards for vehicle load, vehicle headway, and schedule adherence. Through contractual agreement, the commuter rail operating contractor, Massachusetts Bay Commuter Railroad Company (MBCR), provides the data used for this analysis. Based on the analysis, minor schedule changes are implemented to improve service in areas with a demonstrated need. Minor changes may also result from passenger suggestions forwarded to the "Write to the Top" campaign, and can be accomplished by, but are not limited to one or more of the following: (1) adjusting schedule times, (2) increasing service with additional trips (e.g., express service), and (3) redistribution of equipment. Major service changes, such as service expansion or line extensions, require approval by the MBTA Board of Directors and capital funding prior to implementation.

For the purposes of Title VI monitoring, Railroad Operations completes compliance assessments for vehicle load, vehicle headway, and on-time performance (OTP) twice a year, before implementing the schedule changes that are made as a part of the regular planning process. If the assessment of the proposed changes demonstrates that service on minority routes does not comply with Title VI requirements, Railroad Operations develops, within the operating constraints of commuter rail, a solution that minimizes or eliminates Title VI noncompliance before changes are implemented. These biennial assessments are utilized once every two years for the periodic Level of Service and Quality of Service compliance assessments.

Vehicle Load

The purpose of this assessment was to determine if the service provided for both minority and nonminority users is consistent with our stated objectives. For the purpose of monitoring Title VI compliance, Railroad Operations performed an assessment for vehicle load, schedule adherence, and vehicle assignment.

The MBTA commuter rail loading standard during peak periods, as indicated in the *Service Delivery Policy*, is 110% of the seating capacity. This standard was increased in December 2002, from 100%, for improved equity in the stated guidelines of the MBTA.

MBCR utilizes an electronic rail operations management system to provide consist information and ridership details, and to monitor performance. Passenger counts are reported by the train crews for each trip and input into the system along with consist information. This information is independently verified twice annually, as required by the Operating contract. This independent audit of passenger counts is generally considered more accurate and was used for this report. This information was summarized to develop vehicle-load percentages for each peak-period train.

The AM and PM peak-period information was collected for the purpose of this analysis. Table 6-7 shows the ratios of passengers to seats on all commuter rail lines. The commuter rail Load Standard allows up to 110% of a seated load during peak hours and assumes that all passengers will have a seat during off-peak. All of the minority and nonminority routes pass the Load Standard. None of the commuter rail lines is classified as low-income.

Vehicle Headway

All of the commuter rail lines pass the MBTA's Frequency of Service Standard during peak and off-peak periods on weekdays. However, only three of the nonminority pass on Saturdays, and neither of the minority routes pass on Saturday (the Fairmount Line does not have Saturday service). All of the lines that fail the standard on Saturday do so because the first trip in the morning does not arrive by 8:00 AM. The MBTA commuter rail department will evaluate ways in which to ensure that all routes pass the standard on Saturdays.

Table 6-7: Commuter Rail – Vehicle Load Percentage, Spring 2008

Status	Line	Ratio of Passengers to Seats	
		AM Peak	PM Peak
Minority	Fairmount	11%	10%
	Middleborough	71%	70%
Nonminority	Rockport	91%	68%
	Newburyport	72%	70%
	Haverhill	68%	65%
	Lowell	64%	79%
	Fitchburg	70%	56%
	Worcester	71%	76%
	Needham	71%	63%
	Franklin	59%	83%
	Attleboro	80%	92%
	Kingston	71%	86%
	Stoughton	77%	50%
	Greenbush	52%	46%

Schedule Adherence

The MBTA's *Service Delivery Policy* sets a schedule-adherence standard of 95% for all trains arriving at their final terminals within 5 minutes of scheduled arrival times. The Commuter Rail Operating Agreement specifies bench marks for different on-time performance, and subjects the contract operator to a penalty for any train that arrives at its final terminal more than 4 minutes and 59 seconds late when the OTP for the line on which that train operated is less than 95.00% for that day.

MBCR collects and records the OTP data of all revenue trains on a daily basis and maintains it in the rail operations management system. Reports are generated that provide statistics on trains scheduled, trains operating on time, and OTP each day. Because this information is readily available, the data for the 12-month period for state fiscal year 2008 ending June 30, 2008, were reviewed.

As indicated in Table 6-8 below, there were no routes that met or exceeded the schedule-adherence standard of 95% for that period.

Table 6-8: Commuter Rail – Schedule Adherence, July 2007–June 2008

Status	Line	Percentage of Trips that Pass the Schedule Adherence
		Standard
Minority	Fairmount	67%
	Middleborough	83%
Nonminority	Rockport	81%
	Newburyport	84%
	Haverhill	79%
	Lowell	91%
	Fitchburg	80%
	Worcester	72%
	Needham	76%
	Franklin	65%
	Attleboro	76%
	Kingston	88%
	Stoughton	75%
	Total system	79%

The commuter rail system has been negatively affected by a number of factors that caused lower-than-usual on-time performance systemwide. These factors include, but are not limited to:

- Operational restrictions over several bridges, including the Merrimack River bridge in Haverhill, the Route 62 bridge in Concord, and the Massachusetts Avenue and Columbia Road bridges on the Fairmount Line
- Numerous failures of the Beverly drawbridge during peak periods due to damage caused by a private barge's having struck the draw span
- Random power surges from National Grid power lines in the Lawrence-to-Haverhill area as well as the Revere and Lynn areas, causing numerous service disruptions
- Delays on one commuter rail line that can have a residual negative impact on one or more other lines, as the most efficient use of trains requires that they be used on multiple lines throughout the day

- A number of CSX track maintenance projects resulting in poor performance on the Worcester Line for a number of months
- The opening of the Greenbush Line which, while very successful, required significant process changes and coordination between Amtrak and the MBCR maintenance facility at Southampton Street Yard
- Additional traffic between Boston's South Station and the midday maintenance/layover facility in Readville Yard on the Fairmount Line
- The ongoing three-plus-year revitalization project on the Fairmount Line, which has significantly contributed to delays on all lines on the south side, most notably in the evening peak period
- A lengthy track tie replacement project on the Franklin Line that lasted over two months and impacted all south-side lines

To resolve some of the commuter rail OTP problems in the near term, a number of significant changes were made to the schedules in April. These helped dramatically on the Greenbush and other Old Colony lines, but proved less effective on other lines, including the Fairmount Line. However, the solutions to some of the problems can only be mitigated over time. The Fairmount Line project, the Merrimack River Bridge project, the Medford Hillside drainage project, and others will continue for at least two more years. The Fairmount project, which will improve service capacity and reliability, includes major bridge reconstruction and signal system upgrades, as well as four new stations that will increase access to transit in minority neighborhoods. The MBTA is investigating the possibility of adding service on the Fairmount Line that could be introduced when the infrastructure work is complete in 2011. This could include weekend service and more frequent weekday service.

To ensure that the current public timetables accurately reflect the service as it is provided, Railroad Operations, working closely with MBCR, will make changes to all commuter rail schedules in October 2008. These schedule changes will include, where and when necessary, temporary alternate transportation to lessen the impact of scheduled construction projects, such as the Fairmount, Merrimack River, and Medford Hillside projects.

Service Availability (Coverage)

To meet the MBTA's Transit Coverage guideline, in service areas with residential densities greater than 5,000 people per square mile, transit service—of any mode—should be accessible within one-quarter mile. The analysis for this report was completed by measuring one-quarter mile via the street network (rather than “as the crow flies”) to realistically assess the distance that an individual might have to walk to access transit service at a bus stop or rail stop/station.

As can be seen in Table 6-9 below, for high-density census tracts within the Bus/Rapid Transit Service area, 86% of street-miles in minority areas meet the Transit Coverage guideline; however, only 74% of street miles in nonminority areas meet the coverage guideline. Likewise, 89% of street miles in low-income areas meet the coverage guideline, while only 78% of street-miles in non-low-income areas meet the guideline, and 90% of areas that are both minority and low-income meet the guideline, as compared to 74% of areas that are neither minority nor low-income.

Lack of transit coverage in high-density MBTA service areas is generally due to operational constraints imposed by street configurations or other physical barriers. Although some high-density nonminority census tracts, such as all of Winthrop and part of Medford, as well as one minority census tract in Milton, appear on the map (Figure 6-1) not to have access to local transit services, these areas are provided with coverage through private contract carriers that are subsidized by the MBTA. Because these routes are not coded in the analysis, the coverage numbers in Table 6-8 appear slightly lower than they should.

Table 6-9: Transit Coverage within the Bus and Rapid Transit Service Area

Areas with >5,000 people/ square mile	Total Street Miles	Bus Market		Subway Market		Bus + Subway Market		Comm. Rail Market		Market – All Modes	
		Street Miles	% of Total	Street Miles	% of Total	Street Miles	% of Total	Street Miles	% of Total	Street Miles	% of Total
Minority	1,351	1,165	86%	193	14%	1,177	87%	82	6%	1,180	87%
Nonminority	1,869	1,382	74%	120	6%	1,403	75%	60	3%	1,409	75%
Low-income	380	340	89%	79	21%	342	90%	43	11%	343	90%
Non-low-income	2,840	2,207	78%	233	8%	2,238	79%	100	4%	2,246	79%
Both minority & low-income	358	321	90%	76	21%	322	90%	43	12%	324	91%
Not both	2,862	2,226	78%	237	8%	2,258	79%	100	3%	2,265	79%
Total	3,220	2,547	79%	313	10%	2,580	80%	143	4%	2,589	80%

Distribution of Transit Amenities

Bus Shelters

For the purposes of monitoring Title VI compliance, the Operations and Services Development Department is responsible for the Level of Service assessment for bus shelters. This assessment is completed on an annual basis to evaluate whether the distribution and condition of bus shelters in minority and low-income areas are commensurate with the distribution and condition of shelters in nonminority and non-low-income areas.

Shelter Location

Operations and Services Development maintains records on the location of existing bus shelters and tracks the installation of new ones, including those that are installed by the MBTA, Wall USA, and Cemusa. Both Wall and Cemusa are private companies that install bus shelters that they purchase and maintain using revenues earned from the sale of advertising space on the shelters. Wall USA shelters are located exclusively in the city of Boston, and Cemusa shelters are located in a number of other cities within the MBTA service area. MBTA shelters are sometimes installed at bus stops where advertising is not viable.

For this report, CTPS analyzed the data provided by Operations and Services Development with respect to the location of shelters in minority areas, low-income areas, and areas that are both low-income and minority. The bus stops inside each of these three types of areas have a greater percentage of shelters than outside the respective areas, and than throughout the system as a whole. Under the MBTA's shelter placement policy, any bus stop with average daily boardings of more than 60 is eligible for a new shelter placement. CTPS therefore analyzed data for shelters located at stops that meet this threshold. As can be seen in Table 6-10 below, whether looking at all bus stops or at bus stops with the policy threshold of greater than 60 average daily boardings, the percentage of minority stops with shelters is higher than the percentage of nonminority stops with shelters. Likewise, the percentage of low-income stops with shelters is higher than the percentage of non-low-income stops with shelters, and the percentage of stops that are both minority and low-income with shelters is greater than the percentage that is not both with shelters. Figure 6-2 shows the location of all shelters in relation to minority and low-income areas in the MBTA's urban fixed-route service area.

FIGURE 6-1
MBTA Title VI Report
Transit Accessibility by
Minority and Low-Income Status:
Urban Fixed-Route Service Area

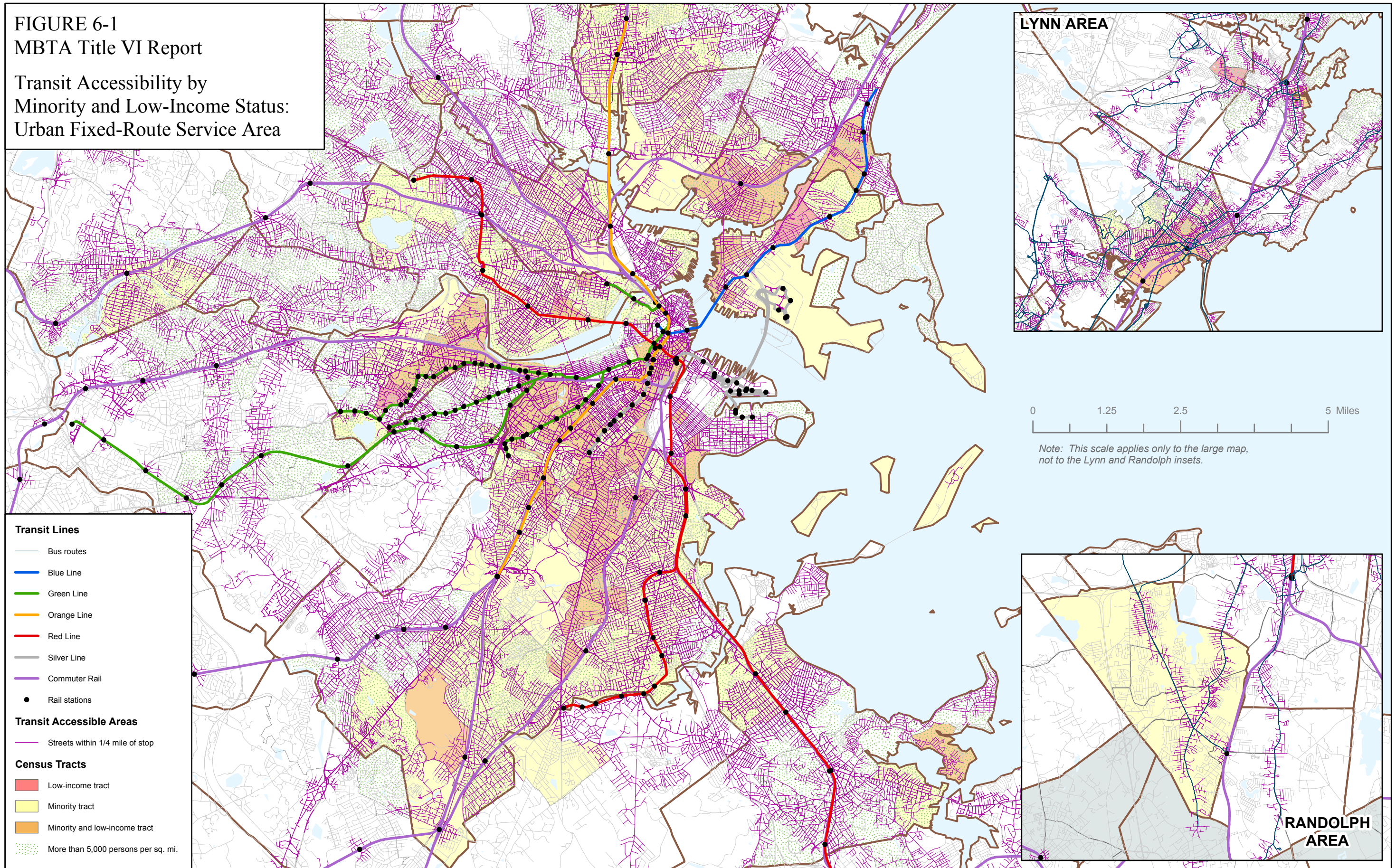
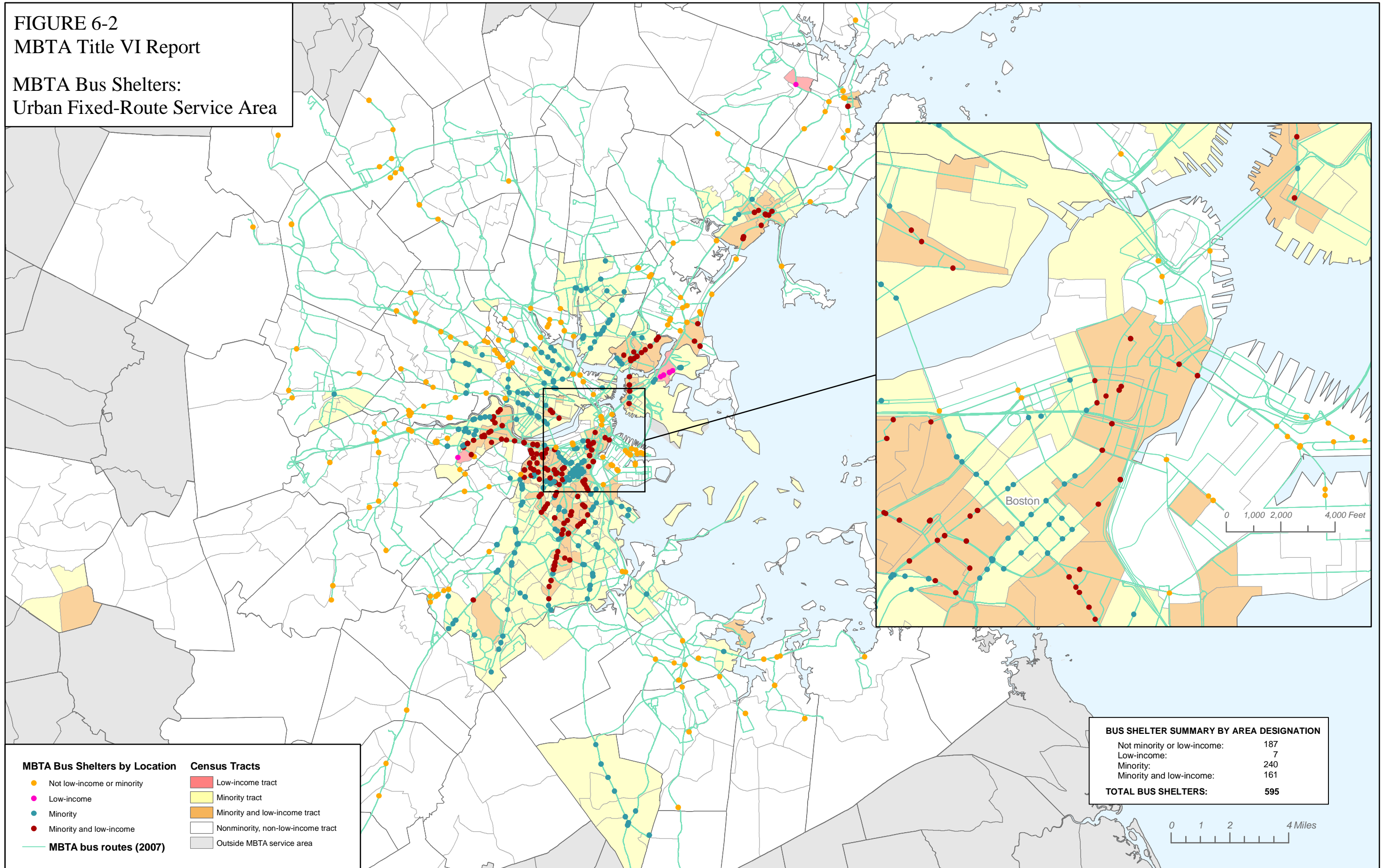


FIGURE 6-2
MBTA Title VI Report

**MBTA Bus Shelters:
 Urban Fixed-Route Service Area**



MBTA Bus Shelters by Location

- Not low-income or minority
- Low-income
- Minority
- Minority and low-income
- MBTA bus routes (2007)

Census Tracts

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

BUS SHELTER SUMMARY BY AREA DESIGNATION

Not minority or low-income:	187
Low-income:	7
Minority:	240
Minority and low-income:	161
TOTAL BUS SHELTERS:	595

0 1 2 4 Miles

Table 6-10: 2008 Bus Shelter Location – Bus Stops with Shelters

	All Bus Stops			Stops with Average Daily Boardings >60		
	Total Stops	Stops with Shelters	% of Stops with Shelters	Total Stops	Stops with Shelters	% of Stops with Shelters
Minority	3,024	425	13%	704	279	37%
Nonminority	4,853	207	4%	323	89	24%
Low-income	814	181	21%	274	108	35%
Non-low-income	7,063	451	6%	753	260	32%
Both minority & low-income	787	174	21%	272	107	35%
Not both	7,090	458	6%	755	261	32%
Systemwide	7,877	632	8%	1,027	368	33%

Bus Shelter Condition

In addition to monitoring the location of bus shelters for the purpose of Title VI, the MBTA also monitors the condition of bus shelters.

Wall USA and Cemusa inspect and clean their shelters twice a week and make repairs as needed. They also respond to complaints that are submitted to the MBTA and address each problem within 24 hours. The MBTA assumes no responsibility for these shelters or their maintenance. However, the MBTA is responsible for the condition of the shelters it owns. Inspection and maintenance of MBTA shelters occurs on a regular basis, and additional repairs and cleaning are performed by the MBTA in response to customer complaints and bus operator reports.

