



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
Karl H. Quackenbush, Executive Director, MPO Staff

MEMORANDUM

DATE May 19, 2016
TO Boston Region Metropolitan Planning Organization
FROM Karl H. Quackenbush
CTPS Executive Director
RE Work Program for: MBTA 2017 Triennial Title VI Report

Action Required

Review and approval

Proposed Motion

That the Boston Region Metropolitan Planning Organization, upon the recommendation of the Massachusetts Bay Transportation Authority and the Massachusetts Department of Transportation, vote to approve the work program for the MBTA 2017 Triennial Title VI Report presented in this memorandum

Project Identification

Unified Planning Work Program Classification

Technical Support/Operations Analysis Projects

CTPS Project Number

11408

Clients

[Massachusetts Bay Transportation Authority

Project Supervisor: Miles Walters

Massachusetts Department of Transportation, Office of Diversity and Civil Rights

Project Supervisor: John Lozada

CTPS Project Supervisors

Principal: Annette Demchur

Manager: Nicholas Hart

Funding

Future MBTA Contract

Impact on MPO Work

The MPO staff has sufficient resources to complete this work in a capable and timely manner. By undertaking this work, the MPO staff will neither delay the completion of nor reduce the quality of any work in the UPWP.

Background

Every three years, the Massachusetts Bay Transportation Authority (MBTA) is required to submit a report to the Federal Transit Administration (FTA) Office of Civil Rights detailing the MBTA's efforts to comply with Title VI of the Civil Rights Act of 1964. The purpose of this Title VI report is to ensure that, as a recipient of federal funds, the MBTA provides a comparable level and quality of transportation services to all customers without regard to race, color, or national origin. The requirements for demonstrating compliance with Title VI are outlined in FTA Circular 4702.1B.

The most recent triennial Title VI report was provided by the MBTA to the FTA in 2014. For years in which the MBTA does not submit a triennial report, the FTA requires the Authority to complete annual Title VI monitoring and internal reporting to identify and address problems early and to ensure ongoing Title VI compliance. Under the MBTA's monitoring schedule, data collection and analysis are completed annually for some service indicators, and every two years for others. When possible, the results of biennial monitoring are folded into subsequent triennial Title VI reports for the FTA. The most recent triennial report outlined an ongoing process of Title VI data collection and analysis; documented the results of current assessments of compliance; and indicated responsive action that would be taken with respect to Title VI concerns in the interim years (2015 and 2016) before the 2017 report.

CTPS has performed data collection and analysis for MBTA Title VI reporting since the 1980s and has been responsible for producing the MBTA's 2005, 2008, 2011, and 2014 Title VI triennial reports for submittal to the FTA. CTPS has also completed annual internal reports for the MBTA since 2005 and quarterly reports for the FTA, as required. This work program represents a continuation of CTPS's involvement in the MBTA's Title VI monitoring efforts. It outlines the monitoring that will be completed for both the 2017 Triennial Title VI Report and the 2016 annual monitoring, which will provide some of the data for the analyses that will be reported in the triennial report.

Objectives

The primary objective of this study is to produce a report that meets all of the requirements set forth in FTA Circular 4702.1B so that the FTA can make a determination about the MBTA's compliance with Title VI regulations. To do so, CTPS will work closely with the MBTA to collect and analyze transit service data as they relate to minority populations within the MBTA's service area. CTPS will provide

ongoing technical support to the MBTA's Title VI Working Group and will produce a final report for submittal to the FTA by June 1, 2017. This report will address all of the general reporting requirements (for which most of the documentation will be provided by the MBTA), as well as the required program-specific elements, which will be evaluated in the context of this work program, and will include:

1. Documentation of the General Requirements set forth in FTA Circular 4702.1B
2. Production of demographic, trip generator, transit service, and transit amenity maps and overlays
3. Documentation of systemwide service standards and policies, along with analyses of service-monitoring data, to compare the performance of services provided in minority areas with those in nonminority areas
4. Documentation of completed equity analyses performed for any proposed fare changes or major service changes that have occurred since the submittal of the MBTA's last triennial Title VI report (in 2014) and a copy of board meeting minutes or a resolution demonstrating the board's consideration, awareness, and approval of the equity analyses for any service or fare changes
5. Documentation of the public engagement process for setting the major service change policy and disparate impact policy, and a copy of board meeting minutes or a resolution demonstrating the board's consideration, awareness, and approval of the major service change policy and disparate impact policy
6. Continued outreach to MBTA departments regarding their roles in Title VI compliance

