



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair
Karl H. Quackenbush, Executive Director, MPO Staff

TECHNICAL MEMORANDUM

DATE: March 30, 2017
TO: Boston Region Metropolitan Planning Organization (MPO)
FROM: Chen-Yuan Wang
RE: FFY 2017 Addressing Safety, Mobility, and Access on Subregional Priority Roadways: Selection of Study Locations

1 BACKGROUND

During the MPO's outreach for development of the Unified Planning Work Program (UPWP) and Long-Range Transportation Plan (LRTP), Metropolitan Area Planning Council (MAPC) subregional groups and other entities submit comments and identify transportation problems and issues that concern them. Often, these issues are related to bottlenecks, safety, or lack of safe or convenient access for abutters along roadway corridors. They can affect not only mobility and safety along a roadway and its side streets, but also a community's quality of life, including economic development, and air quality.

To address these concerns, this study was included in the UPWP for federal fiscal year 2017¹ and a work program was approved on December 1, 2016. The purpose of this study is to identify roadway segments in the MPO region that are of concern to subregional groups but that have not been identified in the LRTP regional needs assessment.²

The study emphasizes issues identified by the relevant subregional groups, along with recommendations to address the identified issues. In addition to topics about mobility, safety, and access, it includes bicycle and pedestrian transportation, transit feasibility, and other subjects raised by subregional groups.

This memorandum discusses the procedure used to select roadways for the study, including selection criteria; the roadway corridor that was chosen for study; and a summary.

¹ Unified Planning Work Program, Federal Fiscal Year 2017, endorsed by the Boston Region Metropolitan Planning Organization on July 28, 2016.

² Work Program for Addressing Priority Corridors from the Long-Range Transportation Plan Needs Assessment: Federal Fiscal Year 2017, approved by the Boston Region MPO on December 15, 2016.

2 SELECTION PROCEDURE

Selection of the study location comprised three steps: 1) identifying potential roadways, 2) developing selection criteria, and 3) rating potential roadways.

2.1 Identifying Potential Roadways

MPO staff identified potential study roadways through various sources, including:

- Soliciting suggestions for study locations during recent outreach for developing the MPO's federal fiscal year (FFY) 2017 UPWP
- Reviewing meeting records from the UPWP outreach process for the past six years (2011–present) to identify roadways that had been proposed for study by subregions
- Reviewing the roadways that are being monitored as part of the MPO's Congestion Management Process (CMP) program, and identifying those with delay or safety concerns
- Contacting subregions, the Massachusetts Department of Transportation (MassDOT) Highway Division district offices, and municipalities for further information about some of the potential study roadways

MPO staff then assembled detailed data for these roadways, including:

- MassDOT 2014 Road Inventory File—used to assemble roadway jurisdiction, average daily traffic (ADT), sidewalk width, shoulders, and other geometric information
- MassDOT 2010–2014 crash database—used to assemble high-crash locations, pedestrian and bicycle crashes, and crash rates
- MPO bike network gap data and MassDOT bike facilities—used to identify bicycle needs, connectivity, and accommodation
- MBTA bus route, subway line and commuter data—used to identify segments serving MBTA stations
- Data from MassDOT's project-information database, the MPO's 2017–2021 Transportation Improvement Program (TIP) projects, MPO planning and other studies, and municipal websites—used to identify projects, studies, and TIP projects planned or programmed for each roadway

Locations with projects that currently are under construction, in design, under study, or programmed in the TIP were excluded from further consideration. After the exclusion, MPO staff identified 25 potential roadway segments in the region. Table 1 presents data assembled for each roadway segment and indicates municipality, MAPC subregion, MassDOT district office, jurisdiction, length, functional class, average daily traffic, overall crash rates, bicycle/pedestrian

crashes per mile, Highway Safety Improvement Program (HSIP)-eligible crash clusters,³ and any relevant studies or projects. It also cites results of applying the selection criteria, and priority rating. Roadway segments are sorted by score, MassDOT District, and roadway name.

2.2 Selection Criteria

MPO staff examined roadway locations more closely by applying five criteria: safety conditions, multimodal significance, subregional priority, implementation potential, and regional equity per the scoring system below.

