

REGIONAL TRANSPORTATION ADVISORY COUNCIL

Summary of November 12, 2008 Meeting

This meeting was held in Conference Room 4 of the State Transportation Building at 10 Park Plaza, Boston.

The meeting was called to order at 3:05 PM.

1. Introductions and Chair's Report – Malek Al-Khatib, *Chair and Boston Society of Civil Engineers*

David Mohler, Transportation Planning and Programming Committee Chair and Deputy Secretary for Planning at the Executive Office of Transportation and Public Works, will soon assume new responsibilities managing the Accelerated Bridge Program. While he will still chair the MPO meetings, his staff will address much of his MPO-related workload.

MPO staff sent the Advisory Council's multimodalism safety letter to D. Mohler. The complementary Massachusetts Bicycle and Pedestrian Advisory Board letter was attached.

2. Approval of the Draft Meeting Minutes of October 8, 2008

These minutes with correction were approved unanimously.

Points and Issues Raised During Discussion

A comment during the discussion about the multimodalism safety letter is not complete. The statement should read that multimodalism is necessary for a comprehensive understanding of transportation planning. (Marilyn Wellons, Riverside Neighborhood Association)

MPO staff will review the notes and recordings from the meeting and adjust the summary accordingly. (M. Al-Khatib)

3. Member Announcements

The Advisory Council should draft a comment letter strongly opposing the proposal to increase by \$2 the parking fees at MBTA commuter rail parking facilities. (Chan Rogers, Southwest Advisory Planning Committee)

Points and Issues Raised During Discussion

Any comment letter should be addressed to D. Mohler. (Kristina Johnson, Quincy)

Advisory Council members should address comments to their appropriate representatives on the MBTA Advisory Board, the group that makes these decisions. (Marcy Crowley, Wayland)

Did the MBTA consider ridership implications from higher parking fees? It is possible that higher parking fees will discourage ridership, thereby decreasing parking demand and parking revenue. It is important that the roundtrip cost of using transit remains competitive with the cost of driving to and parking in Boston. (Frank DeMasi, Wellesley)

It is hard to say whether higher parking fees will discourage ridership. Riders may find alternate methods to reach train stations or they may continue to park and pay more. (John Businger, National Corridors Initiative)

This proposal will likely increase revenue for the MBTA. If most parking fees are \$2 before the \$2 increase, parking demand would have to decrease to half of its current level for the proposal to add no revenue; it is unlikely that MBTA parking lots will be half empty due to this proposal. (Steve Olanoff, Westwood)

The MBTA faces an immediate fiscal challenge. In light of a recent lawsuit, the MBTA must immediately pay for increased employee and retiree benefits. The parking fee increase is a stopgap response to this issue – it is not a comprehensive solution to the Authority’s deep fiscal issues, which will likely require legislative action. (Brian Kane, MBTA Advisory Board)

Revenues from increased ridership fees should support increased capacity on the MBTA system. (Walter Bonin, Marlborough)

The Advisory Council should write a letter regarding comprehensive fiscal solutions at the MBTA. The parking fee increase may only be the tip of the revenue-generating iceberg. (Marilyn MacNab)

Fiscal issues at the MBTA are more comprehensive than the parking fee increase addresses, but this timely issue is the start of a larger discussion. The Advisory Council should address this issue while the iron is hot. (C. Rogers)

Governor Patrick’s recent proposal to increase toll fees on the Massachusetts Turnpike east of I-95 makes the parking fee increase particularly difficult. (Schuyler Larrabee, Boston Society of Architects)

Some MBTA officials wanted to raise parking fees by \$3. (M. MacNab)

The MPO should address its goals for mode shift. If the MPO supports increased transit ridership, this proposal does not support that interest. (John McQueen, WalkBoston)

How does the MBTA fund its operations? (M. Wellons)

MBTA operational cost is a line item in the State budget. The Legislature provided \$367 million in FY 2009 and will provide \$400 million in FY 2010. (B. Kane)

Since the Advisory Council never commented on the Transportation Finance Commission’s recommendations for reduced costs and increased revenues, it would be fair to now comment on those issues. (J. McQueen)

The Transportation Finance Commission is a divisive group with many recommendations. It would be difficult for the Advisory Council to agree on a comment letter that addresses the Commission’s recommendations. (J. Businger)

The concern of the Advisory Council should be to comment on projects and policies – not to comment on costs and revenues. (Marvin Miller, American Council of Engineering Companies)

MPO staff will try to draft a comment letter and distribute it to Advisory Council members in preparation for discussion at the next Advisory Council meeting. (M. Al-Khatib)

4. Presentation: “Safety and Operational Improvements at Selected Intersections: Analysis and Recommendations” – Efi Pagitsas, CTPS

Efi Pagitsas, CTPS, presented an overview of the recently completed Safety and Operational Improvements at Selected Intersections study. The study came from the MPO’s Mobility Management System, which monitors the performance of transportation facilities in the region to provide the MPO with the most recent performance information and to lead to recommendations for action when congestion and other mobility deficiencies are found.

The 2004 Congestion Management System report called on the MPO to conduct a study that examined high-crash intersections in the region. The study ultimately examined fifteen of the most dangerous intersections for issues related to driver, bicycle or pedestrian safety. Recommendations involved bicycle safety and access, driveway safety and access, re-striping and improving existing rights of way, signage and pedestrian improvements, signalization improvements, and circulation adjustments.

