

BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Richard A. Davey, MassDOT Secretary and CEO and MPO Chairman Karl H. Quackenbush, Executive Director, MPO Staff

MEMORANDUM

Date: December 19, 2013

To: Boston Region Metropolitan Planning Organization (MPO)

From: Seth Asante, MPO Staff

Re: Federal Fiscal Year (FFY) 2014 Priority Corridors for Long-Range

Transportation Plan (LRTP) Needs Assessment: Selection of Study

Locations

1 BACKGROUND

The current LRTP identified existing needs for all transportation modes in the MPO region;¹ these needs can guide the process for deciding which projects to fund in future Transportation Improvement Programs (TIPs).

The following are among the current mobility requirements of the region:

- Maintaining and modernizing roadways with high levels of congestion and safety problems
- · Increasing the quantity and quality of walking and bicycling
- Improving efficiency of transit service and adherence to schedules

Based on previous and ongoing transportation planning work—including the MPO's Congestion Management Process (CMP), the MBTA's Program for Mass Transportation (PMT), and MPO planning studies—the LRTP identified several priority arterial roadway segments that require maintenance, modernization, and safety and mobility improvements. This study was included in the FFY 2014 Unified Planning Work Program (UPWP).²

By focusing on arterial segments rather than intersections, multimodal transportation needs can be evaluated comprehensively. A holistic approach to analyzing problems and associated recommendations will ensure that all public transportation users' needs, including pedestrians, bicyclists, and motorists, will be considered. Ultimately, this would result in roadways where it is safe to cross the street, walk or cycle to shops, schools, or train stations; where buses can run on time; and for recreation. Typically, the recommended improvements are within a roadway's right-of-way. They take into account the needs of abutters and users, and the interests and support of stakeholders.

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¹ Paths to a Sustainable Region: The Long-Range Transportation Plan of the Boston Region Metropolitan Planning Organization, September 22, 2011.

² Unified Planning Work Program, Federal Fiscal Year 2014, endorsed by the Boston Region Metropolitan Planning Organization on July 11, 2013.

2 SELECTION PROCEDURE

Selecting the study locations comprised three steps. First, MPO staff assembled data about the arterial segments identified in the LRTP and used it to screen the segments. There were 44 arterial segments in 45 communities in the MPO region. The data assembled were as follows:

- MassDOT's 2011 Road Inventory File and 2007–2011 crash database—used to assemble the following information for each arterial segment in each community: roadway jurisdiction, National Highway System (NHS) status, average daily traffic (ADT), high-crash locations, and crash rates.
- MPO CMP arterial speed data—Used to determine average travel speeds and speed index (average travel speed divided by the speed limit) on each arterial segment.
- MBTA bus service performance and passenger load data—used to determine the percentage of bus trips failing to adhere to schedule (late service) or passenger load standards (crowding).
- Select data from MassDOT's project-information database, the MPO's 2014–2017 TIP projects, MPO planning and other studies; and municipal websites for projects, studies, and TIP projects planned or programmed for each arterial segment.

Table 1 presents the data assembled for each arterial segment and indicates the priority rating, municipality and jurisdiction, MassDOT district office, crash rates, number of top-200 high-crash locations, speed index, transit services and their performance, and any relevant studies or projects; it also cites the results of applying the selection criteria, performed in the second step of this process (below).

Second, MPO staff examined the arterial segments more closely by applying five criteria:

- Safety: Location experiences high crash rate and/or has one or more top-200 high-crash locations
- Congestion: Location experiences extensive delays during peak periods
- *Multimodal Significance:* Location carries bus route(s), is adjacent to a transit stop or station, supports bicycle or pedestrian activities, or has an implementation project to support one or more of these activities.
- Regional Significance: Location carries large proportion of regional traffic and/or is on the National Highway System
- Implementation Potential: Location has a strong commitment from the community and/or MassDOT. Locations under Department of

Conservation and Recreation (DCR) jurisdiction are considered to have less potential for implementation.