To ensure Title VI compliance for bus shelter condition, CTPS inspects all shelters annually, regardless of ownership. CTPS collected data throughout 2007 to evaluate shelters on the following characteristics: roof condition, condition of side panels, presence of graffiti/vandalism, and shelter cleanliness. For every shelter, each characteristic was given a rating of 1 to 3, with 1 representing a “good” condition and 3 representing a “poor” condition. A composite score was then assigned to each shelter based on its worst rating. Thus, if a shelter received ratings of 1 for roof and side panel condition, 2 for vandalism, and 3 for shelter cleanliness, it would receive a composite score of 3.

As can be seen from the data displayed in Table 6-11, both minority and low-income shelters, as well as shelters that are designated both low-income and minority, generally score better than the shelters not so designated. The only difference between the scores that is statistically significant is in the graffiti/vandalism category.

Table 6-11: 2008 Bus Shelter Conditions – Average Scores for all Shelters

	Roof Condition	Sides Condition	Graffiti/Vandalism	Shelter Cleanliness	Composite Score
Minority	1.00	1.06	1.07*	1.07	1.13
Nonminority	1.02	1.04	1.12	1.08	1.17
Low-income	1.01	1.06	1.02*	1.09	1.13
Non-low-income	1.01	1.05	1.11	1.06	1.15
Both minority & low-income	1.01	1.05	1.02*	1.10	1.13
Not both	1.01	1.05	1.11	1.06	1.15

* Indicates that the difference is statistically significant.

An additional metric of analysis for bus shelter condition is the percentage of shelters with certain attributes; specifically, whether the following exist at the shelter location: a sign, a bench, a timetable, and a map, as well as whether the timetable and map are legible and current. CTPS collected data for each of these metrics and the results are presented in Table 6-12. In general, minority and low-income shelters, as well as shelters designated both low-income and minority, have a higher percentage of signs, benches, and maps that are both legible and current than shelters not so designated. The difference is the opposite, however, in most categories of the timetable attribute. The MBTA will take steps to ensure that timetables are current and legible at minority and low-income shelters.

Table 6-12: 2008 Bus Shelter Conditions – Average Percentages of Shelters

	Sign Exists	Bench Exists	Timetable			Map		
			Exists	Legible	Current	Exists	Legible	Current
Minority	97.0%	98.8%	26.6%	36.3%	35.9%	79.1%	87.8%	88.8%
Nonminority	96.4%	96.9%	23.0%	41.5%	37.4%	44.1%	79.8%	81.4%
Low-income	98.8%	98.2%	19.5%	26.4%	27.0%	85.8%	89.0%	89.0%
Non-low-income	96.0%	98.1%	27.8%	42.8%	40.6%	60.8%	84.4%	86.2%
Both minority and low-income	98.8%	98.1%	20.4%	27.7%	28.3%	87.0%	89.8%	89.8%
Not both	96.1%	98.2%	27.3%	41.8%	39.7%	60.7%	84.1%	85.8%

Neighborhood Maps and Trash Receptacles at Rapid Transit Stations

Through the neighborhood map program, maps that show bus connections are provided at rapid transit stations with bus service. Neighborhood maps are also generally installed at all new or renovated stations, regardless of the availability of lack of availability of bus service. As can be seen in Table 6-13, the percentage of minority stations that provide neighborhood maps is higher than the percentage of nonminority stations that have maps. However, the percentage of low-income stations with maps is lower than the percentage of non-low-income stations in which maps have been placed. The MBTA will evaluate where additional maps can be placed to make the distribution at stations in low-income areas equitable with the distribution at non-low-income stations.

Table 6-13: Stations with Neighborhood Maps

Station Classification	Stations	# with Maps	% with Maps
Minority	84	36	43%
Nonminority	56	18	32%
Low-income	32	11	34%
Non-low-income	108	43	40%
Systemwide	140	54	39%

Bombproof Trash Receptacles

As indicated in Chapter 4, stations with high-volume use are equipped with bombproof trash receptacles. As can be seen in Table 6-14, for both rapid transit and commuter rail, the percentage of minority stations is higher than the percentage of nonminority stations with bombproof trash barrels, and the percentage of low-income stations is higher than the percentage of non-low-income stations with bombproof trash barrels. This is not true for commuter boat stations; however, there are only 2 minority and 4 nonminority stations served by commuter boat, and none of the 6 stations is designated as low-income.

Table 6-14: Placement of Bombproof Trash Receptacles

Mode	Station Classification	Stations	# of Stations with Bombproof Trash Barrels	% of Stations with Bombproof Trash Barrels
Rapid Transit	Minority	90	37	41%
	Nonminority	58	21	36%
	Low-income	35	14	40%
	Non-low-income	113	44	39%
Commuter Rail	Minority	30	2	7%
	Nonminority	101	2	2%
	Low-income	11	1	9%
	Non-low-income	120	3	3%
Commuter Boat	Minority	2	0	0%
	Nonminority	4	1	25%
	Low-income	0	0	0%
	Non-low-income	6	1	17%

Automated Fare Collection (AFC): Fare Gates and Fare-Vending Machines

In January 2007, the MBTA fully introduced new fare media and fare collection equipment throughout the bus and subway systems, replacing turnstiles with electronic fare gates and tokens with CharlieCards and CharlieTickets. Between January 2007 and June 2008, 2.4 million CharlieCards were distributed; 1.2 million of these are currently in active use. As of July 2008, CharlieCard penetration rate was 68% of the 22 million bus and subway trips purchased. Also as of mid-2008, approximately 90% of riders were taking advantage of best-value fares by using stored value on a CharlieCard, or by purchasing a time-based pass on a CharlieCard or CharlieTicket.

As discussed in Chapter 4, all rapid transit stations are now equipped with fare gates and fare vending machines (FVM). Therefore, there is no need to analyze the distribution of these technologies throughout the system.

In terms of equipment operability, the MBTA has established performance metrics that are based on the availability for use of the fare gates and fare vending machines.

- The minimum acceptable device availability threshold is 95%.
- The device availability goal is 98%.

As can be seen in Table 6-15, for cashless FVM, for full-service FVM, and for high-speed fare gates, the average percentage of device in-service time equals or exceeds the minimum acceptable device availability threshold at all stations, regardless of minority and low-income status. However, for ADA-compliant fare gates, the average percentage of device in-service time is lower than the minimum acceptable device availability threshold at all stations. Given this level of performance throughout the system, the MBTA will evaluate ways to ensure a higher operability rate for ADA fare gates. These gates are of particular importance, as they provide the only access to stations for persons in wheelchairs.

Table 6-15: Fare Gate and Fare Vending Machine (FVM) Operability

Device Type	Station Classification	Total Devices	% In Service
Cashless FVM	Minority	103	96%
	Nonminority	42	97%
	Low-income	37	98%
	Non-low-income	108	95%
	Total	145	96%
Full-service FVM	Minority	208	95%
	Nonminority	98	95%
	Low-income	69	96%
	Non-low-income	237	95%
	Total	306	95%
ADA Gates	Minority	91	93%
	Nonminority	39	91%
	Low-income	36	92%
	Non-low-income	94	92%
	Total	130	92%
High-speed Gates	Minority	234	96%
	Nonminority	108	97%
	Low-income	84	97%
	Non-low-income	258	96%
	Total	342	96%

AFC Retail Sales Terminals

As can be seen in Table 6-16, the percentage of Retail Sales Terminals (RST) in minority areas is higher than the percentage of RST in nonminority areas. However, the percentage of RST in low-income areas is lower than the percentage of RST in non-low-income areas. (Because all low-income areas with RST are also minority, no additional analysis is necessary to compare the percentage of RST in areas that are both minority and low-income with the percentage in areas that are not both.) The MBTA will evaluate where additional RST can be placed to make the distribution in low-income areas equitable with the distribution in non-low-income areas. Figure 6-3 shows the distribution of RST in the urban fixed-route service area.

Table 6-16: Distribution of Retail Sales Terminals (RTS)

Location Classification	# of locations with RST	% of total RST locations
Minority	94	58%
Nonminority	68	42%
Low-income	41	25%
Non-low-income	121	75%
Total RST locations	162	58%

Variable Message Signs (VMS)

VMS: Bus Rapid Transit (BRT)

The BRT system in Boston consists of two currently unconnected parts of the Silver Line: Silver Line Washington Street and Silver Line Waterfront. Taken together, 58% of the stations/stops on the Silver Line are in minority census tracts, 26% are in low-income tracts, and 23% are in census tracts that are both minority and low-income. However, most of the stations that are classified as minority and low-income are on Silver Line Washington Street. In fact, all of the stations on Silver Line Washington Street are in minority census tracts, and half of these are also low-income. Further, the stations that are not classified as being in low-income tracts are directly adjacent to tracts that are low-income.

When taken as a whole, 61% of minority stations/stops on the Silver Line have VMS, 63% of low-income stations/stops have VMS, and 71% of stations/stops that are both minority and low-income are equipped with VMS.

VMS: Rapid Transit

All rapid transit stations on the Red Line, Blue Line, and Orange Line have, or will soon have, variable-message signs that alert customers to the approach and arrival of trains. Therefore, 100% of minority and low-income stations will have VMS.

As is discussed in Chapter 4, the type of signal system used on the Green Line cannot trigger next train information for display on VMS. However, VMS showing public service information will be installed at stations in the Green Line central subway and on the D Branch. Due to the lack of power and communication connections to stations on the B, C, and E Branches of the Green Line, no VMS signs can be used at these stations in the near term.

Table 6-17 below shows minority and low-income analysis of VMS at all rapid transit stations (Red, Blue, Orange, and Green Line). The percentage of minority and low-income stations that have VMS is lower than the percentage of nonminority and non-low-income stations with VMS. However, due to the nature of the signal system on the Green Line is changed, this cannot be resolved in the near term.

Table 6-17: Rapid Transit Stations with VMS

Stations	Total	# with VMS	% with VMS
Minority	98	75	77%
Nonminority	84	67	80%
Low-income	45	30	67%
Non-low-income	137	112	82%
Total	182	142	78%

VMS: Commuter Rail

All commuter rail stations have VMS, with the exception of two that are not located in minority or low-income census tracts. Therefore, 100% of minority and low-income commuter rail stations are equipped with VMS. A project currently underway will upgrade all of the existing signs with ones that will display “next train” information. Installation of the new signs will begin in 2009, and full implementation should be completed by the second quarter of 2011.

Elevators and Escalators

For the purposes of monitoring Title VI compliance, the Operations Support Department is responsible for the Level of Service assessment of elevators and escalators. This is completed on an annual basis to evaluate whether the distribution and operability of station elevators and escalators in minority and low-income areas is commensurate with the distribution and operability of station elevators and escalators in nonminority and non-low-income areas.

The complete maintenance, service testing, and inspection of all elevators and escalators in the transit system and in other MBTA facilities are outsourced to a private maintenance contractor. Elevator and escalator service requests are transmitted from the MBTA to the contractor, which dispatches maintenance personnel to perform repairs. On a daily basis, Operations Support keeps records regarding station escalator and elevator maintenance activity and hours of operation.

Elevator and Escalator Performance

For the purposes of monitoring Title VI compliance, the Operations Support Department is responsible for the annual Level of Service assessment of elevators and escalators. On a daily basis, Operations Support keeps records of station escalator and elevator maintenance activity and hours of operation. In an effort to determine the average length of time each elevator and escalator was out of service, CTPS examined the data provided by Operations Support on equipment failure service calls that were placed between April 1, 2007, and April 1, 2008.

Tables 6-17 and 6-18 present data on elevator and escalator repair time, out-of-service time, and incident rates, respectively. The first data column in each table compares the average repair time per incident (the total number of revenue-hours between the went-out-of-service and returned-to-service times¹ for each service call) for minority vs. nonminority stations and for low-income vs.

¹ Elevator out-of-service time is defined as the total number of revenue-hours an elevator was out of service, meaning that it does not include the 4.5 hours of nonrevenue time, from approximately 1:00 AM to 5:30 AM.

FIGURE 6-3
MBTA Title VI Report

**CharlieCard Retail Sales Terminal
 Locations as of May 2008:
 Urban Fixed-Route Service Area**

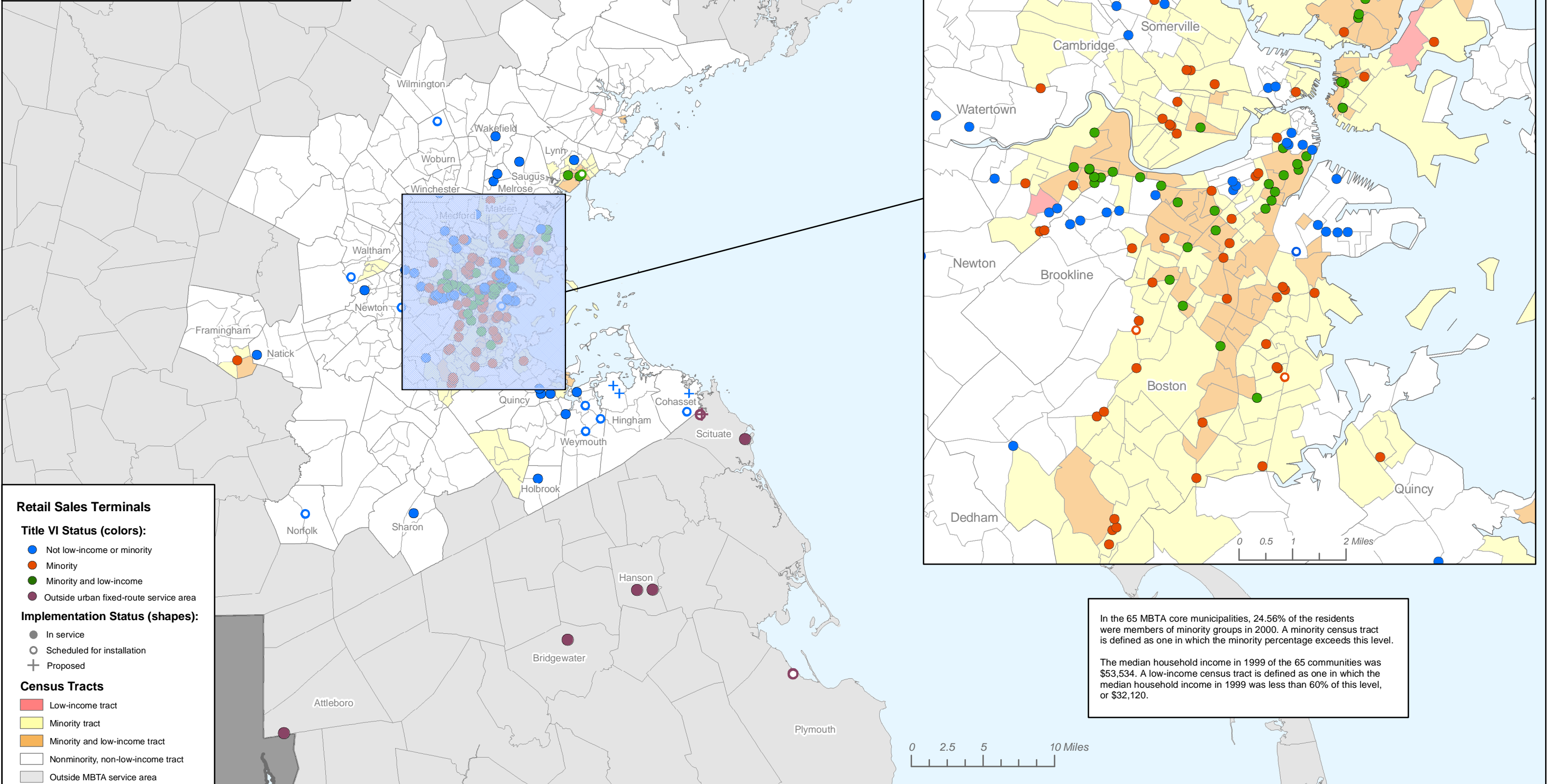
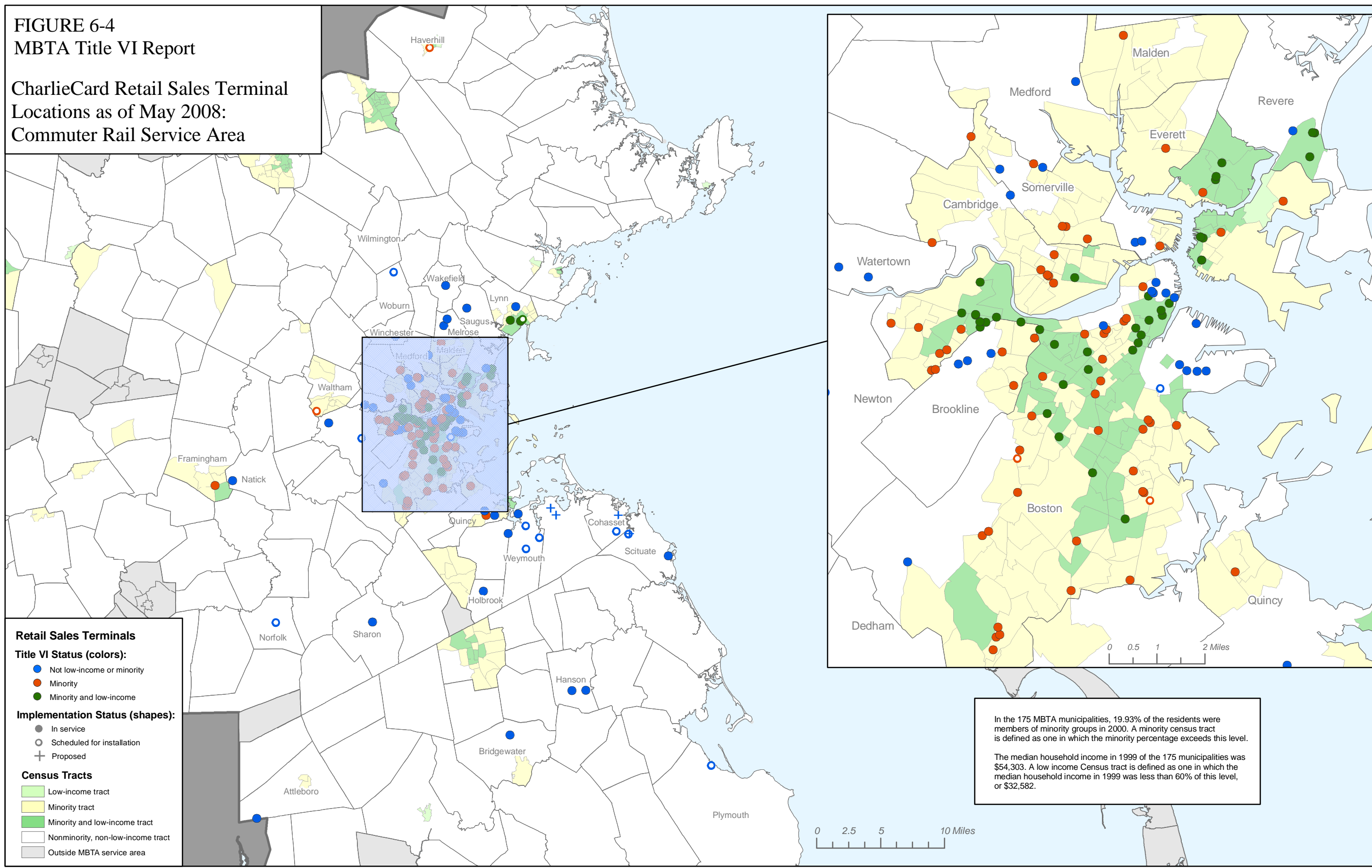


FIGURE 6-4
MBTA Title VI Report

**CharlieCard Retail Sales Terminal
 Locations as of May 2008:
 Commuter Rail Service Area**



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds this level.

The median household income in 1999 of the 175 municipalities was \$54,303. A low income Census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.

non-low-income stations. The table also presents the average number of incidents per elevator and per station, followed by the average out-of-service time per elevator and per station. In addition, the tables show the median out-of-service time, to indicate the extent to which outliers may affect the average (mean).

Out-of-service time differs from repair time in that it equals the total number of revenue hours between the went-out-of-service and returned-to-service times for all overlapping groups of incidents, while repair time is a per-incident measure.² However, out-of-service time is comparable to the result of multiplying the average repair time per incident by the number of incidents per elevator or station. Average repair time is the appropriate measure on a per-incident basis, while average out-of-service time is the appropriate measure on a per-elevator or per-station basis.

Elevators

Elevators in stations designated as minority had, on average, shorter repair times per incident than those in nonminority stations. Minority stations had a slightly higher average rate of incidents per elevator, but a lower average rate of incidents per station than nonminority stations. Because the average repair time per incident was lower for minority stations than for nonminority stations, the average out-of-service time per elevator and per station was lower for minority stations.