Work Description

In addition to the general reporting requirements, FTA Title VI Circular 4702.1B, dated October 1, 2012, sets forth a specific set of reporting requirements for transit providers who operate 50 or more fixed-route vehicles in peak service and that are located in an Urbanized Area (UZA) with a population of 200,000 or greater. Therefore, as one of these transit providers, the MBTA is required to collect and report data through a series of demographic and service profile maps and charts; monitor and report transit service through comparative analysis based on the MBTA's systemwide service standards and service policies; and evaluate major service and fare changes with regard to equity.

The production of demographic and service profile maps and charts relies heavily on up-to-date data coverages of MBTA transit routes and amenities in the geographic

information system (GIS) database maintained by CTPS. These coverages, which have been updated using 2010 census data, allow CTPS to designate the transit routes that serve, and the transit amenities that are located in, predominantly minority areas.

CTPS will collect the data needed for the comparative analysis of transit service according to the MBTA level-of-service monitoring schedule. Certain indicators are monitored annually, while others are monitored every two years. The analyses conducted for the 2017 Triennial Title VI Report will utilize the most recent data available for each of the indicators.

Task 1 Produce Demographic and Service Profile Maps and Charts

CTPS will produce the following maps, overlays, and summary statistics for the MBTA service area by census tract using demographic data from the 2010 census and 2014 American Community Survey (ACS) databases. CTPS will also provide narrative explanations of the maps. This task will consist of the following steps:

- Produce a base map of the MBTA's service area that includes each census tract, major streets and highways, the MBTA's fixed-guideway services, and MBTA stations.
- Produce demographic maps displaying all of the above, highlighting the census tracts that are defined as predominantly minority. Areas that are predominantly low-income will also be identified for the purpose of any environmental justice analyses that may be required for major service or fare changes.
- Summarize statistics on the number and percentage of minority and low-income persons in each census tract and indicate which census tracts are defined as predominantly minority and/or predominantly low-income.
- Produce an overlay to the base map showing population by first language spoken.
- Produce additional overlays to the demographic maps showing all of the following:
 - MBTA depots, maintenance and garage facilities, and administrative buildings (highlighting those that were recently modernized or are scheduled for modernization in the next five years)
 - Major activity centers or other transit trip generators, including the central business district, outlying high-employment areas, schools, and hospitals

- The coverage of all transit services provided by the MBTA, highlighting areas within a reasonable walking distance of the access points
- The locations of bus shelters
- The locations of all CharlieCard retail sales outlets
- Station accessibility and the distribution and operability of elevators and escalators
- Produce additional maps and summary statistics as needed to satisfy the requirements of Title VI reporting

Products of Task 1

Base maps, demographic maps, and all required map overlays, as well as summary statistics and written descriptions and interpretations of the maps and overlays

Task 2 Monitor the Level of Service

Most of the level-of-service analyses associated with Title VI reporting rely on up-to-date data coverages of MBTA transit routes and amenities in the GIS database maintained by CTPS. These coverages allow CTPS to designate amenities as being located in, and routes as serving, predominantly minority or nonminority areas as defined by FTA Title VI guidelines.

Subtask 2.1 Document Service Standards and Policies

For the level-of-service analysis, CTPS will first document the MBTA's standards and policies for the service indicators specified in the Title VI Circular. CTPS will use existing documentation when available and will work with the applicable MBTA departments to document additional standards and policies, as necessary. At this time CTPS is working with the MBTA to develop new customer-centric standards.

Subtask 2.2 Collect Level-of-Service Data

For each of the service indicators specified in the Title VI Circular, CTPS will either directly collect the data required for performing the required level-of-service analyses described in Subtask 2.3 below or will work with the applicable MBTA departments to obtain the necessary data. Data collection activities that are not described here will be completed by the MBTA departments specified, and the results will be provided to CTPS for inclusion in the final triennial report.

- **Vehicle Load:** CTPS will use bus and rapid transit vehicle load data compiled by the MBTA Service Planning department as a part of its biennial service planning process. CTPS will obtain commuter rail vehicle load data from the MBTA Railroad Operations department.

