

# Draft Memorandum for the Record

## Boston Region Metropolitan Planning Organization Meeting

### January 7, 2016 Meeting

10:05 AM – 11:50 AM, State Transportation Building, Conference Rooms 2&3, 10 Park Plaza, Boston, MA

David Mohler, Chair, representing Stephanie Pollack, Secretary and Chief Executive Officer, Massachusetts Department of Transportation (MassDOT)

### Decisions

The Boston Region Metropolitan Planning Organization (MPO) agreed to the following:

- approve Amendment One to the federal fiscal years (FFYs) 2016-20 Transportation Improvement Program (TIP) with revisions
- approve the work program for *Modeling Transit Capacity Constraints*
- approve the minutes of the MPO meeting of December 17

### Meeting Agenda

#### 1. Public Comments

There were none.

#### 2. Chair's Report—*David Mohler, MassDOT*

There was none.

#### 3. Committee Chairs' Reports

Bryan Pounds, MassDOT, announced that the MPO's Unified Planning Work Program (UPWP) Committee would meet after today's MPO meeting.

#### 4. Regional Transportation Advisory Council Report—*Tegin Bennett, Advisory Council Chair*

T. Bennett reported that the Advisory Council will meet next on January 13. The agenda includes a panel discussion with MPO and MassDOT staff on the 3C planning process and the Advisory Council's role in that process.

**5. Executive Director's Report—*Elizabeth Moore, Director of Policy and Planning, Central Transportation Planning Staff (CTPS)***

E. Moore, representing the Executive Director, introduced Alexandra Kleyman, who has been hired as the new Manager of the Unified Planning Work Program in CTPS's Certification Activities Group.

**6. Draft FFYs 2016-20 Transportation Improvement Program, Amendment One—*Sean Pfalzer, MPO Staff***

S. Pfalzer presented a revised Draft Amendment One to the FFYs 2016-20 TIP.

The MPO voted on November 19 to release the draft amendment for a 30-day public review period. During that time, the MPO received one public comment from a resident of Stow who asked the MPO to program funding in the TIP for the replacement of the Gleasondale Bridge over the Assabet River in Stow. Staff will retain this comment for consideration in the upcoming TIP development cycle.

The draft amendment released for public review programs funding for the Tri-Community Bikeway project in Stoneham, Winchester, and Woburn in FFY 2016, and reduces funding for the Route 128 Add-a-Lane project in Needham and Wellesley in that year. It also revises the description of a highway resurfacing project on Route 9 in Wellesley; removes several line items for projects of the Cape Ann Transportation Authority, which will be addressed at a future date; and an updates the cost of the North Washington Street Bridge project in Boston.

Since the amendment was released for public review, a clarification was made to the description of the resurfacing project on Route 9 in Wellesley (project # 608180) to indicate that the project scope includes some resurfacing work previously under project # 607340. Additionally, an adjustment was made to include a bridge maintenance project – bridge Q-01-051 – on Route 3 in Quincy. This project was previously listed on the State TIP (STIP) as one of three bridge projects. Due to an increase in the costs of those projects, the scope has been reduced to address only one bridge.

A motion to approve Draft Amendment One to the FFYs 2016-20 TIP, with the aforementioned clarification and adjustment, was made by South Shore Coalition (Town of Braintree) (Melissa Santucci Rozzi), and seconded by the MassDOT Highway Division (John Romano). The motion carried.

**7. Work Program—*Scott Peterson, Director of Technical Services, CTPS***

S. Peterson introduced the work program for *Modeling Transit Capacity Constraints*. The objective of the work program is to develop a methodology for accurately reflecting

transit capacity in the MPO's travel demand model. This methodology will improve the modeling process by allowing for the examination of how people may respond when there are capacity constraints on the system (i.e. they may choose a different transit route or travel mode).

### ***Discussion***

T. Bennett inquired about the parsing of travel-time periods for modelling, noting that demand levels differ even within the peak travel periods. S. Peterson discussed how staff would be examining the response of different modes to demand over time periods to be determined through this research. It is likely that one hour periods will be examined for some modes, and unlikely that the time periods will be less than one hour.

Ken Miller, Federal Highway Administration (FHWA), asked how staff is defining "capacity" and about forecasting for future conditions. S. Peterson explained that for determining existing conditions, capacity will be considered as the maximum number of people who could be accommodated on vehicles based on frequency and type of vehicle. Staff will be able to test alternatives for meeting future demand, including estimating the number of additional vehicles that would be needed to meet that demand.