Elevators in stations designated as low-income had, on average, a shorter repair time per incident than non-low-income stations. However, low-income stations had a higher average rate of incidents per elevator and per station than non-low-income stations. Thus, although the low-income repair times per incident were lower, the average rate of out of service time per elevator and per station was higher for low-income stations than for non-low-income stations.

The median number of hours out of service per station, while less than the respective average (mean), was not sufficient to indicate that high incident rates at some stations significantly raised the averages.

The MBTA will determine why there were higher rates of incidents per elevators in minority and low-income stations, and higher rates of incidents per station in low-income stations, and address these issues, while endeavoring to maintain the lower average repair times per incident at minority and low-income stations.

Table 6-18: Elevators Out of Service April 1, 2007, through April 1, 2008

	Average # of Hours to Repair	Average # of Incidents		Average # of Hours Out of Service		Median # of Hours Out of Service
	Per Incident	Per Elevator	Per Station	Per Elevator	Per Station	Per Station
Minority	3.5	10.9	24.7	36.0	81.5	57.2
Nonminority	4.6	10.2	26.4	40.3	104.4	48.4
Low-income	3.5	13.9	36.0	46.4	120.5	88.5
Non-low-inc.	4.0	9.6	22.4	35.1	81.5	47.7
All stations	3.9	10.6	25.3	37.7	89.8	54.1

² For example, if one elevator (or escalator) is out of service from 1:00 PM until 3:00 PM, and another elevator (or escalator) at the same station is out of service from 2:00 PM until 4:00 PM, the repair time for each incident is two hours, but the out-of-service time for the station is three hours, as the two incidents overlap each other.

Escalators

Escalators in stations designated as minority had, on average, a longer repair time per incident than those in nonminority stations. Minority stations had a higher average rate of incidents per escalator, but a lower average rate of incidents per station than nonminority stations. Because the average repair time per incident was higher for minority stations than for nonminority stations, the average rate of out-of-service time per escalator and per station was higher for minority stations.

Escalators in stations designated as low-income had, on average, a slightly longer repair time per incident than those in non-low-income stations. Low-income stations had a higher average rate of incidents per escalator and per station than non-low-income stations. Because the average repair time and the average number of incidents per escalator and per station were higher for low-income than for non-low-income stations, the average number of hours out of service per escalator and per station were also higher.

The median out-of-service time per station was significantly less than the respective average (mean), indicating that these high station incident rates significantly raised the averages. The five stations with the highest rate of incidents per escalator were Downtown Crossing (72.5), Government Center (71.0), Park Street (49.0), Copley (26.0), and Andrew (25.3).³ As Downtown Crossing is designated minority and low-income, and Government Center is designated nonminority and non-low-income, the high station incident rates did not raise the average of minority or low-income stations disproportionately.

The MBTA will determine why there were greater rates of incidents involving minority and low-income escalators and low-income stations, and address these issues, while endeavoring to lower the average repair time per incident at minority and low-income stations.

Table 6-19: Escalators Out of Service April 1, 2007, through April 1, 2008

	Average # of Hours to Repair	Average # of Incidents		Average # of Hours Out of Service		Median # of Hours Out of Service
	Per Incident	Per Elevator	Per Station	Per Elevator	Per Station	Per Station
Minority	11.3	9.2	22.9	91.2	228.1	48.6
Nonminority	9.1	7.7	24.4	67.6	215.6	43.1
Low-income	10.5	13.8	30.2	141.6	308.9	59.0
Non-low-inc.	10.3	7.4	21.7	67.6	199.3	39.7
All stations	10.3	8.4	23.5	80.1	223.0	43.9

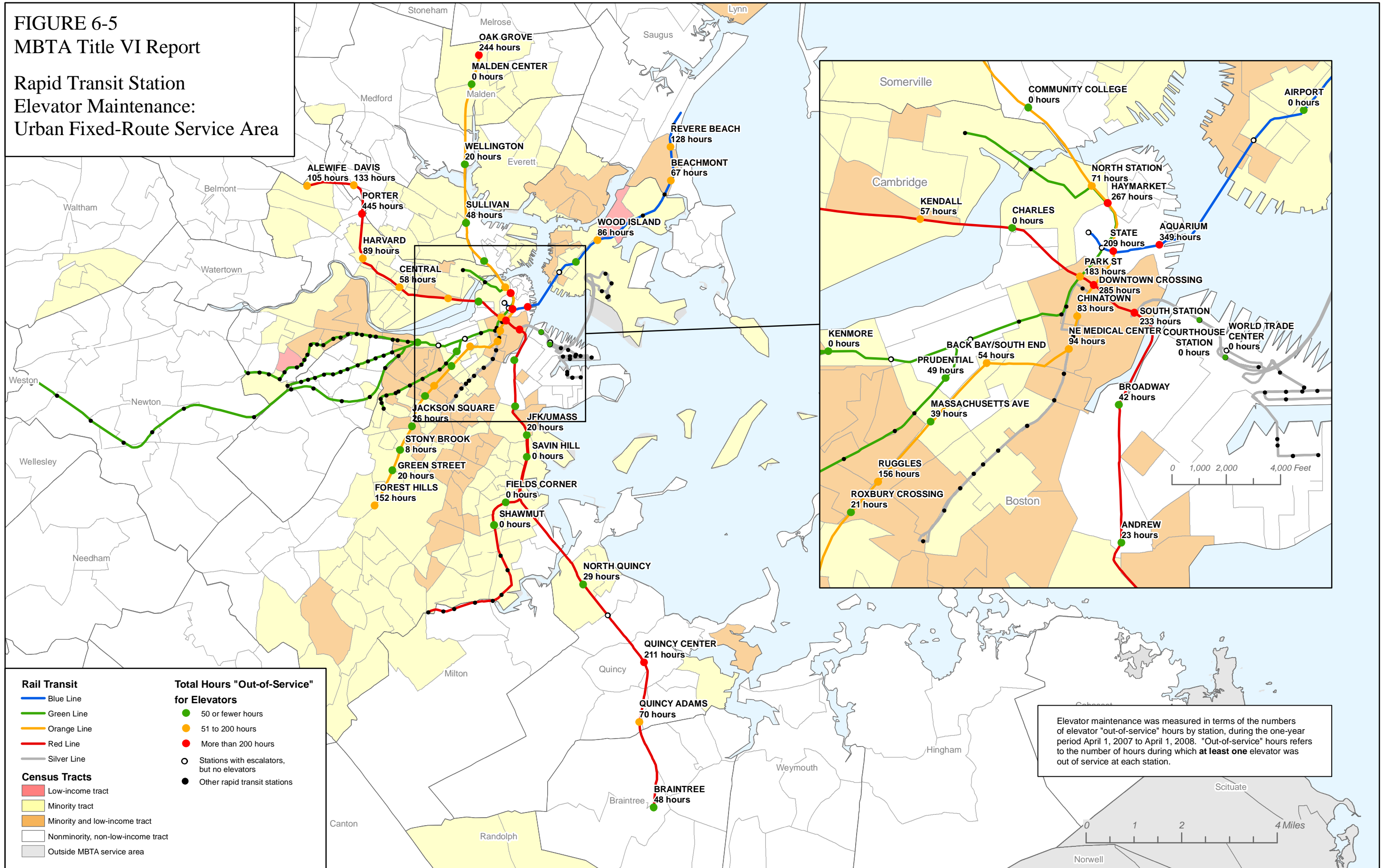
Station Parking Distribution and Utilization

For the purpose of monitoring Title VI compliance, the Long-Range Planning Department is responsible for the level-of-service assessment of station parking. This monitoring evaluates whether the distribution, utilization, and condition of station parking in minority areas is commensurate with the distribution, utilization, and condition of station parking throughout the system.

³ Of these five stations, Downtown Crossing and Park Street are both minority and low-income, and the other three stations are nonminority and non-low-income.

FIGURE 6-5
MBTA Title VI Report

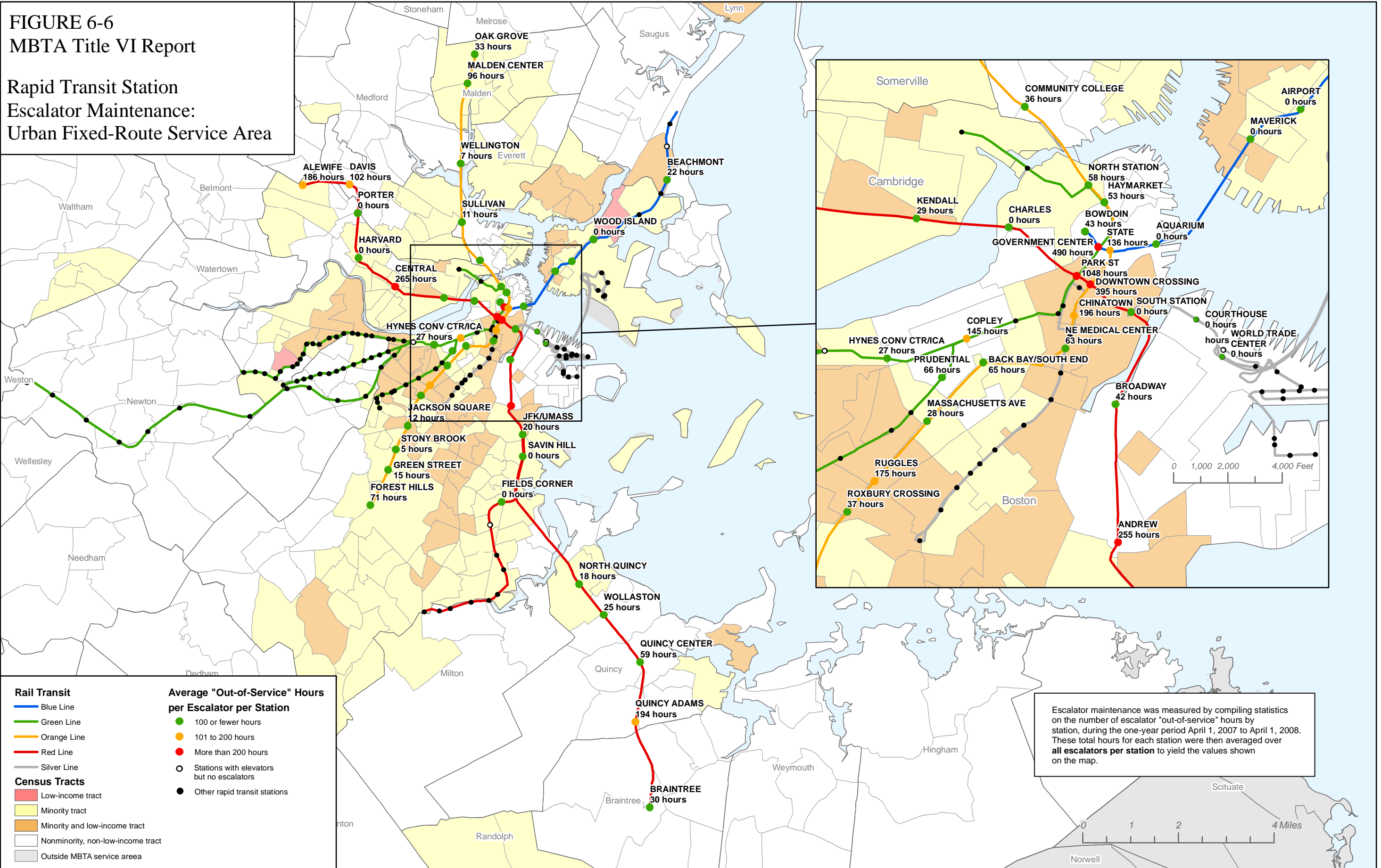
**Rapid Transit Station
 Elevator Maintenance:
 Urban Fixed-Route Service Area**



Elevator maintenance was measured in terms of the numbers of elevator "out-of-service" hours by station, during the one-year period April 1, 2007 to April 1, 2008. "Out-of-service" hours refers to the number of hours during which at least one elevator was out of service at each station.

FIGURE 6-6
MBTA Title VI Report

**Rapid Transit Station
Escalator Maintenance:
Urban Fixed-Route Service Area**



Escalator maintenance was measured by compiling statistics on the number of escalator "out-of-service" hours by station, during the one-year period April 1, 2007 to April 1, 2008. These total hours for each station were then averaged over all escalators per station to yield the values shown on the map.

If a disparity is found in the parking supply, the Title VI Working Group coordinates with Planning and other relevant MBTA departments to develop a plan for future remediation, taking into account numerous feasibility, spatial, and other constraints at MBTA stations.

Parking at MBTA stations and terminals can benefit the community by making access to transit more convenient. Lack of parking or inadequate parking can make transit difficult to access, especially in nonurban communities, where population and housing densities do not allow most residents to access the MBTA by walking. Conversely, parking can also negatively impact a community in terms of creating increased auto trips, which can contribute to congestion and air quality deterioration. The MBTA, in its capital planning, recognizes the need for a balanced parking program that takes into account demand, the variety of parking facility functions (regional collector, intercommunity, local/neighborhood, and urban central), environmental and neighborhood impacts, and the need to promote transit-access alternatives to the automobile. Across the entire MBTA system, according to the Program for Mass Transportation, 84% of transit users bike or walk to stations. Within the commuter rail system, 54% of users drive automobiles to stations and other transit services. Title VI analysis includes assessing how parking functions and supply are distributed throughout the service area and identifying whether there is an imbalance in the siting of parking facilities in low-income-minority and minority neighborhoods versus nonminority neighborhoods.

Parking Distribution

There are 245 train stations in the MBTA system, two express-bus lots, and three ferry terminals. Of these facilities, 148 have some kind of parking, provided by the MBTA, other RTAs, municipalities, or private entities. The breakdown of parking availability by mode and in low-income minority, minority, and nonminority communities is provided in Table 6-20.

Table 6-20: MBTA Facilities with Parking

	Total	Low-Income-Minority	Minority	Nonminority
Total Facilities w/ Parking	137	7 5%	29 21%	108 79%
Total Parking Spaces*	54,515	3,565 7%	13,942 26%	40,573 74%
Rapid Transit Facilities w/ Parking	19	2 11%	9 47%	10 53%
Rapid Transit Parking Spaces*	11,346	540 5%	6,288 55%	5,058 45%
Commuter Rail Facilities w/ Parking	110	5 5%	18 16%	92 84%
Commuter Rail Parking Spaces*	38,850	3,025 8%	7,260 19%	31,590 81%
Rapid Transit/Comm. Rail/Bus Facilities w/ Parking	3	0 0%	2 67%	1 33%
Rapid Transit/Comm. Rail/Bus Parking Spaces	1,716	0 0%	394 23%	1,322 77%
Ferry Facilities w/ Parking	3	0 0%	0 0%	3 100%
Ferry Parking Spaces*	2,325	0 0%	0 0%	2,325 100%
Express Bus Facilities w/ Parking	2	0 0%	0 0%	2 100%
Express Bus Parking Spaces*	278	0 0%	0 0%	278 100%

*Includes non-disability spaces only.

Table 6-21 lists park-and-ride lots for all of the stations in the MBTA system and categorizes the community in which each station is located as low-income-minority, minority, or nonminority. The function of a lot is described for each station as regional collector, intercommunity, local/neighborhood, or urban central. If there is parking at a facility, the number of non-disability spaces, along with typical daily usage and the condition of the parking facility, is listed. The typical daily usage is reported for a sample of all lots, which contains the average daily use of MBTA revenue lots in March 2008.

Stations' parking facilities are categorized based on their function within the MBTA transportation system. The four classifications are:

- Regional collector facilities: Designed to serve customers from multiple origin communities, they are located off highways/interstates or major roadway intersections, and generally have a capacity of more than 500 automobile spaces.
- Intercommunity facilities: Designed and sited to collect customers from the host community and nearby communities, located off secondary routes/roadways, they generally have a capacity of 100 to 500 automobile spaces.
- Local/neighborhood facilities: Designed and sited to serve primarily customers from the neighborhood or immediate community, they have a capacity of less than 100 automobile spaces.
- Urban central: These stations usually do not have parking (with the exception of Maverick, Wood Island, and Chestnut Hill) and are located in the central core of the urban area that the MBTA serves.

Table 6-21: Distribution of Park-and-Ride Lots

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
Rapid Transit						
Orange Line						
	Oak Grove	Minority	788	92%	Regional collector	Paved surface
	Malden	Minority	188	100%	Intercommunity	Paved surface
	Wellington	Nonminority	1316	95%	Regional collector	Paved surface
	Sullivan Sq.	Nonminority	222	100%	Intercommunity	Paved surface
	Community Col.	Nonminority	NP*	NA	Urban central	NP
	North Station	Minority	NP	NA	Urban central	NP
	Haymarket	Minority	NP	NA	Urban central	NP
	State	Nonminority	NP	NA	Urban central	NP
	Downtown Cross.	Low-income minority	NP	NA	Urban central	NP
	Chinatown	Low-income minority	NP	NA	Urban central	NP
	NE Medical Ctr.	Low-income minority	NP	NA	Urban central	NP
	Back Bay	Minority	NP	NA	Urban central	NP
	Mass Ave.	Minority	NP	NA	Urban central	NP
	Ruggles	Low-income minority	NP	NA	Urban central	NP

*NP - No parking.

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Haymarket	Low-income minority	NP	NA	Urban central	NP
	Jackson Sq.	Low-income minority	NP	NA	Urban central	NP
	Stony Brook	Minority	NP	NA	Local/neighborhood	NP
	Green St. (private lots only)	Minority	139	ND**	Local/neighborhood	Paved surface
	Forest Hills	Minority	206	100%	Intercommunity	Paved surface
Green Line						
	Lechmere	Minority	347	89%	Regional collector	Paved surface
	Chestnut Hill	Nonminority	70	96%	Urban central	Paved surface
	Eliot	Nonminority	55	100%	Local/neighborhood	Paved surface
	Waban	Nonminority	74	90%	Local/neighborhood	Paved surface
	Woodland	Nonminority	548	43%	Intercommunity	Multilevel structure
	Riverside	Nonminority	925	84%	Regional collector	Paved surface
	Arlington	Minority	NP	NA	Urban central	NP
	Boylston	Low-income minority	NP	NA	Urban central	NP
	Copley	Nonminority	NP	NA	Urban central	NP
	Government Ctr.	Minority	NP	NA	Urban central	NP
	Haymarket	Minority	NP	NA	Urban central	NP
	Hynes Conv. Ctr.	Nonminority	NP	NA	Urban central	NP
	Kenmore	Minority	NP*	NA	Urban central	NP
	North Station	Minority	NP	NA	Urban central	NP
	Park St.	Low-income minority	NP	NA	Urban central	NP
	Science Park	Minority	NP	NA	Urban central	NP
	AllSt.on St.	Minority	NP	NA	Urban central	NP
	Babcock St.	Low-income minority	NP	NA	Urban central	NP
	Blandford St.	Low-income minority	NP	NA	Urban central	NP
	Boston Col.	Nonminority	NP	NA	Urban central	NP
	BU West	Low-income minority	NP	NA	Urban central	NP
	BU Central	Low-income minority	NP	NA	Urban central	NP
	BU East	Low-income minority	NP	NA	Urban central	NP
	Chestnut Hill Ave.	Nonminority	NP	NA	Urban central	NP
	Chiswick Rd.	Nonminority	NP	NA	Urban central	NP
	Fordham Rd.	Minority	NP	NA	Urban central	NP

**ND - No data.

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Greycliff Rd.	Nonminority	NP	NA	Urban central	NP
	Griggs St.	Low-income minority	NP	NA	Urban central	NP
	Harvard Ave.	Low-income minority	NP	NA	Urban central	NP
	Mt. Hood Rd.	Minority	NP	NA	Urban central	NP
	Packards Corner	Low-income minority	NP	NA	Urban central	NP
	Pleasant St.	Low-income minority	NP	NA	Urban central	NP
	St. Paul St. (B)	Low-income minority	NP	NA	Urban central	NP
	South St.	Nonminority	NP	NA	Urban central	NP
	Summit Ave.	Minority	NP	NA	Urban central	NP
	Sutherland Rd.	Nonminority	NP	NA	Urban central	NP
	Warren St.	Minority	NP	NA	Urban central	NP
	Washington St.	Nonminority	NP	NA	Urban central	NP
	Brandon Hall	Nonminority	NP	NA	Urban central	NP
	Cleveland Circle	Minority	NP	NA	Urban central	NP
	Coolidge Corner	Minority	NP	NA	Urban central	NP
	Dean Rd.	Nonminority	NP	NA	Urban central	NP
	Englewood Ave.	Nonminority	NP	NA	Urban central	NP
	Fairbanks St.	Nonminority	NP	NA	Urban central	NP
	Hawes St.	Nonminority	NP	NA	Urban central	NP
	Kent St.	Nonminority	NP	NA	Urban central	NP
	St. Paul St. (C)	Nonminority	NP	NA	Urban central	NP
	St. Mary's St.	Nonminority	NP	NA	Urban central	NP
	Tappan St.	Nonminority	NP	NA	Urban central	NP
	Washington Sq.	Nonminority	NP	NA	Urban central	NP
	Winchester St.	Nonminority	NP	NA	Urban central	NP
	Beaconfield	Nonminority	NP	NA	Urban central	NP
	Brookline Hills	Nonminority	NP	NA	Urban central	NP
	Chestnut Hill	Nonminority	70	96%	Urban central	NP
	Brookline Village	Minority	NP*	NA	Urban central	NP
	Fenway	Low-income minority	NP	NA	Urban central	NP
	Longwood Ave.	Nonminority	NP	NA	Urban central	NP
	Newton Ctr.	Nonminority	NP	NA	Urban central	NP
	Newton Highlands	Nonminority	NP	NA	Urban central	NP