- *Safety Conditions, 0-2 points (each bullet counts as 1 point)*
 - Location has higher-than-average crash rate for its functional class or contains two or more HSIP-eligible intersections
 - Location has significant number of pedestrian and bicycle crashes (two or more per mile) or contains two or more HSIP-eligible bike/pedestrian clusters

- *Multimodal Significance, 0-2 points (each bullet counts as 1 point)*
 - Location currently supports transit, bicycle, pedestrian, or heavy vehicle activities or needs to support these activities
 - Location has significant potential to improve transit, bicycle, pedestrian, or heavy vehicle activities

- *Subregional Priority, 0-2 points (each bullet counts as 1 point)*
 - Location is essential for subregion's economic, cultural, or recreational development
 - Location carries significant portion of subregional vehicle, bicycle, or pedestrian traffic

- *Implementation Potential, 0-3 points (each bullet counts as 1 point)*
 - Location is proposed or endorsed by its subregion and is a priority for that subregion
 - Location is proposed or endorsed by its roadway administrative agency (agencies)
 - Location has strong support from all of its stakeholders

³ HSIP-eligible crash clusters are defined by MassDOT as crash clusters that rank within the top five percent of crash clusters for each Regional Planning Agency, based on the Equivalent Property Damage Only (EDPO) index. In the EDPO index, property-damage-only crashes are awarded one point each, crashes involving injuries are given five points each, and fatal crashes are given ten points each. In the Boston Region MPO, 939 intersections are identified from MassDOT 2012–14 Crash Data as the top five percent crash clusters with a minimum EDPO value of 41.

- *Regional Equity, 0-1 points (each bullet counts as 1 point)*
 - Location is situated in a subregion that has not been selected for this study in the past two years

2.3 Rating Potential Roadways

Roadway segments with a score of five points or less were rated as low priority. Roadway segments with a score of six-to-seven points were rated medium priority. Roadway segments with a score of eight-or-more points were rated high priority. Among the 25 potential locations, MPO staff identified three as high priority:

1. Route 1A from Plainville town line to Route 140 in Wrentham
2. Route 109 from Walpole town line to Interstate 95 in Westwood
3. Route 129 from Washington Street to Swampscott town line in Lynn

Staff also evaluated the pedestrian accommodation and safety improvement needs for the three locations by applying the Pedestrian Report Card Assessment that the MPO recently developed.⁴ All three locations highly qualify for pedestrian accommodation or safety improvement requirements. Appendix A contains detailed results of the assessments.

3 SELECTED SUBREGIONAL ROADWAY: ROUTE 1A IN WRENTHAM

MPO staff recommend Route 1A from Plainville town line to Route 140 in Wrentham for this study cycle, based on the following considerations:

- The roadway has greater safety and congestion concerns than the other two highly rated locations.
- It includes one of the Commonwealth's top 200 crash locations, Route 1A (South Street) at Premium Outlet Boulevard, and several HSIP-eligible crash clusters.
- It needs to be examined for pedestrian and bicycle accommodation and safety and operational improvements.
- The study site has strong support from all stakeholders, including officers from Wrentham (see Appendix B) and MassDOT District 5.
- It has potential for design and implementation toward a "Complete Streets" corridor.

⁴ Pedestrian Level-of-Service Memorandum, Ryan Hicks and Casey-Marie Claude, Boston Region Metropolitan Organization, January 19, 2017.

Figure 1 shows the locations of this selected and the previously studied corridors in the region. The selected roadway is about 3.1 miles long. It is classified as an urban minor arterial and is mainly a two-lane roadway except a four-lane section in the vicinity of Wrentham Village Premium Outlets and Interstate 495 Interchange. The roadway has no dedicated bicycle accommodation. Sidewalks exist on both sides only in the town center area and on one side only in the section west of Route 121. All of its sections are under MassDOT District 5's jurisdiction. Several sections along the roadway are under consideration for development or redevelopment. This study would be timely for examining the corridor's safety and operational issues, exploring multimodal opportunities, and connecting the corridor's various projects in a consistent and cohesive approach.

4 SUMMARY

Route 1A is one of the most significant commuter corridors in the South West Advisory Planning Committee (SWAP) subregion. The selected Route 1A section meets the objectives of this study, especially in supporting the transportation improvement priorities of the SWAP subregion.