D. Mohler noted that staff already has the ability to forecast for future demand, and he asked for more specifics about how this work program would add to that ability. S. Peterson explained how this work would automate the process for determining what alternative routes passengers on over-capacity routes would be likely to choose.

A motion to approve the work program for *Modeling Transit Capacity Constraints* was made by the City of Boston (Jim Gillooly), and seconded by the Inner Core Committee (City of Somerville) (Tom Bent). The motion carried.

### **8. MPO Meeting Minutes—Maureen Kelly, MPO Staff**

A motion to approve the minutes of the meeting of December 17 was made by the City of Boston (J. Gillooly), and seconded by the Inner Core Committee (City of Somerville) (T. Bent). The motion carried. The following members abstained: At-Large Town of Arlington (Laura Wiener); MassDOT Highway Division (John Romano); Massachusetts Port Authority (Hayes Morrison); and Regional Transportation Advisory Council (T. Bennett).

## **9. Federal Certification Review - Responses to Recommended Actions—Elizabeth Moore, Director of Policy and Planning, CTPS**

Last May, the FHWA and Federal Transit Administration (FTA) released a report on their findings from the MPO's last federal certification review. The federal agencies found the MPO fully compliant with federal law and regulations, and made commendations and some recommendations for improvement. For today's presentation and discussion, staff distributed a handout with its proposed responses to the federal recommendations. E. Moore then reviewed many of the recommendations made by the federal agencies, highlighting those that will require the MPO's input and approval for action. These recommendations are summarized, by topic area, below.

**TIP:** The federal agencies made a few recommendations regarding the TIP process. One relates to revising the TIP project evaluation criteria, which staff and the MPO are updating.

**UPWP:** The agencies recommended that the MPO include a study in the UPWP to determine how the State Implementation Plan (SIP) commitments have affected air quality. Staff has explored this topic in a recent backcasting study. This year, the UPWP Committee will consider whether MPO staff should do more work in this area.

**TIP and UPWP:** Concern was expressed that some communities are not benefiting from the MPO's planning process. Staff will try to find out why those communities are not getting involved in the MPO process and determine if staff can help overcome institutional barriers that may be hindering their involvement.

**Interagency Cooperation and Agreements:** FHWA and FTA suggested that the MPO update the Memorandum of Understanding (MOU) between MassDOT, the Massachusetts Department of Environmental Protection (DEP), and Massachusetts MPOs. This MOU, which coordinates air quality planning in the state, needs revision to reflect institutional changes that have occurred since it went into effect.

It was also recommended that the MPO revisit the MOU that governs its operations to include representation of other regional transit authorities (RTAs) in the region, including the Cape Ann Transportation Authority and MetroWest RTA. This recommendation was made in response to MAP-21 legislation requirements. However, because the new surface transportation bill, the FAST Act, has somewhat different requirements, staff will follow development of new guidance and regulations and advise the MPO board.

The federal agencies also recommended updating the MOU between MPOs in the Boston Urbanized Area (UZA) for greater cross border collaboration on regional plans.

The MOU currently includes five MPOs: Boston, Merrimack Valley, Northern Middlesex, Old Colony, and Southeastern Massachusetts. The UZA also encompasses three MPOs in New Hampshire, one in Rhode Island, and two others in Massachusetts. The Boston Region MPO will take the lead on coordinating changes to the MOU.

***Title VI / Non-discrimination Activities:*** The MPO was advised to expand its data collection and analyses pertaining to protected populations to include persons protected on the basis of age, disability, and gender. Staff is exploring thresholds for use in analyses of these protected populations. Staff is also working to develop better methodologies for determining transportation impacts on protected populations; a work program for determining the benefits and burdens of TIP projects will be forthcoming.

The MPO was also asked to revisit the method used to determine which languages to translate vital documents into. Staff currently uses census data to conduct these analyses, but will be researching other data sources to augment the analyses.

Additionally, the federal agencies are asking the MPO to help ensure that municipal project proponents comply with their Title VI obligations. Staff will be participating in a working group on this subject organized by MassDOT's Office of Diversity and Civil Rights.

***Public Participation:*** As recommended, staff is updating its Transportation Equity contacts database to have a better representation of protected populations, and working to improve its electronic communications with the public. A full-time Public Participation Specialist has been hired by CTPS.