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Reservoir	Nonminority	NP	NA	Urban central	NP
	Back of the Hill	Minority	NP	NA	Urban central	NP
	Brigham Circle	Minority	NP	NA	Urban central	NP
	Fenwood Rd.	Low-income minority	NP	NA	Urban central	NP
	Heath St.	Minority	NP	NA	Urban central	NP
	Longwood Medical	Low-income minority	NP	NA	Urban central	NP
	Mission Park	Low-income minority	NP	NA	Urban central	NP
	Northeastern	Low-income minority	NP	NA	Urban central	NP
	Prudential	Minority	NP	NA	Urban central	NP
	Riverway	Minority	NP	NA	Urban central	NP
	Ruggles/MFA	Low-income minority	NP	NA	Urban central	NP
	Symphony	Minority	NP	NA	Urban central	NP
Red Line						
	Alewife	Minority	2733	100%	Regional collector	Multilevel structure
	Davis	Nonminority	NP	NA	Urban central	NP
	Porter	Nonminority	NP	NA	Urban central	NP
	Harvard	Minority	NP	NA	Urban central	NP
	Central	Minority	NP	NA	Urban central	NP
	Kendall	Low-income minority	NP	NA	Urban central	NP
	Charles/MGH	Nonminority	NP	NA	Urban central	NP
	Park St.	Low-income minority	NP	NA	Urban central	NP
	Downtown Cross.	Low-income minority	NP	NA	Urban central	NP
	South Station	Low-income minority	NP	NA	Urban central	NP
	BRd.way	Nonminority	NP	NA	Urban central	NP
	Andrew	Nonminority	NP	NA	Urban central	NP
	JFK/UMass	Minority	NP	NA	Urban central	NP
	Savin Hill	Minority	33	ND	Local/neighborhood	Paved surface
	Shawmut	Minority	NP	NA	Local/neighborhood	NP
	Fields Corner	Minority	NP	NA	Local/neighborhood	NP
	Ashmont	Minority	NP	NA	Local/neighborhood	NP
	N. Quincy	Minority	1206	87%	Regional collector	Paved surface
	Wollaston	Nonminority	550	93%	Intercommunity	Paved surface
	Quincy Ctr.	Nonminority	872	74%	Regional collector	Multilevel structure

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Quincy Adams	Nonminority	2538	80%	Regional collector	Multilevel structure
	Braintree	Nonminority	1322	94%	Regional collector	Multilevel structure
Red - Mattapan						
	Mattapan	Minority	200	17%	Local/neighborhood	Paved surface
	Milton	Nonminority	41	26%	Local/neighborhood	Paved surface
	Butler	Minority	40	ND	Local/neighborhood	Paved surface
	Capen St.	Nonminority	NP	NA	Local/neighborhood	NP
	Cedar Grove	Minority	13	ND	Local/neighborhood	Paved surface
	Central Ave.	Nonminority	NP	NA	Local/neighborhood	NP
	Valley Rd.	Nonminority	NP	NA	Local/neighborhood	NP
Blue Line						
	Wonderland	Nonminority	1257	98%	Regional collector	Paved surface
	Revere Beach	Nonminority	NP*	NA	Urban central	NP
	Beachmont	Low-income minority	430	80%	Intercommunity	Paved surface
	Suffolk Downs	Low-income minority	110	86%	Intercommunity	Paved surface
	Orient Hts.	Minority	434	73%	Intercommunity	Paved surface
	Wood Island	Minority	74	ND	Urban central	Paved surface
	Airport	Minority	NP	NA	Urban central	NP
	Maverick	Minority	97	ND	Urban central	Paved surface
	Aquarium	Nonminority	NP	NA	Urban central	NP
	State	Nonminority	NP	NA	Urban central	NP
	Government Ctr.	Nonminority	NP	NA	Urban central	NP
	Bowdoin	Nonminority	NP	NA	Urban central	NP
Express Bus						
	Watertown	Nonminority	200	91%	Intercommunity	Paved surface
	Woburn	Nonminority	78	100%	Intercommunity	Paved surface
Commuter Rail						
Newburyport/ Rockport Line						
	Newburyport	Nonminority	814	34%	Intercommunity	Paved surface
	Rowley	Nonminority	282	17%	Intercommunity	Paved surface
	Ipswich	Nonminority	146	ND	Intercommunity	Paved surface

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Rockport	Nonminority	150	ND	Intercommunity	Dirt and paved
	Gloucester	Nonminority	100	ND	Local/neighborhood	Paved surface
	W. Gloucester	Nonminority	44	58%	Local/neighborhood	Paved surface
	Manchester	Nonminority	71	ND	Local/neighborhood	Paved surface
	Beverly Farms	Nonminority	53	ND	Local/neighborhood	Paved surface
	Prides Cross.	Nonminority	3	ND	Local/neighborhood	Paved surface
	Montserrat	Nonminority	117	79%	Intercommunity	Paved surface
	Hamilton/Wenham	Nonminority	194	65%	Intercommunity	Paved surface
	N. Beverly	Nonminority	87	67%	Local/neighborhood	Paved surface
	Beverly Depot	Nonminority	168	ND	Intercommunity	Paved surface
	Salem	Nonminority	340	100%	Regional collector	Dirt and paved
	Swampscott	Nonminority	131	100%	Intercommunity	Paved surface
	Lynn	Low-income minority	985	13%	Regional collector	Multilevel structure
	Riverworks	Low-income minority	NP	NA	Local/neighborhood	NP
	Chelsea	Low-income minority	NP	NA	Local/neighborhood	NP
Haverhill Line						
	Haverhill	Minority	159	60%	Intercommunity	Paved surface
	Bradford	Nonminority	303	49%	Intercommunity	Paved surface
	Lawrence	Low-income minority	1076	ND	Intercommunity	Multilevel structure
	Andover	Nonminority	152	77%	Intercommunity	Paved surface
	Ballardvale	Nonminority	120	77%	Intercommunity	Paved surface
	N. Wilmington	Nonminority	49	ND	Intercommunity	Paved surface
	Reading	Nonminority	113	71%	Local/neighborhood	Paved surface
	Wakefield	Nonminority	117	73%	Intercommunity	Paved surface
	Greenwood	Nonminority	58	ND	Intercommunity	Paved surface
	Melrose Highlands	Nonminority	146	ND	Local/neighborhood	Paved surface
	Melrose Cedar Park	Nonminority	56	ND	Local/neighborhood	Paved surface
	Wyoming	Nonminority	32	ND	Local/neighborhood	Paved surface
Lowell Line						
	Lowell	Minority	774	ND	Regional collector	Multilevel structure
	N. Billerica	Nonminority	541	93%	Regional collector	Paved surface
	Wilmington	Nonminority	191	90%	Intercommunity	Paved surface

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Anderson RTC	Nonminority	1510	ND	Regional collector	Paved surface
	Mishawum	Nonminority	NP*	NA	Local/neighborhood	NP
	Winchester	Nonminority	150	ND	Intercommunity	Paved surface
	Wedgemere	Nonminority	119	ND	Intercommunity	Paved surface
	W. Medford	Nonminority	36	ND	Intercommunity	Paved surface
Fitchburg Line						
	Fitchburg	Low-income minority	316	ND	Intercommunity	Multilevel structure
	N. Leominster	Nonminority	135	ND	Intercommunity	Paved surface
	Ayer	Nonminority	53	ND	Local/neighborhood	Paved surface
	Shirley	Nonminority	64	ND	Local/neighborhood	Dirt and paved surface
	Littleton	Nonminority	73	ND	Intercommunity	Dirt and paved surface
	S. Acton	Nonminority	218	ND	Intercommunity	Paved surface
	W. Concord	Nonminority	146	93%	Intercommunity	Paved surface
	Concord	Nonminority	92	ND	Local/neighborhood	Paved surface
	Lincoln	Nonminority	164	ND	Intercommunity	Dirt and paved surface
	Silver Hill	Nonminority	6	ND	Local/neighborhood	Dirt lot
	Hastings	Nonminority	16	ND	Local/neighborhood	Dirt lot
	Kendal Green	Nonminority	52	ND	Local/neighborhood	Dirt and paved surface
	Brandeis/Roberts	Minority	70	35%	Local/neighborhood	Paved surface
	Waltham	Minority	82	ND	Local/neighborhood	Paved surface
	Waverly	Nonminority	NP	NA	Local/neighborhood	NP
	Belmont	Nonminority	113	ND	Intercommunity	Paved surface
Needham Line						
	Needham Hts.	Nonminority	243	100%	Intercommunity	Paved surface
	Needham Ctr.	Nonminority	34	100%	Local/neighborhood	Paved surface
	Needham Junction	Nonminority	171	100%	Intercommunity	Paved surface
Needham Line						
	Hersey	Nonminority	309	ND	Intercommunity	Paved surface
	W. Roxbury	Nonminority	62	85%	Local/neighborhood	Paved surface
	Highland	Nonminority	175	78%	Local/neighborhood	Paved surface
	Bellevue	Nonminority	37	83%	Local/neighborhood	Paved surface
	Roslindale Village	Nonminority	160	56%	Local/neighborhood	Paved surface

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
Framingham Line						
	Worcester	Low-income minority	384	ND	Intercommunity	Paved surface
	Grafton	Minority	373	ND	Intercommunity	Paved surface
	Westborough	Nonminority	448	89%	Intercommunity	Paved surface
	Southborough	Nonminority	364	95%	Intercommunity	Paved surface
	Ashland	Nonminority	678	60%	Intercommunity	Paved surface
	Framingham	Minority	166	100%	Intercommunity	Paved surface
	W. Natick	Nonminority	178	100%	Intercommunity	Paved surface
	Natick	Nonminority	73	ND	Local/neighborhood	Paved surface
	Wellesley Sq.	Nonminority	298	ND	Intercommunity	Paved surface
	Wellesley Hills	Nonminority	70	ND	Local/neighborhood	Paved surface
	Wellesley Farms	Nonminority	188	ND	Intercommunity	Paved surface
	Auburndale	Nonminority	60	ND	Intercommunity	Paved surface
	W. Newton	Nonminority	172	ND	Intercommunity	Paved surface
	Newtonville	Nonminority	90	ND	Local/neighborhood	Paved surface
	Yawkey	Low-income minority	NP	NA	Urban central	NP
Fairmount Line						
	Fairmount	Minority	50	32%	Local/neighborhood	Paved surface
	Morton St.	Minority	NP*	NA	Local/neighborhood	NP
	Uphams Corner	Low-income minority	NP	NA	Local/neighborhood	NP
Franklin Line						
	Forge Park	Nonminority	716	80%	Regional collector	Paved surface
	Franklin	Nonminority	173	100%	Intercommunity	Paved surface
	Norfolk	Nonminority	532	90%	Intercommunity	Paved surface
	Walpole	Nonminority	343	74%	Intercommunity	Paved surface
	Plimptonville	Nonminority	5	ND	Local/neighborhood	Dirt lot
	Windsor Gardens	Nonminority	NP	NA	Local/neighborhood	NP
	Norwood Central	Nonminority	781	67%	Intercommunity	Paved surface
	Norwood Depot	Nonminority	393	25%	Intercommunity	Paved surface
	Islington	Nonminority	39	50%	Local/neighborhood	Dirt and paved surface
	Dedham Corp. Ctr.	Nonminority	497	33%	Intercommunity	Paved surface
	Endicott	Nonminority	46	ND	Local/neighborhood	Paved surface
	Readville	Minority	347	64%	Intercommunity	Paved surface

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
Greenbush Line						
	Greenbush	Nonminority	1000	29%	Intercommunity	Paved surface
	N. Scituate	Nonminority	235	59%	Intercommunity	Paved surface
	Cohasset	Nonminority	410	40%	Intercommunity	Paved surface
	Natasket	Nonminority	495	21%	Local/neighborhood	Paved surface
	W. Hingham	Nonminority	214	63%	Intercommunity	Paved surface
	E. Weymouth	Nonminority	325	70%	Intercommunity	Paved surface
	Weymouth	Nonminority	290	55%	Intercommunity	Paved surface
Providence Line						
	Providence	Nonminority	330	ND	Intercommunity	Paved surface
	S. Attleboro	Nonminority	567	100%	Intercommunity	Paved surface
	Attleboro	Minority	765	ND	Regional collector	Paved surface
	Mansfield	Nonminority	830	ND	Regional collector	Dirt and paved surface
	Sharon	Nonminority	542	45%	Intercommunity	Paved surface
	Stoughton	Nonminority	333	86%	Intercommunity	Paved surface
	Canton Ctr.	Nonminority	215	97%	Intercommunity	Paved surface
	Canton Junction	Nonminority	764	96%	Regional collector	Paved surface
	Route 128	Nonminority	2589	92%	Regional collector	Multilevel structure
	Hyde Park	Minority	121	91%	Local/neighborhood	Paved surface
Middleborough Line						
	Middleborough/ Lakeville	Nonminority	769	83%	Regional collector	Paved surface
	Bridgewater	Nonminority	504	72%	Intercommunity	Paved surface
	Campello	Minority	535	44%	Intercommunity	Paved surface
	Brockton	Low-income minority	264	ND	Intercommunity	Paved surface
	Montello	Minority	347	68%	Intercommunity	Paved surface
	Holbrook/Randolph	Minority	369	78%	Intercommunity	Paved surface
Kingston Line						
	Plymouth	Nonminority	96	2%	Intercommunity	Paved surface
	Kingston	Nonminority	1039	63%	Regional collector	Paved surface
	Halifax	Nonminority	402	77%	Intercommunity	Paved surface
	Hanson	Nonminority	482	70%	Intercommunity	Paved surface
	Whitman	Nonminority	208	95%	Intercommunity	Paved surface

(continued)

Table 6-21 (continued)

Mode/Line	Station Name	Minority/ Nonminority	Non- Accessible Capacity	Usage	Function	Lot Condition
	Abington	Nonminority	405	82%	Intercommunity	Paved surface
	S. Weymouth	Nonminority	543	82%	Intercommunity	Paved surface
Commuter Ferry						
	Quincy Fore River	Nonminority	350	73%	Intercommunity	Paved surface
	Hingham	Nonminority	1841	46%	Regional collector	Paved surface
	Hull	Nonminority	134	ND	Intercommunity	Dirt lot

Parking Utilization

The analysis of parking facility utilization is based on data collected by the MBTA Revenue Department for MBTA-owned and operated lots (95 of a total 148 lots). Utilization rates of these sample lots were compared to assess whether there were disparities between minority-area facilities and the system as a whole in terms of parking supply needs. Facilities used at less than 50% of capacity are considered to have an excess of parking. Facilities with parking usage over 85% are considered to be approaching over-capacity. Table 6-22 shows the breakdown of parking facility utilization across the system.

Table 6-22: Parking Facility Utilization

Utilization Rate	Total		Low-Income-Minority		Minority		Nonminority	
	# of Facilities	% of Total Facilities	# of Facilities	% of Low-Income-Minority Facilities	# of Facilities	% of Minority Facilities	# of Facilities	% of Non-Minority Facilities
Less than 50%	19	20%	1	33%	5	24%	14	19%
50% to 85%	38	41%	1	33%	7	33%	31	43%
Greater than 85%	36	39%	1	33%	9	43%	27	38%
Total	93	100%	3	3%	21	23%	72	77%

A comparison of utilization rates for all the facilities and for those in low-income-minority, minority, and nonminority areas shows that on a systemwide level: 39% of all MBTA-owned-and-operated revenue facilities are over 85% full, while 38% of revenue facilities in nonminority areas, 33% of revenue facilities in low-income-minority areas, and 43% of revenue facilities in minority areas are over 85% full. This overall utilization rate is lower than the rate reported for 2007 (60%), which was based on a systemwide inventory conducted in fall 2005/winter 2006 that included non-MBTA revenue lots and non-revenue lots. The utilization data for fall 2005/winter 2006 for the non-MBTA-owned-and-operated lots showed that 56% of these lots were over 85% full.

Low-income-minority and minority areas have a higher percentage of facilities that have excess parking (less than 50% utilization) compared with all the facilities and with the facilities in nonminority areas. One in three (33%) parking facilities in low-income minority areas has less than 50% utilization. Of all parking facilities in minority areas, 24% have less than 50% utilization, compared to 20% of parking facilities systemwide and 19% of parking facilities in nonminority areas.

Table 6-23 presents the distribution of parking facilities by function throughout the entire system and in low-income-minority, minority, and nonminority areas. The analysis of the breakdown of facilities by function indicates that parking facility types are distributed similarly within minority and nonminority areas. Of the large regional collector facilities, 7 of 23 (20%) are located at minority-area stations, which is slightly less than the percentage of all parking lots systemwide that are located in minority communities (24%). Low-income-minority neighborhoods do not have any local/neighborhood or urban center parking facilities; many of these communities are densely populated urban communities, and most people in these communities live within walking distance of transit.

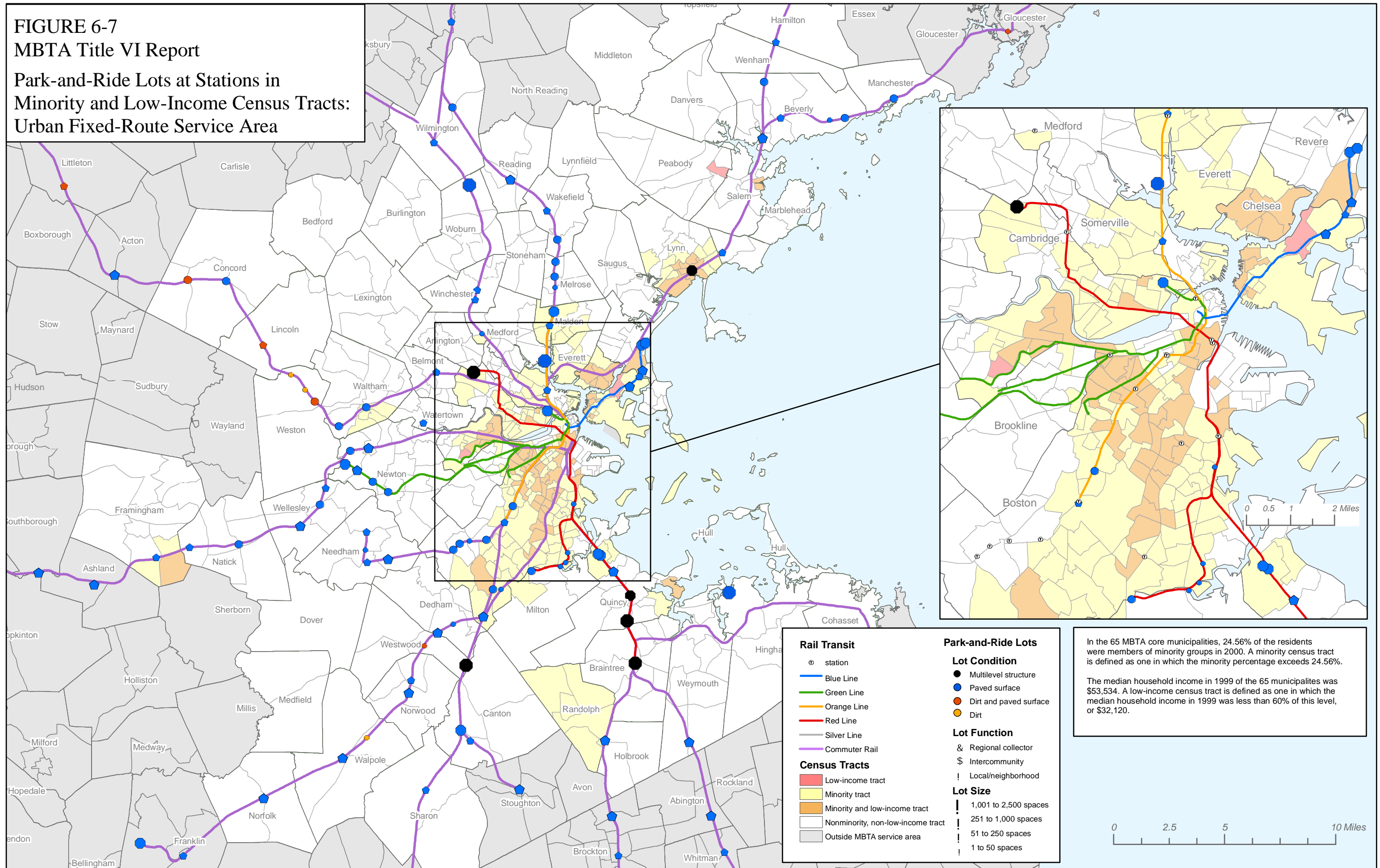
Table 6-23: Parking Facility Function

	Total		Low-Income-Minority		Minority		Nonminority	
	# of Facilities	% of Total Facilities	# of Facilities	% of Low-Income-Minority Facilities	# of Facilities	% of Minority Facilities	# of Facilities	% of Non-Minority Facilities
Regional collector	23	16%	1	13%	7	20%	16	14%
Intercommunity	82	55%	7	88%	16	46%	66	58%
Local/neighborhood	40	27%	0	0%	10	29%	30	27%
Urban central	3	2%	0	0%	2	6%	1	1%
Total	148		8		35		113	

Condition of Parking Lots

The condition of station parking facilities at low-income-minority-area facilities, minority-area facilities, and nonminority-area facilities was assessed by categorizing each facility by the type of construction. These conditions are summarized in Table 6-24.

