**BOSTON REGION METROPOLITAN PLANNING ORGANIZATION** 



Gina Fiandaca, MassDOT Secretary and CEO and MPO Chair Tegin L. Teich, Executive Director, MPO Staff

# WORK PROGRAM

# I-90 ALLSTON MULTIMODAL MODELING

# PHASE 1

JUNE 15, 2023

## **Proposed Motion**

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

## **Project Identification**

### Unified Planning Work Program (UPWP) Classification

Agency and Other Client Transportation Planning Studies and Technical Analyses

### Project Number 13809

Client

Massachusetts Department of Transportation (MassDOT) Highway Division *Client Supervisor: Mike O'Dowd* 

### **Project Supervisors**

*Principal:* Rosemary McCarron *Manager:* Ben Dowling

### **Funding Source**

MassDOT On-Call Support Contract

## Schedule and Budget

Schedule: Four months from notice to proceed

Budget: \$116,039

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

This work program will expand upon prior Central Transportation Planning Staff (CTPS) work modeling the Allston Multimodal Project. The project is expected to dramatically improve livability and connectivity for residents of the Allston neighborhood of Boston. It will enhance regional mobility through improvements to Interstate 90 (I-90) and its abutting interchange and create a new stop on the Worcester/Framingham commuter line, to be known as West Station.

CTPS provided support for this project in 2018 and 2020. MassDOT and its project team are currently developing a Supplemental Draft Environmental Impact Report and have requested that CTPS produce travel-demand forecasts to help understand the transportation impacts and opportunities of the project.

## Objectives

CTPS will support MassDOT and the project team by using CTPS's regional travel demand model set to produce data on highway volumes, transit volumes, and mode splits in the study area for opening- and forecast-year scenarios.

## **Work Description**

As described in Tasks 1 through 4 below, CTPS will estimate roadway volumes for I-90, the Allston Interchange, and the surface roadway network surrounding the interchange. This is a Phase 1 work program and it is anticipated that additional phases will follow.

### Task 1 Model Setup

CTPS will prepare the regional travel demand model for use in this study.

#### Products of Task 1

A regional travel demand model set which is suitable for the study

### Task 2 Model One Forecast-Year Scenario

CTPS will model the Forecast-Year No-Build scenario to include a new split zone for Transportation Analysis Zone (TAZ) 246 and reconfigured centroid connectors to produce more realistic highway assignments for TAZ 246 and the new TAZ. The No-Build scenario will also incorporate expected changes to transit operations in the horizon year, including a spring 2023 commuter rail schedule and Bus Network Redesign routing for specific routes to be identified by the project team. This No-Build scenario will be compared to an appropriate base-year scenario.

#### Products of Task 2

• Trip generation estimates for the immediate study area by TAZ for all scenarios

- Mode splits for the immediate study area and the area within a one-mile radius of West Station for all scenarios
- AM and PM peak-period network plots with roadway-link volumes for all scenarios
- Trip tables by time period for all modes that provide access to and from the study area, aggregated at a geography defined by the project team
- Tabular daily and peak-period summaries of systemwide route-level ridership for the Worcester/Framingham commuter rail line, rapid transit (Blue, Green, Red, and Orange Lines), local MBTA buses (Routes 57, 64, 66, 70/70A, 86, 501, 504, and 505), and any new shuttles identified by the project team, for all scenarios
- Tabular daily and peak-period summaries of station-level ridership at West Station, Auburndale, West Newton, Newtonville, Boston Landing, Lansdowne, Back Bay, and South Station, as well as all stations west of Auburndale on the Framingham/Worcester commuter rail line, Harvard Square, Central Square, Kendall Square, Packard's Corner, Babcock Street, Pleasant Street, Lechmere, as well as Green Line central subway and B Branch surface stations
- Tabular summary of boarding and alighting at access and egress modes at West Station, including passenger pick up and drop-off
- Tabular summary of crowding on the Worcester/Framingham commuter rail line, Green Line B Branch, and major buses serving the study area during peak periods

#### Task 3 Model One Opening-Year Scenario

CTPS will model the Opening-Year No-Build scenario to support the project team and its opening-year analysis.

#### Product of Task 3

CTPS will provide the project team with the same set of outputs and analysis listed under Task 2 above, except for volume plots.

#### Task 4 Project Coordination

CTPS will coordinate with the project team throughout the study, which is expected to result in the submission of an environmental filing.

#### Products of Task 4

Attendance at various internal team meetings

### Exhibit 1 ESTIMATED SCHEDULE I-90 Allston Multimodal Modelling--Phase 1

	Month					
Task	1	2	3	4	5	
<ol> <li>Model Setup</li> <li>Model One Forecast Year Scenario</li> <li>Model One Opening Year Scenario</li> <li>Project Coordination</li> </ol>						

#### Exhibit 2 ESTIMATED COST I-90 Allston Multimodal Modelling--Phase 1

## Direct Salary and Overhead

## \$116,039

	Person-Weeks			Direct	Overhead	Total	
Task	M-1	P-4	P-2	Total	Salary	(119.34%)	Cost
1. Model Setup	0.0	2.0	1.0	3.0	\$4,837	\$5,772	\$10,608
2. Model One Forecast Year Scenario	0.0	9.0	9.0	18.0	\$27,952	\$33,358	\$61,310
3. Model One Opening Year Scenario	0.0	3.0	4.0	7.0	\$10,692	\$12,760	\$23,452
4. Project Coordination	2.0	1.5	2.0	5.5	\$9,423	\$11,245	\$20,669
Total	2.0	15.5	16.0	33.5	\$52,904	\$63,135	\$116,039
Other Direct Costs							\$0
TOTAL COST							\$116,039

#### Funding

MassDOT On-Call Support Contract

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Title VI Specialist Boston Region MPO 10 Park Plaza, Suite 2150 Boston, MA 02116 civilrights@ctps.org

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857.702.3700 (voice)

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