Another criterion applied was regional equity: Not to select locations in the same area as another or in the same area as a location selected in the preceding cycle of this study.

Arterial segments were rated low priority because these projects were either in construction, recently completed, in design, under study, or programmed in the TIP, and were excluded from further consideration for this cycle of the Priority Corridors study. In addition, arterial segments that have been studied by MPO staff or other agencies within the past-10 years were rated as low priority and were excluded from further consideration. Finally, arterial segments were rated low priority when they met only two or fewer of the five criteria.

Arterial segments were rated medium priority when they met three or four of the five criteria.

Arterial segments that met all five criteria were rated high priority. Four arterial segments had been given high priority by MPO staff on the basis of safety, operations, multimodal and regional significance, support from the community, and subregion for the study. Available funding resources determined the number of segments selected. The segment described below was selected for study.

3 SELECTED ARTERIAL SEGMENTS FOR STUDY: ROUTE 140 IN FRANKLIN

Route 140 in Franklin (excluding the segment in the Town Center (from Emmons Street to Summer Street)—which was programmed in the FFY 2013 TIP—is the area that the MPO staff recommends to be evaluated for improvements. Two specific segments are worthy of focus: 1) between Franklin Village Shopping Center and Beaver Street, and 2) between King Street/Chestnut Street and the Wrentham town line.

The study area was proposed because of the following factors: 1) mobility and safety issues, 2) access management improvements, and 3) multimodal uses (bicycle, pedestrian, transit, and motor vehicle). MassDOT District 3, the 495/MetroWest Partnership, and the Town of Franklin have expressed their support for the study and are willing to assist and review potential improvements for implementation.

Three other high-priority segments were not selected for study because they involved regional equity and did not receive broad support from the community, MAPC subregion, and MassDOT.

4 SUMMARY

The recommended arterial segments meet the objectives of this study, especially in supporting the transportation improvement priorities of the MPO's LRTP. The work scope for this study assumed that "up to two" arterial segments would be selected. However, currently the MPO staff does not propose studying a second arterial segment because the Route 140 segments are relatively long, which would require considerable resources.

MPO staff will submit this proposal to the MPO for discussion and approval. If the MPO approves this selection, staff will meet with officials from Franklin and related agencies to discuss the study specifics, conduct field visits, collect data, and perform various analyses for both roadway segments.

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TABLE 1

Arterial Segments Considered for Study Priority Corridors for Long-Range Transportation Plan Needs Assessment Study (Arterial Segment Selected for Study is Highlighted in Green)

