

Table 1: FFY17 UPWP Proposed New Discrete MPO-Funded Studies

ID	Category	Project Name	Estimated Cost	Project Description
A-7	Active Transportation	Safety Effectiveness of Safe Routes to School Programs	\$80,000	<p>Purpose: This study will investigate the safety and effectiveness of the Safe Routes to School (SRTS) program and the primary factors contributing to a program’s effectiveness. Such factors could include such things as the presence of reduced speed school zones or infrastructure improvements, as well as the grade levels of students and the presence of school crossing guards.</p> <p>Anticipated Outcome: Through this study, a task force will be formed to guide the direction of the research. A literature review will be conducted on SRTS programs throughout the Boston region, as well as in other states, to determine the factors that contribute to various SRTS improvements either being encouraged, requiring further study, or being discouraged in specific locations.</p> <p>Schools selected for detailed study will be those that have been participating in the SRTS program and represent a board broad range of communities throughout the Boston region (factors considered to choose when choosing schools will include representing a range of grade levels, high- and low- density communities, varied traffic characteristics on surrounding roads, and environmental justice zones, among others). Once the schools are selected, MPO staff will gather data on traffic volumes, pedestrian and bicycle volumes, crashes, roadway setting and characteristics, traffic control devices, modes of commute to school, school hours and after school activities, and school policies. The outcome will be an understanding of the traffic and safety characteristics before and after implementation of the SRTS program in both the immediate vicinity of the selected schools and within a two-mile radius. In cases where there is good before and after data, these findings will be quantitative.</p>
B-7	Land Use, Environment, and Economy	Study of Promising GHG-Reduction Strategies	\$55,000	<p>Purpose: Based on recommendations from the 2016 study completed by staff that provided information about cost-effective GHG reduction strategies, staff is proposing to study a subset of the 14 promising strategies that the MPO can fund, study, or advocate for in order to understand implementation at the regional level and determine their GHG reduction and cost-effectiveness potential.</p> <p>Anticipated Outcome: Examples of potential strategies that the MPO can fund and which could be studied in more detail include transit expansion or service improvement, teleworking, and parking management. The study could also look at the equity, safety, and mobility impacts of these strategies.</p>
C-1	Multi-modal Mobility	Addressing Safety, Mobility, and Access on Subregional Priority Roadways	\$110,000	<p>Purpose: Identify priority arterial and bottleneck locations and recommend low-cost improvements.</p> <p>Anticipated Outcome: An enhanced understanding of approaches to improve safety and mobility for all modes. Communities can contact CTPS for roadways to be considered for study.</p>
C-3	Multi-modal Mobility	Low Cost Improvements to Express-Highway Bottleneck Locations	\$50,000	<p>Purpose: Build on previously conducted analysis of several express-highway bottleneck locations (Low-Cost Improvements to Bottlenecks Phase I and Phase II). These studies were very well received by the MassDOT and the FHWA. Some of the recommendations from these studies already have been executed, and the FHWA has interviewed MPO staff about the successful implementation.</p> <p>Anticipated Outcome: Identification of low-cost methods to reduce congestion, increase safety, and improve traffic operations in the Boston Region.</p>
C-4	Multi-modal Mobility	Addressing Priority Corridors from the Long Range Transportation Plan Needs Assessment	\$110,000	<p>Purpose: These planning studies develop conceptual plans recommending improvements for specific arterial segments.</p> <p>Anticipated Outcome: Cities and towns are able to review the requirements of a specific arterial segment, starting at the conceptual level, before committing design and engineering funds to a project. If the project qualifies for federal funds, the study’s documentation also may be useful to MassDOT and the municipalities.</p>
C-6	Multi-modal Mobility	Planning for Connected and Autonomous Vehicles	\$50,000	<p>Purpose: This project would involve research into the overarching issues that the Boston Region MPO needs to understand and plan for around autonomous and connected vehicle technologies. Some of the questions that could form the body of research include:</p>

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				<ul style="list-style-type: none"> • What research exists already? • How are other states, regions, and municipalities approaching being prepared for these technologies? • How might these technologies affect transportation planning (i.e., the need for off-street parking) and modeling in the future? • What is the current thinking around the potential penetration level of these new technologies? • Could scenario planning provide a useful approach to understand how best to plan for these technologies? • What are the best next steps for the region in terms of being prepared for these technological changes? <p>Anticipated Outcome: This project would be an important first step to understanding the transportation planning consequences of autonomous vehicle and connected vehicle technologies and how the MPO and region can be prepared.</p>
E-7	Transit	Using General Transit Feed Specification data to Find Shared Segments with Excessively Irregular Headways	\$25,000	<p>Purpose: The goals of this study would be are to use existing data to provide schedule improvements for MBTA buses and to document reasons behind irregularities in the existing schedule.</p> <p>Anticipated Outcome: By mining General Transit Feed Specification data, we can discover the distribution of headways in a route over time, discovering segments that have excessively irregular headways or segments where multiple bus routes are scheduled to overlap.</p> <p>In many cases, there may be a reason for the irregular combined headways. This project would document these reasons and, where appropriate, propose recommendations for improvement.</p>
F-1	Other Technical Support	MPO Staff-Generated Research Topics	\$30,000	<p>Purpose: This program would support staff work on a topic that relates to metropolitan transportation planning and MPO work, as well as something that is of great interest to the staff member. The topic may not be covered by a UPWP ongoing program or discrete project, and so would need this more-open avenue for advancement. MPO staff members would complete an application, which would be reviewed by MPO managers and directors, for some MPO funding to do independent research on a topic of professional interest and potential use in the metropolitan transportation- planning program.</p> <p>Anticipated Outcome: This program could bring forth valuable information for the MPO’s consideration and would support staff’s professional development. The opportunities afforded to staff through this program could yield highly creative solutions to transportation-planning problems.</p>
	Total for New Discrete Studies		\$510,000	

Table 2: FFY 2017 Proposed New On-Going Program

	Proposed New Ongoing Study	UPWP Study Recommendation Tracking Database	\$20,000	<p>Purpose: Annually track status of recommendations advanced through Unified Planning Work Program (UPWP) studies</p> <p>Anticipated Outcome: We propose creating a database of previous UPWP planning studies that would house details of project contacts, proposed improvements, implementation status, milestones, funding, and issues affecting implementation progress. MPO staff would use the database to produce reports for the MPO board detailing topics such as the percentage of planning studies that have advanced to the MassDOT project information system or are in preliminary design. By updating the database every year, CTPS will have a timely and efficient way to inform the MPO about the status of recommendations from its planning studies.</p>
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