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 Wrentham, MassDOT, and MAPC to discuss the study specifics, conduct field visits, collect data, and perform various analyses.

CW/cw

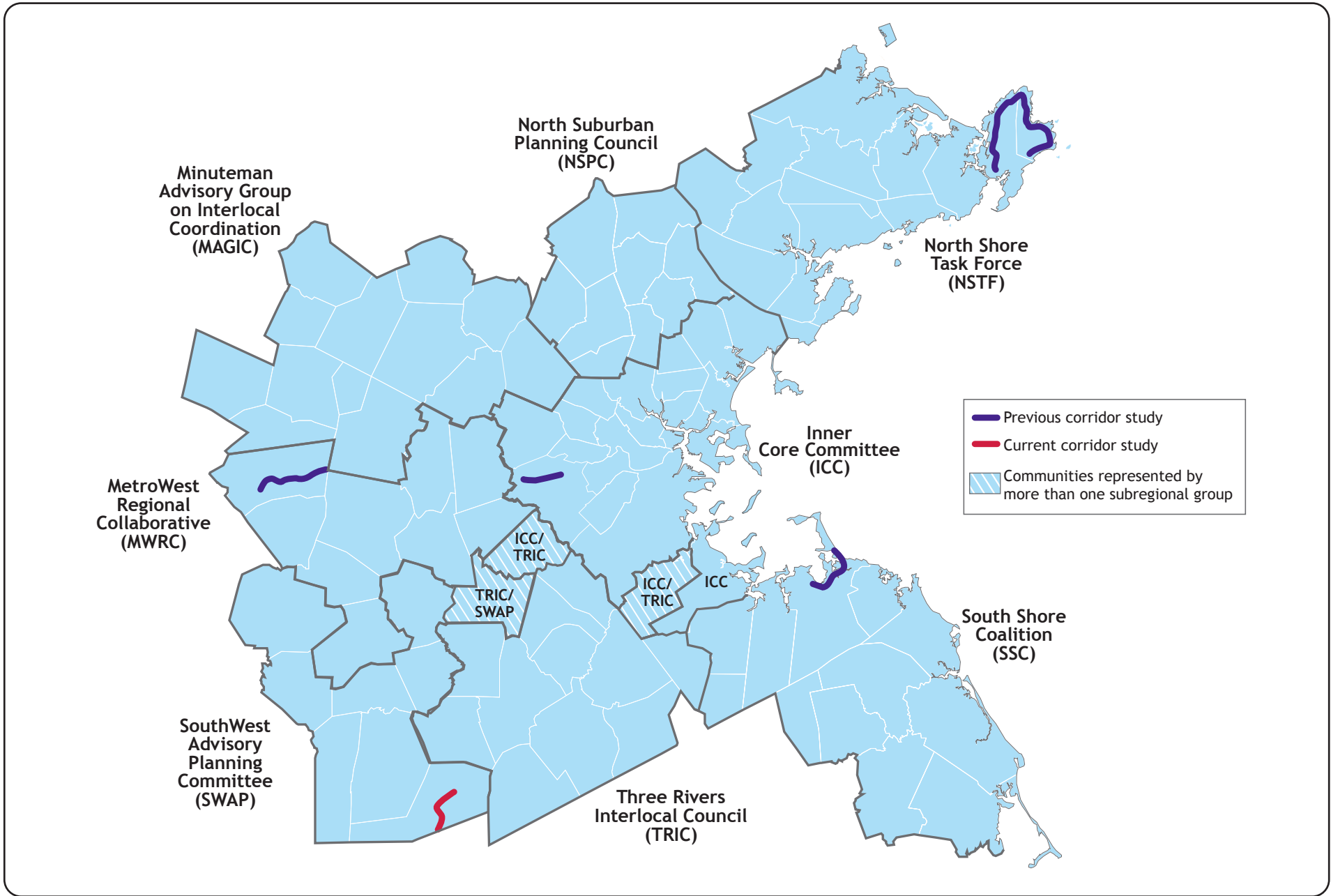


FIGURE 1
Study Locations

TABLE 1
Roadway Segments Considered for Study (Selected Segment is Highlighted in Blue)
Subregional Priority Roadways Study