| Arterial Segment | Community | MAPC Subregion | Jurisdiction | MassDOT District | In National Highway System | Function Class | ADT | Distance | Crash Rate | Top-200 High- Crash Locations | Speed Index | Transit Service | Crowded or Late MBTA Bus Service | Study, Project, or TIP Project | Safety Conditions | Congestion | Multimodal Significance | Regional Significance | Implementation Potential | Overall Assessment | Summary of Comments |
|---|--------------|-------------------|------------------------|---------------------|-------------------------------------|-------------------|---------|----------|---------------|--|----------------|-------------------------------|---|---|----------------------|------------|----------------------------|--------------------------|-----------------------------|-----------------------|---|
| Route 9 | Natick | MetroWest | MassDOT D3 | 3 | Yes | 2 | 59,500 | 3.5 | 4.9 | 2 | 0.62 | MWRTA Route 1 | | MAPC Land Use/ Route 9 Corridor Study. Project #601586 will resurface from Walnut Street to just east of Oak Street and reconstruct the Route 9/ Oak Street intersection; this should address some of the congestion and safety issues at the intersection. MassDOT is currently at the 25% design stage with Project #605313, which will reconstruct the Route 9/ Route 27 interchange. This project is not currently included in the Boston Region MPO TIP. | х | х | x | x | | Medium | The segments to focus on are: From the Framingham town line to east of Speen Street. Route 9 in Natick should be evaluated for safety and mobility improvements, and opportunities to better manage access in the corridor. |
| Route 9 | Framingham | MetroWest | MassDOT D3 | 3 | Yes | 2 | 52,000 | 4.6 | 6.2 | 3 | 0.68 | MWRTA Routes 1, 2, 3, 9 | | MassDOT Project #604991 MAPC Land Use/ Route 9 Corridor Study | х | х | x | × | | Medium | The segments District 3 suggests focusing on are: 1) between the California Avenue intersection and the I-90 interchange, and 2) between the County Club Lane intersection and the Prospect Street/ Main Street intersection. The primary concerns are safety, mobility, and opportunities for better access management. |
| Route 9 between Parkerville Road and White Bagley Road/ Breakneck Hill Road | Southborough | MetroWest | MassDOT D3 | 3 | Yes | 2 | 49,000 | 0.8 | 1.8 | 0 | 0.72 | | | MAPC Land Use/Route 9 Corridor Study. The CTPS Safety and Operations at Intersections Study evaluated congestion and safety issues at the Route 9/ Oak Hill Road/ Central Street intersection in FFY 2012. Western section of Route 9 in Southborough between the I-495 interchange and Crystal Pond Road was evaluated for short-term and long-term improvements as part of MassDOT's I-495/ Route 9 study. | х | | | x | | Low | Study should focus on mobility, safety, and access management. |
| Route 109 from I-495 to Birch Street | Milford | SWAP | Town | 3 | No | 3 | 26,700 | 0.5 | 7.8 | 1 | 1.00 | | | MassDOT Project #601379 reconstructed the I-495 ramps at Route 109 in 2004. The ramp node intersections generally function well. | х | | х | х | | Medium | The high crash location has been recommended for FFY 2014 Safety and Operations Analyses at Intersections. |
| Route 140 | Franklin | SWAP | MassDOT D3 and Town | 3 | No | 3 | 20,700 | 4.7 | 3.7 | 0 | 0.47 | GATRA Franklin Area Bus | | Franklin is currently designing the segment of Route 140 in the Town Center - Emmons Street to Summer Street, which was programmed in the FFY 2013 TIP. | х | х | x | х | х | High | SWAP subregion and 495/ MetroWest Partnership support a Route 140 Study in Franklin. Two segments worthy of focus for mobility, safety, maintenance, and access- management improvements are: 1) between Franklin Village Shopping Center and Beaver Street, and 2) between King Street / Chestnut Street and the Wrentham town line. The Town of Franklin, SWAP Subregion, and MassDOT District 3 have indicated their interest in and support for this study. |
| Route 1 North | Saugus | ICC | MassDOT D4 | 4 | Yes | 2 | 105,000 | 4.0 | 1.6 | 0 | 0.74 | MBTA Route 429 | Yes | MassDOT Project #601513 will reconstruct the Route 1 and Walnut Street interchange (75% Design). MassDOT Project #605012 will reconstruct/ widen Route 1 to three full lanes in each direction from Route 99 south through Route 60 (preliminary design). | х | х | x | x | | Low | Rated low because of projects currently in design on Route 1. |
| Route 1 North | Lynnfield | NSPC | MassDOT D4 | 4 | Yes | 2 | 100,000 | 1.4 | 2.3 | 0 | 0.66 | | | MassDOT project #607477 will resurface Route 1 in Lynnfield and Peabody (FFY 2017 TIP). | Х | х | | Х | | Low | Rated low because of a TIP project. |