FIGURE 6-7
MBTA Title VI Report
Park-and-Ride Lots at Stations in
Minority and Low-Income Census Tracts:
Urban Fixed-Route Service Area



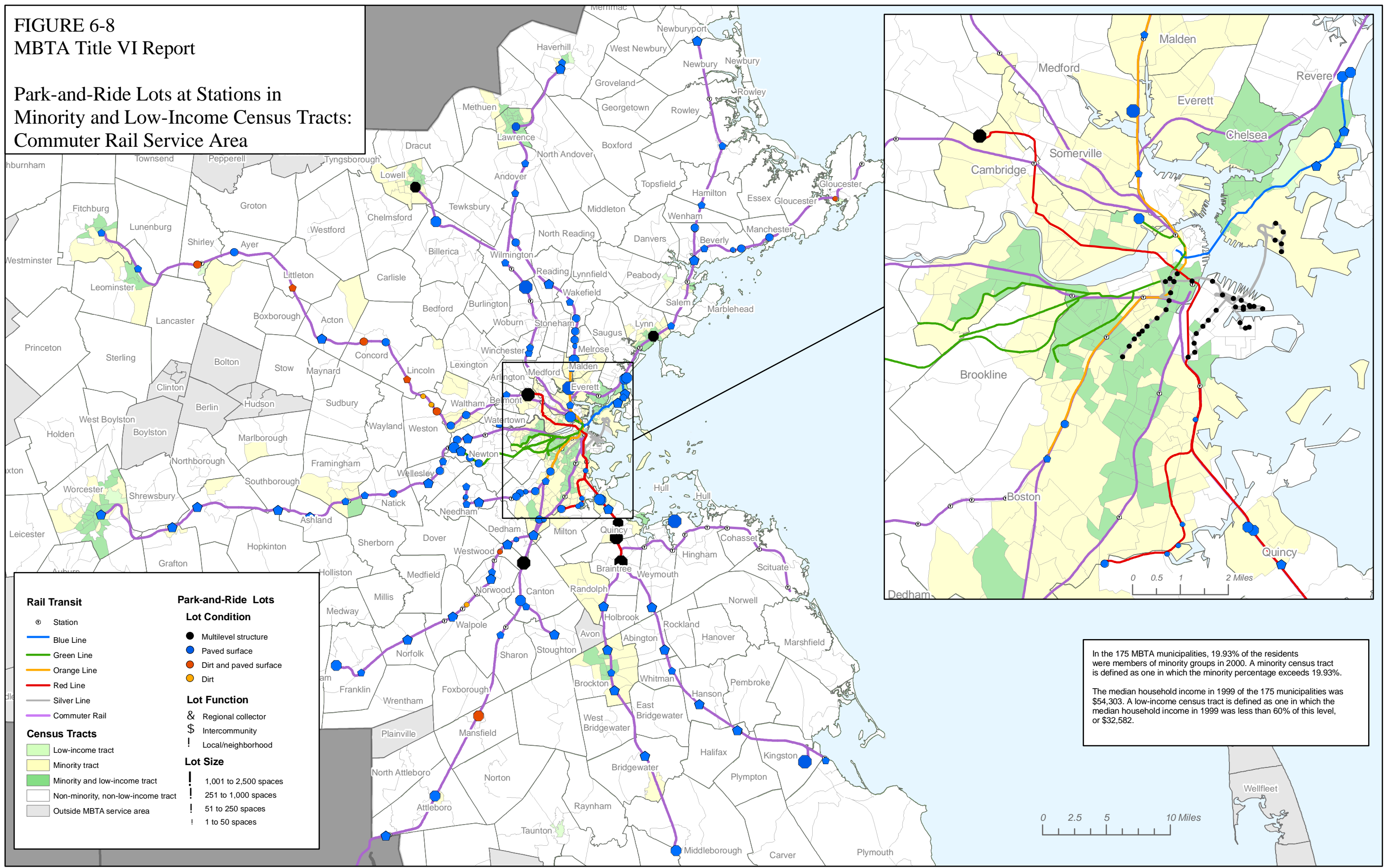
In the 65 MBTA core municipalities, 24.56% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 24.56%.

The median household income in 1999 of the 65 municipalities was \$53,534. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,120.



FIGURE 6-8
MBTA Title VI Report

**Park-and-Ride Lots at Stations in
 Minority and Low-Income Census Tracts:
 Commuter Rail Service Area**



In the 175 MBTA municipalities, 19.93% of the residents were members of minority groups in 2000. A minority census tract is defined as one in which the minority percentage exceeds 19.93%.

The median household income in 1999 of the 175 municipalities was \$54,303. A low-income census tract is defined as one in which the median household income in 1999 was less than 60% of this level, or \$32,582.

Table 6-24: Parking Facility Conditions

	Total		Low-Income-Minority		Minority		Nonminority	
	# of Facilities	% of Total Facilities	# of Facilities	% of Low-Income-Minority Facilities	# of Facilities	% of Minority Facilities	# of Facilities	% of Non-Minority Facilities
Multilevel structure	10	7%	3	38%	5	14%	5	4%
Paved surface	126	85%	5	63%	30	86%	96	85%
Dirt lot or combination dirt/paved	12	8%	0	0%	0	0%	12	11%
Total	148		8		35		113	

Half of the 10 multilevel parking structures are located in minority communities, and three of these are located in low-income-minority communities. This represents a much higher proportion than the 5% of all parking facilities that are located in low-income-minority communities and the 24% of all parking facilities that are located in minority communities. This should serve to benefit low-income-minority and minority communities, since the amount of land area utilized per parking space by multilevel structures is much less than that used for paved surface lots. There are no unpaved lots located in low-income-minority or minority communities; however, there are 12 unpaved lots located in non-minority areas. Paved surface lots make up the majority of parking surfaces throughout the system: 85% of all parking facilities have paved surfaces.

Parking Assessment

The results of the data analysis show an equitable distribution of parking utilization and types of parking facilities within the MBTA system when considering the density of development and population in an area. Low-income-minority and minority communities have a lower percentage of parking facilities that fill to over 85% of capacity than minority communities and the system as a whole. A higher percentage of parking facilities fill to less than 50% of capacity in low-income-minority and minority communities than in the non-minority communities. In terms of size and function, the distribution of facilities in minority and nonminority neighborhoods is equivalent when considering the location of the neighborhood. Finally, with respect to facility conditions, paved surface lots predominate in all areas, with a higher distribution of multilevel structures in low-income-minority and minority communities than in the system as a whole.

Vehicle Assignment

Bus Vehicle Assignment

For the purposes of monitoring Title VI compliance, the Bus Operations Department is responsible for the Level of Service assessment of bus vehicle assignment, which is performed on an annual basis. It involves evaluating the operational distribution of buses throughout the system based on vehicle age and the functionality of air-conditioning.

In general, buses are assigned to one of the eight MBTA bus storage and maintenance facilities, and operate only on routes served by that garage. Daily, within each garage, individual vehicles are not assigned to specific routes, but circulate among routes based on a number of operating constraints and equipment criteria.

To complete the annual bus vehicle assignment monitoring for Title VI, Bus Operations collects data on a summer day using bus pull-out and swing-on sheets, which display information pertaining to the operator, the bus, and the route number. From these data, the average age and the functionality of air-conditioning on the vehicles assigned to each route are determined. Analysis is then completed to compare the average age and proportion of air-conditioner failures on routes that serve minority areas and low-income areas with the data for routes that serve nonminority and non-low-income areas.

If the data demonstrate any adverse disparities in vehicle assignments on routes serving minority or low-income areas, data from two additional days of monitoring are collected and analyzed to determine whether the data for the first day are truly representative. If a disparity is again demonstrated, Bus Operations reviews both the distribution of vehicles by facility and the manner in which vehicles are assigned within facilities to determine which appears to be the source of the problem. After review, appropriate actions are taken to modify either the distribution of vehicles to facilities or the route assignments of vehicles within facilities. Additional monitoring is conducted six months later in order to determine whether the disparity had been rectified.

For the purposes of this report, Bus Operations intentionally collected vehicle assignment data on an unusually warm day in the summer of 2007 (August 3, 2007) to ensure an accurate assessment of air-conditioner functionality. CTPS analyzed the pull-out sheets, which show what bus was assigned to each operator run, and matched the bus type to each trip operated. In addition, CTPS examined maintenance logs for the same day to determine which buses had been flagged as having defective air-conditioning systems. Using the pull-out sheets, a bus vehicle number was matched to each trip on each route. Routes were grouped into minority and nonminority categories. An average age was then calculated for buses based on route types.

As shown in the Table 6-25, the average age for the entire bus fleet observed was 4.12 years, the average age for buses operating on minority routes was 4.17 years, and the average age for buses operating on low-income are routes was 3.66 years. Based on bus number, CTPS then determined, by trip, if an assigned bus was equipped with air-conditioning, and if so equipped, whether the air-conditioning system had been marked in the maintenance-reporting database as defective. It was found that 99% of buses on minority routes, 99% of buses on low-income routes, and 99% of buses on routes systemwide were identified as having working air-conditioning.

Table 6-25: Bus Vehicle Assignment

Route Classification	Average Vehicle Age (Years)	% of Buses with Functional A/C
Minority	4.17	99%
Nonminority	4.25	99%
Low-income	3.66	99%
Non-low-income	4.25	99%
Total	4.25	99%

Heavy Rail and Light Rail Vehicle Assignment

For the purposes of monitoring Title VI compliance, Subway Operations is responsible for the Level of Service assessment of vehicle assignments on light and heavy rail routes. This is completed on an annual basis to evaluate the distribution of rail vehicles throughout the system based on vehicle age.

Each of the three heavy-rail lines (Red Line, Blue Line, and Orange Line) operates with dedicated equipment, meaning that the equipment on one line is not interchangeable with equipment on any of the other lines. In addition, all three heavy-rail lines are defined as minority and as non-low-income routes under Title VI guidelines. Therefore, an analysis of minority vs. nonminority routes or low-income vs. non-low-income routes is not possible for the heavy rail system.

Light rail consists of the Green Line and the Mattapan High Speed Line. The Mattapan Line operates as a short, stand-alone, light-rail extension of the Red Line's Ashmont Branch, with a dedicated fleet; its equipment cannot be used elsewhere in the system. The Green Line, however, is an extensive light-rail system, with four branches (B, C, D, and E) that feed into a core service. For Title VI, the B and E branches are defined as minority and as low-income routes, and the C and D branches are defined as nonminority and as non-low-income. The Mattapan Line is minority, but is not low-income (see Table 6-5). Periodic Title VI monitoring is therefore necessary for vehicle assignment on light rail.

To complete the annual light-rail vehicle assignment monitoring for Title VI, Subway Operations collects data on at least one sample spring weekday. If analysis of these data shows disparities between light-rail vehicle assignments on routes that serve minority areas and assignments for all light rail lines, Subway Operations works in conjunction with Service Planning to resolve them, and a subsequent analysis is completed six months later in order to monitor whether the remediation was sufficient to eliminate the problem.

For the purposes of this report, CTPS analyzed Green Line vehicle assignments, by branch, using data provided by Subway Operations for a randomly chosen day in July 2008. The age of each car for each trip on all four Green Line branches was calculated. An average age was then generated for those lines considered minority routes (Green Line branches B, E and the Mattapan Line), those routes considered minority and low-income (Green Line branches B and E) and those considered nonminority and non-low-income (Green Line branches C and D).

Table 6-26 shows that the average age per car-trip of light-rail equipment operated on minority Green Line routes and the Mattapan Line, combined, was 19.1 years; the average age per car-trip of light-rail equipment operated on low-income Green Line routes was 8.6 years; and the average age for all Green Line routes was 17.0 years. The Mattapan Line, which is physically isolated from the Green Line network, utilizes a fleet of 10 historic PCC streetcars that were built in 1945 and extensively rebuilt since 1999. The age of these cars significantly increases the average age for vehicles on minority routes and on the entire light-rail network. These cars are now being equipped with air-conditioning systems, which will significantly improve the passenger amenities offered on this line.

Table 6-26: Light Rail Vehicle Assignment

Line Classification	Average Vehicle Age (Years)
Minority	19
Nonminority	15
Low-income	9
Non-low-income	24
Total	17

Commuter Rail Vehicle Assignment

For the purposes of monitoring Title VI compliance, Railroad Operations is responsible for the Level of Service assessment of vehicle assignments on commuter rail routes. This assessment is completed on an annual basis to evaluate the distribution of commuter rail vehicles throughout the system based on vehicle age.

Vehicle assignments are developed to correspond with specific characteristics of commuter rail service. These characteristics include minimum seating requirements for each scheduled trip, one functioning toilet car in each trainset, a train length consistent with infrastructure constraints, and modified equipment for a specific operating environment, such as the power doors on the Old Colony trains. In order to optimize coach utilization and the requirements for the train characteristics stated above, the bilevel coaches are operated on trains with the largest volume of ridership.

All coaches in the commuter rail fleet are equipped with similar amenities (such as air-conditioning), with the primary variation among coaches being age. To determine the average age of a trainset, Railroad Operations looks at a sample of consist utilization summary reports. Within the operating constraints of the commuter rail system, Railroad Operations works to alleviate any Title VI vehicle-assignment disparities found in the analysis.

For this report, Railroad Operations collected consist data for every train that operated on each line on October 31, 2007. CTPS then developed a consist summary report to determine the average age of the equipment by line. The data are summarized in Table 6-27. It should be noted that no commuter rail line is classified as low-income. Therefore, only a comparison of minority with nonminority is reported.

Table 6-27: Commuter Rail Vehicle Assignment

Status	Line	Average Coach Age (years)
Minority	Fairmount	19
	Middleborough	12
Nonminority	Rockport	21
	Newburyport	21
	Haverhill	22
	Lowell	21
	Fitchburg	21
	Worcester	18
	Needham	17
	Franklin	17
	Providence	16
	Kingston	11
	Stoughton	16
	Greenbush	15
Average Age:	Minority Routes	16
Average Age:	Nonminority Routes	18
Average Age:	All Routes	18

The analysis shows that the newer vehicles are generally assigned to the south-side operation, where all the minority routes are located. All commuter rail coaches purchased since 1991 are high-capacity, bilevel coaches. These coaches are utilized on the south-side lines, as they have the heaviest ridership in the system, and also because several tracks at South Station can only accommodate six-car trains. The average age of the coaches on one of the two minority lines (the

Middleborough/Lakeville Line) is equal to or less than the average age for the system, as bilevel equipment must be used on the Middleborough/Lakeville Line to accommodate both heavy demand and track constraints at South Station. Only one minority line, Fairmount, exceeded the average for age for nonminority lines. This is consistent with the present allocation of equipment, as the Fairmount Line (like the north-side lines) has lower ridership and therefore utilizes more of the lower-capacity single-level coaches, which are older than the high-capacity, bilevel cars.

Transit Security

Placement of Callboxes at Stations

As discussed in Chapter 4, the MBTA has placed emergency callboxes in its stations in accordance with its crime prevention through environmental design program. Table 6-28 shows an analysis of the number and percentage of callboxes at minority, nonminority, low-income, and non-low-income stations. As can be seen in the table, the percentage of callboxes at minority stations is higher than at nonminority stations, and the percentage of callboxes is also higher at low-income stations than at non-low-income stations.

Table 6-28: Placement of Callboxes at Stations

Station Classification	Stations	# of Stations with Callboxes	% of Stations with Callboxes
Minority	84	49	58%
Nonminority	56	15	27%
Low-income	32	16	50%
Non-low-income	108	48	44%
Systemwide	140	64	46%

Placement of Surveillance Cameras on Buses

Currently, 290 buses at four MBTA garages are equipped with surveillance cameras, and another 20 buses at these garages will soon have cameras, as shown in Table 6-29.

Table 6-29: Surveillance Cameras on MBTA Buses

Garage	Buses with Cameras	Total Buses at Garage
Quincy	65	82
Lynn	70	88
Charlestown	139	225
Cabot	16 current, 20 planned	200
Total (current and planned)	310	595

There are no cameras on the 733 buses at the other five MBTA bus garages: Albany, Arborway, Fellsway, North Cambridge, and Southampton.

Some routes that serve minority and low-income areas operate out of each of the above garages. Due to the way in which bus vehicle assignments occur (see Chapter 4), all or most minority and low-income routes will have buses with cameras operating on them some of the time. Upon request, the vehicles with cameras can, and have been, assigned to routes with high crime rates.

Station Security Inspections

As discussed in Chapter 4, the MBTA is currently conducting periodic, random station inspections in which passengers' handbags, briefcases, and other carry-on items are searched to deter passengers from carrying explosives or other weapons onto MBTA vehicles. The analysis shown in Table 6-30 indicates that, a lower percentage of all station inspections has occurred at minority and low-income stations (across all modes) than at stations that are nonminority and non-low-income.

Table 6-30: Station Security Inspections, July 2008

	# of Station Inspections	% of Total Station Inspections
Minority stations	49	49%
Nonminority stations	51	51%
Low-income stations	11	11%
Non-low-income stations	89	89%
Total station inspections	100	

Option B: Quality-of-Service Monitoring

Although the Circular no longer requires recipients to complete both Title VI Level of Service and Quality of Service monitoring, the MBTA is reporting on both in this submittal. The Quality of Service analysis was incorporated into the on-going service planning process through the MBTA's 2006 revisions of the *Service Delivery Policy*. This analysis is applied to the final recommendations in the Service Plan so that if inequities are found they can be addressed before the proposed service changes are implemented.

Historically, the Quality of Service analysis has been completed by CTPS in accordance with the procedures outlined in C 4702.1, Chapter IV, §2.c.[2][a-e]. The procedures set forth in the revised circular (C 4702.1A) are somewhat different than those used in the past. The MBTA has chosen to continue to use the methodology it has been using so that comparisons can be made with past analyses.

The Quality of Service assessment was first completed for the MBTA's 2002 Title VI submittal. At that time, CTPS used the Boston Region MPO's regional model to identify the 10 most densely populated minority TAZs and the 10 most densely populated nonminority TAZs in the MBTA service area. In addition, CTPS used the regional model to select the 3 TAZs with the highest densities of work-trip attractions as representative destinations for the Quality of Service analysis, with the stipulation that each of the three would be from a different neighborhood. This methodology ensured the objectivity of the TAZ selection criteria. The regional model was then used to complete the Quality of Service analysis.

The Quality of Service analysis presented in the March 2005 MBTA Title VI Triennial Report was completed for the 2004 Service Plan, and included the service changes proposed in that plan. The assessment used the same residential trip-origin and work-trip destination TAZs that were used in 2002, with the addition of two major regional employment destinations—Logan Airport and the South Shore Plaza. Logan was selected because of the large and varied number of services it provides, and the South Shore Plaza was selected based on its suburban location and its role as a regional trip generator.

While the selection methodology for destination zones was designed to be unbiased, one might expect some differences between the work trips attracted to these five selected zones, given that three of the zones—Longwood Medical Area, Logan Airport, and the South Shore Plaza—are likely to contain a higher proportion of lower-income jobs.

In addition to including two additional destinations, the Quality of Service analysis reported in the March 2005 MBTA Title VI Triennial Report differed from the 2002 analysis in that it was completed using the MBTA's new Web-based trip-planning tool, which is more sensitive than the MPO's regional model for measuring individual transit-trip times, transfers, and costs. Because the regional model is no longer being used for this analysis, the MBTA has gone back to using census tracts. Tracts tend to be more stable over time, while TAZs may change to accommodate modeling needs.