When CTPS staff completed the draft recommendations, municipalities reviewed and commented on them in order to ensure a comprehensive consideration of the several local issues. Municipalities will address the final recommendations through a variety of avenues, including Chapter 90 funding, mitigation agreements with developers, and the MPO TIP process.

Points and Issues Raised During Discussion

Many intersection issues seem to have commonsense solutions. How would someone know whom to contact with an issue? (J. Businger)

The MPO can direct local concerns to the appropriate administrative avenue. (E. Pagitsas)

Did the study utilize MassHighway’s Project Development and Design Guide? Did the study find areas to improve the Guide? (S. Olanoff)

The study followed American Association of State Highway and Transportation Officials (AASHTO) and Manual on Uniform Traffic Control Devices (MUTCD) design guides primarily. (E. Pagitsas)

The MPO should provide a follow-up memo to recommend a method to expand this work to other communities. (David Ernst, MassBike)

The FFY 2009 Unified Planning Work Program (UPWP) includes a similar safety study as well as a study to examine coordinated signalization. The MPO is considering methods to ensure a consistent funding mechanism for implementation of these studies. (E. Pagitsas)

The Transportation Planning and Programming Committee's UPWP Subcommittee would be the most appropriate avenue through which the Advisory Council could pursue a preference for this work. (Pam Wolfe, MPO Staff)

The Town of Lexington is using this study to evaluate safety issues of some intersections at a conceptual level. (Richard Canale, Minuteman Advisory Group on Interlocal Coordination)

The City of Quincy was pleased with the study's several recommendations to improve a very complicated and intricate intersection. (K. Johnson)

In cases where bringing intersections up to code require costly improvements, how would municipalities make cost-effective improvements? (M. Al-Khatib)
Studies often suggest tiers of recommendations based on time- and cost-effectiveness. This provides a palette from which municipalities can choose to address issues. (E. Pagitsas)

5. Presentation: "Update on Amendment to FFYs 2007-2010 TIP" – Hayes Morrison, MPO Staff

The MPO released a draft Amendment to the FFYs 2009 and 2010 Elements of the FFYs 2007-2010 Transportation Improvement Program (TIP). The FFY 2009 element reflects projects that are ready to be advertised and projects that were proposed by the Transportation Planning and Programming Committee on June 19, 2008, for inclusion in the upcoming Draft FFYs 2009-2012 TIP. The FFY 2010 element includes projects that cannot be removed from the FFYs 2007-2010 TIP due to compliance with air quality conformity; the proposed Amendment moved air quality conformity projects that were programmed in FFY 2009 to 2010.

The proposed Amendment is a measure to update the FFYs 2007-2010 TIP and allow projects in the FFY 2009 element to move forward. The MPO expects to release a full Draft FFYs 2009-2012 TIP in early Spring 2009 with an updated list of projects and new air quality conformity. The release of the FFYs 2009-2012 TIP has been delayed because the document's air quality conformity relies on analysis and information provided in the long-range Transportation Plan, which is currently undergoing amendment. The Draft Amendment to the long-range Transportation Plan and the Draft FFYs 2009 – 2012 TIP are currently scheduled to be released for public review concurrently.

Points and Issues Raised During Discussion

Does the Amendment reflect funds secured through bond bills? (F. DeMasi)
The Accelerated Bridge Program is in the Amendment. The list of projects for this Program is forthcoming. (H. Morrison)

CSX negotiated reconstruction of double-stack bridges. Will those bridges be on the TIP? (F. DeMasi)
The CSX bridges are not in the MPO region. (H. Morrison)

What is the timeline for the long-range Transportation Plan Amendment? (Jeff Rosenblum, Cambridge)

The MPO is working toward releasing the Draft Plan Amendment early in the new year. (H. Morrison)

Does the Department of Conservation and Recreation (DCR) receive a federal match for projects listed in the Accelerated Bridge Program? (J. Rosenblum)

DCR bridges are funded through MassHighway. Many of the MassHighway bridges will leverage federal funds through the Accelerated Bridge Program. (H. Morrison)

DCR does not leverage federal funding because it does not want its parkways to be maintained like roadways, but how will the MPO or the State address serious maintenance issues with DCR bridges? (M. Wellons)

DCR bridges repaired as part of the accelerated bridge program may or may not be rehabilitated using federal funds. Approximately \$3B in total funding will be used in this program, \$1.2B is state and \$1.8B is federal. It would be possible for the State to fund DCR bridges with only non-federal aid; however, information about this funding stream has not been released. (H. Morrison)

How could the State leverage more federal funding? (M. Al-Khatib)

In the program, the State is essentially borrowing against future revenues. (H. Morrison)

The Advisory Council gave its approval to the Amendment.

K. Johnson voted no.

6. Committee Announcements

John Hersey, MPO staff, circulated a sympathy card for the family of Robert Sturgis. A former member of the Advisory Council and frequent contributor to discussions of the region's planning and growth, Mr. Sturgis passed away on August 1.

