



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
Tegin L. Teich, Executive Director, MPO Staff

WORK PROGRAM

ROUTE 1 CORRIDOR STUDY—DEDHAM

MAY 28, 2020

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 23330

Client

Town of Dedham

Client Supervisor: Jeremy Rosenberger

Project Supervisors

Principal: Mark Abbott

Manager: Seth Asante

Funding Source

Town of Dedham

Schedule and Budget

Schedule: Twelve months from notice to proceed

Budget: \$120,593

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

The town of Dedham has been awarded a grant by the Massachusetts Office of Travel and Tourism to fund a study of the Route 1 (VFW Parkway and Providence Highway) in West Roxbury, Boston, and Dedham. The study area for this corridor study is Route 1 from the intersection of Route 109/Spring Street and VFW Parkway in Boston to the Marine Rotary at Washington Street in Dedham. This section of Route 1 was designed primarily as a relatively high-speed vehicle corridor. The existing development, future potential development, and redevelopment adjacent to the corridor requires a relook at the corridor's design to address multimodal transportation and safety needs.

A roadway corridor study is a logical way to address regional multimodal transportation and safety needs since it evaluates a roadway corridor or arterial segment comprehensively, considering the goals of the community, needs of pedestrians, bicyclists, motorists, public transportation users, and roadway abutters. An additional key aspect to conducting a study of the corridor is public involvement; getting public input is essential in developing successful improvements. This study uses this approach to analyze the issues.

Central Transportation Planning Staff (CTPS) will develop short- and long-term recommendations for improvements within the roadway's right-of-way. The intent is to improve the roadway corridor so that it is safe for people to access shops, schools, transit stations, and recreational areas, support existing and future development, and help the community meet its broader transportation and growth goals.

Objective(s)

1. Identify the safety, mobility, access, and other transportation-related issues within the corridor segment.
2. Develop and evaluate solutions to the problems identified in objective one; maintain and modernize the roadway; use the existing roadway more efficiently; and increase transportation options, particularly for vulnerable road users, including pedestrians, transit riders, bicyclists, and those with limited mobility.

Work Description

For this work program, CTPS will perform the following tasks:

- Establish an advisory committee with the Town of Dedham and the City of Boston
- Identify corridor issues and identify problem locations
- Collect and gather data
- Analyze data
- Recommend improvements

- Document results

Task 1 Establish an Advisory Committee

CTPS and Metropolitan Area Planning Council (MAPC) staff, the Town of Dedham, and the City of Boston will establish an advisory committee composed of municipal officials, adjacent property owners, and others (to be identified). The Advisory Committee will include representatives from the Massachusetts Department of Transportation (MassDOT) Highway Division, the Department of Conservation and Recreation (DCR), the Army Corp of Engineers, the City of Boston, and the Massachusetts Bay Transportation Authority (MBTA). These stakeholders will advise CTPS about the study areas and data sources; help identify transportation-related problems; and help develop multimodal transportation solutions and recommendations. Either the Town of Dedham or other entities mentioned previously will implement the recommendations from this study; therefore, it is important that these recommendations reflect those entities' experiences, and align with MassDOT design standards.

Products of Task 1

- Formation of an advisory committee
- Documentation of stakeholder input

Task 2 Technical Analysis

Task 2 consists of collecting and gathering data for evaluating existing conditions and conducting analysis for identifying problems and needs of the corridor.

Subtask 2.1 Collect and Gather Data

CTPS will work with the Advisory Committee and stakeholders to identify relevant data sources, review base materials and previous studies to identify problems and needs, relevant data for analyses, missing data that needs to be collected, and findings and recommendations that need to be considered in the current study. Once the problem locations and gaps in data have been identified, CTPS will gather recent and historical data from existing sources, including databases maintained by the Town of Dedham, City of Boston, MPO, MassDOT Highway Division, MAPC, and the MBTA.

The relevant data will be pulled from existing databases for planning and evaluating roadway improvements such as crashes, traffic volumes, pedestrian and bicycle volumes, transit service data (ridership, boardings/alightings, average delays, etc.), traffic signal control and timing permits, pavement conditions, roadway inventory data, street lighting, and utilities within the right-of-way. Some data that will need to be collected in the field include the following:

- Average weekday traffic counts and turning-movement counts for the peak periods, including for truck traffic data, pedestrians, and bicyclists
- Conditions of pedestrian and bicycle amenities, such as sidewalk, bicycle lanes, and crosswalks, and gaps in pedestrian and bicycle networks
- Access management and circulation data, such as location and types of driveways, spacing of access, driveways, median treatments, and other access-related issues
- Americans with Disability Act (ADA) compliance issues

Products of Subtask 2.1

- Datasets for assessing safety, mobility, and operational performance at problem locations

Subtask 2.2 Conduct Technical Analysis

The analysis performed in this study will be guided by the vision, goals, and principles identified by the Advisory Committee. Staff will perform the following tasks based on analyses conducted in similar past corridor studies:

- Conduct an online survey to obtain input from residents and stakeholders
- Analyze crash data, prepare crash diagrams, identify Highway Safety Improvement Program locations and other safety concerns
- Analyze traffic volume, speed, and classification data to identify capacity and circulation issues
- Conduct analyses of traffic signal warrants and signal retiming and coordination to determine traffic operations deficiencies and safety impacts
- Assess the need for upgrading traffic signal equipment to comply with MassDOT standards
- Review access management to determine existing deficiencies and circulation problems, such as driveway spacing, traffic signals spacing, median treatments and openings, turn lanes, access to abutting businesses and land uses, and multimodal connections
- Evaluate parking needs and conditions in the corridor
- Evaluate existing roadway cross-section uses to determine deficiencies
- Review existing intersections and roadway geometric layouts and identify problems and needs