### ***Discussion***

Dennis Giombetti, MetroWest Regional Collaborative (Town of Framingham), asked if the federal agencies had prioritized the issues to be addressed. K. Miller replied no, but pointed out that some of the recommendations relate to regulation, while others are recommendations for good practice. E. Moore added that the federal agencies did not find the MPO to be deficient in any way; if there were deficiencies, those items would have been prioritized. The handout distributed to members gives dates for when the response actions are expected to take place.

K. Miller thanked staff for developing a comprehensive action plan to address the federal recommendations. He offered staff the assistance of the federal agencies.

K. Miller then asked if staff is conducting outreach to municipalities that are not fully participating in the MPO process and whether staff developed a work program for these efforts. E. Moore explained that some the subregional outreach, which is currently

underway, is included under the work plans approved by the MPO. Other outreach is conducted in collaboration with MAPC: MPO staff attends the meetings that MAPC holds in the subregions.

D. Mohler asked if staff will be developing a list of municipalities that are not engaging in the process for the TIP, UPWP, and Long-Range Transportation Plan (LRTP). E. Moore replied yes, and noted that staff will contact those municipalities individually. Staff has already identified some of the municipalities and has scheduled TIP/UPWP outreach meetings in two of them, in addition to conducting the subregional outreach with MAPC. More extensive public participation work may be scheduled in those communities in the future.

K. Miller inquired about the percentage of the municipalities in the MPO region that vote in the MPO's annual elections for town and city representation. E. Bourassa replied that the majority of recent MPO elections (since the MPO expanded to include subregional representatives) have been uncontested, and thus voting participation is low. About 35 percent of the municipalities voted in the last election, although all the 101 municipalities in the region may nominate candidates and vote. K. Miller suggested that municipalities' voting status could be used as a metric for determining participation in the MPO process. E. Bourassa added that voting participation tends to be higher during contested elections.

Hayes Morrison, Massachusetts Port Authority, asked if municipalities' participation in the MPO elections is proportionate to their participation in the MAPC. E. Bourassa indicated that voting participation may be similar to attendance at a Council meetings. He added that municipalities have responded positively to the MPO's transition to a body that includes subregional representatives. D. Giombetti added that MPO's regional approach has led to better communication lines between municipalities and the MPO representatives, and more engagement.

E. Bourassa asked if the federal agencies have heard any concerns from municipalities. K. Miller replied that he has not heard any specific concerns voiced. E. Bourassa then noted how some small towns simply do not have enough staff to fully participate in the MPO's process. MAPC has been making extra efforts to reach out to those towns.

D. Crowley noted that the MPO's elected subregional representatives have a role to play in reaching out to towns that are not engaged. E. Moore expressed appreciation for any assistance that the MPO members may provide.

John Lozada, MassDOT Office of Diversity and Civil Rights (ODCR), discussed the steps MassDOT is taking in its Title VI oversight role. ODCR has sent documents to

every chief elected officer and town manager in the Commonwealth explaining municipal obligations under Title VI, and inviting them to contact ODCR for more information. The MassDOT Office of Transportation Planning has also studied non-participation in the MPO process. This information will be sent to the MPOs for further analysis.

### **10. Roadway-Monitoring Dataset Analysis—*Ryan Hicks, MPO Staff***

R. Hicks presented the results of the Roadway-Monitoring Dataset Analysis, which staff conducted to compare three datasets for vehicle travel-times: INRIX; the FHWA's National Performance Management Research Dataset (NPMRDS); and MassDOT's roadway monitoring dataset.

This analysis was conducted in the context of the MPO's Congestion Management Process (CMP), which collects roadway data, including travel-time data, on the region's roadways. Data gathered through the CMP is used for identifying congested corridors to prioritize needs and address through the LRTP and TIP; calibrating the MPO's travel-demand model; evaluating TIP projects; and informing the public of congestion conditions through the use of interactive maps on the MPO's website.

In past years, the MPO staff gathered travel-time data by driving along CMP-monitored corridors with GPS data logger. In recent years, datasets have become available through third-party companies that monitor their fleets with GPS devices and sell the data to DOTs and MPOs. The advantages of the new vehicle-probe data are that they provide more samples and 24-hour monitoring, and they are less costly than obtaining data by the previous method.