Because census tracts were used for this report instead of TAZs, it was necessary to change two of the nonminority origins that were used in the previous Quality of Service analyses. Therefore, nonminority tracts were chosen that are as close as possible to the previous origins for the sake of consistency. Table 6-31 shows the 10 minority and 10 nonminority origins and indicates whether each is also low-income. Table 6-32 shows the five destinations and indicates the minority and income status of each.

Table 6-31: Quality-of-Service Origins

Tract	Minority Neighborhood Origin	Low-Income?	Tract	Nonminority Neighborhood Origin	Low-Income?
90100	Grove Hall (Dorchester)	Y	60300	South Boston	N
101102	Wellington Hill (Dorchester)	Y	30100	North End	N
70200	Chinatown	Y	20100	Beacon Hill	N
91800	Bowdoin/Geneva (Dorchester)	N	350400	Somerville Powderhouse Square	N
81200	Mission Hill	Y	400500	Brookline Washington Square	N
81300	Eggleston Square (Roxbury)	Y	352900	Mid-Cambridge	N
160100	Chelsea (East Side)	Y	70600	South End (North of Tremont)	N
50300	East Boston Central Square	Y	401	Brighton Center	Y
110401	Roslindale Square	N	354500	Cambridge Avon Hill	N
354900	Cambridge Rindge Towers	N	351000	Somerville Spring Hill	N

Table 6-32: Quality-of-Service Destinations

Tract	Destinations	Minority?	Low-income?
30300	State Station	N	N
10700	Copley Square	N	N
81000	Longwood Medical Area	Y	Y
51200	Logan Airport	Y	N
419100	South Shore Plaza	N	N

Table 6-33, below, shows the results of the Quality of Service analysis. Although the data show minority areas to have higher trip fares, a greater number of transfers, longer trip lengths, and longer travel times on average when compared to nonminority areas, none of the differences between minority and nonminority areas are statistically significant at the 95% confidence level. Fur-

thermore, when these variables are normalized for distance, the average travel speed for minority neighborhoods is slightly higher than that for nonminority neighborhoods, and the trip cost per mile is slightly lower. The only difference that is statistically significant at the 95% confidence level is the greater rate of transfers per mile for minority neighborhoods than for nonminority neighborhoods. Aside from this difference, there is no indication of a systemwide disparity between minority and nonminority neighborhoods.

Low-income neighborhoods, on average, also have higher trip fares and a greater number of transfers per trip and per mile than non-low-income areas; however, low-income neighborhoods have shorter trip lengths and travel times, greater travel speeds, and the same trip cost per mile. None of the differences between low-income and non-low-income areas are statistically significant at the 95% confidence level. There is therefore no indication of a systemwide disparity between low-income and non-low-income neighborhoods.

All neighborhoods designated as low-income are also designated as minority, meaning that the figures for areas that are both low-income and minority will match those for low-income alone.

Table 6-33: Quality-of-Service Analysis

Average Performance	Avg. Peak-Hr. Travel Time (min)	Trip Length (mi)	Avg. Travel Speed (mph)	Transfers/Trip	Transfers/Mile	Total Trip	Trip Cost/Cost
Minority	44.76	7.48	9.38	1.38	0.21*	\$1.70	\$0.37
Nonminority	44.65	7.44	9.21	1.12	0.15	\$1.61	\$0.40
Low-income	41.93	6.84	9.11	1.29	0.22	\$1.70	\$0.42
Non-low-income	43.89	7.07	8.80	1.18	0.16	\$1.64	\$0.42

* Indicates that the difference is statistically significant.

Appendix **A**

MBTA Limited English Proficiency (LEP) Policy and Procedure



Massachusetts Bay Transportation Authority

SUBJECT: LEP Policy and Procedure	AFFECTED PERSONNEL:	STATUS & DATE:
DOCUMENT #:	ISSUED BY: ODCR	SUPERCEDES:

1.0 PURPOSE

This document serves as the Policy and Procedure and Plan of Action for the Massachusetts Bay Transportation Authority (“MBTA”) or (“the Authority”) to provide services to individuals with limited English proficiency. The purpose is to provide a framework for the provision of timely and reasonable language assistance to persons whose primary language is not English, or to those who are limited in speaking, reading, writing or understanding the English language. It demonstrates the MBTA’s best efforts in providing excellent customer service and ensuring meaningful access to all its customers as we continue to build a premier world class transit system.

The MBTA’s LEP Policy and Procedure is in compliance with Title VI of the Civil Rights Act of 1964. It is also in accordance with Federal guidelines that require recipients of federal financial assistance to take adequate steps to ensure that persons with limited English proficiency receive appropriate language assistance. Additionally, it is a proactive way of meeting customer needs, and is consistent with the Authority’s objective to improve overall customer satisfaction.

2.0 DEFINITION OF TERMS

2.1.1 *Title VI of the Civil Rights Act of 1964* – was enacted as part of the landmark Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from discriminating based on race, color or national origin by, among other things, failing to provide meaningful access to individuals who are limited English proficient.

2.1.2 *Individuals with Limited English Proficiency* - individuals who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English.

2.1.3. *Federal financial assistance* – any federal funds in the form of grants, loans or any other assistance that an agency receives towards any program, project, service or activity.

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2.1.4. *Recipients* – all entities (such as the MBTA) that receive Federal financial assistance, either directly or indirectly, through a grant, contract or some other agreement.

2.1.5. *Meaningful access* – the obligation to provide meaningful access is fact-dependent. A person has meaningful access when he or she is able to obtain important communications and information without barriers in a timely and accurate way.

2.1.6. *Vital document* – whether or not a document is “vital” may depend upon the importance of the program, information, encounter, or service involved, and the consequence to the person with LEP if the information in question is not provided accurately or in a timely manner. Vital documents could include, for example, information regarding critical change to service or material with potential for important health, safety and security consequences.

2.1.7. *Language assistance* – the MBTA may provide interpretation, translation and other language services to customers who are limited English proficient based on the need, activity or encounters. There is no “one size fits all solution” for providing assistance and assessments will be made on a case-by-case basis.

2.1.8. *Universal symbols* – pictorial symbols that are used internationally to guide passengers through transportation facilities and are cross-culturally recognized.

2.1.9. *Oral translation* – the act of translating spoken words from one language to another.

2.1.10. *Written translation* – the act of translating written words from one language to another.

2.1.11. *Interpretation* – the unrehearsed transmitting of a spoken or signed message from one language to another.

3.0 SCOPE

This policy establishes the framework and guidelines by which the Authority’s departments will meet the requirements of Title VI and related Federal regulations. It ensures effective communication by developing a comprehensive written language assistance program so that all customers including those who are not proficient in English can have meaningful access to the Authority’s programs and activities, as required under the regulations. The scope of the policy covers a range of language assistance programs including the translation of certain written materials, the provision of oral language assistance and interpretation, public

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announcements and the provision of universal symbols and permanent signs in LEP languages for guidance.

4.0 RESPONSIBILITIES

The LEP policy and procedure is an authority-wide initiative requiring active participation and involvement from various departments within the MBTA including ODCR, Operations, Customer Support Services, Marketing, Public Affairs and others with responsibility for serving this community. ODCR is responsible for monitoring, reporting and overall coordination of the program and will collaborate with relevant departments to ensure effective and efficient implementation.

5.0 MEANINGFUL ACCESS POLICY

Federal standards require that any agency receiving federal funds must provide meaningful access to its services, programs and activities for customers who have limited English proficiency. A person has meaningful access when he or she is able to obtain important communications and information without barriers in a timely and accurate way. To ensure that the Authority is providing meaningful access, language assistance services will be offered as required.

5.0(A) Language Needs Assessment

The Authority will apply the following four factors to determine meaningful access and when assessing customer language needs:

1. The number and proportion of persons of limited English proficiency eligible or likely to be served or encountered by a program, activity, or services;
2. The frequency with which persons with limited English proficiency come into contact with the program or service;
3. The nature and importance of the program, activity, or service provided to people's lives;
4. The resources available to the recipient.

The greater the number of persons with LEP, the greater the frequency they will have contact with services, and the greater the programs and activities, the more likely enhanced service will be needed.

5.0(B) Identification of Language Needs in Service Areas

The Authority, in collaboration with Central Transportation Planning Services ("CTPS"), evaluated MBTA customer neighborhoods, stations,

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bus routes, and subway and commuter rail lines to identify language dominances, other than English, in those areas. Under the regulation criteria, the primary languages break down as follows for the Authority’s customers:

- Spanish 6.1%
- Chinese 2.1%
- Cape Verdean Creole/Portuguese 2.0%
- Italian 1.9%
- Haitian Creole/French 1.5%

For the purpose of this policy, Cape Verdean Creole and Haitian Creole are the preferred languages for translation. However, if translation and/or interpretation services for Cape Verdean Creole and Haitian Creole are not accessible, then the Authority may choose to authorize Portuguese and French as acceptable substitutes.

6.0 LANGUAGE ASSISTANCE

Communication with limited English proficient customers in a timely and accurate manner is critical when providing meaningful language assistance. As such, the MBTA will provide interpretation and translation services to assist with language assistance needs. This can be done by contracting with outside language service organizations; engaging qualified bilingual staff to assist; offer language training to essential employees to better prepare them to effectively communicate; community outreach efforts; distributing materials in the dominant LEP languages; and by screening customer feedback for language related issues and concerns.

6.1(A) Oral Translation/Interpretation Services

The Authority will make reasonable efforts to provide oral translation and interpreting services when necessary to facilitate MBTA projects and initiatives so as to accurately communicate important and relevant information to customers that have a limited ability to speak, write, read, and understand English.

Additionally, oral translation/interpretation services will be provided at public hearings and other pertinent events as necessary. Oral translation may include voice announcements, and interpretation services that will be provided for telephone conversations regarding critical matters involving safety, security, and emergency.

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6.1(A)1 Procedure for Accessing Oral Translation/Interpretation Services

The MBTA has contracted with a language assistance firm to provide professional oral translation and interpretation services. Persons requesting translation services can make request in person, by telephone or fax, E-mail, or in writing. The authorization for translation services will be made by the Department requesting the services. The Office of Diversity and Civil Rights, Public Affairs, Marketing, and Customer Support Services Center may also be used to assist in processing requests made by other departments as well. The following are appropriate contacts based on the need for obtaining services or assistance:

- **ODCR (Government Compliance)** - general assistance and request for information (617) 222 3305;
- **Public Affairs** - assistance regarding public meetings and/or customer support (617) 222- 3304
- **Marketing** - assistance regarding marketing materials and/or printed communications (617) 222-5470;
- **CSS** - assistance regarding translation services for direct customer telephone contact, communications and complaints (617) 222-3200.

6.1(A)2 Interpreters for meetings/public hearings:

Upon request, staff from Marketing, ODCR or CSS will coordinate language requests between the MBTA and vendor. The firm will request the Authority’s language needs, the date, time, place and general purpose of the meeting or event. The MBTA’s requests for interpreters should be submitted at least 5 business days prior to public hearing/meeting.

6.1(A)3 Telephone Interpreter:

MBTA will contact the language assistance firm to request an interpreter for telephone communications as necessary. The firm will require that the Authority’s language needs be identified prior to being contacted. As an example, this can be achieved by MBTA staff utilizing “I Speak Calling Cards” printed in various languages for the customer to identify his or her spoken languages (i.e. “I speak Spanish”) translated in the Spanish language. The department requesting the services will be charged for the translations.

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6.1(B) Written Translation Services

The Authority will make every effort to translate documents or use universal symbols and signs for its customers with limited English proficiency, and in doing so, the Authority will take into consideration the importance, benefits, costs, and feasibility of translating such materials.

6.1(B)1 Vital materials

For the purpose of this policy, vital materials are defined as information or documents that are critical for accessing MBTA services, programs and activities. Vital documents may include, but are not limited to:

- communications affecting health and safety;
- security announcements and signage;
- emergency related public announcements;
- public participation in the decision making processes involving the Authority;
- public meeting translations (advance notice will be given 48 ours before event);
- materials regarding Title VI Rights and complaint procedures;
- materials concerning major Authority-wide initiatives that affect customer services (e.g. AFC);
- information affecting a rider's ability to access and use the system safely and effectively (e.g. major station changes, renovations, permanent changes in service or service routes).

6.1(B)2 Non-vital materials

Less vital materials, that may not be subject to translation include, but are not limited to:

- train and bus schedules;
- information regarding schedules, trip-planning, inquiries, and customer feedback;
- paper and/or Charlie card tickets;
- general advertisements;
- general announcements; and,
- publications of internal major Authority policies and procedures.

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6.1(B)3 Signage and Universal Symbols

A vital part of a well-functioning LEP compliance program includes having effective non-verbal communication such as signage, and electronic messaging and related methods for informing customers of Limited English Proficiency of basic communications. The Authority will assess, post and maintain signs in regularly encountered languages other than English in trains, buses, stations and other appropriate Authority property where deemed beneficial or necessary as an effective way of communicating frequently recurring messages necessary for customer safety and service.

The lack of space or feasibility of translated signage or electronic messaging may sometimes hinder where signs are placed. In some cases, universal symbols will be used as appropriate. Priority areas for signage and universal symbols may include, but are not limited to:

- Accessibility/Priority seating
- Do Not Enter
- Do Not Leave Bags Unattended
- Elevator/Escalator
- Emergency Brake
- Emergency Exit
- Danger
- No Smoking
- In Case of Emergency, Press Button
- Hazardous
- Stand Behind Yellow Line
- Third Rail

6.1(C) Procedure for Accessing Written Translation Services

As indicated on pages two and three, departments requiring assistance will initiate service request through ODCR, Marketing or CSS based on kind of assistance needed. The MBTA will send documentation to the language assistance firm for written translation services. The language assistance firm will review the request and submit a cost estimate for the requested services back to the MBTA. The department ordering the services will be charged for the translations.

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After the MBTA approves the translation costs for the materials, the firm will then proceed with the translation and store materials as an electronic file that will be emailed back to the originating MBTA department.

6.1(D) How To Access MBTA Translation Services

To request services, based on need, departments may contact the Office of Diversity and Civil Rights (ODCR) at 617-222-3305, Marketing at 617-222-5470, Public Affairs at 617-222-3304 or Customer Support Services Center (CSS) at 617-222-2515.

7.0 TRAINING

The MBTA will train its workforce, especially its managers and employees who interact with the Authority’s customers and are responsible for implementation of program, to ensure that they are knowledgeable and aware of the MBTA’s Limited English Proficiency (LEP) Policy and Procedure. Trainings will be conducted in coordination through HR, ODCR, Marketing, and CSS. Other employee trainings will be implemented through the following:

- New hire orientation and policy training sessions for supervisors and other staff who are responsible for implementing LEP policy.
- Language courses will be encouraged and reimbursable under the MBTA’s Tuition Reimbursement program (these courses must be taken on employees’ own time.)
- Training and written information on the scope and nature of available language assistance services.

8.0 OUTREACH

The Authority through ODCR, Marketing, CSS, Public Affairs and other departments will ensure that its Limited English Proficiency (LEP) Program reaches out to communities, especially those with high levels of populations with Limited English Proficiency. This can be achieved by holding public meetings, written communications, and by inviting members of the community with Limited English Proficiency to identify needs, provide feedback, and to make suggestions on how the MBTA can improve its language services. Additional outreach efforts may include, but are not limited to:

- Title VI brochures
- Publication of notices in newspapers;
- Radio and TV stations that serve limited English proficiency groups; and

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- Discussions with community organizations regarding problems and solutions

9.0 MONITORING AND REPORTING

ODCR in conjunction with Customer Support Services Department (CSS), Public Affairs and Marketing will monitor, review and amend, if necessary, the MBTA’s Limited English Proficiency (LEP) Policy & Procedure through consideration given to the following:

- Reports and observations from the Customer Support Services Department;
- Changes in demographics that trigger consideration of translation language;
- Analysis of staff requests for translations services, needs and costs; and
- FTA reviews of the Title VI Program and LEP Plan;
- Customer feedback
- ODCR in collaboration with other departments will include progress on implementation of the program in its Quarter GM and other reports.

10.0 POLICY DISTRIBUTION

This Limited English Proficiency (LEP) Policy and Procedure will be distributed to all MBTA supervisors and all departments. Additionally, the policy will be available at:

New hire orientation and training;
 Human Resources;
 Office of Diversity and Civil Rights (ODCR)
 Customer Support Services (CSS)
 Marketing

11.0 REFERENCE DOCUMENTATION

- 11.1 Circular FTA C4702.1A
- 11.2 Executive Order 13166
- 11.3 Title VI of the Civil Rights Act of 1964

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Appendix

B

MBTA Security Inspection Program



MBTA Transit Police

DEPARTMENT MANUAL
CHAPTER 152

General Order No. 2006-12

SUBJECT PATROL Security Inspection Program		DATE OF ISSUE 10/05/06	EFFECTIVE DATE 10/10/06
REFERENCES	PAGE 1 OF 9	ISSUING STATUS <input type="checkbox"/> NEW <input checked="" type="checkbox"/> AMENDS <input type="checkbox"/> RESCINDS	ISSUING AUTHORITY JOSEPH C. CARTER Chief

1.0 **BACKGROUND.** The terrorist attacks of September 11, 2001, in the United States, March 11, 2004, in Madrid, Spain, July 7, 2005 in London, England and July 11, 2006 in Mumbai, India; illustrate the vulnerability of critical public transportation facilities to violent attack. Moreover, the United States Department of Homeland Security warns that the nation's mass transit systems – part of America's "critical infrastructure" – are at high risk of being targeted by terrorist groups determined to carry out mass destruction/casualty attacks. The MBTA Transit Police Department is committed to maintaining a safe mass transit system by instituting procedures designed to prevent potential attacks while honoring the spirit and the letter of the United States Constitution and the Constitution of the Commonwealth of Massachusetts. To accomplish these goals, the Department will implement a number of carefully designed, supervised, and documented security measures, including security inspections of persons' handbags, briefcases, and other carry-on items. The purpose of these measures is to deter persons from carrying explosives or other weapons aboard MBTA vehicles, and thereby to prevent an attack from occurring on the MBTA transit system. In implementing these measures, the Department is taking all reasonable steps to protect the privacy interests of MBTA passengers and to minimize the intrusion caused by the increased security measures.

2.0 DEFINITIONS.

- 2.1 **Explosive Detection Dogs (EDD).** A police canine that has been trained in the detection of explosive materials by means of their distinctive odors. Department EDD canines are certified by either the North American Police Work Dog Association (NAPWDA) or the Transportation Security Administration (TSA) in explosives detection before their assignment in the field.
- 2.2 **Explosive Trace Detection (ETD)/Explosive Detection System (EDS).** Transportation Security Administration (TSA) certified electronic equipment designed to detect and identify the presence of explosive materials based on chemical signatures and/or other unique core characteristics.
- 2.3 **Improvised Explosive Device (IED).** A non-military, non-commercial, or modified explosive device designed by the builder with available knowledge and materials. Contains an explosive charge, fusing system and optional container. (FBI definition)
- 2.4 **Non-intrusive Inspection.** A Security Inspection performed on an unopened handbag, briefcase or other carry-on item by means of an Explosive Detection Dog (EDD) or electronic Explosive Trace Detection (ETD)/Explosive Detection System (EDS) equipment.
- 2.5 **Physical Inspection.** The examination of a handbag, briefcase, or other carry-on item conducted by a Transit Police Officer.