| Arterial Segment | Community | MAPC Subregion | Jurisdiction | MassDOT District | In National Highway System | Function Class | ADT | Distance | Crash Rate | Top-200 High- Crash Locations | Speed Index | Transit Service | Crowded or Late MBTA Bus Service | Study, Project, or TIP Project | Safety Conditions | Congestion | Multimodal Significance | Regional Significance | Implementation Potential | Overall Assessment | Summary of Comments |
|---|--------------------------|-------------------|------------------------|---------------------|-------------------------------------|-------------------|--------|----------|---------------|--|----------------|--|---|---|----------------------|------------|----------------------------|--------------------------|-----------------------------|-----------------------|---|
| Route 1A from Oak Island Road to Bell Circle | Revere | ICC | MassDOT D4 | 4 | Yes (part) | 3 | 28,100 | 1.5 | 2.6 | 0 | 0.36 | MBTA Routes 441 and 442 | Yes | CTPS Lower North Shore Transportation Improvement Study proposed improvements for Route 1A in Revere in October 2000; an update may be necessary. | | х | × | х | | Medium | |
| Route 3/3A | Burlington and Woburn | NSPC | MassDOT D4 | 4 | Yes (part) | 2,3 | 25,000 | 3.0 | 5.9 | 0 | 0.49 | MBTA Routes 350 and 354 | Yes | Route 3/3A (Cambridge Street) Corridor Study in Burlington, Woburn, and Winchester, CTPS Study. | х | x | x | x | | Medium | The NSPC and the City of Woburn have expressed interest in a Route 3/3A corridor study in Woburn and Burlington and have the full support of the communities. District 4 is also concerned with right-of-way issues in the corridor. |
| Route 16 (Revere Beach Parkway) between Route 107 and Winthrop Avenue | Revere | ICC | DCR | 4 | Yes | 2 | 35,000 | 0.7 | 4.0 | 0 | 0.50 | MBTA Routes 99, 106, 110 | Yes | CTPS Lower North Shore Transportation Improvement Study proposed improvements for Revere Beach Parkway. Study was completed in October 2000; an update may be necessary. | х | х | x | х | | Medium | The signals are not interconnected and there is traffic congestion. The District believes mobility, operations, and safety could be improved in the corridor. The DCR's interest in such a study is very important for implementation. |
| Route 28 from the Assembly Square Mall to Highland Ave in Somerville | Somerville | ICC | MassDOT D4 | 4 | Yes | 2 | 50,000 | 1.5 | 5.3 | 0 | 0.66 | MBTA Routes 80 and 88 | Yes | MassDOT Project #605680, Assembly Square Access Improvements completed in 2013; MassDOT Study, Grounding of McGrath: Determining the future of the Route 28 Corridor, ongoing study; CTPS Study, Toward a Route 28 Corridor Transportation Plan, December 2008. | Х | X | X | × | | Low | The segment was rated low priority because of recent studies and construction. |
