



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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

MEMORANDUM

DATE December 15, 2016
TO Boston Region Metropolitan Planning Organization
FROM Karl H. Quackenbush, Executive Director
RE Work Program for Safety Effectiveness of Safe Routes to School Programs

Action Required

Review and approval

Proposed Motion

That the Boston Region Metropolitan Planning Organization (MPO) vote to approve the work program for the Safety Effectiveness of Safe Routes to School Programs presented in this memorandum

Project Identification

Unified Planning Work Program Classification

Planning Studies

CTPS Project Number

13280

Client

Boston Region MPO

CTPS Project Supervisors

Principal: Mark Abbott

Manager: Casey Claude

Funding

MPO Planning Contract #95411

MPO §5303 Contract #98873

Impact on MPO Work

This is MPO work and will be carried out in conformance with the priorities established by the MPO.

Background

The Massachusetts Safe Routes to School (SRTS) program is a federally funded initiative of the Massachusetts Department of Transportation (MassDOT) that is implemented by MassRIDES. Through the SRTS program, MassRIDES works with schools, communities, students, and families to encourage elementary and middle school students to bike or walk to school. SRTS promotes a collaborative, community-focused approach that fosters partnerships between advocacy groups, law enforcement, education leaders, and public health departments as they work together to provide safer routes for young students to get to school.

The program covers five key areas, known as the Safe Routes Five Es:

- Education – Children and adults are educated on the importance of walking and biking to school safely. Through a combination of pedestrian and bicycle safety education sessions, school safety assemblies, and workshops, students are given the tools they need to be smart and safe pedestrians and bicyclists.
- Encouragement – The program organizes customizable school, community, statewide, and international events and programs to encourage students, parents, teachers, and the local community to increase their physical activity and choose active, healthy, and safe modes of transportation.
- Enforcement – Partnerships with local police officers, safety officers, and school resource officers create a community approach to enhance and ensure the safety of students who walk and bike to school.
- Evaluation – Monitoring outcomes and documenting trends through data collection before and after Safe Routes activities is an important component of SRTS programs.
- Engineering – An on-call team of engineers, planners, and pedestrian and bicycle experts assess school environments and make recommendations for operational and physical improvements to the roads and walkways surrounding schools.

Schools can partner with the Massachusetts SRTS Program on education, encouragement, enforcement, and evaluation activities to become eligible to receive funding for infrastructure projects targeted to making routes to school safe and fully accessible. Schools that participate in the program represent diverse communities of varied socio-economic status in urban, suburban, and rural environments statewide

that are all committed to implementing SRTS initiatives. Participating communities are currently limited to one assessment per community, so that the benefits of the program may be distributed throughout the Commonwealth. Schools are invited annually to apply for an infrastructure project.

In this study, MPO staff will evaluate the effectiveness of the Massachusetts SRTS program for improving safety and possibly increasing walking and biking to school. The goal is to conduct a quantitative analysis of traffic data and safety characteristics from the immediate vicinity—within a two-mile radius—of schools that participated in the program; data gathered both before and after implementation of the SRTS program and applicable infrastructure improvements or policy changes will be used for the analysis. School areas where there were infrastructure projects funded by MassDOT or through the Boston Region MPO's Transportation Improvement Program (TIP) process will be good candidates for this before-and-after study. The MPO staff will determine and evaluate any relationships among roadway settings, traffic characteristics, and traffic regulations that contribute to the effectiveness of the SRTS program. Depending on the availability of data, some of the evaluation and resulting recommendations may be qualitative.

Objectives

This study will investigate and evaluate the effectiveness of the Massachusetts SRTS program and the primary factors contributing to the program's effectiveness. Such factors could include reduced-speed zones, infrastructure improvements, the presence of school crossing guards, and others.

Work Description

MPO staff will perform the following tasks:

Task 1 Agency Coordination and Assessment of SRTS Program

MPO staff will consult with MassRIDES and the MassDOT Office of Transportation Planning (OTP) to review the current SRTS program and its activities. The review will include research into other states' SRTS programs and how they determine locations where school speed zones and other infrastructure improvements are encouraged, require further justification, or are discouraged. Staff will also review the Metropolitan Area Planning Council's spatial analysis and MySchoolCommute survey tools to assess the effectiveness of the SRTS programs.