Roadway	Location	Community	MAPC Subregion	MassDOT District	Jurisdiction	Length (Miles)	Functional Classification	Average Daily Traffic	Overall Crash Rate (MVMT)	Bike/Ped Crashes Per Mile	Top 200 High-Crash Locations 2012-2014	HSIP-Eligible Crash Clusters 2012-2014	Study, Project, or TIP Project	Safety Conditions	Multimodal Significance	Subregional Priority	Implementation Potential	Regional Equity	Score	Overall Assessment	Summary of Comments
Route 1A	Plainville town line to Route 140	Wrentham	SWAP	5	MassDOT	3.1	5	11,000	8.6	0.6	1	5	Pre-TIP/MassDOT Project 603739: Construction of Route I-495/ Route 1A Ramps. The project is in a preliminary functional design stage with the 25% design under revision. MassDOT Project 605218: Resurfacing and Related Work on Route 1A. The purpose of this project was to improve the riding surface and maintain structural integrity of the pavement in various sections of Route 1A from Route 1 in North Attleborough to the Norwood/Westwood town line. MassDOT Project 600710: Safety Improvements, Route 1A (South Street) at Route 121 (West Street) (Wampum Corner); complete 2006.	1	2	2	3	1	9	High	Both MassDOT and the Town of Wrentham strongly support this corridor study. The corridor exhibits congestion in the vicinity of the Wrentham Premium Outlets and there is potential for additional significant development in the immediate area. The corridor also includes high crash locations and lacks bicycle/pedestrian accommodations. It would be worthwhile to study the corridor and provide recommendations to the town and MassDOT prior to additional development. Recent MassDOT Project 605218 includes the corridor in scope, but does not address pedestrian and bicycle accommodation, safety, and operational improvements.
Route 109	Walpole town line to Interstate 95	Westwood	ICC	6	Westwood	4.1	3	16,500	4.4	1.7	0	2	MassDOT Project 601315: Reconstruction of Route 109 (High Street) from Grove Street to Hartford Street. The project proposes to reconstruct High Street utilizing full depth reconstruction, including sidewalks, walls, drainage, curbing, signs, pavement markings, and new traffic signals are installed at Hartford Street, Gay Street, Windsor Road/Public Library Entrance and Summer Street. Construction ended in Spring 2008.	1	2	2	2	1	8	High	In FFY 2016 UPWP outreach, Medfield cited Route 109 as a major commute route to Interstate 95 that puts strain on the adjacent communities. Based on the comment, staff also examined this Westwood section.
Route 129	Washington Street to Swampscott town line	Lynn	ICC	4	Lynn	1.2	3	24,200	7.7	26.7	0	3	No projects	2	2	2	1	1	8	High	The North Shore Task Force cited this roadway as one of the subregion's priority roadways for study in the FFY 2013 and FFY 2014 UPWP. High traffic volumes between Marblehead and Lynn are creating bottlenecks in this corridor.
Concord Avenue	Blanchard Road to Garden Street	Cambridge	ICC	6	Cambridge and DCR (between two rotaries)	1.9	3 and 2 (between two rotaries)	28,000	3.7	14.2	0	1	TIP Conceptual Project #987 Minuteman Path Right-of-Way to acquire Watertown branch right-of-way to connect Minuteman Path from Arlington, Cambridge, and Watertown to Dr. Paul Dudley White Bike Path in Boston DCR announced a comprehensive study of the parkway system for bike lanes on December 18, 2014 (a small portion of this segment has DCR jurisdiction).	2	2	1	1	1	7	Medium	Comments in survey response on vision, goals, objectives in FFY 2015 LRTP outreach. For example, "eliminate designation of Concord Avenue as 'unrestricted arterial' street. It's a narrow street with no wiggle room for bicycles when trucks pass." The small DCR portion of this segment is included in the comprehensive DCR study announced December 2014.
Washington Street	Dedham Street to Cobbs Corner	Canton	TRIC	6	Canton	2.5	3	16,000	3.5	4.8	0	0	No projects	1	2	2	1	1	7	Medium	Canton requested a study of the downtown section for signal coordination and pedestrian and bicycle safety and mobility improvements (2015 UPWP outreach).
Route 27	Downtown Stoughton (School Street to Kinsley Street)	Stoughton	TRIC	5	Stoughton	0.6	3	17,550	14.0	25.0	1	0	Stoughton Downtown Station Area Plan: With a technical assistance grant from MassDOT, the Town began a planning effort centered on the Stoughton Train Station and the surrounding areas looking at redevelopment potential within the Downtown. A "Kick-off" announcement was made at the April 27th (2016) Board of Selectmen Meeting publicizing the commencement of work. Studies done by Greenman-Pederson, Inc. include immediate, short-term, mid-term, and long-term fixes to traffic near Downtown (Feb. 27, 2015, The Enterprise Stoughton News).	2	2	1	1	1	7	Medium	This location is suitable for a subarea (downtown) transportation study, instead of a corridor study. TRIC cited this roadway in the UPWP FFY 2013 and 2016 outreach. The concerns mainly are related to MBTA train operations and parking needs. The on-going study, Stoughton Downtown Station Area Plan, covers a major portion of the roadway.
Route 27	Upland Road (near Pine Grove Avenue) to Massapoag Brook (between Canton Street and Gabriel Road)	Sharon	TRIC	5	Sharon	1.7	3	13,900	2.4	2.9	0	0	No projects	1	1	2	2	1	7	Medium	TRIC cited this roadway in the UPWP FFY 2012 outreach.
Route 117	Weston town line to Route 20	Waltham	ICC	4	Waltham, MassDOT (0.05 mile section at Interstate 95)	1.3	5	17,500	3.3	4.6	0	0	No projects	1	2	2	1	1	7	Medium	In FFY 2012 UPWP outreach, Waltham proposed this roadway for the Priority Corridor study. Major proposals include widening the bridge over Route 128, connecting Route 2 by extending Green Street, and other critical intersection improvements. In FFY 2016 UPWP outreach, MetroWest proposed this corridor as part of a subarea study that includes Route 20 and Route 30 between Waltham and Weston.