The Membership Committee will solicit invitations to unrepresented municipalities and will convene to review citizen, professional and transportation planning groups for membership. (J. Hersey, on behalf of Sue McQuaid, vice chair and Neponset Valley Chamber of Commerce)

The Transportation Planning and Programming Committee's TIP Criteria Subcommittee will meet twice before the next meeting; S. McQuaid will report a summary of those meetings at the next Advisory Council meeting. (J. Hersey, on behalf of S. McQuaid)

S. Olanoff will continue to represent the Advisory Council on the Transportation Planning and Programming Committee's UPWP Subcommittee. Like all committee chairs and subcommittee representatives, he will take direction from and report to the Advisory Council at general body meetings via Committee Reports. (M. Al-Khatib)

The Freight Committee is assessing the preliminary stages of the Statewide Freight and Rail Plan, and some Committee members have an interest in establishing a non-MPO related, statewide freight advocacy group. The Committee would like to present its charter to the Advisory Council, when M. Al-Khatib determines an appropriate meeting at which to present. (W. Bonin)

All members should participate on Advisory Council committees. Much of the Advisory Council's work will happen in these committees – not at general body meetings. Interested members should contact the chair or J. Hersey. Summaries of committee work will be provided in monthly Committee Reports, which will be included in the monthly packets. (M. Al-Khatib)

Points and Issues Raised During Discussion

There were no comments.

7. Review of Committee Membership

The Advisory Council will try to finalize its committees' membership by November 30. All members interested in participating on committees should contact M. Al-Khatib or J. Hersey before then.

8. Adjourn

The meeting adjourned at 4:40 pm.

Attachments:

1. Attendance List for November 12, 2008
2. Memorandum Re: Safety and Operational Improvements at Selected Intersections: Analysis and Recommendations (available upon request)
3. Memorandum Re: Changes to TIP Materials from 10/30/08 (available upon request)
4. Memorandum Re: Changes to TIP Materials from 11/6/08 (available upon request)

5. Attendance List for November 12, 2008

Agencies

Brian Kane, MBTA Advisory Board
Leon Papadopoulos, MassRIDES
Steven Rawding, Massachusetts Aeronautics Commission

Cities and Towns

Walter Bonin, Marlborough
Marcy Crowley, Wayland
Frank DeMasi, Wellesley
Kristina Johnson, Quincy
Todd Kirrane, Brookline
Kurt Mullen, Needham
Steve Olanoff, Westwood
Jeff Rosenblum, Quincy
Gail Wagner, Lexington

Citizens Groups

Malek Al-Khatib, Boston Society of Civil Engineers
Dennis Baker, American Council of Engineering Companies
John Businger, National Corridors Initiative
Richard Canale, Minuteman Advisory Group on Interlocal Coordination
David Ernst, MassBike
Schuyler Larrabee, Boston Society of Architects
John McQueen, WalkBoston
Marvin Miller, American Council of Engineering Companies
Chan Rogers, Southwest Advisory Planning Committee
Elliot Rothman, Boston Society of Architects
Marilyn Wellons, Riverside Neighborhood Association
Tom Yardley, MASCO

Guests and Visitors

Ed Lowney
Marilyn MacNab

MPO Staff

Hayes Morrison
Efi Pagitsas
Pam Wolfe

TABLE 1
Summary of Safety and Operational Data and Analysis

(ReS, 080902, SOISI_15_Ints_Summary.xls)