Of the three datasets examined, INRIX is the dataset currently used by the MPO staff and displayed on the MPO's online arterial and express highway performance dashboards. The MPO purchases this dataset. The second dataset, NPMRDS, is collected by a company called HERE. This data is free to MPOs until 2017, when FHWA's contract with HERE expires. The third, MassDOT's dataset, is also free. Notable comparisons among the datasets include: INRIX has the largest network (coverage) while MassDOT's network is the smallest and does not yet contain arterial roadways; INRIX, unlike the other two datasets, uses more samples in its travel time calculations; and INRIX is able to provide data in one-minute increments, whereas the other two datasets offer five-minute increments. R. Hicks showed graphs depicting the output from all three datasets

In conclusion, staff recommends that the MPO continue to use the INRIX data for the following reasons: better quality data; more extensive coverage; INRIX has an

automated method for removing outliers from the dataset; this dataset has already been used for MPO project evaluations and to create performance dashboards; and by obtaining an updated INRIX dataset, staff will be able to do “apples-to-apples” comparisons to determine changes in roadway congestion over time. In addition, staff found that the NPMRDS database will be useful for understanding freight congestion on freeways.

### ***Discussion***

In response to members’ questions, R. Hicks provided more information about the INRIX data and how it is collected and cleaned. The company monitors vehicles on the roadway through tracking a Bluetooth address or GPS from smartphone or vehicle devices, and averages the data into one-minute increments. Outliers in the raw data – which could be the result of inclement weather conditions, crashes, or roadway construction – are flagged and removed from the dataset.

Steve Olanoff, Three Rivers Interlocal Council (Town of Norwood/Neponset Valley Chamber of Commerce), inquired about how often the MPO would need to purchase the INRIX data and the cost. Mark Abbott, Manager of CTPS’s Traffic Analysis and Design Group, replied that the current INRIX dataset was purchased in 2013 and contains data from 2012. He noted that staff is bringing this to the MPO’s attention so that discussions can begin about purchasing the next dataset [for 2015]. He emphasized that staff supports the continued use of INRIX data because of the reasons R. Hicks described, the accuracy of the data, consistency with the data used for the LRTP, and for its usefulness in performance-based planning requirements (mandated in the FAST Act). Staff has also found other uses for the data, such as for congestion scans. He also noted that the NPMRDS data is inconsistent with the MPO’s past work, that the data is free only until 2017, and the analytics are expensive (\$150,000 to \$200,000).

S. Peterson discussed how INRIX data has been used in a number of studies and research projects, including those conducted by the Center for Urban Mechanics and Boston University. Researchers at Boston University, supported by a National Science Foundation grant, used INRIX data to study the environmental costs of roadway congestion; the results of the study were presented to the MPO last year. He discussed the value of having time-series data to show how congestion changes over time. He noted that there could be opportunities for using the data in collaboration with communities in the region as well.

D. Mohler advised staff to be mindful of procurement rules when selecting a vendor to provide travel-time data. Prior to selecting a preferred vendor, a request should be



issued for responses from companies that can provide a dataset that meets the MPO's requirements.

J. Gillooly asked if the data sources presented today contain data for every day and hour of 2012 or if they contain composite data. R. Hicks replied that INRIX contains data for every day, hour, and minute of that year. The two other datasets contain data in five minute increments. S. Peterson added that INRIX covers a larger area than the other two datasets; INRIX covers the entirety of the MPO's travel demand model network area.

### **11. Transportation Improvement Program Project Evaluation Criteria— *Sean Pfalzer, MPO Staff***

S. Pfalzer presented updates to the proposed revisions to the TIP project evaluation criteria. The updates reflect the discussion the MPO had at their meeting on December 17. He gave an overview of the changes made since the last meeting, which are summarized by goal topic below:

**Safety:** For the measures of crash severity, the Equivalent Property Damage Only (EPDO) values have been added as thresholds for scoring. The mode-specific criteria were clarified to indicate that effectiveness of safety countermeasures would be evaluated. Additional points were added to the criterion for improving safety at at-grade rail crossings.

**System Preservation:** Clarifications were made to criteria for improving substandard roadway bridges and substandard traffic signal equipment. Also, the point values under these criteria were modified.

**Capacity Management/Mobility:** A clarification was made to a criterion to indicate that it evaluates a project's ability to reduce transit vehicle delay, and the scoring under this criterion was modified to include absolute values. Another criterion regarding pedestrian improvements was modified to include improvements to ADA accessibility and to increase the available points. The point system under the criterion for reducing vehicle congestion was changed to include absolute values.