- Evaluate the gaps in pedestrian and bicycle networks and connectivity issues
- Evaluate the conditions for pedestrians and bicyclists in the corridor and assess potential safe and economical means of accommodating bicyclists
- Evaluate performance of bus service, bus stop placement in relation to demand and MBTA service standards, and transit needs assessment (routes, stops, signs and shelters)
- Review existing utilities layout (electric, water/sewer, telecommunications, and stormwater drainage outlets) as data is available, to determine whether proposed improvements would require any relocation
- Conduct planning level environmental assessment to identify potential impacts to wetlands, waterways, and flood zones

Products of Subtask 2.2

- List of problems and needs
- Crash analyses tables and figures
- Collision diagrams
- Delay, level of service, and queue calculations
- Bus performance statistics tables
- Pedestrians' and bicyclists' conditions
- Gaps in pedestrian and bicycle networks

Task 3 Recommend Improvements and Conceptual Design

Based on the results of the analyses described above ideas and feedback from the survey, and in consultation with Advisory Committee, CTPS will develop and recommend improvements as follows:

- Complete Streets improvements to help create livable communities and enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. The recommended improvement would be in response to community context and may include, for example, sidewalks, bicycle lanes, cycle tracks, accessible public transportation stops, frequent and safe crossing opportunities, median islands and treatments, accessible pedestrian signals or curb extensions.
- Intersection geometric improvements to help improve safety and efficiency, such as reconfigured lane assignments, raised medians, improved sight distances/sight lines, optimized signal timings, improved traffic control and signage, shorter pedestrian crossing distances, and turn lanes.

- Pedestrian and bicycle facilities that provide safe and comfortable accommodation and connectivity, and support multimodal transportation. Improvements to close any gap in pedestrian and bicycle network, such as installing and repairing sidewalks, constructing separated bicycle lanes or cycle tracks or multiuse paths, and making facilities such as crosswalks and sidewalks more accessible and compliant with ADA requirements.
- Roadway cross-section improvements compatible with the expected future land uses of the corridor, improved access management, and improved streetscape providing a greener and more welcoming environment for all users.
- Transit service improvements to allow buses to run on time, make it safe for people to walk and bicycle to and from bus stops, and potential new routes and stops to improve connections and connectivity.

Products of Task 3

- Conceptual designs of alternatives and site-specific recommendations
- Cross-sectional renderings of the alternatives
- Planning-level cost estimates of the alternatives
- Illustrations of streetscape elements
- Summary of alternatives analysis comparing benefits and disadvantages of alternatives

Task 4 Document Results

CTPS will submit a draft report on the background of the study, agency and municipal input, identification of problems, data collection, analyses, and recommendations. The document will follow MassDOT Highway Division's guidelines for preparation of functional design reports as much as possible, taking into consideration the study's budget.

After receiving comments on the draft report from municipal officials, MassDOT, and other study advisory groups, staff will address these comments and finalize the study report and recommendations.

Products of Task 4

- Draft study report
- Final study report

The Boston Region Metropolitan Planning Organization (MPO) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination under any program or activity that receives federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, Federal Transit Administration, or both, prohibit discrimination on the basis of age, sex, and disability. The Boston Region MPO considers these protected populations in its Title VI Programs, consistent with federal interpretation and administration. In addition, the Boston Region MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with U.S. Department of Transportation policy and guidance on federal Executive Order 13166.

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A complaint form and additional information can be obtained by contacting the MPO or at http://www.bostonmpo.org/mpo_non_discrimination. To request this information in a different language or in an accessible format, please contact

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Boston Region MPO
10 Park Plaza, Suite 2150
Boston, MA 02116
civilrights@ctps.org
857.702.3700 (voice)
617.570.9193 (TTY)

Exhibit 1
ESTIMATED SCHEDULE
Route 1 Corridor Study - Dedham

Task	Month												
	1	2	3	4	5	6	7	8	9	10	11	12	
1. Establish an Advisory Committee	█												
2. Technical Analysis	█												
3. Recommend Improvements and Conceptual Design				█									
4. Document Results								█					

Exhibit 2
ESTIMATED COST
Route 1 Corridor Study - Dedham

Direct Salary and Overhead	\$120,306
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Task	Person-Weeks					Direct Salary	Overhead (106.5%)	Total Cost
	M-1	P-5	P-4	P-2	Total			
1. Establish an Advisory Committee	1.0	1.0	1.0	1.0	4.0	\$6,408	\$6,824	\$13,232
2. Technical Analysis	2.0	5.0	3.0	5.5	15.5	\$24,125	\$25,693	\$49,818
3. Recommend Improvements and Conceptual Design	1.0	4.0	2.0	2.5	9.5	\$15,487	\$16,493	\$31,980
4. Document Results	2.0	3.0	1.0	1.0	7.0	\$12,240	\$13,036	\$25,276
Total	6.0	13.0	7.0	10.0	36.0	\$58,260	\$62,046	\$120,306

Other Direct Costs	\$287
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TOTAL COST	\$120,593
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Funding
 Town of Dedham