Crash data are for 1999-2001, from Mass. RMV

Community (MassHighway District No.)	Intersection	Existing Vehicle Crash Rate ¹ (based on 2007 PM peak hour)	Average 2005 MassHighway District 3 or 4 Crash Rate ¹	Signal- ized (S) or Unsignal- ized (U)	Existing AM / PM Level of Service	Total Number of Crashes	Crash Result (no. of crashes)					Crash Type (no. of crashes)				Collision With (no. of crashes)						Crosswalk Ped ISI ²	Through Movement Bike ISI ³	
							Prop- erty Damg.	In- jury	Fatal	Hit & Run	Other	Angle	Rear End	Head On	Other	Motor Veh. in Traffic	Motor Veh. Parked	Fixed Object	Pedes- trian	Bi- cycle	School Bus			Other
Beverly (4)	1. Rantoul Street (Route 1A) at Elliott Street (Route 62)	1.93	0.88	S	D / F	45	25	15	1	4	0	22	11	3	9	35	4	1	3	0	0	2	1.9	2.6
<i>Crash data show that some angle crashes may be due to lane changing by vehicles trying to bypass left-turning vehicles, especially on the WB approach. Pedestrians do not use the functioning pedestrian buttons which exist on all 4 corners; rather, they cross the streets concurrently with traffic. Crosswalk markings have begun to fade.</i>																								
Boston (4)	2. Hyde Park Avenue at River Street (Cleary Square)	1.85	0.88	S	F / F	38	22	13	0	3	0	20	9	1	8	27	5	1	1	0	0	4	1.9	2.6
<i>There are conflicts between left-turning vehicles and through vehicles on all approaches. Pedestrians often cross concurrently with traffic, potentially conflicting with turning vehicles, even though an exclusive pedestrian signal phase exists with functioning pedestrian buttons. High proportion of buses and trucks in the vehicle mix.</i>																								
Braintree (4)	3. Grove Street at Columbian Street	1.09	0.88	S	B / C	39	24	14	0	0	1	20	10	3	6	34	2	0	0	0	1	2	2.7	3.7
<i>Pedestrian and bicycle facilities are nonexistent - no crosswalks, no sidewalks, no pedestrian phase/buttons, no bicycle lanes. Some sight distance problems exist. Congestion and delays are generally low.</i>																								
Holliston (3)	4. Washington Street (Routes 16/126) at Hollis Street	1.47	0.79	U	F / C	37	22	15	0	0	0	18	10	0	9	30	1	2	0	1	0	3	3.8	2.5
<i>The intersection is wide and pedestrian-unfriendly. There is no ped. signal, or traffic signal with a ped. phase to protect people wishing to cross by foot. The church driveway on the n. side of Hollis St just w. of the intersection appears to be a cause of rear-end crashes between exiting vehicles and vehicles turning from Washington St.</i>																								
Lexington (4)	5. Massachusetts Ave (Routes 4/225) at Maple St (Route 2A)	2.87	0.63	U	E / F	61	43	17	0	0	1	25	31	0	5	54	0	0	0	1	1	5	3.7	3.0
<i>Intersection has excessive open space. It is pedestrian- and bicyclist-unfriendly. This is one of just two study intersection where rear-end crashes were more numerous than angle crashes - most are on Maple St WB. Also, Maple St left turns conflict with SB through and left-turning vehicles. Sidewalks are uneven and cracked.</i>																								
Littleton (3)	6. Great Road (Rts 2A/119) at King Street (Rts 2A/110)	2.25	0.84	S	D / C	50	29	18	0	3	0	35	7	1	7	37	8	1	1	0	0	3	1.9	2.7
<i>Rear-end, congestion-related crashes were just 14%. The many angle crashes (70%) may be related to poor sight distance to/from Rt 119 EB/WB, and confusion from the lack of a WB left-turn arrow. This may cause conflicts between WB left-turning and EB through vehicles, the highest direction-related types of crashes in the RMV data.</i>																								
Marlborough (3)	7. Bolton Street (Route 85) at Union Street	2.36	0.84	S	E / D	58	38	18	0	1	1	32	21	1	4	52	2	0	2	1	1	0	1.9	3.5
<i>Angle and rear-end crashes were numerous. They were related to the SB direction, which has poor sight distance. SB vehicles were involved in 81% of angle crashes and 48% of rear-end crashes. Signal is only semi-actuated - the NB phase always leads, even if there are no NB left turns. This gives insufficient green time to SB vehicles.</i>																								
Medfield (3)	8. Main Street (Route 109) at N. Meadows Road (Route 27)	1.82	0.84	S	F / F	55	35	17	0	3	0	28	13	1	13	44	3	2	0	0	0	6	1.9	2.8
<i>Angle crashes predominate (51% of all crashes). Rt 109 EB and Rt 27 SB vehicles are involved in the most angle crashes. Rear-end crashes (24% of all crashes) include mostly Rt 109 EB and Rt 27 NB vehicles. Rt 27 NB through vehicles often get stuck behind WB left-turning vehicles, especially in the PM peak.</i>																								
Peabody (4)	9. Central Street at Tremont Street	1.42	0.63	U	C / F	39	17	21	0	1	0	18	10	4	7	28	3	4	0	1	0	3	3.6	2.3
<i>This is the study intersection with the highest percentage of injury-related crashes (54% of all crashes). Many near misses observed between Tremont St WB left-turning vehicles and Central St SB through vehicles. A very pedestrian- and bicyclist-unfriendly intersection.</i>																								
Quincy (4)	10. Hancock Street (Route 3A) at E./W. Squantum Street	2.75	0.88	S	F / F	86	63	21	0	2	0	46	21	4	15	75	3	0	2	1	0	5	2.7	2.9
<i>Congestion and many near-miss angle crashes observed. Good pedestrian facilities exist, but there are problems: excessive open space for pedestrians in the northeast area of the intersection; also, pedestrians cross between queued vehicles on W. Squantum St to reach the Red Line station, potentially conflicting with WB vehicles.</i>																								
Randolph (4)	11. N. Main Street (Route 28) at Reed/Pond/Old Streets	1.12	0.88	S	F / F	40	20	20	0	0	0	12	15	3	10	33	0	3	3	0	0	1	2.8	2.9
<i>Congestion-related crashes and rear-end crashes very much predominate. One of just two study intersections where rear-end crashes were more numerous than angle crashes. 60% of rear-end crashes were in the NB direction. Field work showed left-turning vehicles blocking through vehicles in both the NB and SB directions.</i>																								
Revere (4)	12. Ocean Avenue at Shirley Avenue	4.14	0.88	S	B / C	55	32	23	0	0	0	38	6	1	10	40	7	3	2	0	0	3	2.8	3.5
<i>Not much congestion; instead, crashes involved mostly left-turning and through vehicles. Poor sight distance NB and SB due to the intersection being on a crest. Some signal heads are old and small, not of the LED type. There were above-average numbers of injury-related crashes (compared to the other 14 study intersections).</i>																								
Stoneham (4)	13. Main Street (Route 28) at William Street	1.69	0.88	S	C / C	55	38	15	0	2	0	32	11	1	11	49	0	0	3	0	0	3	2.8	2.8
<i>This intersection has heavy pedestrian use, especially in the AM peak hour (a middle school is nearby). There is interference south of the intersection by left-turning vehicles exiting the Stop & Shop plaza in the PM, turning NB. There is no exclusive pedestrian signal phase. Many angle crash near misses observed (all directions).</i>																								
Wayland (3)	14. Commonwealth Rd (Route 30) at Main St (Route 27)	2.59	0.84	S	F / F	71	51	17	0	3	0	32	29	2	8	64	4	1	1	0	0	1	2.1	3.6
<i>Very congested intersection. Three approaches have just one official general-purpose lane, so left-turning vehicles often block same-direction through vehicles. Some gridlock was observed: WB vehicles blocking SB vehicles. Many near misses observed between left-turning vehicles and opposite-approach through vehicles.</i>																								
Weymouth (4)	15. Pleasant Street at Pine Street/Tall Oaks Drive	0.88	0.63	U	F / F	25	17	8	0	0	0	13	6	0	6	20	1	3	0	0	0	1	3.6	2.3
<i>52% of all crashes occurred 7 PM - 7 AM; i.e., a majority of crashes were darkness-related. Of these, 54% occurred during winter (Nov. - Mar.). Sight distance is somewhat compromised from NB and SB. 68% of crashes occurred at the Tall Oaks Dr intersection, 32% at the slightly offset (about 30 ft to the north) Pine St intersection.</i>																								

