

**Staff-Recommended FFY 2019 List of Discrete Studies,
Grouped by Subject Area**

ID	Project Name	Project Purpose and Outcome	LRTP Goal Areas						Mode			Study Scale		Impact			Other			
			Safety	System Preservation	Clean Air/Clean Communities	Transportation Equity	Capacity Management/Mobility	Economic Vitality	Roadway	Bicycle Pedestrian	Transit	Specific Community or Location	Broader Region	Enhance State of Practice	Low-Cost/Near-Term Implementation	Long-Term Implementation	Connection to Existing or Past Work	Continuing Study	Study Carried Over from 2018 Universe	New Study Concept for FFY 2019
ACTIVE TRANSPORTATION																				
A-1	Pedestrian Report Card Assessment Dashboard	<p>Purpose: This project is a follow up study to the pedestrian level of service, which was completed in January 2017. The previous study created the Pedestrian Report Card Assessment (PRCA) tool, which allows planners and engineers to rate the suitability of roadway segments and intersections for pedestrians. This proposed project will focus on the implementation of PRCA, including creating an interactive dashboard that will monitor pedestrian suitability on intersections and roadway segments throughout the Boston Region.</p> <p>Anticipated Outcome: An interactive dashboard will be created that will display the PRCA on the MPO website.</p>	P		S		S			P			P		P			P		
LAND USE, ENVIRONMENT, AND ECONOMY																				
L-1	Reverse Commute Areas Analysis	<p>Purpose: This study would, using data analysis and stakeholder input, identify areas that have significant job concentrations AND face challenges filling jobs with local residents, and therefore need to draw from labor markets in urban cores or other remote areas. The study would then analyze transportation barriers to worker access to these areas, including but not limited to: 1) Last-mile transit options (including shuttles) 2) Bike and ped LOS evaluation of area, especially relating to safe routes to transit 3) Guaranteed Ride Home programs</p> <p>Anticipated Outcome: A report identifying several of these areas and using one or more as a case study, and drawing on previous CTPS reports to evaluate their transportation-related needs and challenges.</p> <p>Note: Possible collaboration with MAPC--CTPS does transportation analysis and MAPC examines jobs/demographics/housing</p>				S	S	P		S	P		P		S	P	P			
L-2	Transportation Access Studies of Commercial Business Districts* <i>*to be conducted first in a sequence with M-7, The Future of the Curb</i>	<p>Purpose: Cities and towns have relatively little information on the characteristics of CBD patrons and, as a result, the transportation planning process for these areas is often governed by perceptions that may or may not be correct. Understanding the transportation access mode and spending and visiting characteristics of CBD patrons would help planners in their work with businesses to improve transportation access to CBDs. This information might help planners make the case for improving transit and non-motorized vehicle access by improving bus stop locations, giving buses priority treatment, and improving pedestrian and non-motorized vehicle infrastructure. A transportation access study of a selection of Boston metropolitan area CBDs would evaluate how patrons access CBDs.</p> <p>Anticipated Outcome: The study would consist of several tasks. CTPS would conduct a literature review and summary of other studies of transportation access to CBDs. CTPS would also characterize the CBDs in the Boston metropolitan area by demographics, commercial development type and density, and existing transportation facilities and services. For a selection of CBDs, CTPS would work with the municipalities and any business associations to solicit business participation in the study. Businesses would first be asked to provide their perceptions on their customers' actual and preferred transportation access modes. Participating businesses would then be asked to encourage their customers to fill out a short survey while they wait in line at the register. The survey would ask the transportation access mode for this visit and their typical transportation access mode to that business. For each mode selected, the survey would ask how frequently the patron uses that mode to access the business and how much the patron typically spends at the business (when using that mode).</p>						P	S	S	P	S		P	S					