- **Vehicle Headway:** CTPS will use bus and rapid transit vehicle headway data compiled by the MBTA Service Planning department as a part of its biennial service planning process, and will obtain commuter rail vehicle headway data from MBTA Railroad Operations.
- **On-Time Performance:** CTPS will use bus and rapid transit vehicle on-time performance data compiled by the MBTA Service Planning department as a part of its biennial service planning process, and will obtain commuter rail vehicle on-time performance data from MBTA Railroad Operations.
- **Percent of Scheduled Bus Service Operated:** Using data compiled monthly by the MBTA for its online ScoreCard, CTPS will analyze, by bus route, the percentage of trips operated.
- **Availability and Condition of Transit Amenities:** CTPS will collect data on transit amenities through field observations and/or will obtain these data from the MBTA. These amenities include station and shelter conditions; the distribution of benches, timetables, route maps, neighborhood maps, and trash and recycling receptacles at stations; the distribution and operability (should operability data be available) of faregates, fare vending machines, and variable message signs; the distribution and operability of station elevators and escalators; and the distribution of retail sales terminals. For each amenity, CTPS will compare the location, condition, and/or operability of those found in predominantly minority areas or stations to amenities in nonminority areas or stations.
 - CTPS will conduct field observations for the location and condition of bus shelters, as well as the benches, timetables, and route maps that are provided in the shelters.
 - For the condition of rapid transit and commuter rail stations and the amenities present at rapid transit and commuter rail stations, CTPS will utilize data that were collected as part of the MBTA's 2016 Title VI monitoring program.
 - CTPS will obtain information about the distribution and operability of AFC faregates, fare vending machines, and retail sales terminals and the distribution and operability of station elevators and escalators from the MBTA.
- **Service Availability:** Using its GIS database, CTPS will determine the level of transit service available to all customers in the MBTA's service area, and compare the level of transit service of minority and nonminority populations.

- **Vehicle Assignment:** For bus vehicle assignment, CTPS will obtain and analyze Bus Operations garage pullout and maintenance records for at least one sampled hot day during the summer. CTPS will use these data to analyze the functionality of air conditioning and the vehicle age of buses on routes that are classified as minority, and will compare the results to those for buses on routes that are classified as nonminority. CTPS will complete the same type of vehicle assignment analysis for rapid transit and commuter rail—for vehicle age only—using data collected through CTPS field observations and/or provided by the MBTA.

Subtask 2.3 Level-of-Service Analyses

For each of the service indicators specified in the Title VI Circular, CTPS will use the data discussed in Subtask 2.2 to assess the performance of all services by applying the service standards and policies documented in Subtask 2.1 and to compare the performance of the services provided to predominantly minority areas with the performance of services provided to nonminority areas. If the assessment shows that there is a disparate impact on the basis of race, color, or national origin, CTPS will work with the MBTA to determine why the disparity exists, and will assist in developing corrective actions to remedy the disparity to the greatest extent possible. CTPS will include in the final report a discussion of any corrective actions.

Products of Task 2

Summaries from the MBTA's service standards and policies, maps displaying the distribution of transit amenities and transit accessibility, tables and charts displaying collected data and results from level-of-service analyses, and written descriptions of all procedures and findings

Task 3 Document Service and Fare Equity Analyses

Since the submittal of the MBTA's 2014 Triennial Title VI Report, CTPS has conducted numerous service and fare equity analyses, including those for the 2014 MBTA fare restructuring, 2015 MBTA Late-Night Service termination and mitigation, 2015–16 MBTA Youth Pass Pilot, and the 2016 MBTA fare restructuring. Documentation of these completed service and fare equity analyses and any additional service or fare equity analyses that may be performed before completion of the work outlined in this work program will be included in the MBTA's 2017 Triennial Title VI Report.

Product of Task 3

Documentation of any service or fare equity analyses that have been completed between the submittal of the MBTA's 2014 and 2017 Triennial Title VI reports

Task 4 Document Fulfillment of Other General Reporting Requirements

In addition to the program-specific data collection and analysis requirements outlined above, the Title VI Circular also includes a number of general reporting requirements that are completed by departments within the MBTA. These include, for example, public notification of protection under Title VI, Title VI complaint procedures and forms, a policy for providing access for limited-English-speaking populations based on the US Department of Transportation's limited-English-proficiency (LEP) guidance on inclusive public-participation processes; a breakdown of minority representation on planning and advisory bodies; and equity analyses of the locations of any proposed transit facilities. The MBTA will provide CTPS with most all of the documentation related to these general reporting requirements and CTPS will incorporate the documentation into the MBTA 2017 Triennial Title VI Report.