Roadway	Location	Community	MAPC Subregion	MassDOT District	Jurisdiction	Length (Miles)	Functional Classification	Average Daily Traffic	Overall Crash Rate (MVT)	Bike/Ped Crashes Per Mile	Top 200 High-Crash Locations 2012-2014	HSP-Eligible Crash Clusters 2012-2014	Study, Project, or TIP Project	Safety Conditions	Multimodal Significance	Subregional Priority	Implementation Potential	Regional Equity	Score	Overall Assessment	Summary of Comments
Route 38	Woburn town line to Tewksbury town line	Wilmington	NSPC	4	MassDOT	4.0	3	17,500	5.2	5.3	0	5	Pre-TIP/MassDOT Project 608051: Reconstruction on Route 38 (Main Street), from Route 62 to the Woburn city line. The roadway will consist of two 11-foot lanes, two five-foot bike lanes and a six-foot sidewalk. Turn lanes and upgraded traffic signals will be installed at Route 62; preliminary design phase. Pre-TIP/MassDOT Project 607327: Bridge Replacement, Route 38 (Main Street) over the Boston and Marine Corporation Railroad; preliminary design phase.	2	2	1	1	1	7	Medium	Pre-TIP #608051 has a scope covering half of the segment's length. The project is under design. NSPC cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Both Routes 38 and 62 serve as conduits through Wilmington to I-95 and I-93, and contain congested signalized intersections and traffic and pedestrian safety issues.
Route 35	Route 97 in Topsfield to Route 114 (Margin St.) in Peabody	Topsfield (less than 0.05 mi), Danvers, Peabody	NSTF	4	Topsfield (less than 0.05 mi), Danvers, Peabody, MassDOT	6.0	5	17,250	2.4	1.8	0	1	Advertised TIP #606609 Bridge Replacement, Route 35 (Water Street) over Waters River MassDOT Project #87612 Reconstruction of two Interchanges on Route 128, with Route 62 and with Route 35; complete Autumn 2012	1	2	2	1	1	7	Medium	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Verbal comments were made a MAPC subregion meeting and a letter for the FFY 2014 UPWP was submitted.
Route 129	Swampscott town line to Ocean Ave.	Marblehead	NSTF	4	Marblehead	1.5	3	12,100	2.2	2.7	0	0	No projects Conceptual TIP Arterial and Intersection Project 972 Atlantic Avenue (Route 129) ends at the location boundary, near Seaview Avenue in Marblehead	1	2	2	1	1	7	Medium	The North Shore Task Force (NSTF) cited this roadway as one of the subregion's priority roadways for study in the FFY 2013 and FFY 2014 UPWP. High traffic volumes between Marblehead and Lynn are creating bottlenecks in this corridor.
Route 127	Route 133 in Gloucester to Route 127A in Rockport	Gloucester, Rockport	NSTF	4	MassDOT, Gloucester, Rockport	4.7	3, 5	16,950	1.7	1.7	0	1	No projects	1	2	2	1	1	7	Medium	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Study should include how to improve bike facilities and bike-to-rail connections in this heavily traveled tourist area and build on the Essex Coastal Scenic Byway to the region.
Route 38	I-95 Interchange to Wilmington town line	Woburn	NSPC	4	MassDOT, Woburn	1.4	3	19,250	6.9	3.6	0	2	Conceptual (2013) TIP Arterial and Intersection Project #1449 Route 38 (Main Street) Traffic Lights, consisting of replacing outmoded traffic signal controls for the twelve signalized intersections along Route 38 in Woburn	2	1	2	1	1	7	Medium	NSPC and Woburn requested a study of the I-95 rotary interchange and the traffic signals at Route 38 and Elm Street. The area north of I-95 recently reconstructed by developer. MassDOT District 4 notes high crash locations at Elm Street and at the I-95 Rotary. While a study may have value, they suggested that a Road Safety Audit (RSA) may be a more appropriate way to address these locations.