- 2.6. **Prohibited Item.** Any unlawfully possessed firearm or ammunition; explosives (including but not limited to dynamite, nitroglycerin, black powder, fireworks, plastic explosives or blasting caps); inflammable or combustible liquid; acid; poisonous substance, liquid or gas; radioactive article, substance or material; biological or hazardous material; or any kind of device or substance that could be used as a weapon to kill or injure one or more victims on the mass transit system, or that in the manner in which it is being transported poses an unreasonable danger to persons or to the property, equipment or facilities of the mass transit system.
- 2.7 **Security Inspections.** The inspection of handbags, briefcases, and other carry-on items by ETD, EDS, EDD or physical examination for the primary purpose of preventing the carrying or placement of any Prohibited Item on the transit system.
- 3.0 **POLICY.** Security Inspections of handbags, briefcases and other carry-on items possessed by MBTA passengers are for the purpose of preventing a terrorist attack on the transit system by deterring persons from carrying Prohibited Items aboard MBTA vehicles.
- 3.1 It is the policy of the Department that all Security Inspections will be done pursuant to selection criteria in accordance with Sections 4.3 and 4.4, and shall not be based to any degree upon a particularized suspicion of criminal activity. Nothing in this General Order shall be construed in any way to preclude, prevent or otherwise limit the authority of a Transit Police Officer to initiate a lawful consensual field inquiry, or a lawful investigative detention based upon a reasonable and articulable suspicion to believe that a particular individual may be engaged in criminal activity, or a lawful arrest and/or search based upon probable cause.
- 3.2 It is the policy of the Department that all Security Inspections of passengers' handbags, briefcases, and other carry-on items will be supervised and documented.
- 3.3 It is the policy of the Department that no Officer shall rely to any extent upon a person's race, ethnicity or apparent religious faith or affiliation in conducting a Security Inspection, or otherwise in exercising police discretion, except when responding to a suspect-specific "Be on the Lookout" (B.O.L.O.) alert. It is a violation of this policy for any Officer to treat a person differently based on his or her race, ethnicity or apparent religious faith or affiliation.
- 3.4 It is the policy of the Department that Security Inspections are to be conducted in a manner designed to minimize intrusion into the privacy interests of MBTA passengers while preventing/deterring acts of terrorism. Whenever possible, Security Inspections will be performed by means of electronic Explosive Trace Detection (ETD) or Explosive Detection System (EDS) equipment or by the use of Explosive Detection Dogs (EDD). Security Inspections shall be conducted in strict observance of the constitutional rights of the parties, with due regard for the safety of all Officers, other persons, and property involved.
- 4.0 **OPERATIONAL GUIDELINES.** Security Inspections will be conducted in accordance with the following operational guidelines:
- 4.1 **NOTICE.** The MBTA will post signs in conspicuous locations at station entrances, within transit vehicles, and at other locations on MBTA property, notifying patrons that all persons choosing to use the MBTA transit system will be subject to Security Inspection of their handbags, briefcases and other carry-on items. Such notices will be posted at least five (5) days before the Department begins to conduct Security Inspections and will remain posted for as long as the Department conducts Security Inspections.

- 4.2 **APPEARANCE.** Security Inspections will only be performed by uniformed Transit Police Officers. In the event that Detectives or plainclothes Transit Police Officers are assigned to conduct Security Inspections, they must wear an article of clothing that clearly identifies them as MBTA Transit Police Officers and must display their badges conspicuously.
- 4.3 **PRE-ENTRANCE SECURITY INSPECTIONS.** Pre-Entrance Security Inspections will be conducted where practical before persons proceed through the "paid" entrance area of an MBTA station. A Transit Police Supervisor and a minimum of three (3) Transit Police Officers will be assigned to conduct pre-entrance Security Inspections. At the commencement of the Security Inspection process, the Supervisor will establish in writing the frequency of individuals subject to Security Inspections, *e.g.*, that every eleventh passenger with a bag or parcel will be subjected to a Security Inspection. Supervisors may vary the frequency of the individuals subject to Security Inspections at regularly set intervals provided that such changes are documented and occur no more than once an hour. Supervisors will use hand counters supplied by the MBTA Transit Police Department to calculate when inspections will be performed.
- 4.3.1 **NON-DISCRETIONARY APPLICATION.** Pre-Entrance Security Inspections will be conducted only pursuant to this policy, and Police Officers will not be permitted to exercise discretion to inspect the carry-on items of any passenger out of the established sequence absent the existence of probable cause or some other constitutional or legal justification.
- 4.3.2 **REPORT/CAD RECORD.** A Pre-Entrance Security Inspection (code 4095) entry will be made in the CAD system noting the time the Transit Police Supervisor and Officers arrive at the inspection site, the location where Pre-Entrance Security Inspections are to be conducted and the Officers assigned. The total number of Pre-Entrance Security Inspections performed, inspection results and refused inspections will be noted in the CAD record.
- **RACE/GENDER REPORT.** All Supervisors will record on a separate recording sheet for each Pre-Entrance Security Inspection the race and gender of the passenger who was subject of the inspection to assure that there is no actual or perceived bias-based profiling.
- 4.3.3 **PASSENGER COOPERATION.** Pre-Entrance Security Inspections are only to be conducted of persons choosing to use the MBTA transit system. Consequently, a person may avoid a Pre-Entrance Security Inspection by electing not to board an MBTA vehicle or enter MBTA property. A person who refuses to allow a Pre-Entrance Security Inspection will either be denied entry or requested to leave MBTA property. A person's refusal to allow a Pre-Entrance Security Inspection does not alone constitute probable cause or reasonable suspicion. Therefore, absent other factors that would justify a search based on probable cause or a threshold inquiry based on reasonable suspicion, a person who refuses to allow a Pre-Entrance Security Inspection will not be detained or questioned. Rather, such person will be denied access to the MBTA transit system or requested to leave MBTA property.
- 4.3.4 **LANGUAGE BARRIER.** The Department will provide public information relative to Pre-Entrance Safety Inspections in multiple languages with the assistance of both private and public organizations dedicated to services to non-

English speaking populations. Nevertheless, Officers conducting inspections may encounter a non-English speaking passenger with whom the Officers have difficulty communicating. In that case, the Officers will use the Department's contracted "Language Line" interpreter service.

4.3.5 **ITEMS TO BE INSPECTED.** Officers are authorized to inspect passengers' handbags, briefcases, and any other carry-on items.

4.3.6 **REFUSAL.** In the event that a person refuses to allow a Pre-Entrance Security Inspection of his or her handbag, briefcase, or other carry-on item, he or she will either be denied entry or requested to leave MBTA property. If the person persists in his or her demand to enter the system, the Supervisor must intervene and explain the policy of the MBTA in this area and reiterate that entrance is dependant upon compliance with the policy. If a passenger who has refused to submit to a Pre-Entrance Security Inspection continues to refuse to leave the system, the Supervisor will warn that a continued presence on MBTA property may result in the arrest of the passenger for the criminal offense of Trespass pursuant to Massachusetts General Law Chapter (M.G.L.) 266, §120.

- **REFUSAL REPORT.** Whenever a passenger refuses to permit a Pre-Entrance Security Inspection, and he or she attempts to enter the system or refuses to leave the system, a Pre-Entrance Security Inspection (code 4095) entry code will be made in the CAD system and an FIO Report completed.

4.4 **CRITICAL INFRASTRUCTURE SECURITY INSPECTIONS.** Critical Infrastructure Security Inspections will be conducted at strategic locations within the MBTA transit system. Critical Infrastructure Security Inspections will involve the inspection of packages of a size equal to or larger than a standard airline carry-on bag (approximately 12" by 18" by 7") being transported on board an MBTA vehicle between two identified stations on the transit system. A Transit Police Supervisor will oversee and coordinate the activities of all Transit Police Officers and/or MBTA Transportation Officials assigned to conduct Critical Infrastructure Security Inspections. At the commencement of the Critical Infrastructure Security Inspection process, the Supervisor will establish in writing the frequency of individuals subject to Security Inspections, *e.g.*, that every passenger or every third passenger with a bag or parcel equal to or larger than noted above will be subjected to a Critical Infrastructure Security Inspection. Supervisors may vary the frequency of the individuals subject to Security Inspections at regularly set intervals provided that such changes are documented and occur no more than once an hour. Supervisors will use hand counters supplied by the MBTA Transit Police Department to calculate when inspections will be performed.

4.4.1 **NON-DISCRETIONARY APPLICATION.** Critical Infrastructure Security Inspections will be conducted only pursuant to this policy, and Officers will not be permitted to exercise discretion to inspect the carry-on items of any passenger out of the sequence established by the Department or of an item that is not equal to or larger than the size noted above absent the existence of probable cause or some other constitutional or legal justification.

4.4.2 **REPORT/CAD RECORD.** A Critical Infrastructure Security Inspection (code 4096) entry will be made in the CAD system noting the location where Critical Infrastructure Security Inspections are being conducted as well as the names

of the Transit Police Supervisor and Officers and MBTA Transportation Officials assigned. The total number of Critical Infrastructure Security Inspections performed, inspection results, and refused inspections will be noted in the CAD record.

- **RACE/GENDER REPORT.** All Supervisors will record on a separate recording sheet for each Critical Infrastructure Security Inspection the race and gender of the passenger who was subject of the inspection to assure that there is no actual or perceived bias-based profiling.

4.4.3 PASSENGER COOPERATION. Critical Infrastructure Security Inspections are only to be conducted of persons choosing to use the MBTA transit system that are in the possession of packages of a size equal to or larger than a standard airline carry-on bag (approximately 12" by 18" by 7"). Consequently, a person may avoid a Critical Infrastructure Security Inspection by electing to leave MBTA property. A person who refuses to allow a Critical Infrastructure Security Inspection will not be allowed to travel beyond the inspection location and will be instructed to immediately leave MBTA property. A person's refusal to allow a Critical Infrastructure Security Inspection does not alone constitute probable cause or reasonable suspicion. Therefore, absent other factors that would justify a search based on probable cause or a threshold inquiry based on reasonable suspicion, a person who refuses to allow a Critical Infrastructure Security Inspection will not be detained or questioned. Rather, such person will be denied access to the MBTA transit system or requested to leave MBTA property.

4.4.4 LANGUAGE BARRIER. The Department will provide public information relative to Critical Infrastructure Safety Inspections in multiple languages with the assistance of both private and public organizations dedicated to services to non-English speaking populations. Nevertheless, Officers conducting inspections may encounter a non-English speaking passenger with whom the Officers have difficulty communicating. In that case, the Officers will use the Department's contracted "Language Line" interpreter service.

4.4.5 ITEMS TO BE INSPECTED. All carry-on items that are of a size equal to or larger than a standard airline carry-on bag (approximately 12" by 18" by 7") are subject to Critical Infrastructure Security Inspections.

4.4.6 REFUSAL. In the event that a person refuses to allow a Critical Infrastructure Security Inspection of his or her handbag, briefcase, or other carry-on item 16" by 24" by 8" or larger, he or she will be denied further travel on the transit system and requested to leave MBTA property. If the person persists in his or her demand to travel on the transit system, the Supervisor must intervene and explain the policy of the MBTA in this area and reiterate that continued travel is dependent upon compliance with the policy. If a passenger who has refused to submit to a Critical Infrastructure Security Inspection continues to refuse to leave the system, the Supervisor will warn that a continued presence on MBTA property may result in the arrest of the passenger for the criminal offense of Trespass pursuant to Massachusetts General Law Chapter (M.G.L.) 266, §120.

- **REFUSAL REPORT.** Whenever a passenger refuses to permit a Critical Infrastructure Security Inspection, and he or she attempts to continue to travel on the system or refuses to leave the system, a

Critical Infrastructure Security Inspection (code 4096) entry code will be made in the CAD system and an FIO Report will be completed.

- 4.5 **DURATION OF INSPECTION.** The duration of each inspection will be no longer than necessary to inspect the passenger's handbag, briefcase, or other carry-on item(s). The Department pledges to perform all inspections in as efficient and expeditious manner as possible so as not to cause customers or transportation services undue delay.
- 4.6 **SCOPE OF INSPECTION.** The inspection of any carry-on items that are of a size equal to or larger than a standard airline carry-on bag (approximately 12" by 18" by 7") will be limited to what is minimally necessary to determine whether the item being inspected contains any Prohibited Items.
- 4.7 **METHOD OF INSPECTIONS.** The primary means for conducting Critical Infrastructure Security Inspections will be either an Explosive Detection Dog (EDD), electronic Explosive Trace Detection (ETD) equipment or Explosive Detection System (EDS) equipment. If none of these resources are available, a Physical Inspection will be conducted.
- 4.8 **EXPLOSIVE DETECTION CANINE INSPECTIONS.** Explosive Detection Unit (EDU) personnel will conduct Critical Infrastructure Security Inspections by having Explosive Detection Dogs (EDD) check carry-on items that are of a size equal to or larger than a standard airline carry-on bag (approximately 12" by 18" by 7") for the presence of an explosive odor. In all other respects, including reporting under Section 4.3.6 and Section 4.4.6 of this chapter, the protocol for EDU personnel conducting Security Inspections will remain the same.
- 4.9 **EXPLOSIVE TRACE DETECTION (ETD)/EXPLOSIVE DETECTION SYSTEM (EDS) INSPECTIONS.** Officers will conduct Critical Infrastructure Security Inspections by utilizing Electronic Explosive Trace Detection (ETD)/ Explosive Detection System (EDS) equipment when available. In all other respects, including reporting under Section 4.3.6 and Section 4.4.6 of this chapter, the protocol for personnel conducting Security Inspections will remain the same.
- 4.10 **PHYSICAL INSPECTIONS.** In the event that neither an ETD,EDS or EDD is available, a Physical Inspection will be conducted by having the passenger open the carry-on item for inspection. The Officer conducting the Physical Inspection may carefully move, manipulate, or remove as necessary the contents of the carry-on item in order to reveal and expose to view other items contained therein that may constitute a Prohibited Item. In the event that an article of baggage is found to contain another closed container or compartment that, by its shape, size, design, or weight may conceal a Prohibited Item, the Officer may proceed to open that interior container or compartment to inspect for Prohibited Items.
- 5.0 **RESPONSIBILITIES.** In order to implement an effective Security Inspection Policy that complies with prevailing state and federal constitutional law, specific duties are assigned to the Administrative Services Division, the Patrol Operations Division, all Supervisors, and all MBTA Transit Police personnel.

5.1 **ADMINISTRATIVE SERVICES DIVISION.** The Administrative Services Division Commander will:

- coordinate with the MBTA General Manager, the Chief Operating Officer, the Director of Marketing Communications, and other appropriate offices of the Authority the implementation of a comprehensive public information program that will include advertising in both print and electronic media and the installation of notices in accordance with Section 4.1 above;
- utilize appropriate citizen complaint procedures to document and investigate allegations of deviation from Department policy or prevailing law in this area;
- recommend immediate and appropriate corrective measures if deviations from law or policy occurs;
- develop and utilize procedures for the proactive review of performance, complaint, and other employment information to assist Supervisors in identifying and modifying potentially problematic behavior and to promote professionalism throughout the Department;
- ensure that all Officers understand the definition and practical application of a Security Inspection, its uses and its limitations under the law;
- ensure that a sufficient number of latex "stick resistant" gloves are available to Officers conducting Security Inspections; and
- ensure that the Patrol Operations Division is provided with all information requisite to contacting and utilizing the Department's contracted "Language Line" service.

5.2 **PATROL OPERATIONS DIVISION.** The Patrol Operations Division Commander will:

- ensure that Supervisors are consistently assigned to oversee implementation of Pre Entrance and Critical Infrastructure Security Inspections;
- notify the Administrative Services Division Commander of any complaints he/she has received alleging any deviation or violation of Department policy or the law relative to Security Inspections;
- monitor the scheduling of Security Inspections and ensure that the locations and rates of Critical Infrastructure Security Inspections and Pre-Entrance Security Inspections conducted are appropriate for the existing Department of Homeland Security alert level and/or current intelligence information; and
- ensure that all Supervisors have been trained in the protocol for use of the Department's "Language Line" service and possess the requisite equipment and information to access that service.

5.3 **SUPERVISORS.** All Supervisors will:

- ensure that a sufficient number of Officers are assigned to conduct Security Inspections at locations and times determined by the Patrol Operations Division Commander;

- inspect transit stations where Security Inspections are to be conducted to ensure that conspicuous signs are posted notifying persons that they will be subject to a Security Inspection if they choose to enter or continue to use the MBTA transit system;
- ensure that all Transit Police Officers, MBTA Transportation Officials and other support personnel assigned comport their conduct to the Department's rules and regulations and the core values of integrity, courtesy and professionalism while conducting Security Inspections, and that all reporting requirements are met;
- ensure that every passenger whose carry-on item is inspected is given a briefing card explaining the policy of Security Inspections. If asked, Supervisors shall identify a contact from the Patrol Operations Division Command should there be any further questions or concerns;
- the Supervisor **must** be in possession of the written instructions for use of the "Language Line" interpreter service and all necessary information to access that service, e.g., Department's client i.d. number and personal code; and
- ensure that a cellular telephone is available with a speakerphone capability in the event that the inspection team needs to contact the Department's contracted "Language Line" interpreter service. If the location of the Security Inspection does not allow the use of a cellular phone, then the Supervisor must identify the location of a "land line" telephone for use in the event that the "Language Line" service is to be utilized.

6.0 **WEAPON AND EXPLOSIVE PROTOCOL.** In the event that an ETD/EDS indicates a positive finding, or an EDU canine alerts on a carry-on item or person, or an Officer observes what he or she believes to be an Improvised Explosive Device (IED) or other type of Prohibited Item during a Security Inspection, the following procedures will be initiated:

- 6.1 The Supervisor will instruct the person to step away from the carry-on item and instruct the Officers to both secure the item and clear any other patrons or employees from the immediate area.
- 6.2 The Supervisor will direct an Officer to contact the Dispatch Supervisor, by landline phone, and advise him/her of the situation.
- 6.3 The Supervisor will conduct a threshold inquiry of the person to determine if any additional information can be obtained regarding the suspected device.
- 6.4 If the Supervisor is unable to determine the exact nature of the device and/or weapon, it will be considered to be an IED and Officers will initiate the safety and response procedures outlined in sections, 4.0, 5.0, and 6.0 of Chapter 252, Explosive Detection Unit.

7.0 INVESTIGATIONS NOT GOVERNED BY THIS POLICY. The terms and conditions of this Chapter govern minimally invasive security inspections that are designed to protect the system and its riders, to deter terrorism and not to gather evidence of criminal conduct. Notwithstanding that imperative, nothing in this chapter limits or expands the statutory and common law authority of Transit Police Officers to initiate and pursue investigations and conduct searches based upon reasonable suspicion, probable cause, or any recognized exception to the probable cause requirement. M.G.L. c. 41, §98; M.G.L. c. 276, §1; and Terry v. Ohio, 392 U.S. 1 (1968). See Also Searches, Chapter 147 of the Department Manual.

