



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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Richard A. Davey
MassDOT Secretary and CEO
and MPO Chairman

Karl H. Quackenbush
Executive Director, MPO Staff

MEMORANDUM

DATE July 12, 2012

TO Transportation Planning and Programming Committee
of the Boston Region Metropolitan Planning Organization

FROM Karl H. Quackenbush, CTPS Director

RE Work Program for: Route 79 Transportation Study – Evaluation of
Alternatives

ACTION REQUIRED

Review and approval

PROPOSED MOTION

That the Transportation Planning and Programming Committee of the Boston Region Metropolitan Planning Organization, upon the recommendation of the Massachusetts Department of Transportation, vote to approve the work program for Route 79 Transportation Study – Evaluation of Alternatives in the form of the draft dated July 12, 2012.

PROJECT IDENTIFICATION

Unified Planning Work Program Classification
Planning Studies

CTPS Project Number
43214

Client
Massachusetts Department of Transportation
Project Supervisor: Ethan Britland

CTPS Project Supervisors
Principal: Karl H. Quackenbush
Manager: Ian Harrington

Funding
Other Federal Funds (TCSP Funds)

The Boston Region MPO is composed of:

Massachusetts Department of Transportation

Metropolitan Area Planning Council

Massachusetts Bay Transportation Authority Advisory Board

Massachusetts Bay Transportation Authority

Massachusetts Port Authority

Regional Transportation Advisory Council

City of Boston

City of Beverly

City of Everett

City of Newton

City of Somerville

City of Woburn

Town of Arlington

Town of Bedford

Town of Braintree

Town of Framingham

Town of Lexington

Town of Medway

Town of Norwood

Federal Highway Administration
(nonvoting)

Federal Transit Administration
(nonvoting)

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 other work in the UPWP.

BACKGROUND

The *Route 79 / Davol Street Transportation Study*, completed in June 2008, examined the overall feasibility of creating an urban boulevard by developing and analyzing various alternatives that would consolidate or realign Route 79 and Davol Street, which run parallel along Fall River's waterfront area between Brightman Street and Interstate 195. Goals of the study were to reconnect the waterfront to the downtown area, promote economic development, and to incorporate plans for the South Coast Rail project.

A primary recommendation of the 2008 study was to conduct more detailed planning review and analysis of several examined alternatives, including but not limited to: regional transportation impacts, economic and land use feasibility, environmental constraints, refinement of the conceptual layouts, and coordination with the South Coast Rail project. Although this new study will build on the prior study effort's findings regarding the advanced alternatives, this does not preclude any additional alternatives from being developed and analyzed as part of the current effort. A 'no-build' condition, which assumes that no changes to the current infrastructure have been implemented, will also be included as a basis for comparison to all developed alternatives.

MassDOT has requested that CTPS use its regional travel demand model to forecast travel behavior in the horizon year 2035 in the study area for all alternatives, including the 'no-build' condition. Results from these model runs will be provided to MassDOT's consulting team for use in their microsimulation programs to assess future conditions for the respective alternatives.

OBJECTIVES

The objectives of this work are:

1. To model proposed alternatives using the regional travel demand model
2. To provide necessary outputs for MassDOT and its consulting team to use in their evaluation of alternatives.
3. To assist in the environmental justice analysis

WORK DESCRIPTION

The regional travel demand model will produce outputs that will be used in MassDOT's consulting team's microsimulation programs.

Task 1 Perform Study Area Base-Year Model Calibration

CTPS will use the latest version of its base-year model, which is for the year 2009. Specific attention will be paid to further calibration of the study area transit and roadway networks to replicate existing conditions. The results of running the base-year model will be summarized in sufficient detail to provide both study area-specific data and certain system-wide statistics.

Product of Task 1

A well-calibrated travel demand model set for the study area

Task 2 Prepare Inputs for Forecast Year

CTPS will develop forecasts for the 2035 design horizon year. Model inputs—socioeconomic data, congested-highway travel times, auto operating costs, CBD parking costs, transit fares, and travel times—will be consistent with the currently adopted land use and background transportation projects assumed in the latest Long-Range Transportation Plan (LRTP). The South Coast Rail Economic and Land Use Corridor Plan will be consulted; CTPS will also confer with MassDOT, MAPC and other relevant agencies, such as SRPEDD and other MPOs, to construct the best demographic and land use assumptions to use in this planning effort.

Products of Task 2

Model inputs for the opening horizon year

Task 3 Conduct No-Build Model Run for the Forecast Year

Using the model work done for the LRTP and the South Coast Rail Economic and Land Use Corridor Plan, CTPS will create a no-build network for the forecast year 2035. A forecast-year model run will be conducted for this no-build scenario, and the results will be summarized at the same levels of detail as for the base year.

Product of Task 3

A complete summary of travel forecasts for the no-build scenario

Task 4 Run Model for Developed Alternatives

Based on work completed in prior tasks, MassDOT and the consultant team will develop and refine three alternatives for detailed analysis for the 2035 design year. Mode choice and highway assignment results will be summarized in tabular form. Aggregate statistics such as total linked and unlinked transit trips will be summarized by submode, such as rapid transit, bus, ferry, and commuter rail.

Product of Task 4

A complete summary of travel forecasts for the three scenarios

Task 5 Provide Consulting Team with Necessary Model Outputs

CTPS will coordinate closely with MassDOT and the consulting team to deliver needed data. The CTPS model results will provide estimated regional and external traffic volumes (and projected transit usage) for use by MassDOT and the consulting team to assess future operational conditions of Route 79 for each developed alternative. The consultant will coordinate closely with MassDOT and CTPS to utilize regional model results as inputs to traffic simulations and transit services depicting future build and no-build scenarios.