Route 114	Salem town line to Route 129 (Ocean Ave)	Marblehead	NSTF	4	Marblehead	1.4	3	16,750	2.7	6.4	0	0	No projects	1	1	2	2	1	7	Medium	NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Study should include how to improve bike facilities and bike-to-rail connections in this heavily traveled tourist area and build on the Essex Coastal Scenic Byway to the region.
Route 129	Lynn town line to Marblehead town line	Swampscott	NSTF	4	Swampscott, DCR (less than 0.1 mi)	2.5	3	19,000	1.9	5.2	0	0	Community Transportation Technical Assistance Program, CTPS and MAPC Study Conceptual TIP project 972: Atlantic Avenue (Route 129), roadway rehabilitation from Puritan and Humphrey to the Marblehead town line	1	2	2	1	1	7	Medium	Part of the segment falls under a conceptual TIP project. NSTF cited this roadway in 2012 as one of the subregion's priority roadways for study in the FFY 2013 and 2014 UPWP. Segment in downtown Swampscott is a bottleneck for those traveling from Marblehead to Lynn. MassDOT District 4 notes that the intersection of Route 129 and Burrill Street is a high crash location and an RSA could address safety and congestion issues.
Route 109	Millis town line to Dover town line	Medfield	TRIC	3	Medfield	3.2	3	16,000	3.0	1.9	0	0	MassDOT Project 601654: Roadway reconstruction including signals on a section of Route 109 (Main Street). The project is in the preliminary design phase.	0	2	2	2	1	7	Medium	In FFY 2016 UPWP outreach, Medfield cited Route 109 as a major commute route to Interstate 95 that puts strain on the adjacent communities.
Edgell Road	Route 9 to Water Street in Framingham	Framingham	MetroWest	3	Framingham	2.2	5	18,500	3.5	1.8	0	0	Pre-TIP 602038 Edgell Road Corridor Project: Reconstruct pavement and improve signalization at Water St, Brook St, Central St, and Vernon St (close to Route 9) No projects in MassDOT project database.	1	2	2	2	0	7	Medium	The roadway was first mentioned in FFY 2008 UPWP outreach and cited in the MetroWest Working Group Meeting in 2016.
Route 37	Braintree town line to Brockton town line	Holbrook	SSC	5	MassDOT and Holbrook	3.6	3	15,500	5.1	3.9	1	2	FFY 2013 Safety and Operations at Intersections Conceptual TIP #1044 Intersection improvements at South Franklin Street and King Road	2	1	2	1	0	6	Medium	Not suitable for selection since the SSC subregion is already well-represented by past Subregional Priority Roadways projects. The Town of Holbrook has been in contact with the district and is interested in improvements, particularly multimodal transportation improvements.
Main Street	Wakefield town line to Central Street	Saugus	ICC	4	Saugus and MassDOT	2.9	3, 5	16,950	2.6	2.1	0	1	No projects	1	2	1	1	1	6	Medium	In FFY 2012 UPWP outreach, Saugus requested the MPO to consider performing a roadway/sidewalk/traffic light/pedestrian access assessment study, to be called a Main Street/Saugus Center Corridor Study.