| Route 37 | Braintree | SSC | MassDOT D4 | 4 | No | 3 | 35,200 | 4.7 | 2.0 | 2 | 0.69 | MBTA Route 230 | Yes | MassDOT Project #602028 resurfaced the roadway including new pavement, guardrail, painting, and signage in 2010. | Х | Х | Х | Х | | Medium | Town and MassDOT D4 interest critical for implementation. |
| Route 60 | Waltham | ICC | City | 4 | No | 3 | 13,000 | 1.0 | 7.0 | 0 | 1.07 | | | CTPS and MAPC Study, Belmont, Lexington, Waltham Subarea Study, October 2009. | x | | | х | | Low | Lack congestion and broad support for a study |
| Routes 4 and 225 | Bedford | MAGIC | MassDOT D4 and Town | 4 | No | 5 | 13,600 | 4.0 | 6.3 | 0 | 0.30 | MBTA Routes 62 and 76 | Yes | Great Road Project: Master Plan and Conceptual Design, prepared by VHB for the Town of Bedford in 2011 | х | х | х | x | х | High | The MAGIC subregion and the Towns of Bedford and Lexington requested that the FFY 2012 UPWP and FFY 2013 UPWP include a study of Routes 4 and 225. This segment was not selected because in FFY 2013 MPO staff studied Route 2 in Concord and Lincoln, which is in the MAGIC subregion. |
| Routes 4 and 225 | Lexington | MAGIC | Town | 4 | No | 3,5 | 20,400 | 4.2 | 3.8 | 1 | 0.57 | MBTA Routes 62 and 76 | Yes | MassDOT section from I-95 to Hartwell Ave was the subject of a Town study (Hartwell Avenue Traffic Mitigation Plan-Bedford Street Concept Plan) and an Road Safety Audit (RSA) in November 2011; CTPS FFY 2008 Safety and Operations at Intersections Study, Massachusetts Avenue at Maple Street | х | х | х | х | | Medium | MAGIC subregion and the Towns of Lexington and Bedford requested that this corridor be included in the FFY 2012 UPWP for a study. |
| Route 99 | Everett | ICC | City | 4 | Yes | 3 | 44,900 | 2.4 | 2.7 | 0 | 0.36 | MBTA Routes 104, 105, and 109 | Yes | MassDOT Project #602383 reconstructed Route 99 with traffic signal update from Second Street to the Malden city line in 2008; MassDOT Project #601580 reconstructed Route 99 from Sweeter Circle to Second Street in 2004; MassDOT Project #602382 reconstructed Route 99 from Sweeter Circle to the Alford Street Bridge in 2013 | | х | X | X | | Low | Rated low because the three MassDOT projects listed completely reconstructed Route 99 with signal improvements from Alford Street Bridge to the Malden city line |
| Route 107 (Broadway) south of Albert J. Brown Circle | Revere | ICC | MassDOT D4 and City | 4 | No | 3 | 21,200 | 1.4 | 3.6 | 0 | 0.63 | MBTA Routes 116, 117, and 119 | Yes | | × | Х | X | × | | Medium | No advance study or design; lack broad support for a study |