Product of Task 1

The findings of the assessment will be provided in the final memorandum

Task 2 SRTS Study Locations

MPO staff, working with MassRIDES and OTP, will select up to eight schools (approximately one school in each of the eight subregions of the MPO's planning area, if possible) that have been participating in the SRTS program for study. Schools will be selected to represent a range of grade levels (elementary and middle), size, and types (public and charter), as well as to cover a wide geographical area in the MPO region. The selection process will also take into account various localized factors that could impact the effectiveness of a SRTS program, such as the population density and characteristics of traffic surrounding the schools.

Product of Task 2

Presentation to the MPO board on the selection of schools to be studied

Task 3 Evaluation of the SRTS Effectiveness at the Selected Schools

MPO staff will gather data on traffic volumes, pedestrian and bicycle volumes, crashes, roadway setting and characteristics, the type of traffic control devices present, modes students use to commute to school, school hours and after-school activities, and school policies, such as bus fees. This data will assist in evaluating the effectiveness of different SRTS strategies employed. Depending on the availability of data, some of the evaluation and resulting recommendations may be qualitative.

Product of Task 3

List of SRTS strategies, comments on their effectiveness, and recommendations

Task 4 Document Results

MPO staff will identify and recommend types of improvements (related to safety, operations, and policy) that appear to have the highest impact on safety and promoting walking and biking to school, and document the study and recommendations in a report or memorandum. The draft document will be made available for review by municipal and school officials, MassRIDES, and OTP. After their comments have been addressed, the final memorandum or report will be presented to the MPO board.

Product of Task 4

A final report or memorandum documenting all of the project's tasks and products, including recommendations

Estimated Schedule

It is estimated that this project will be completed nine 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 \$80,000. This includes the cost of 30.8 person-weeks of staff time, overhead at the rate of 102.7 percent, travel, and other direct costs. A detailed breakdown of estimated costs is presented in Exhibit 2.

KQ/MSA/msa

Exhibit 1
ESTIMATED SCHEDULE
Safety Effectiveness of Safe Routes to School Programs

| Task | Month | | | | | | | | | |
|---|-------|---|---|---|---|---|---|---|---|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 1. Agency Coordination and Assessment of SRTS Program | | | | | | | | | | |
| 2. SRTS Study Locations | | | | | | | | | | |
| 3. Evaluation of the SRTS Effectiveness at the Selected Schools | | | | | | | | | | |
| 4. Document Results | | | | | | | | | | |

Exhibit 2
ESTIMATED COST
Safety Effectiveness of Safe Routes to School Programs

| | |
|-----------------------------------|-----------------|
| Direct Salary and Overhead | \$79,885 |
|-----------------------------------|-----------------|

| Task | Person-Weeks | | | | | | Direct Salary | Overhead (102.70%) | Total Cost |
|---|--------------|-----|-----|------|------|-------|---------------|-----------------------|------------|
| | M-1 | P-5 | P-4 | P-2 | SP-1 | Total | | | |
| 1. Agency Coordination and Assessment of SRTS Program | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 3.0 | \$4,724 | \$4,852 | \$9,576 |
| 2. SRTS Study Locations | 0.6 | 1.0 | 1.0 | 2.0 | 0.0 | 4.6 | \$6,413 | \$6,586 | \$12,999 |
| 3. Evaluation of the SRTS Effectiveness at the Selected Schools | 0.2 | 2.0 | 1.0 | 6.0 | 2.0 | 11.2 | \$11,780 | \$12,098 | \$23,877 |
| 4. Document Results | 4.0 | 1.0 | 0.0 | 7.0 | 0.0 | 12.0 | \$16,494 | \$16,939 | \$33,433 |
| Total | 5.8 | 5.0 | 2.0 | 16.0 | 2.0 | 30.8 | \$39,411 | \$40,475 | \$79,885 |

| | |
|---------------------------|--------------|
| Other Direct Costs | \$115 |
|---------------------------|--------------|

| | |
|--------|-------|
| Travel | \$115 |
|--------|-------|

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|-------------------|-----------------|
| TOTAL COST | \$80,000 |
|-------------------|-----------------|

Funding

MPO Planning Contract #95411

MPO §5303 Contract #98873