Roadway	Location	Community	MAPC Subregion	MassDOT District	Jurisdiction	Length (Miles)	Functional Classification	Average Daily Traffic	Overall Crash Rate (MVMT)	Bike/Ped Crashes Per Mile	Top 200 High-Crash Locations 2012-2014	HSIP-Eligible Crash Clusters 2012-2014	Study, Project, or TIP Project	Safety Conditions	Multimodal Significance	Subregional Priority	Implementation Potential	Regional Equity	Score	Overall Assessment	Summary of Comments
Route 3A	Burlington Mall Road to Francis Wyman Road (Route 62)	Burlington	NSPC	4	MassDOT	3.8	3	23,100	2.5	1.1	0	2	TIP Programmed/MassDOT Project 608068: Adaptive Traffic Control Signal System on Cambridge Street (Route 3A), Middlesex Turnpike Road, and Burlington Mall Road. Installation of compatible traffic signal control equipment, video detection, communication devices and software to integrate 11 MassDOT and 16 Town owned traffic signal locations into one adaptive signal system.	1	2	1	1	1	6	Medium	MPO staff identified this roadway segment. MassDOT District 4 expressed interest in examining the inconsistent roadway cross-sections and the potential for pedestrian and bicycle accommodations in 2015. It's now considered low priority as Project 608068 advanced in 2016.
Route 127	Route 1A in Beverly to Route 133 in Gloucester	Beverly, Manchester-by-the-Sea, Gloucester	NSTF	4	MassDOT, Manchester, Beverly	13.6	5, 6	4,850	1.8	0.9	0	1	Advertised TIP project 607441: Safe Routes to School includes about 0.10 mi of Route 127 near Lincoln Street in Manchester; construction is underway. MassDOT Project #607707 Resurfacing and Related Work on Route 127; preliminary design phase (last updates from 2013). Advertised (2013) TIP Project 600220 in construction on Route 1A in Beverly terminates near the intersection with Route 127.	0	2	2	1	1	6	Medium	MassDOT Project #607707, which is currently in the preliminary design phase, covers two-thirds of the segment in scope. NSTF cited this roadway during the UPWP outreach for FFYs 2013 and 2014. Study should include how to improve bike facilities and bike-to-rail connections in this heavily traveled tourist area and build on the Essex Coastal Scenic Byway to the region.
Route 53	Route 123 to Route 139	Hanover	SSC	5	MassDOT	3.5	3	22,500	2.3	1.1	0	0	Advertised (2009) TIP/MassDOT Project 602602: Reconstruction of Washington Street (Route 53) and Related Work, from the Route 3 (NB) Ramp to Webster Street (Route 123). Prime Contractor has performed hydrant relocation, road widening excavation, drainage installation, and road cold planing and binder paving. Sidewalks and curb work are completed with final paving in Spring 2017. Pre-TIP 607758: Intersection and Signal Improvements on Route 53 (Columbia Road) at Route 139 (Rockland Street) MassDOT Project 607715: Resurfacing and Related Work Route 53; preliminary design phase.	0	1	2	2	0	5	Low	SSC cited this roadway during the UPWP outreach for FFYs 2013 and 2014 via a formal letter and verbal comments at MPAC subregion meeting and stressed that this north-south corridor, as a direct connection to and from Route 3 Exit 13, serves many south shore communities, and a major route between Route 123 and Route 139.
Route 97	Route 1A in Beverly to Topsfield/Boxford town line	Beverly, Wenham, Topsfield	NSTF	4	Beverly, Wenham, Topsfield	8.9	5	15,000	0.8	0.3	0	1	MassDOT Project #604028 Intersection Improvements on Route 97 (Topsfield Road) at Cherry and Maple Streets; complete 2009. Pre-TIP Project 605020: Border (New Hampshire) to Boston Bikeway intersects Route 97 in Wenham.	0	2	1	1	1	5	Low	NSTF proposed to study this segment in conjunction with the Route 97 corridor in Boxford, Georgetown, and Haverhill (Merrimack Valley Planning Commission). This may have implementation challenges. Segment mentioned in Fall 2014 LRTP Outreach and Fall 2012 via public comment and a letter for the FFY 2014 UPWP Universe.
Route 133	Route 127 in Gloucester to Route 1A in Ipswich	Essex, Gloucester, Ipswich	NSTF	4	MassDOT, Essex	11.0	5, 6	10,500	0.7	0.2	0	0	MassDOT Project 602146: Resurfacing and Related Work on a Section of Route 133 (Essex Road). The project includes pedestrian improvements from the intersection of Route 1A to the Essex Town Line, a distance of approximately two miles; complete spring 2011. MassDOT Project 600217: Reconstruction of Route 133 (Main Street) from North of Western Avenue to Waters Street in Essex (about one mile). It includes concrete sidewalks and pavement markings; complete autumn 2013.	0	2	1	1	1	5	Low	MassDOT Project 602146 covers all of the Ipswich portion of the segment, and 600217 covers some of the Essex portion. This is the last of three sections proposed for study by Essex National Heritage Commission. It was cited in the 2013 UPWP outreach. A two-mile section in the Essex downtown area was recently reconstructed (summer 2011).
Route 2A/King Street	Route 495 Southbound ramps to Ayer town line	Littleton	MAGIC	3	MassDOT	2.5	3	15,000	1.5	0.4	0	0	MassDOT Project 605504: Bridge Betterment, Route 2A (King Street) over I-495; scheduled to complete in 2013.	0	2	2	0	1	5	Low	Requested by Littleton in 2015.