| Arterial Segment | Community | MAPC Subregion | Jurisdiction | MassDOT District | In National Highway System | Function Class | ADT | Distance | Crash Rate | Top-200 High- Crash Locations | Speed Index | Transit Service | Crowded or Late MBTA Bus Service | Study, Project, or TIP Project | Safety Conditions | Congestion | Multimodal Significance | Regional Significance | Implementation Potential | Overall Assessment | Summary of Comments |
|---|------------|-------------------|------------------------|---------------------|-------------------------------------|-------------------|--------|----------|---------------|--|----------------|--|---|--|----------------------|------------|----------------------------|--------------------------|-----------------------------|-----------------------|---|
| Route 114 | Peabody | NSTF | MassDOT D4 | 4 | Yes | 2 | 37,400 | 2.7 | 3.9 | 0 | 0.53 | MBTA Route 435 | Yes | MassDOT Project #605383 | х | Х | Х | X | × | High | Route 114 in Peabody was listed as a potential corridor in need of signal progression. There has been concern about pedestrians and bicycles. This segment was not selected because in FFY 2012 MPO staff studied Route 114 in Danvers, which is in the NSTF subregion. |
| Route 114 | Salem | NSTF | City | 4 | Yes (part) | 2 | 22,400 | 3.0 | 10.4 | 0 | 0.30 | MBTA Routes 426 and 459 | Yes | Transportation Improvement Study for Route 1A, 114, and 107 and Other Roadways in Downtown Salem, 2005 CTPS Study | х | х | Х | Х | | Medium | Rated medium because Route 114 was studied by CTPS in 2005. |
| Route 129 | Swampscott | NSTF | Town | 4 | No | 3 | 19,200 | 2.5 | 2.6 | 0 | 0.55 | MBTA Routes 442 and 449 | Yes | Community Transportation Technical Assistance Program, CTPS and MAPC Study | | х | Х | Х | | Medium | The North Shore Task Force cited this roadway as one of the subregion's priority roadways for study in the FFY 2013 UPWP. |
| Route 129 | Marblehead | NSTF | Town | 4 | No | 3 | 12,400 | 1.5 | 5.5 | 0 | 0.76 | | | None | х | | | Х | | Low | The North Shore Task Force cited this roadway as one of the subregion's priority roadways for study in the FFY 2013 UPWP. |
| Route 16 | Medford | ICC | DCR | 4 | Yes | 2 | 30,800 | 1.0 | 5.1 | 0 | 0.57 | | | None | Х | х | | Х | | Medium | The District believes that mobility and safety in this corridor can be improved. DCR interest is critical for implementation. |
| Route 1 | Norwood | TRIC | MassDOT D5 | 5 | Yes | 2 | 35,600 | 4.0 | 2.6 | 2 | 0.47 | | | MassDOT's I-95 South Corridor Study provides comprehensive evaluation of the I-95 and Route 1 corridors south of Route 128 that included a recommended plan of short-term and long-term improvements based on the alternatives analysis and the collective input of many stakeholders. | х | х | i. | х | х | Low | Rated low because of MassDOT I-95 South Corridor Study. |
| Route 27 between Depot Street and Canton Street | Sharon | TRIC | Town | 5 | Yes | 3 | 13,600 | 1.0 | 1.9 | 0 | 0.52 | MBTA Commut- er rail station and Park & Ride lot | | None | | Х | Х | X | | Medium | TRIC cited this roadway in the UPWP FFY 2012 and 2013 |
| Route 37 | Holbrook | SSC | MassDOT D5 and Town | 5 | No | 3 | 12,400 | 3.5 | 4.6 | 1 | 0.69 | MBTA Route 230 | Yes | FFY 2013 Safety and Operations at Intersections | х | х | Х | х | х | High | The Town of Holbrook has been in contact with the MassDOT District 5 and is interested in improvements, particularly multimodal transportation improvements. Does not have broad support. |
| Route 138 | Stoughton | TRIC | MassDOT D5 and Town | 5 | No | 3,5 | 18,600 | 4.0 | 6.3 | 1 | 0.69 | BAT Route 14 | NA | MassDOT Project #607403 intended to address safety, congestion and a lack of multi- modal accommodation at the intersection of Route 138 and Central Street (preliminary design). 2012 Major Bottleneck Analysis Study: Route 138An OCPC Study, proposed short- and long- term multimodal solutions to address problems in the corridor. CTPS study also proposed short- and long-term improvements for addressing problems on Route 138 in Stoughton, 2001. | х | x | x | х | | Low | Rated low because of recent projects and studies. |
| Route 140 | Wrentham | SWAP | MassDOT D5 and Town | 5 | No | 3 | 20,670 | 4.8 | 1.3 | 0 | 0.71 | | | MassDOT Project #605700 will resurface, construct sidewalks, and drainage improvements on Route 140 in Wrentham (under construction 2012-13 to 2014). | | х | 1 | х | х | Low | The 495/ MetroWest Partnership and SWAP subregion expressed support for a Route 140 study in Wrentham during the FFY 13 UPWP subregion outreach. This segment was rated low priority because of ongoing reconstruction. |
| VFW Parkway | Boston | ICC | DCR | 6 | Yes | 2 | 40,400 | 4.0 | 1.4 | 0 | 0.50 | MBTA Route 429 | Yes | | Х | Х | Х | Х | | Medium | DCR interest is critical for implementation. |