Product of Task 4

Documentation in the 2017 Triennial Title VI Report of the fulfillment of other FTA general reporting requirements

Task 5 Provide Technical Support to the MBTA's Title VI Working Group

CTPS will participate as a member in the MBTA's Title VI Working Group in a technical-support role throughout development of the 2017 Triennial Title VI Report. CTPS will circulate draft sections of the report for review and comment by the Working Group as they become available.

Product of Task 5

Technical support to the MBTA's Title VI Working Group

Task 6 Assemble the 2017 Triennial Title VI Report

In addition to the summary statistics, maps, and documentation produced in Tasks 1–3, CTPS will assemble and format all of the documentation provided by individual MBTA departments to produce the MBTA's Triennial Title VI Report for submittal to the FTA, which is due June 1, 2017. CTPS will produce the final report in a format that is accessible to people with disabilities and is acceptable to the FTA, including a cover with a graphical design and graphical presentations of materials contained in the report, as appropriate. Subsequent to this submission, CTPS will provide follow-up assistance to MBTA staff to respond to issues raised by the FTA in its review of the MBTA's 2017 Title VI Program.

Product of Task 6

MBTA 2017 Triennial Title VI Report for the FTA

Task 7 Provide Ongoing Technical Support to the MBTA

CTPS staff will provide ongoing technical assistance to the MBTA to address Title VI issues, as necessary.

Product of Task 7

Technical support provided to the MBTA, as necessary

Estimated Schedule

It is estimated that this project will be completed 12 months after work commences. The proposed schedule, by task, is shown in Exhibit 1.

Estimated Cost

The total cost of this project is estimated to be \$161,511. This includes the cost of 60.5 person-weeks of staff time, overhead at the rate of 102.7 percent, and travel. A detailed breakdown of estimated costs is presented in Exhibit 2.

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Exhibit 1
ESTIMATED SCHEDULE
MBTA 2017 Triennial Title VI Report

Task	Month												
	1	2	3	4	5	6	7	8	9	10	11	12	
1. Produce Demographic and Service Maps and Charts	█												
2. Monitor the Level of Service	█												
3. Document Service and Fare Equity Analyses						█							
4. Document Other General Reporting Requirements				█									
5. Provide Technical Support to the MBTA's Title VI Working Group	█												
6. Assemble the MBTA 2017 Triennial Title VI Report								█					
7. Provide Ongoing Technical Support to the MBTA	█												

Exhibit 2
ESTIMATED COST
MBTA 2017 Triennial Title VI Report

Direct Salary and Overhead	\$161,011
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Task	Person-Weeks							Direct Salary	Overhead (102.70%)	Total Cost
	M-1	P-5	P-4	P-3	P-2	Temp	Total			
1. Produce Demographic and Service Maps and Charts	0.8	2.0	0.4	1.6	0.0	0.0	4.8	\$7,723	\$7,932	\$15,655
2. Monitor the Level of Service	1.6	0.0	0.0	6.0	1.4	13.0	22.0	\$18,560	\$19,061	\$37,621
3. Document Service and Fare Equity Analyses	2.8	0.4	1.4	1.4	0.0	0.0	6.0	\$9,409	\$9,663	\$19,072
4. Document Other General Reporting Requirements	2.0	1.0	1.0	2.0	0.0	0.0	6.0	\$9,272	\$9,523	\$18,795
5. Provide Technical Support to the MBTA's Title VI Working Group	4.0	0.0	0.0	2.4	0.0	0.0	6.4	\$10,032	\$10,302	\$20,334
6. Assemble the MBTA 2017 Triennial Title VI Report	6.0	1.0	1.0	3.0	0.0	0.0	11.0	\$17,650	\$18,127	\$35,777
7. Provide Ongoing Technical Support to the MBTA	2.7	0.0	0.0	1.6	0.0	0.0	4.3	\$6,787	\$6,971	\$13,758
Total	19.9	4.4	3.8	18.0	1.4	13.0	60.5	\$79,433	\$81,578	\$161,011

Other Direct Costs	\$500
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Travel	\$500
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TOTAL COST	\$161,511
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Funding
 Future MBTA Contract