Section 4.1 Revised 8/2006

Appendix

C

MBTA Bus Routes: Minority and Low-Income Status

MBTA Rapid Transit Lines and Stations: Minority and Low-Income Status

MBTA Commuter Rail Lines and Stations: Minority and Low-Income Status

Bus Routes: Minority and Low-Income Status

Based on 40% of boardings at minority and/or low-income stops, using primary route variations

Route	Route Name	Minority	Low-Income	Minority & Low-Income
1	Harvard/Holyoke Gate - Dudley via BU Medical Area	Y	N	N
4	North Station - World Trade Center	Y	N	N
5	City Point - McCormick Housing	N	N	N
6	South Station - Haymarket	Y	Y	Y
7	City Point - Otis & Summer Sts. via Summer St.	N	N	N
8	Harbor Pt/UMass - Kenmore via S. Bay & BU Medical Area	Y	Y	Y
9	City Point - Copley	N	N	N
10	City Point - St. Copley via S. Bay Mall	Y	N	N
11	City Point - Bedford & Chauncy Sts.	N	N	N
14	Roslindale Sq. - Heath St. via Dudley	Y	Y	Y
15	Kane Sq. - Ruggles	Y	Y	Y
16	Forest Hills - UMass Campus via JFK & S. Bay	Y	N	N
17	Fields Corner - Andrew via Uphams Corner	Y	N	N
18	Ashmont - Andrew	Y	N	N
19	Fields Corner - Kenmore	Y	Y	Y
21	Ashmont - Forest Hills	Y	N	N
22	Ashmont - Ruggles via Jackson Sq.	Y	Y	Y
23	Ashmont - Ruggles via Washington	Y	Y	Y
24	Wakefield Ave./Truman Pkwy. - Mattapan	Y	N	N
25	Franklin Park - Ruggles via Dudley	Y	Y	Y
26	Ashmont - Norfolk St. Loop via Norfolk	Y	N	N
27	Mattapan - Ashmont	Y	N	N
28	Mattapan - Ruggles via Dudley	Y	Y	Y
29	Mattapan Sq. - Jackson Sq.	Y	Y	Y
30	Mattapan - Forest Hills via Roslindale Sq.	Y	N	N
31	Mattapan Sq. - Forest Hills	Y	N	N
32	Wolcott Sq. - Forest Hills via Cleary Sq.	Y	N	N
33	River & Milton Sts., Dedham - Mattapan	Y	N	N
34	Dedham Line - Forest Hills via Washington	Y	N	N
34	Walpole Center - Forest Hills via Dedham Mall (local)	N	N	N
35	Dedham Mall - Forest Hills via Centre & Belgrade	Y	N	N
36	VA Hospital, W. Roxbury - Forest Hills via Charles	N	N	N
37	Baker & Vermont Sts. - Forest Hills	N	N	N
38	Wren St. - Forest Hills	N	N	N
39	Forest Hills - Back Bay	Y	N	N
40	Georgetown - Forest Hills via Alwin St.	Y	N	N
41	Center & Elliott Sts. - JFK UMass via Dudley	Y	Y	Y
42	Forest Hills - Dudley	Y	N	N
43	Ruggles - Park & Tremont Sts.	Y	Y	Y
44	Jackson Sq. - Ruggles via Seaver St.	Y	Y	Y
45	Franklin Park - Ruggles via Grove Hall	Y	Y	Y
47	Central Sq., Cambridge - Broadway	Y	Y	Y
48	Centre & South Sts. - Jackson Sq.	Y	N	N
50	Cleary Sq. - Forest Hills	Y	N	N
51	Reservoir - Forest Hills	N	N	N
52	Dedham Mall - Watertown via Oak Hill	N	N	N

Bus Routes: Minority and Low-Income Status

Based on 40% of boardings at minority and/or low-income stops, using primary route variations

Route	Route Name	Minority	Low-Income	Minority & Low-Income
55	Jersey & Queensbury - Park & Tremont Sts.	Y	Y	Y
57	Watertown Bus Yard - Kenmore Sq.	Y	N	N
59	Needham Junction - Watertown Sq.	N	N	N
60	Chestnut Hill - Kenmore Sq.	N	N	N
62	Bedford VA Hosp - Alewife via Lexington Center	N	N	N
64	Oak Sq. - Kendall/MIT via Union & Central	Y	N	N
65	Brighton Center - Kenmore Sq.	Y	N	N
66	Harvard - Dudley via Union Sq., Allston	Y	Y	Y
67	Turkey Hill - Alewife via Arlington Center	N	N	N
68	Harvard - Kendall	Y	N	N
69	Harvard - Lechmere	Y	N	N
70	N. Waltham - University Park via Central Sq., Waltham	Y	N	N
70	Cedarwood - University Park via Central Sq., Waltham	Y	N	N
71	Watertown Sq. - Harvard via Mt. Auburn St.	N	N	N
72	Aberdeen Ave. & Mt. Auburn St. - Harvard via Huron Ave.	N	N	N
73	Waverly Sq. - Harvard Subway via Belmont	N	N	N
74	Belmont Center - Harvard Alley	N	N	N
75	Belmont Center - Harvard Alley via Huron Towers	Y	N	N
76	Lincoln Labs - Alewife via Hanscom (inbound)	N	N	N
77	Arlington Heights - Harvard	N	N	N
78	Arlmont Village - Harvard	Y	N	N
79	Arlington Heights - Alewife	N	N	N
80	Arlington Center - Lechmere	Y	N	N
83	Rindge Ave. - Central Sq., Cambridge	Y	N	N
84	Alewife - Alewife via Arlmont Loop	N	N	N
85	Spring Hill - Kendall	N	N	N
86	Sullivan - Cleveland Circle	Y	N	N
87	Arlington Center - Lechmere	N	N	N
88	Clarendon Hill - Lechmere via Highland Ave.	N	N	N
89	Clarendon Hill - Sullivan	Y	N	N
90	Davis - Wellington via Sullivan	N	N	N
91	Central Sq., Cambridge - Sullivan	N	N	N
92	Assembly Sq. Mall - Franklin St. via Sullivan	N	N	N
93	Sullivan - Downtown Boston via Bunker Hill	N	N	N
94	Medford Sq. - Davis Sq. via West Medford	N	N	N
95	West Medford - Sullivan via Mystic Ave.	Y	N	N
96	Medford Sq. - Harvard via Davis Sq. & George St.	N	N	N
97	Malden - Wellington via Commercial St.	Y	N	N
99	Boston Regional Medical Center - Wellington	Y	N	N
100	Elm St. - Wellington via Fellsway	N	N	N
101	Malden Center - Sullivan via Winter Hill	Y	N	N
104	Malden Center - Sullivan	Y	N	N
105	Malden - Sullivan via Newland St. Housing	Y	N	N
106	Lebanon Loop - Wellington via Malden	Y	N	N
108	Linden Sq. - Wellington via Malden	Y	N	N
109	Linden Sq. - Sullivan via Broadway	Y	N	N

Bus Routes: Minority and Low-Income Status

Based on 40% of boardings at minority and/or low-income stops, using primary route variations

Route	Route Name	Minority	Low-Income	Minority & Low-Income
110	Wonderland - Wellington via Woodlawn	N	N	N
111	Woodlawn - Haymarket via Bellingham Sq.	Y	Y	Y
112	Wellington - Wood Island via Mystic Mall	Y	N	N
114	Bellingham Sq. - Maverick	Y	Y	Y
116	Wonderland - Maverick via Revere St.	Y	Y	Y
117	Wonderland - Maverick via Beach St.	Y	Y	Y
119	Northgate Shopping Center - Beachmont	N	N	N
120	Orient Heights - Maverick	Y	N	N
121	Wood Island - Maverick via Lexington St.	Y	Y	Y
131	Melrose Highland - Oak Grove via East Side	N	N	N
132	Redstone Shopping Plaza - Malden	N	N	N
134	N. Woburn - Wellington via Riverside Ave.	N	N	N
136	Reading Depot - Malden Center	N	N	N
137	Reading Depot - Malden Center	N	N	N
170	Oakpark - Dudley via Waltham & Back Bay (outbound)	Y	N	N
171	Logan Airport - Dudley via Andrew & Terminals (outbound)	N	N	N
191	Mattapan - Haymarket	Y	Y	Y
192	Cleary Sq. - Haymarket via Forest Hills	Y	N	N
193	Watertown Sq. - Haymarket Sq.	Y	N	N
194	Clarendon Hill - Haymarket via Sullivan	Y	N	N
201	Fields Corner Loop via Neponset Ave.	Y	N	N
202	Fields Corner Loop via Adams St.	Y	N	N
210	Quincy Center - Fields Corner	N	N	N
211	Quincy Center - Squantum via N. Quincy	Y	N	N
212	Quincy Center - N. Quincy	N	N	N
214	Quincy Center - Germantown	N	N	N
215	Quincy Center - Ashmont via W. Quincy	N	N	N
216	Quincy Center - Hough's Neck	N	N	N
217	Quincy Center - Ashmont	N	N	N
220	Quincy Center - Hingham Center via Old Center	N	N	N
221	Quincy Center - Fort Point via N. Weymouth	N	N	N
222	Quincy Center - East Weymouth	N	N	N
225	Quincy Center - Weymouth Landing via Des Moines Rd.	N	N	N
230	Quincy Center - Montello Commuter Rail via Braintree	N	N	N
236	Quincy Center - S. Shore Plaza via Braintree	N	N	N
238	Quincy Center - Holbrook/Randolph Station	N	N	N
240	Avon Sq. - Ashmont	Y	N	N
245	Quincy Center - Mattapan via Quarry St. & Edgehill Rd.	N	N	N
325	Elm St. - Haymarket (PM Version)	N	N	N
326	West Medford - Haymarket	N	N	N
350	Chestnut Ave., Burlington - Alewife	N	N	N
351	Oak Park/Bedfd Wds. - Alewife via Mall Rd.	N	N	N
352	Chestnut Ave., Burlington - State St., Boston	N	N	N
354	Woburn Line - State St., Boston	N	N	N
355	Mishwaum - Government Center	N	N	N
411	Jack Satter House, Revere - Malden	N	N	N

Bus Routes: Minority and Low-Income Status

Based on 40% of boardings at minority and/or low-income stops, using primary route variations

Route	Route Name	Minority	Low-Income	Minority & Low-Income
424	Eastern Ave./Essex St. - Haymarket (outbound)	N	N	N
426	Central Sq., Lynn - Haymarket via Clifftondale Sq.	Y	Y	Y
428	Oaklandvale - Haymarket via Granada Highlands	N	N	N
429	Northgate Shopping Center - Central Sq., Lynn	N	N	N
430	Saugus Center - Malden	N	N	N
431	Neptune Towers - Central Sq.	Y	Y	Y
434	Main St., Peabody - Haymarket via Goodwin Circle	N	N	N
435	Liberty Tree Mall - Central Sq., Lynn via Peabody Sq.	N	N	N
436	Liberty Tree Mall - Central Sq., Lynn via Goodwin Circle	N	N	N
439	Nahant - Central Sq., Lynn	N	N	N
441	Marblehead - Haymarket via Central Sq. & Paradise Rd.	Y	Y	Y
442	Marblehead - Haymarket via Central Sq. & Humphrey St.	Y	Y	Y
448	Marblehead - Downtown Crossing Express via Paradise Rd.	Y	N	N
449	Marblehead - Downtown Crossing Express via Humphrey	N	N	N
450	Salem Center - Haymarket Sq. via Western Ave.	N	N	N
451	N. Beverly - Salem via Dodge St. & Cummings Office Park	N	N	N
455	Salem Depot - Haymarket via Central Sq., Lynn	Y	N	N
456	Salem - Central Sq., Lynn via Highland & Eastern	N	N	N
459	Salem Depot - Downtown Crossing via Logan Airport	Y	N	N
465	Danvers Sq. - Salem Dpt via Liberty Tree Mall	N	N	N
468	Danvers - Salem Depot via North St.	N	N	N
500	Riverside - Federal & Franklin St.	N	N	N
501	Brighton - Federal & Franklin St.	Y	N	N
502	Watertown Sq. - Copley Sq.	N	N	N
503	Brighton - Copley Sq.	Y	N	N
504	Watertown Sq. - Federal & Franklin Sts.	N	N	N
505	Waltham Center - Federal & Franklin Sts.	N	N	N
553	Roberts - Federal & Franklin Sts.	N	N	N
554	Waverly Sq. - Federal & Franklin Sts.	N	N	N
555	Riverside - Federal & Franklin Sts.	N	N	N
556	Waltham Hghlands - Federal & Franklin Sts.	N	N	N
558	Riverside - Federal & Franklin Sts.	N	N	N
701	CT-1: Central Sq., Cambridge - BU Medical Area	Y	N	N
708	Longwood Medical Area - Andrew	Y	Y	Y
741	Silver Line Waterfront, SL1: Airport - South Station	Y	N	N
742	Silver Line Waterfront, SL2: BMIP - South Station	N	N	N
743	Silver Line Waterfront, SL3: City Point - South Station	N	N	N
746	Silver Line Waterfront: South Station - Silver Line Way	N	N	N
747/748	CT2: Sullivan - Ruggles	Y	N	N
749	Silver Line Washington St.: Dudley - Downtown Boston	Y	Y	Y

Rapid Transit Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Rapid Transit	Minority	Low-Income	Minority & Low-Income
Major Transfer Stations			
<i>(not included in boarding calculations for line status)</i>			
State Street: Blue & Orange Lines	N	N	N
Government Center: Blue & Green Lines	N	N	N
Downtown Crossing: Orange & Red Lines	Y	Y	Y
Haymarket: Green & Orange Lines	Y	N	N
North Station: Green & Orange Lines	Y	N	N
Park Street: Green & Red Lines	Y	Y	Y
South Station: Red Line & Silver Line Waterfront	Y	Y	Y
Blue Line	Y	N	N
Wonderland	N	N	N
Revere Beach	N	N	N
Beachmont	Y	Y	Y
Suffolk Downs	Y	Y	Y
Orient Heights	Y	N	N
Wood Island	Y	N	N
Airport	Y	N	N
Maverick	Y	N	N
Aquarium	N	N	N
State Street	N	N	N
Government Center	N	N	N
Bowdoin	N	N	N
Orange Line	Y	N	N
Forest Hills	Y	N	N
Green Street	Y	N	N
Stony Brook	Y	N	N
Jackson Square	Y	Y	Y
Roxbury Crossing	Y	Y	Y
Ruggles	Y	Y	Y
Massachusetts Ave.	Y	N	N
Back Bay	Y	N	N
New England Medical Center	Y	Y	Y
Chinatown	Y	Y	Y
Downtown Crossing	Y	Y	Y
Haymarket	Y	N	N
State Street	N	N	N
North Station	Y	N	N
Community College	N	N	N
Sullivan	N	N	N
Wellington	N	N	N
Malden Center	Y	N	N
Oak Grove	Y	N	N

Rapid Transit Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Rapid Transit	Minority	Low-Income	Minority & Low-Income
Red Line	Y	N	N
Ashmont	Y	N	N
Shawmut	Y	N	N
Fields Corner	Y	N	N
Savin Hill	Y	N	N
Braintree	N	N	N
Quincy Adams	N	N	N
Quincy Center	N	N	N
Wollaston	N	N	N
North Quincy	Y	N	N
JFK/UMass	Y	N	N
Andrew	N	N	N
Broadway	N	N	N
South Station	Y	Y	Y
Park Street	Y	Y	Y
Charles	N	N	N
Kendall	Y	Y	Y
Central	Y	N	N
Harvard	Y	N	N
Porter	N	N	N
Davis	N	N	N
Alewife	Y	N	N
Green Line - B Branch	Y	Y	Y
Blandford St.	Y	Y	Y
BU East	Y	Y	Y
BU Central	Y	Y	Y
BU West	Y	Y	Y
Saint Paul St.	Y	Y	Y
Pleasant St.	Y	Y	Y
Babcock St.	Y	Y	Y
Packards Corner	Y	Y	Y
Harvard Ave.	Y	Y	Y
Griggs St.	Y	Y	Y
Allston St.	Y	N	N
Warren St.	Y	N	N
Washington St.	N	N	N
Sutherland Rd.	N	N	N
Chiswick Rd.	N	N	N
Chestnut Hill Ave.	N	N	N
South St.	N	N	N
Boston College	N	N	N

Rapid Transit Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Rapid Transit	Minority	Low-Income	Minority & Low-Income
Green Line - C Branch	N	N	N
Saint Marys St.	N	N	N
Hawes St.	N	N	N
Kent St.	N	N	N
Saint Paul St.	N	N	N
Coolidge Corner	Y	N	N
Winchester St.	N	N	N
Brandon Hall	N	N	N
Fairbanks St.	N	N	N
Washington Square	N	N	N
Tappan St.	N	N	N
Dean Rd.	N	N	N
Englewood Ave.	N	N	N
Cleveland Circle	Y	N	N
Green Line - D Branch	N	N	N
Fenway	Y	Y	Y
Longwood Ave.	N	N	N
Brookline Village	Y	N	N
Brookline Hills	N	N	N
Beaconsfield	N	N	N
Reservoir	N	N	N
Chestnut Hill Station	N	N	N
Newton Centre	N	N	N
Newton Highlands	N	N	N
Eliot	N	N	N
Waban	N	N	N
Woodland	N	N	N
Riverside	N	N	N
Green Line - E Branch	Y	Y	Y
Northeastern	Y	Y	Y
Museum of Fine Arts	Y	Y	Y
Longwood Medical Area	Y	Y	Y
Brigham Circle	Y	N	N
Fenwood Rd.	Y	Y	Y
Mission Park	Y	Y	Y
Riverway	Y	N	N
Back of the Hill	Y	N	N
Heath Street	Y	N	N

Rapid Transit Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Rapid Transit	Minority	Low-Income	Minority & Low-Income
Green Line - Central Subway			
Kenmore	Y	N	N
Hynes Convention Center	N	N	N
Symphony	Y	N	N
Prudential	N	N	N
Copley	N	N	N
Arlington	Y	N	N
Boylston	Y	Y	Y
Science Park	Y	N	N
Lechmere	Y	N	N
Mattapan High Speed Line			
Mattapan	Y	N	N
Capen St.	N	N	N
Valley Rd.	N	N	N
Central Ave.	N	N	N
Milton	N	N	N
Butler	Y	N	N
Cedar Grove	Y	N	N
Ashmont	Y	N	N

Commuter Rail Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Northside Commuter Rail	Minority	Low-Income	Minority & Low-Income
Rockport/Newburyport Line	N	N	N
Rockport	N	N	N
Gloucester	N	N	N
West Gloucester	N	N	N
Manchester	N	N	N
Beverly Farms	N	N	N
Prides Crossing	N	N	N
Montserrat	N	N	N
Newburyport	N	N	N
Rowley	N	N	N
Ipswich	N	N	N
Hamilton/Wenham	N	N	N
North Beverly	N	N	N
Beverly	N	N	N
Salem	N	N	N
Swampscott	N	N	N
Lynn	Y	Y	Y
River Works	Y	Y	Y
Chelsea	Y	Y	Y
Haverhill Line	N	N	N
Haverhill	Y	N	N
Bradford	N	N	N
Lawrence	Y	Y	Y
Andover	N	N	N
Ballardvale	N	N	N
North Wilmington	N	N	N
Reading	N	N	N
Wakefield	N	N	N
Greenwood	N	N	N
Melrose Highlands	N	N	N
Melrose/Cedar Park	N	N	N
Wyoming Hill	N	N	N
Malden Center	Y	N	N
Lowell Line	N	N	N
Lowell	Y	N	N
N. Billerica	N	N	N
Wilmington	N	N	N
Anderson/Woburn	N	N	N
Mishawum	N	N	N
Winchester	N	N	N
Wedgemere	N	N	N
West Medford	N	N	N

Commuter Rail Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Northside Commuter Rail	Minority	Low-Income	Minority & Low-Income
Fitchburg Line	N	N	N
Fitchburg	Y	Y	Y
North Leominster	N	N	N
Shirley	N	N	N
Ayer	N	N	N
Littleton	N	N	N
S. Acton	N	N	N
West Concord	N	N	N
Concord	N	N	N
Lincoln	N	N	N
Silver Hill	N	N	N
Hastings	N	N	N
Kendal Green	N	N	N
Brandeis/Roberts	Y	N	N
Waltham	Y	N	N
Waverley	N	N	N
Belmont	N	N	N
Porter Square	N	N	N

Commuter Rail Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Southside Commuter Rail	Minority	Low-Income	Minority & Low-Income
Framingham/Worcester Line	N	N	N
Worcester	Y	Y	Y
Grafton	Y	N	N
Westborough	N	N	N
Southborough	N	N	N
Ashland	N	N	N
Framingham	Y	N	N
W. Natick	N	N	N
Natick	N	N	N
Wellesley Square	N	N	N
Wellesley Hills	N	N	N
Wellesley Farms	N	N	N
Auburndale	N	N	N
West Newton	N	N	N
Newtonville	N	N	N
Yawkey	Y	Y	Y
Back Bay	Y	N	N
Needham Line	N	N	N
Needham Heights	N	N	N
Needham Center	N	N	N
Needham Junction	N	N	N
Hersey	N	N	N
W. Roxbury	N	N	N
Highland	N	N	N
Bellevue	N	N	N
Roslindale	N	N	N
Forest Hills	Y	N	N
Ruggles	Y	Y	Y
Back Bay	Y	N	N
Franklin Line	N	N	N
Forge Park	N	N	N
Franklin	N	N	N
Norfolk	N	N	N
Walpole	N	N	N
Plimptonville	N	N	N
Windsor Gardens	N	N	N
Norwood Central	N	N	N
Norwood Depot	N	N	N
Islington	N	N	N
Dedham Corp.	N	N	N
Endicott	N	N	N
Readville	Y	N	N
Hyde Park	Y	N	N
Ruggles	Y	Y	Y
Back Bay	Y	N	N

Commuter Rail Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Southside Commuter Rail	Minority	Low-Income	Minority & Low-Income
Fairmount/Readville Line	Y	N	N
Readville	Y	N	N
Fairmount	Y	N	N
Morton St.	Y	N	N
Uphams Corner	Y	Y	Y
Attleboro/Stoughton Line	N	N	N
South Attleboro	N	N	N
Attleboro	Y	N	N
Mansfield	N	N	N
Sharon	N	N	N
Stoughton	N	N	N
Canton Center	N	N	N
Canton Junction	N	N	N
Route 128	N	N	N
Hyde Park	Y	N	N
Ruggles	Y	Y	Y
Back Bay	Y	N	N
Middleborough/Lakeville Line	Y	N	N
Middleborough/Lakeville	N	N	N
Bridgewater	N	N	N
Campello	Y	N	N
Brockton	Y	Y	Y
Montello	Y	N	N
Holbrook/Randolph	Y	N	N
Braintree	N	N	N
Quincy Center	N	N	N
JFK/Umass	Y	N	N
Kingston/Plymouth Line	N	N	N
Plymouth	N	N	N
Kingston	N	N	N
Halifax	N	N	N
Hanson	N	N	N
Whitman	N	N	N
Abington	N	N	N
South Weymouth	N	N	N
Braintree	N	N	N
Quincy Center	N	N	N
JFK/Umass	Y	N	N

Commuter Rail Lines and Stations: Minority and Low-Income Status

Station status based on census tracts

Line status based on 40% of boardings at minority and/or low-income stations

Southside Commuter Rail	Minority	Low-Income	Minority & Low-Income
Greenbush Line	N	N	N
Greenbush	N	N	N
N. Scituate	N	N	N
Cohasset	N	N	N
Nantasket Junction	N	N	N
W. Hingham	N	N	N
E. Weymouth	N	N	N
Weymouth Landing	N	N	N
Quincy Center	N	N	N
JFK/Umass	Y	N	N