



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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

MEMORANDUM

DATE August 20, 2015
TO Boston Region Metropolitan Planning Organization
FROM Karl H. Quackenbush
CTPS Executive Director
RE Work Program for: MBTA 2016 Title VI Program Monitoring

Action Required

Review and approval

Proposed Motion

That the Boston Region Metropolitan Planning Organization, upon the recommendation of the Massachusetts Department of Transportation, vote to approve the work program for MBTA 2016 Title VI Program Monitoring presented in this memorandum

Project Identification

Unified Planning Work Program Classification

Technical Support/Operations Analysis Projects

CTPS Project Number

11395

Clients

Massachusetts Department of Transportation

Project Supervisor: John Lozada

Massachusetts Bay Transportation Authority

Project Supervisor: Melissa Dullea

CTPS Project Supervisors

Principal: Annette Demchur

Manager: Nicholas Hart

Funding

Future MassDOT 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 MBTA submitted the most recent triennial Title VI report to the FTA on May 30, 2014. In the years when the MBTA does not submit a triennial report, the FTA requires the MBTA 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 or three 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 actions that will be taken with respect to Title VI concerns in the interim years between the 2014 and 2017 triennial reports.

CTPS has performed data collection and analysis for MBTA Title VI reporting since the 1980s, and was 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 the 2016 annual report, which will provide some of the data for the analyses that will be reported in the 2017 triennial report.

Objectives

CTPS will assist the MBTA in data collection and will conduct performance assessments, based on existing MBTA service standards and policies, of specific service indicators, according to the MBTA's monitoring schedule. CTPS will then compare service performance in predominately minority communities with performance in communities that are predominately nonminority, as required by the

MBTA's Disparate Impact and Disproportionate Burden Policy, to determine if there are disparate impacts on the basis of race, color, or national origin.

Work Description

The Title VI Circular identifies a number of service indicators for service monitoring for which a comparative analysis must be completed. The MBTA monitors some service indicators annually, including vehicle assignment and the distribution, operability, and/or utilization of two types of transit amenities: (1) automated-fare-collection (AFC) gates, fare vending machines, and retail sales outlets; and (2) station elevators and escalators. For reporting in even-numbered years, the MBTA monitors station conditions and amenities, the distribution of neighborhood maps, and the distribution and operability of variable-message signs. For reporting in odd-numbered years, the MBTA monitors vehicle load, vehicle headway, and on-time performance; service availability; and the distribution and condition of bus shelters. Because vehicle load, vehicle headway, and on-time performance data were not available in time for the 2015 annual report, these service indicators will be included in the 2016 report.

Most of the service analyses rely 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 and the American Community Survey (ACS) five-year data set (2009–13), allow CTPS to designate amenities as being located in, and routes as serving, predominantly minority and/or low-income areas.¹

Task 1 Monitor Service Performance

The first step in service performance monitoring is assessing the performance of specified services against established service standards and policies. The performance of the services provided for predominantly minority areas is then compared with the performance of services provided for predominantly nonminority areas to determine if there are disparate impacts on the basis of race, color, or national origin, as required by the MBTA's Disparate Impact and Disproportionate Burden Policy. The service indicators for which CTPS will collect and/or analyze data, and the actions that will be taken by CTPS, are described below.

- **Vehicle Load, Vehicle Headway, and On-Time Performance:** Although these service indicators are generally analyzed in odd-numbered years, the analysis will occur through this work program, as the MBTA was not able to provide data for these indicators for the 2015 monitoring. The

¹ The FTA no longer requires analysis of service performance by income level, but does require consideration of the impacts of service and fare changes on low-income populations.

MBTA reports on vehicle loads, vehicle headways, and on-time performance on all modes every two years. CTPS collects data through field observations for the Green Line; for all of the other modes, the MBTA provides data to CTPS. Should MBTA data become available during this reporting period, CTPS will compare the performance of those routes identified as serving predominantly minority areas to routes serving predominantly nonminority areas using the vehicle load, frequency of service, and schedule adherence standards, and will complete a disparate impact analysis for each indicator.