| Arterial Segment | Community | MAPC Subregion | Jurisdiction | MassDOT District | In National Highway System | Function Class | ADT | Distance | Crash Rate | Top-200 High- Crash Locations | Speed Index | Transit Service | Crowded or Late MBTA Bus Service | Study, Project, or TIP Project | Safety Conditions | Congestion | Multimodal Significance | Regional Significance | Implementation Potential | Overall Assessment | Summary of Comments |
|---------------------|-----------|-------------------|--------------|---------------------|-------------------------------------|-------------------|--------|----------|---------------|--|----------------|---|---|--|----------------------|------------|----------------------------|--------------------------|-----------------------------|-----------------------|---|
| Route 1 | Dedham | TRIC | MassDOT D6 | 6 | Yes | 2 | 52,000 | 2.5 | 3.5 | 0 | 0.51 | MBTA Route 52 | Yes | MassDOT's I-95 South Corridor Study provides comprehensive evaluation of the I-95 and Route 1 corridors south of Route 128 that included a recommended plan of short-term and long-term improvements based on the alternatives analysis and the collective input of many stakeholders. | х | х | x | x | | Low | Rated low because of MassDOT I-95 South Corridor Study. |
| Route 3A | Quincy | ICC | City | 6 | Yes | 3 | 20,000 | 4.5 | 9.6 | 1 | 0.47 | MBTA Routes 210, 212 | Yes | FFY 2012 CTPS safety and operations study addressed problems at Route 3A and Coddington Street intersection. | х | Х | х | х | | Medium | The City of Quincy interest is critical for implementation |
| Route 3A | Weymouth | SSC | MassDOT D6 | 6 | Yes | 3 | 34,000 | 2.0 | 3.8 | 1 | 0.62 | MBTA 220, 221, 222 | Yes | | Х | х | Х | Х | | Medium | MassDOT District 6 and Town of Weymouth interest are critical for implementation |
| Route 9 | Brookline | ICC | MassDOT D6 | 6 | Yes | 2 | 33,400 | 2.8 | 2.3 | 0 | 0.50 | MBTA Route 39, 60, 65 | Yes | MassDOT Project #605110 will revitalize the corridor, improve the livability for residents and businesses, improve regional connections for bicycles and pedestrians and improve the overall streetscape; programmed in FFY 2015 TIP. MassDOT Project #604211 addressed pedestrian and traffic concerns in this segment, project was completed in 2009. | х | х | x | x | | Low | Rated low because of recent construction and TIP projects |
| Route 9 | Newton | ICC | MassDOT D6 | 6 | Yes | 2 | 48,000 | 3.0 | 2.4 | 0 | 0.33 | | | MassDOT Project #604327 resurfaced this segment including updates to the guardrail and improvements to the existing drainage structures; construction was completed in 2012. | х | Х | | Х | | Low | Rated low of recent MassDOT construction project |
| Route 9 | Wellesley | MetroWest | MassDOT D6 | 6 | Yes | 2 | 47,000 | 5.0 | 4.3 | 1 | 0.42 | | | CTPS Study, Route 9 Corridor in Wellesley, 2003; MAPC Land Use/Corridor Study | х | х | х | х | | Medium | Rated medium because of MAPC and CTPS studies; MassDOT District 6 and Town of Wellesley interest are critical for implementation. |
| Route 16 | Wellesley | MetroWest | Town | 6 | No | 3 | 18,700 | 3.5 | 6.9 | 1 | 0.42 | | NA | MassDOT Project #600712 reconstructed Route 16 from Grantland Road to the Newton town line in 2004, including paving, drainage improvements, sidewalk reconstruction, traffic signals, and ornamental lighting. | х | х | | х | | Medium | Town of Wellesley interest critical for implementation. |
| Route 16 | Newton | ICC | City | 6 | No | 3 | 27,000 | 4.0 | 4.3 | 1 | 0.60 | MWRTA Route 1 MBTA Route 59, 556 MBTA Green Line | NA | MassDOT Project #600894 reconstructed section of Route 16 including signals in 2004 | х | х | x | x | | Medium | City of Newton interest is critical for implementation. |
| Route 28 | Randolph | TRIC | MassDOT D6 | 6 | No | 3 | 26,700 | 4.2 | 6.1 | 2 | 0.66 | MBTA Route 240 Brockton Area Transit (BAT) | NA | MassDOT Project #603716, resurfaced and related work on a section of Route 28 (completed in 2008); MassDOT Project #601735 resurfaced Route 28 from Union Square to the Avon town line (completed in 2004; FFY 2008 Safety and Operations Analyses at Intersections Study; Arterial Coordination Study, CTPS Study, 2010. | x | х | × | × | | Low | Rated low because of recent studies and design and construction projects. |
| Route 37 | Braintree | ssc | MassDOT D6 | 6 | No | 3 | 32,400 | 4.7 | 3.4 | 2 | 0.55 | MBTA Routes 230, 238 | Yes | MassDOT Project #602027 addressed problems in the segment from Peach St. to Holbrook town line (construction completed in 2011). | х | х | Х | Х | | Medium | MassDOT District 6 and Town of Braintree interest are critical for implementation. |
| Route 138 | Canton | TRIC | MassDOT D6 | 6 | No | 3 | 30,000 | 5.2 | 2.6 | 0 | 0.43 | | NA | MassDOT Project #603883 (preliminary design); MassDOT Project #605807 (completed 2011); MassDOT Project #602475 (completed 2001); MassDOT Project #602475; Route 138 Corridor Study, CTPS Study. | | Х | | х | | Low | |