¹Crash rate = the number of crashes per million vehicles entering an intersection; based on 2007 PM peak hour volumes.

²Ped ISI = Pedestrian Intersection Safety Index. This safety index is calculated for the crosswalk on the intersection approach with the highest PM peak hour volumes. (Source: U.S. DOT, Federal Highway Administration, Pedestrian and Bicyclist Intersection Safety Indices, April 2007.)

³Bike ISI = Bicycle Intersection Safety Index. This safety index is calculated for the bicycle through movement on the main road in the peak direction during the PM peak hour. (Source: U.S. DOT, Federal Highway Administration, Pedestrian and Bicyclist Intersection Safety Indices, April 2007.)

(Note: A higher Ped/Bike ISI would call for a greater priority for an in-depth safety assessment (not done in this study); a lower Ped/Bike ISI, a lower priority for an in-depth safety assessment. For more information on footnotes 2 and 3, go to www.tfhrc.gov/safety/pedbike/pubs/06129/06129.pdf.)

MEMORANDUM

TO: Transportation Planning and Programming Committee **October 16, 2008**

FROM: Robert Sievert

RE: Safety and Operational Improvements at Selected Intersections
(SOISI) Study: Analysis and Recommendations

INTRODUCTION

This memorandum summarizes the analyses, findings, and recommended improvement concepts of the Safety and Operational Improvements at Selected Intersections study. The study was authorized and funded by the Boston Region Metropolitan Planning Organization (MPO).

BACKGROUND

To conduct a study such as this was one of the recommendations of the 2004 Congestion Management System (CMS) report, which identified intersections high in vehicle crashes in each of the Metropolitan Area Planning Council (MAPC) subregions.¹ This study's purpose was to evaluate up to 15 intersections in various parts of the region and to develop recommendations for improvements intended to enhance the safety of drivers, bicyclists, and pedestrians. Some of the selected intersections called for improvements requiring right-of-way acquisitions. Locations were not selected which were currently under study by CTPS or by others or were under design.

Initially, 30 intersections were identified by CTPS from a screening of one main source of data: intersections with high numbers of vehicle crashes, especially those involving bicycles or pedestrians, as shown in the Massachusetts Registry of Motor Vehicles (RMV) data from 1999 to 2001. Via telephone discussions with town officials, the 30 candidate intersections were screened to see whether they were still experiencing safety problems in 2007. For those that were not, other suitable candidates were substituted. (Although RMV crash data for 2002–2005 had become available, that database appeared to contain inaccuracies for many communities in the Boston region and therefore was not used in this study.)

From the original group of 30 intersections, CTPS selected 15 to recommend for detailed study, based on relevant criteria gleaned from the CMS and the Transportation Improvement Program (TIP). The criteria, which were consistent with MPO policies, generally fell under the following categories:

¹ Central Transportation Planning Staff, *Mobility in the Boston Region: Existing Conditions and Next Steps: The 2004 Congestion Management System Report*, December 2004, Appendix B.

- Safety (the number and severity of crashes involving vehicles, bicycles, and pedestrians)
- Community (regional equity)

CTPS submitted the original 30 and the recommended 15 intersections to the MPO's Transportation Planning and Programming Committee for review. The Committee slightly modified the final list and selected the 15 intersections that are analyzed in this study.

OBJECTIVE AND STUDY PROCESS

This study sought to accomplish the following objective: to develop operational strategies for up to 15 intersections in the Boston Region MPO area that enhance vehicle, bicycle, and pedestrian safety, and, to the extent possible, improve overall traffic operations. The intersections selected for analysis in this study were diverse in terms of geographic location in and around the greater Boston region (see Figure 1). They also varied with respect to being signalized or unsignalized, three-legged or four-legged, and urban or suburban. See Table 1 for a summary of the 15 intersections selected and analyzed, including each location's crash data, level of service (LOS) results, and pedestrian and bicycle safety indices.

The study process consisted of the following steps:

- Task 1 Define intersections and receive approval by the Planning and Programming Committee
- Task 2 Perform field reconnaissance and collect data
- Task 3 Evaluate and analyze the selected intersections
- Task 4 Receive input from MassHighway District office staff and local officials
- Task 5 Recommend Improvements
- Task 6 Document all findings and recommendations

RESULTS

The analyses and recommendations for each of the intersections are presented in sections 1 through 15 of this memorandum. A preliminary version of the text on each intersection was sent for review to officials in the municipality where the intersection is located and also to the appropriate MassHighway district office. The responses received are reflected in the texts presented here. The actual written responses are provided in Appendix A.

The section on each intersection concludes with a summary of the course of action that is recommended. It is hoped that the recommendations will lead the communities to take steps to improve safety and operations at the intersections.

