



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
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WORK PROGRAM

PRIORITIZATION OF DEDICATED BUS LANES II

FEBRUARY 6, 2020

Proposed Motion

The Boston Region Metropolitan Planning Organization (MPO) votes to approve this work program.

Project Identification

Unified Planning Work Program (UPWP) Classification

Not listed in federal fiscal year 2020 UPWP

Project Number 11425

Client

Massachusetts Bay Transportation Authority (MBTA)

Client Supervisor: Wes Edwards

Project Supervisors

Principal: Katie Stetner

Manager: Jonathan Belcher

Funding Source

Future MBTA Contract

Schedule and Budget

Schedule: Eight months from notice to proceed

Budget: \$82,245

Schedule and budget details are shown in Exhibits 1 and 2, respectively.

Relationship to MPO Work

This study is supported in full with non-MPO funding. Committing MPO staff to this project will not impinge on the quality or timeliness of MPO-funded work.

Background

In 2016, the Central Transportation Planning Staff (CTPS) conducted a study for the Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning that identified segments of Greater Boston roadways where the installation of dedicated bus lanes would be the most beneficial for bus riders, as measured by the rate of delay that the riders encountered. The study included an assessment of the rate of weekday bus passenger delay in roadway segments with 1,500 or more weekday bus passengers in one direction. The study resulted in the identification of roadway segments with comparatively high rates of weekday bus passenger delay.

The MBTA has used the results of the 2016 study to support the implementation of dedicated bus lanes in multiple locations in the Greater Boston region. The MBTA would like to support the introduction of additional bus lane corridors in the region and prioritize funding to the corridors with the greatest potential for significant reduction in bus passenger travel times. The categorizing of roadway segments into prioritization tiers will assist MBTA staff with the allocation of capital funds for bus lane construction, in coordination with municipal partners.

Objectives

1. Identify and compile additional data items to support the classification of roadway segments into tiers for bus priority implementation.
2. Review and summarize the demographics of the routes and corridors identified.
3. Work with the MBTA to define a funding model for each tier and to document the model in a public-facing guide for municipal staff.
4. Document relevant data and analyses in a memorandum and develop a publicly-available interactive mapping tool that displays the data and results of this study.

Work Description

The seven tasks in this work program are described below.

Task 1 Support the Development of Tiers to Prioritize Implementation of Dedicated Bus Lanes

Staff will work with the MBTA to develop tiers for prioritizing corridors for the implementation of dedicated bus lanes. Staff will classify roadway segments with 1,500 or more weekday bus passengers in one direction into tiers. As part of the tier development process, staff will use the metrics from the 2016 study and compile additional relevant data to be incorporated within the budget of this task. This may include updated bus travel time data, updated ridership data, readily available

bicycle infrastructure data, or information about non-MBTA bus services that might use a bus lane in the segments previously identified.

Products of Task 1

Classification of potential corridors for dedicated bus lanes into implementation tiers with supporting datasets, figures, and graphs.

Task 2 Analyze Demographics of Potential Bus Lane Corridors

Staff will identify and analyze the demographic characteristics of the residents living near the potential bus lanes in the corridors identified in Task 1. Staff will also analyze the demographics of bus passengers who would benefit from potential bus lanes in these corridors.

Products of Task 2

Maps, graphs, or tables that summarize the demographic characteristics of the potential bus priority corridors identified in Task 1.

Task 3 Develop Funding and Partnership Model with the MBTA

Staff will work with the MBTA to define funding and municipal partnership approaches for each tier identified in Task 1. The level of MBTA funding and partnership will be based on the potential benefit of bus priority improvements.

Products of Task 3

No products for Task 3.

Task 4 Produce Funding and Partnership Guide for Municipal Staff

Staff will document the funding and partnership model developed in Task 3 in a graphical guide for municipal staff. While the details of the funding and partnership model will be documented in the technical memorandum in Task 5, the guide is intended to communicate information to municipal staff by highlighting the key points for municipalities. The guide will also explain the classification tiers and the levels of support that the MBTA will provide for corridors in each tier to help with the implementation of bus priority treatments.

Product of Task 4

A graphical guide for municipal staff that documents the MBTA's model for funding and information on the partnership between the MBTA and municipalities on bus priority projects.

Task 5 Document Methodology and Results in Technical Memorandum

Staff will document the methodology and the results of Tasks 1, 2, and 3 in a technical memorandum. The technical memorandum will provide details about the datasets and analysis used to define the classification tiers, and summarize the demographic characteristics of the potential bus priority corridors. The memorandum

will also document the funding and partnership model as developed in cooperation with the MBTA.

Products of Task 5

Technical memorandum documenting the methodology and results of Tasks 1, 2, and 3.

Task 6 Develop Interactive Application

Staff will develop an interactive mapping tool to display the results of Tasks 1 and 2. The mapping tool will include the MBTA bus network and the relevant data about ridership and schedules. The interactive application will be designed with MBTA branding.

Products of Task 6

An interactive mapping tool that displays relevant data about bus routes and potential bus priority corridors.

Task 7 Provide Additional Technical Assistance

Staff will provide additional technical assistance as requested by the MBTA within the budget of this task.

Product of Task 7

Additional technical assistance as requested by the MBTA.

Exhibit 1
ESTIMATED SCHEDULE
Prioritization of Dedicated Bus Lanes II

Task	Month							
	1	2	3	4	5	6	7	8
1. Support the Development of Tiers to Prioritize Implementation of Dedicated Bus Lanes	█							
2. Analyze Demographics of Potential Bus Lane Corridors	█							
3. Develop Funding and Partnership Model with the MBTA	█							
4. Produce Funding and Partnership Guide for Municipal Staff	█			A				
5. Document Methodology and Results in Technical Memorandum	█						B	
6. Develop Interactive Application	█						C	
7. Provide Additional Technical Assistance	█							

Products/Milestones

- A: Funding guide
- B: Technical memorandum
- C: Interactive application

Exhibit 2
ESTIMATED COST
Prioritization of Dedicated Bus Lanes II

Direct Salary and Overhead	\$82,245
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Task	Person-Weeks				Direct Salary	Overhead (104.89%)	Total Cost
	M-1	P-5	P-4	Total			
1. Support the Development of Tiers to Prioritize Implementation of Dedicated Bus Lanes	0.2	2.0	1.0	3.2	\$5,884	\$6,172	\$12,056
2. Analyze Demographics of Potential Bus Lane Corridors	0.2	1.0	0.0	1.2	\$2,451	\$2,571	\$5,023
3. Develop Funding and Partnership Model with the MBTA	0.2	1.0	0.0	1.2	\$2,451	\$2,571	\$5,023
4. Produce Funding and Partnership Guide for Municipal Staff	1.1	3.0	0.0	4.1	\$8,005	\$8,397	\$16,402
5. Document Methodology and Results in Technical Memorandum	1.4	2.5	0.0	3.9	\$7,570	\$7,940	\$15,510
6. Develop Interactive Application	0.8	5.0	0.0	5.8	\$11,420	\$11,979	\$23,399
7. Provide Additional Technical Assistance	0.2	1.0	0.0	1.2	\$2,358	\$2,474	\$4,832
Total	4.2	15.5	1.0	20.8	\$40,141	\$42,104	\$82,245

Other Direct Costs	\$0
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TOTAL COST	\$82,245
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Funding

Future MBTA Contract