Products of Task 5

Forecasted traffic levels and conditions; forecasted transit ridership and services

Task 6 Perform Environmental-Justice Analyses

CTPS will conduct environmental-justice analyses for the tested scenarios using a Geographic Information System (GIS) approach. After identifying communities of concern, performance measures—accessibility to health care, higher education, and jobs; mobility and congestion; air quality and other environmental impacts—will be used as indicators of benefits and burdens for environmental-justice and non-environmental-justice communities.

Product of Task 6

Memorandum documenting the environmental justice analyses

Task 7 Perform Air Quality Analyses

CTPS will use the model set to calculate the air quality emissions for the developed alternatives produced in the horizon year. Air quality emissions will be produced for these scenarios based on factors calculated by the EPA's MOBILE 6.2 Vehicle Emissions Modeling Software. These benefits and impacts will be computed for several different GIS-based traffic analysis zone areas, as well as measures related to changes in vehicle miles traveled such as but not limited to travel time delay, fuel consumption and emissions.

Products of Task 7

Air quality emissions associated with the developed alternatives

Task 8 Produce a Technical Memorandum

A technical memorandum documenting all of the model methodology, assumptions, and results will be provided to MassDOT and the consulting team.

Product of Task 8

A technical memorandum documenting the project's assumptions, methods, and results

ESTIMATED SCHEDULE

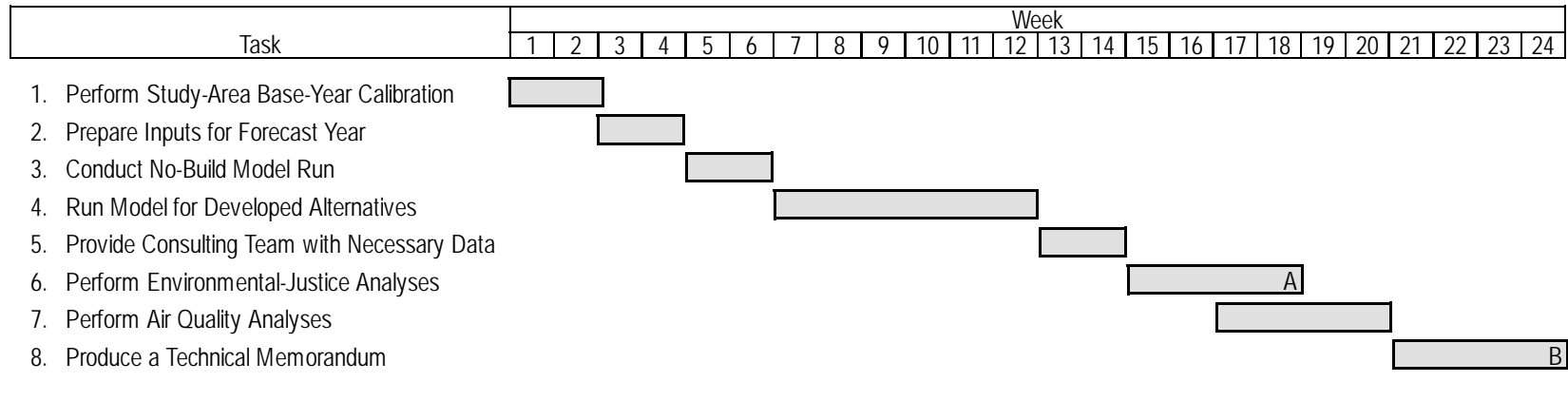
It is estimated that this project will be completed approximately six months after the notice to proceed is received. The proposed schedule, by task, is shown in Exhibit 1.

ESTIMATED COST

The total cost of this project is estimated to be \$60,000. This includes the cost of 21.9 person-weeks of staff time and overhead at the rate of 96.58 percent. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/BK/bk

Exhibit 1
 ESTIMATED SCHEDULE
 Route 79 Transportation Study



Products/Milestones

A: Environmental-justice memorandum

B: Technical Memorandum

Exhibit 2
 ESTIMATED COST
 Route 79 Transportation Study

Direct Salary and Overhead **\$60,000**

Task	Person-Weeks				Direct Salary	Overhead (@ 96.58%)	Total Cost
	M-1	P-5	P-4	Total			
1. Perform Study-Area Base-Year Calibration	0.0	0.5	1.5	2.0	\$2,655	\$2,565	\$5,220
2. Prepare Inputs for Forecast Year	0.0	0.5	1.0	1.5	\$2,043	\$1,973	\$4,015
3. Conduct No-Build Model Run	0.0	0.5	1.0	1.5	\$2,043	\$1,973	\$4,015
4. Run Model for Developed Alternatives	0.0	1.0	5.0	6.0	\$7,762	\$7,496	\$15,258
5. Provide Consulting Team with Necessary Data	0.2	0.0	0.5	0.7	\$943	\$911	\$1,854
6. Perform Environmental-Justice Analyses	0.3	1.0	1.0	2.3	\$3,311	\$3,198	\$6,509
7. Perform Air Quality Analyses	0.5	2.0	0.9	3.4	\$5,196	\$5,019	\$10,215
8. Produce a Technical Memorandum	2.0	0.5	2.0	4.5	\$6,569	\$6,345	\$12,914
Total	3.0	6.0	12.9	21.9	\$30,522	\$29,478	\$60,000

Other Direct Costs **\$00**

TOTAL COST **\$60,000**

Funding
Other Federal Funds (TCSP Earmark)