The 15 intersections, and the recommendations for each in summary form, are as follows:

1. BEVERLY: Rantoul Street (Route 1A) at Elliott Street (Route 62)

(page 9)

- The City of Beverly and its consultant should consider the seven improvement concepts analyzed in this study as part of its effort to reconstruct all of Rantoul Street (Route 1A).

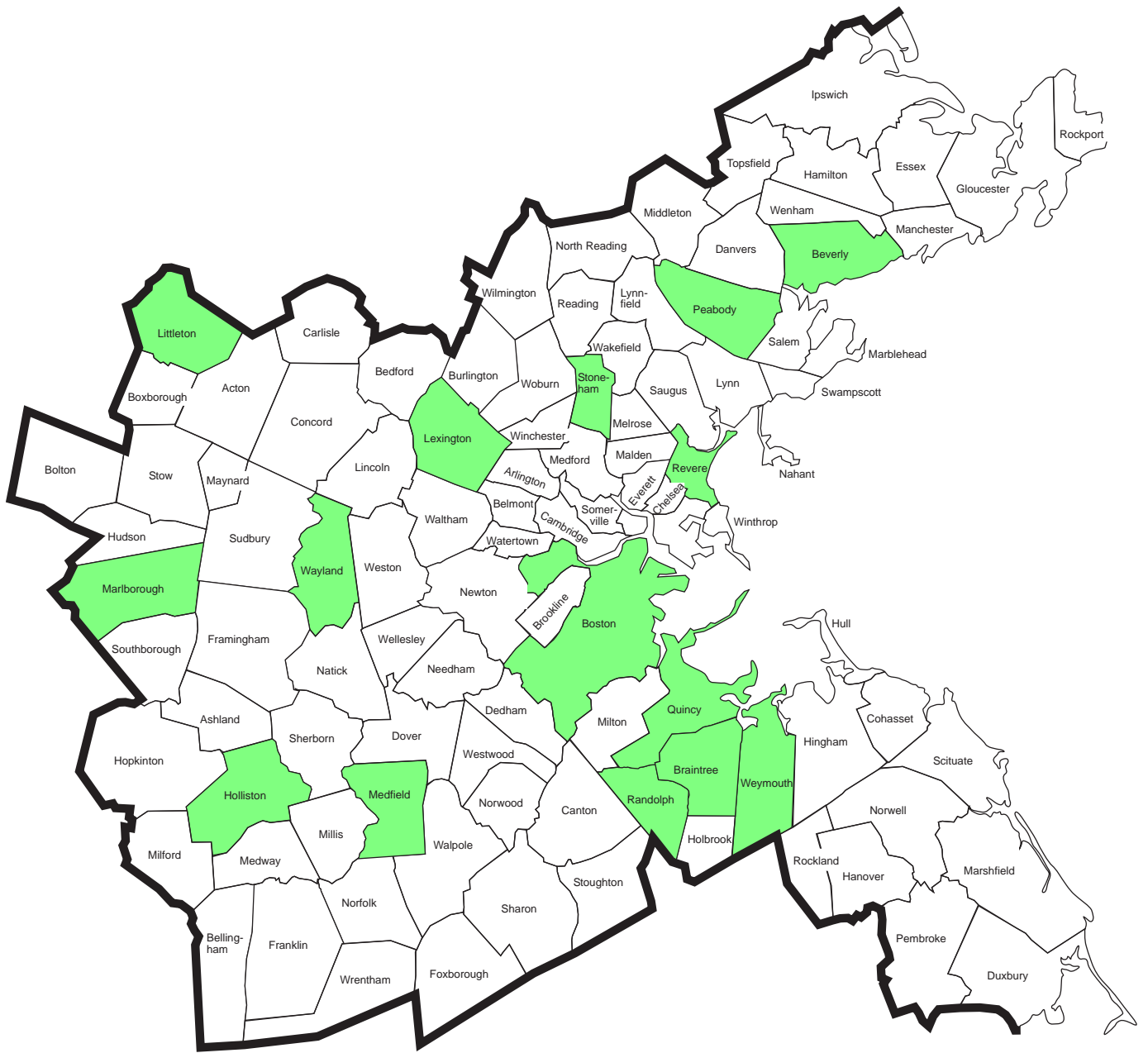



FIGURE 1
Cities and Towns of the Boston Region Metropolitan Planning Organization Area

 Communities with intersections selected for study in the Safety and Operational Improvements at Selected Intersections study

2. BOSTON: Hyde Park Avenue at River Street (Cleary Square)*(page 18)*

- The City of Boston should consider the three improvement concepts analyzed in this study as part of its effort to optimize traffic signal timing plans along Hyde Park Avenue between Forest Hills and Cleary Square.

3. BRAINTREE: Grove Street at Columbian Street*(page 28)*

- Optimize signal timing; extend all-red phase from 1 to 2 seconds.
- Add a second YIELD sign at the Grove Street westbound right-turn lane.
- Relocate one of the Jamie's Grille and Pub driveways away from the intersection.
- Add sidewalks in the intersection area when reconstruction occurs in the future.

4. HOLLISTON: Washington Street (Routes 16/126) at Hollis Street*(page 36)*

- Consider the installation of a new traffic signal.
- Consider the installation of a modern roundabout.
- Construct bulbouts, medians, and/or islands to channelize the intersection area.
- Redesign and move church driveway further west on Hollis Street, away from intersection.
- Consider the addition of a bicycle lane on this portion of Washington Street through Holliston.
- Repaint faded crosswalks, lane markings.