| Arterial Segment | Community | MAPC Subregion | Jurisdiction | MassDOT District | In National Highway System | Function Class | ADT | Distance | Crash Rate | Top-200 High- Crash Locations | Speed Index | Transit Service | Crowded or Late MBTA Bus Service | Study, Project, or TIP Project | Safety Conditions | Congestion | Multimodal Significance | Regional Significance | Implementation Potential | Overall Assessment | Summary of Comments |
|---|-----------|-------------------|--------------|---------------------|-------------------------------------|-------------------|--------|----------|---------------|--|----------------|-----------------------------------|---|---|----------------------|------------|----------------------------|--------------------------|-----------------------------|-----------------------|--|
| Route 145 | Boston | ICC | City | 6 | No | 5 | 19,900 | 2.5 | 1.2 | 0 | NA | MBTA Route 120 Blue Line | Yes | | | X | х | х | | Medium | |
| Route 145 | Winthrop | ICC | Town | 6 | No | 5 | 19,900 | 3.3 | 1.5 | 0 | NA | | NA | MassDOT Project # 607244 will reconstruct Revere Street and Winthrop Street corridor. Project includes a complete street of pavement reconstruction and reclamation; sidewalk reconstruction, intersection improvements, and bicycle and pedestrian improvements at key locations along the corridor. | | х | | х | | Low | |
| Alewife Brook Parkway/ Fresh Pond Parkway from Soldiers Field Road to Route 2 | Cambridge | ICC | DCR | 6 | Yes | 2 | 55,800 | 2.2 | 3.5 | 0 | 0.47 | MBTA Routes 72, 75 | Yes | Alewife Studies, Phase II, CTPS Study | х | х | х | х | | Medium | DCR interest is critical for implementation. |
| Storrow Drive | Boston | ICC | DCR | 6 | Yes | 2 | 82,000 | 2.0 | 2.5 | 0 | 0.50 | MBTA Route 1, CT1,CT2 | Yes | | Х | Х | X | × | | Medium | DCR interest is critical for implementation. |
| Memorial Drive | Cambridge | ICC | DCR | 6 | Yes | 2 | 49,500 | 2.3 | 2.7 | 1 | | MBTA Routes 47, 64, | Yes | | х | | х | Х | | Medium | DCR interest is critical for implementation. |

- Projects and Studies: Segment does not have recent studies or projects in design, construction, or programmed in the TIP.
 Safety Conditions: Segment has a high crash rate for its functional class or contains top-200-high-crash location.
 Congested Conditions: Speed index less than 0.7, i.e., experiences delays during peak periods.

- Multimodal Significance: Support transit or bicycle or pedestrian activities or has implementation project to support one or more of these activities.

• Regional Significance: Carries high proportion of regional traffic or is on the National Highway System.
• Implementation Potential: Has a strong commitment from city/town, MassDOT, or MAPC subregion. Locations under DCR jurisdiction are considered to have lower implementation potential.)

**Functional Classification: 2 = principal arterial; 3 prin