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ROADWAY and MULTIMODAL MOBILITY																				
M-2	Low-Cost Improvements to Express Highway Bottleneck Locations	<p>Purpose: Recurring bottlenecks, the subject of this study, are influenced by the design or operation present at the point where the bottleneck begins (e.g., merges, diverges, lane drops, traffic weaving, and abrupt changes in highway alignment). Low-cost infrastructure solutions, as opposed to major construction projects, could involve changes in the design or operation of merges, traffic operations, or highway alignment.</p> <p>The previous two studies of express-highway bottlenecks were very well received by MassDOT and the FHWA. Some of the recommendations from those studies already have been executed. The MPO has been conducting these studies to identify low-cost methods to reduce congestion, increase safety, and improve traffic operations in the Boston region.</p> <p>Anticipated Outcome: This study would select additional express-highway bottleneck locations and produce reports documenting low-cost solutions to existing traffic congestion issues at the selected locations. A before-and-after analysis of previous work may be included, depending on the final scope of the study.</p>	P	S			P		P			P			P				Recurring	
M-3	Addressing Safety, Mobility, and Access on Subregional Priority Roadways	<p>Purpose: During MPO outreach, Metropolitan Area Planning Council (MAPC) subregional groups identify transportation problems and issues that concern them, often those relating to bottlenecks or lack of safe access to transportation facilities in their areas. These issues can affect livability, quality of life, crash incidence, and air quality along an arterial roadway and its side streets. If problems are not addressed, mobility, access, safety, economic development, and air quality are compromised.</p> <p>Anticipated Outcome: Anticipated outcomes include data collection, technical analysis, development of recommendations, and documentation for selected corridors.</p>	P				S		P			P			P				Recurring	
M-4	Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment	<p>Purpose: The purpose of these studies are to develop conceptual design plans that address regional multimodal transportation needs along priority corridors identified in the Long- Range Transportation Plan (LRTP), Charting Progress to 2040. These studies include recommendations that address multimodal transportation needs that are expected to arise from potential future developments in the study area.</p> <p>Anticipated Outcome: Through these studies, MPO staff would recommend conceptual improvements for one or more corridors, or several small sections within a corridor, that are identified by the Congestion Management Process and the LRTP as being part of the needs assessment process. These studies provide cities and towns with the opportunity 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 for construction of the recommended upgrades, the study's documentation also might be useful to the Massachusetts Department of Transportation (MassDOT) and the municipalities.</p>					P		P			P			P			Recurring		
M-5	New and Emerging Metrics for Roadway Usage	<p>Purpose: Planners and researchers have recently developed a number of interesting ways to better communicate the balance of needs among roadway users of a corridor, including measuring person throughput relative to the amount of space used by vehicles. These methods may help planners and engineers steer away or complement from reliance on traffic/vehicle-oriented LOS and may help sharpen MPO staff's analysis of roadways and corridors through a better understanding of non-SOV modes. One example is how FHWA recently changed federal guidance to encourage MPOs to use person-hours of delay, rather than vehicle-hours of delay, in measuring Peak Hour Excessive Delay (PHED) on segments of the National Highway System.</p> <p>Anticipated Outcome: Use case studies to develop the MPO's exploration of and approach to new and emerging metrics and/or popularly accessible terms to express the needs (travel demands) of all corridor travelers and to fully measure roadway efficiency under use by different modes.</p>	P	S	S	S	S		S	P	S		P	P	S					

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M-7	The Future of the Curb** <i>**to be conducted second in a sequence with L-2, Transportation Access Studies of Commercial Business Districts</i>	Purpose: There is an increasing amount of competition for curb space in urban areas, as well as the potential for transformation of their purpose in coming years. AVs/CVs may require less curb space for parking, while deliveries (Amazon etc) are increasingly common. Curbside bus and bike lanes are also in demand. Anticipated Outcome: An MPO study examining what the curb of the future will look like and how to balance demand between all of these modes/dynamics. Article on this concept: https://www.wired.com/story/city-planning-curbs/	S	S	S		P			P	S	S		P	P	S				
M-8	Updates to Express Highway Volumes Charts	Purpose: Visual depictions of traffic volumes on limited-access highways and associated ramps are basic planning and traffic engineering tools, as well as popular with the public. Recognizing the demand for such a tool, CTPS has previously developed a comprehensive set of diagrams depicting these volumes on the region's highways, but they have not been updated in a number of years. As such, the diagrams do not take advantage of modern visualization technologies. Staff propose to update the traffic counts and diagrams and utilize contemporary visualization technology and methods to create vibrant, compelling, and innovative depictions of traffic on the Boston region's highways. Anticipated Outcome: Staff will obtain current traffic volume data for selected limited-access highways and ramps will be obtained and calculate balanced volumes. These updated volumes will be incorporated into the CTPS traffic database, and then put to use through modern and innovative visualization techniques. The resulting visualization product can be useful in analyses of congestion, air quality, and numerous other fields.					P			P				P	P					
OTHER																				
O-1	MPO Staff-Generated Research Topics	Purpose: This program would support work by MPO staff members on topics that relate to the Boston Region MPO's metropolitan transportation-planning process, that staff members have expressed interest in, and that are not covered by an ongoing Unified Planning Work Program (UPWP) or discrete project. This program was funded for the first time in FFY 2017. 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	P				P	P

Notes:

10 Total projects

Glossary:

AV/CV = autonomous vehicles/connected vehicles. CTPS = Central Transportation Planning Staff. FFY = federal fiscal year. FHWA = Federal Highway Administration. GHG = greenhouse gas(es). GTFS = general transit feed specification. LOS = level of service. LRTP = Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority. MPO = Metropolitan Planning Organization. P = primary. S = secondary. ROW = right-of-way. SIP = State Implementation Plan. SRTS = Safe Routes to School. TNCs = transportation network companies. UPWP = Unified Planning Work Program