- **Distribution of Transit Amenities:** CTPS will monitor the following transit amenities in the context of this work program: the condition of rapid transit, commuter rail, and commuter boat stations, as well as the benches, timetables, and route maps that are provided in the stations; the distribution and/or condition of neighborhood maps; the distribution and/or operability of variable message signs; the distribution and/or operability of AFC fare gates, fare vending machines, and retail sales terminals; and the distribution and operability of station elevators and escalators. CTPS will collect the monitoring data for the rapid transit, commuter rail, and commuter boat stations and related amenities through field observations. The MBTA provides data on all other amenities to CTPS. CTPS will evaluate the location, condition, and/or operability of each amenity according to MBTA policy and will compare the performance of the amenities in predominantly minority areas or stations to the amenities in predominantly nonminority areas or stations, as required by the MBTA's Disparate Impact and Disproportionate Burden Policy.
- **Vehicle Assignment:** For bus vehicle assignment, CTPS will obtain and analyze Bus Operations' garage pullout and maintenance records for at least one sample hot day during the summer. Using these data, CTPS will analyze the functionality of air conditioning and the vehicle age of buses on routes that serve predominantly minority areas, and will compare those data to the data for buses on routes that serve predominantly nonminority areas. Vehicle assignment analyses, which are performed only for vehicle age, will be conducted for rapid transit and commuter rail using data collected through CTPS field observations and/or provided by the MBTA. CTPS will then conduct disparate impact analyses of vehicle age and air-conditioning functionality.

Products of Task 1

- Summaries showing the vehicle loads, vehicle headway, and on-time performance of routes in predominantly minority areas and in predominantly nonminority areas, and the results of the disparate impact analyses, should data become available

- Summaries showing the distribution of transit amenities in predominantly minority areas and in predominantly nonminority areas, and the results of the disparate impact analyses
- Summaries by route for vehicle assignment (based on vehicle age, and, for buses, air conditioning), with an indication of which routes serve predominantly minority areas, and the results of the disparate impact analyses

Task 2 Prepare an Internal Report for the MBTA

CTPS will compile the results of the level-of-service analysis into the 2016 Title VI report to the MBTA. This report will provide the data needed for the MBTA to determine whether any corrective actions need to be taken to ensure that services in predominantly minority areas are comparable to those in predominantly nonminority areas.

Product of Task 2

2016 Title VI report for the MBTA

Task 3 Provide Technical Assistance to the MBTA and the MassDOT Office of Diversity and Civil Rights (ODCR)

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

Product of Task 3

Technical assistance provided to the MBTA and ODCR as necessary

Estimated Schedule

It is estimated that this project will be completed 13 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 \$63,139. This includes the cost of 29.6 person-weeks of staff time, overhead at the rate of 98.88 percent, and travel. A detailed breakdown of estimated costs is presented in Exhibit 2.

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Exhibit 1
ESTIMATED SCHEDULE
MBTA 2016 Title VI Program Monitoring

Task	Month													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1. Monitor Service Performance	█													
2. Prepare an Internal Report for the MBTA							█							
3. Provide Technical Assistance to the MBTA and ODCR	█													

Exhibit 2
ESTIMATED COST
MBTA 2016 Title VI Program Monitoring

Direct Salary and Overhead	\$62,639
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Task	Person-Weeks							Direct Salary	Overhead (98.88%)	Total Cost
	M-1	P-5	P-4	P-3	P-1	Temp	Total			
1. Monitor Service Performance	1.4	1.0	1.0	3.6	4.4	8.6	20.0	\$17,518	\$17,322	\$34,840
2. Prepare an Internal Report for the MBTA	2.2	0.0	0.0	1.8	0.0	0.0	4.0	\$5,795	\$5,730	\$11,524
3. Provide Technical Assistance to the MBTA and ODCR	3.2	0.0	0.0	2.4	0.0	0.0	5.6	\$8,183	\$8,091	\$16,275
Total	6.8	1.0	1.0	7.8	4.4	8.6	29.6	\$31,496	\$31,143	\$62,639

Other Direct Costs	\$500
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Travel	\$500
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TOTAL COST	\$63,139
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Funding

Future MassDOT contract