**Clean Air / Clean Communities:** The scoring system of the criteria for evaluating reduction in carbon dioxide and other emissions was changed to include absolute values and negative values (for projects that would be detrimental to air quality). The points available for projects in "Green Communities" were reduced.

**Transportation Equity:** No changes were made in this category. Staff is continuing work that will help to establish absolute thresholds for scoring.

***Economic Vitality:*** A clarification was made to the criterion for evaluating whether a project provides multimodal access to an activity center to award points for providing truck access.

As requested by the MPO, staff also distributed a sample list of 18 advertised TIP projects that staff will use to compare the old scoring system to the newly proposed system. All the projects on the list were advertised between FFY 2012 and FFY 2015. These projects are distributed throughout the MPO region, and represent each of the community types defined by MAPC.

### ***Discussion***

D. Crowley noted that the MPO suggested re-evaluating only a few projects. He asked if staff has sufficient time to do the analysis of 18 projects by the next MPO meeting on January 21. S. Pfalzer indicated that it would be reasonable for staff to complete the evaluation by January 21. D. Crowley asked staff to make the evaluation results available a couple of days prior to the next meeting.

K. Miller remarked on the addition of negative point values in the Clean Air / Clean Communities category, and suggested that there are other categories where negative points could be given for projects that have detrimental effects. E. Moore pointed out that there are legal requirements pertaining to air quality and transportation equity, which may have been considered when developing the negative values in the scoring system for those topic areas.

Marie Rose, MassDOT, asked if staff foresees a shift in the ranking of the projects based on the new scoring system. S. Pfalzer indicated that he does not anticipate a major shift in rankings given that the MPO's goals and objectives have remained consistent.

Tom Kadzis, City of Boston, commented about the criterion for evaluating whether a project reduces vehicle congestion. Under this criterion, a project would score points based upon the estimated number of hours of daily vehicle delay reduced. Given that this measure factors in time travelled but not distance traveled, T. Kadzis wondered whether it could be seen as promoting sprawl (i.e. higher reductions in hours travelled could be achieved over longer trips). S. Pfalzer responded that the scoring results for this criterion are produced from an intersection analysis and from the project's Functional Design Report. The benefits in terms of vehicle delay reduction tend to be localized to the particular intersections in the project corridor.

## **12.Members Items**

There were none.

### **13. Adjourn**

A motion to adjourn was made by the MetroWest Regional Collaborative (Town of Framingham) (D. Giombetti), and seconded by the City of Boston (J. Gillooly). The motion carried.

## Attendance

<b>Members</b>	<b>Representatives and Alternates</b>
At-Large City (City of Newton)	David Koses
At-Large Town (Town of Arlington)	Laura Wiener
City of Boston (Boston Redevelopment Authority)	Lara Mérida
City of Boston (Boston Transportation Department)	Jim Gillooly
	Tom Kadzis
Federal Highway Administration	Ken Miller
Inner Core Committee (City of Somerville)	Tom Bent
Massachusetts Department of Transportation	David Mohler
	Marie Rose
MassDOT Highway Division	John Romano
Massachusetts Port Authority	Hayes Morrison
Metropolitan Area Planning Council	Eric Bourassa
MetroWest Regional Collaborative (Town of Framingham)	Dennis Giombetti
Minuteman Advisory Group on Interlocal Coordination (Town of Bedford)	Richard Reed
North Shore Task Force (City of Beverly)	Denise Deschamps
Regional Transportation Advisory Council	Tegin Bennett
South Shore Coalition (Town of Braintree)	Melissa Santucci Rozzi
South West Advisory Planning Committee (Town of Medway)	Dennis Crowley
Three Rivers Interlocal Council (Town of Norwood/Neponset Valley Chamber of Commerce)	Tom O'Rourke

<b>Other Attendees</b>	<b>Affiliation</b>
Annie Lemelin	Conservation Law Foundation
John Lozada	MassDOT Office of Diversity and Civil Rights
Brittany Montgomery	Cambridge resident
Steve Olanoff	Three Rivers Interlocal Council (Town of Norwood)
Bryan Pounds	MassDOT Office of Transportation Planning

Miles Walters                      MBTA

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**MPO Staff/Central Transportation Planning Staff**

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Elizabeth Moore, Director of Policy and Planning  
Scott Peterson, Director of Technical Services

Mark Abbott  
Lourenço Dantas  
Ryan Hicks  
Maureen Kelly  
Alexandra Kleyman  
Anne McGahan  
Sean Pfalzer  
Jennifer Rowe  
Alicia Wilson

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