5. LEXINGTON: Massachusetts Avenue (Routes 4/225) at Maple Street (Route 2A)*(page 45)*

- Consider the installation of a new traffic signal
- Consider the installation of a modern roundabout.

6. LITTLETON: Great Road (Routes 2A/119) at King Street (Routes 2A/110)*(page 56)*

- The Town of Littleton and MassHighway District 3, together with IBM and its consultant, should consider the three improvement concepts analyzed in this study as part of IBM's traffic mitigation plan for this intersection and the roadways nearby.

7. MARLBOROUGH: Bolton Street (Route 85) at Union Street*(page 64)*

- Switch the northbound lead phase to a southbound lead phase.
- Add an exclusive right-turn lane to Union Street westbound.
- Upgrade signs, markings, signal equipment, sidewalks, ADA ramps.

8. MEDFIELD: Main Street (Route 109) at North Meadows Road/ Spring Street (Route 27)*(page 73)*

- Optimize the signal splits and cycle lengths.
- Consolidate the driveways in the northeastern quadrant of the intersection.

9. PEABODY: Central Street at Tremont Street*(page 85)*

- Add a new signal at Central Street at Tremont Street and coordinate it with the flashing beacon at Central Street at Warren Street, located just to the south.
- Enhance street lighting at and near the Central Street at Tremont Street intersection.

10. QUINCY: Hancock Street (Route 3A) at East/West Squantum Street*(page 94)*

- Some widening of approach lanes and departure lanes may be required in order to improve overall safety as well as traffic operations.
- Expand the small island in the northeastern part of the intersection and add a pedestrian button in order to improve overall pedestrian safety.
- Make Hollis Avenue right-in, right-out only, during the AM and PM peak periods.
- Prohibit peak period entry/exit to/from the Knights of Columbus parking lot from/to Hollis Avenue in order to prevent cut-through traffic.

11. RANDOLPH: North Main Street (Route 28) at Reed/Pond/Old Streets*(page 108)*

- Widen and restripe Pond Street (east of the intersection) to create a three-lane cross section: westbound, an exclusive left-turn lane and a through/right-turn lane; and eastbound, a one-lane departure lane (the current design).
- Consider the same cross section design on Reed Street (west of the intersection).
- Make the signal fully actuated.
- Add signs warning drivers “STATE LAW: STOP for pedestrians in crosswalk” on all approaches.
- Replace older signal heads with new LED types.

12. REVERE: Ocean Avenue at Shirley Avenue*(page 119)*

- Improve signage warning drivers of “Medical Area,” “Pedestrian Crossings.”
- Add an LED signal south of intersection warning drivers of “(RED) Signal Ahead.”
- Consider reducing speed limit on Ocean Avenue near the intersection from 35 to 25 miles per hour.
- Only if necessary, implement a split signal phase to eliminate all conflicts between northbound and southbound vehicles.

13. STONEHAM: Main Street (Route 28) at William Street*(page 126)*

- Add a leading eastbound signal phase.
- Consider posting signs prohibiting vehicles from turning left from the two Stop and Shop driveways during the AM and PM peak periods—onto Main street northbound as well as onto William Street westbound.
- Add signs warning drivers “STATE LAW: STOP for pedestrians in crosswalk” on all approaches.
- Restripe all lane markings and crosswalks.

14. WAYLAND: Commonwealth Road (Route 30) at Main Street (Route 27)

(page 134)

- Change the current pretimed signal to a fully actuated signal, and optimize the signal splits and cycle length.
- An exclusive left-turn lane exists on the Route 27 northbound approach. Widen the other three approaches to create similar exclusive left-turn lanes there.
- Replace the old, tilting signal posts with new posts or mast arms.

15. WEYMOUTH: Pleasant Street at Pine Street/Tall Oaks Drive

(page 144)

- The installation of a new signal should be considered at this location.
- Enhance street lighting at and near this intersection.

MEMORANDUM

TO: Transportation Planning and Programming Committee

DATE: October 30, 2008

FROM: Hayes Morrison, TIP Manager

RE: Changes to TIP Materials from 9/18/08

Since the September 18 meeting, there have been a few developments that have required changes for the Transportation Planning and Programming Committee's consideration for the Amendment One of the FFY 2009 and 2010 elements of the FFYs 2007 – 2010 TIP. As a result, staff is recommending making the changes itemized below to the previously distributed materials.

Recommended Changes to DRAFT Amendment One – FFY 2009 Element of the FFYs 2007 – 2010 TIP

Page 2 of 9 –

Move:

- 1) Ipswich – Route 1A over MBTA Bridge Replacement - 602543
Project was previously in the FFY 2008 element of this TIP and should be moved into the 2009 element
- 2) Wellesley – Rockland St Bridge over CSX – 600776
Project was previously listed in the Non Federal Aid portion of this amendment. The project will now be funded with Federal Aid
- 3) Marlborough – Robin Hill and Boundary St Bridges over the Assabet River – 603506
Project was previously listed in the Non Federal Aid portion of this amendment. The project will now be funded with Federal Aid

Page 3 of 9 –

Add:

- 1) Watertown Bike Path earmarks numbers 1400 and 1424
Earmarks previously included in this amendment in the FFY 2010 element. Match for these earmarks to be provided by the Department of Conservation and Recreation
- 2) Weymouth Multi-Modal Center earmark number 4276
Earmark to fund the construction of a multi-modal center in Weymouth

Remove:

- 1) Quincy – Quincy Center Concourse – 604664
Project is non-exempt for air quality and was not included as part of the FFY 2007 – 2010 TIP and Air Quality analysis. Project should be included in the FFY 2009

element of the proposed list of projects for the pending Draft FFYs 2009 – 2012 TIP

2) Waltham – Interstate 95 – 604710

Project moved to FFY 2010 element Interstate Maintenance program from the FFY 2009 element Interstate Maintenance program pending this action

Page 6 of 9 –

Add:

- 1) Section 115 Earmarks (earmarks not previously included)
 - Cambridge – Lechmere Station Relocation \$1,000,000
 - Beverly/Salem – Beverly/Salem Intermodal Center \$1,100,000
 - Revere – Wonderland Station Improvements \$300,000
 - Revere – Wonderland Station Improvements \$1,900,000

Page 7 of 9 –

Add:

- 1) Flex Funds Carryover (these funds were part of the FFY 2007 element of the TIP and will be used by the MBTA in this element)
 - Environmentally Friendly Locomotive Switchers, flexed from CMAQ \$312,500
 - Woburn – Anderson RTC, flexed from STP \$150,000

Page 7 of 9 –

Update:

- 1) Blue Line/North Shore – Feasibility Study for Blue Line Extension to Lynn
Project funds reduced to reflect available carryover funds from \$3,920,200 to \$2,450,000
- 2) Salem – Beverly/Salem Intermodal Center
Project funds reduced to reflect available carryover funds from \$1,216,714 to \$1,045,000
- 3) Beverly - Beverly/Salem Intermodal Center
Project funds reduced to reflect available carryover funds from \$1,216,714 to \$1,045,000
- 4) Quincy – Quincy Catamaran
Project zeroed out pending additional pending FY09 appropriation
- 5) Revere – Wonderland Station
Project funds reduced to reflect available carryover funds from \$1,095,043 to \$940,500
- 6) Boston – Commonwealth Ave/Green Line
Previous amount listed was incorrect; the total amount of the earmark is \$820,750 not \$656,600
- 7) Boston – Improvements at Harbor Islands Park
Project funds increased to reflect available carryover funds from \$271,700 to 338,925
- 8) Hingham – Hingham Intermodal Center

Project funds reduced to increased available carryover funds from \$4,695,215 to \$4,702,500

9) Commuter Rail – Rockport Station

Project funds reduced to reflect available carryover funds from \$1,672,982 to \$1,436,875

10) Commuter Rail – Fitchburg Line Improvements

Project funds reduced to reflect available carryover funds from \$7,840,200 to \$7,350,000

11) Medford – Downtown Parking Improvements

Project funds reduced to reflect available carryover funds from \$1,216,714 to \$1,045,000

12) Melrose Commuter Rail Improvement

Previous amount listed was incorrect; the total amount of the earmark is \$857,500, not \$686,000

13) Ferry – Ferry System Improvements

Project funds reduced to reflect available carryover funds from \$7,475,000 to \$5,128,750

14) Woburn – Woburn Park and Ride Facility

Project funds reduced to reflect available carryover funds from \$1,095,043 to \$940,500

MEMORANDUM

TO: Transportation Planning and Programming Committee

DATE: November 6, 2008

FROM: Hayes Morrison, TIP Manager

RE: Changes to TIP Materials from 10/30/08

Since the October 30 mailing, there have been a few developments that have required additional changes for the Transportation Planning and Programming Committee's consideration for the Amendment One of the FFY 2009 and 2010 elements of the FFYs 2007 – 2010 TIP. As a result, staff is recommending including the minor changes itemized below to the previously distributed materials.

Additional Recommended Changes to DRAFT Amendment One – FFY 2009 Element of the FFYs 2007 – 2010 TIP

Page 2 of 9 –

Changed:

- 1) Ipswich – North Green Improvement
Project cost changed from \$91,000 to \$91,800
- 2) Framingham – Fountain St over MBTA/CSX – 604013
Project cost changed from \$4,100,000 to \$3,900,000
- 3) Marlborough – Robin Hill and Boundary St Bridges over the Assabet River - 603506
Project cost changed from \$4,257,930 to \$3,702,710

Move:

- 1) Ipswich – Route 1A over MBTA Bridge Replacement - 602543
Project was previously in the FFY 2008 element of this TIP and should be moved into the 2009 element and is now moving to **page 4**, Non Federal Aid
- 2) Wellesley – Rockland St Bridge over CSX – 600776
Project will move back to **page 4**, Non Federal Aid

Page 3 of 9 –

Add:

- 1) Franklin – Route 140 (design) – 604988
Project is fully funded by an earmark, design funding previously listed in FFY 2008 element but was not obligated

Page 4 of 9 –

Add:

- 1) Ipswich – Route 1A over MBTA Bridge Replacement - 602543

Project was previously in the FFY 2008 element of this TIP and should be moved into the 2009 element and is now moving to **page 4**, Non Federal Aid

2) Wellesley – Rockland St Bridge over CSX – 600776

Project will move back to **page 4**, Non Federal Aid

3) Minuteman National Park (Concord) – Pavement Management Project

Project was not previously included, Eastern Federal Lands Highway Division project to address pavement management on federal lands