Notes:

*** Functional Classification**

2 = principal arterial, 3 = rural minor arterial or urban principal arterial, 5 = urban minor arterial or rural major collector, 6 = urban collector or rural minor collector

**** Selection Criteria**

Safety Conditions: Location has a high crash rate for its functional class or contains areas with a high number of crashes or with a significant number of pedestrian/bicycle crashes.
Multimodal Significance: Location supports transit, bicycle, or pedestrian activity, has significant potential to enhance these activities, or has a heavy vehicle (truck/bus) issue.
Subregional Priority: Location carries a significant proportion of subregional vehicle, bicycle, or pedestrian traffic or is essential for its subregional economic, cultural, or recreational development.
Implementation Potential: Location is proposed or endorsed by the subregion, by the roadway administrative agency (agencies) or has strong support from all of its stakeholders.
Regional Equity: Location is situated in a subregion that has not been selected for this study in the past two years.

Acronyms and Abbreviations

AADT = Annual average daily traffic. ADA = Americans with Disabilities Act. ADT = Average daily traffic. BAT = Brockton Area Transit Authority. CTPS = Central Transportation Planning Staff. DCR = Department of Conservation and Recreation. DEIR = Draft Environmental Impact Report. EJ = Environmental justice. ENHC = Essex National Heritage Commission. EPDO = Equivalent property damage only. FFY = Federal fiscal year. GATRA = Greater Attleboro Taunton Regional Transit Authority. HSIP = Highway Safety Improvement Program. ICC = Inner Core Committee. LRTP = Long-Range Transportation Plan. MAGIC = Minuteman Advisory Group on Interlocal Coordination. MAPC = Metropolitan Area Planning Council. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority. MVMT = Million vehicle miles traveled. MetroWest = MetroWest Regional Collaborative. MPO = Boston Region Metropolitan Planning Organization. MWRTA = MetroWest Regional Transit Authority. NSPC = North Suburban Planning Council. NSTF = North Shore Task Force. RSA = Road safety audit. RTA = Regional transit authority. SSC = South Shore Coalition. SWAP = South West Advisory Planning Committee. TIP = Transportation Improvement Program. TRIC = Three Rivers Interlocal Council. UPWP = Unified Planning Work Program.

Source: Central Transportation Planning Staff.

APPENDIX A

Pedestrian Report Card Assessment

1. Route 1A from Plainville town line to Route 140 in Wrentham
2. Route 109 from Walpole town line to Interstate 95 in Westwood
3. Route 129 from Washington Street to Swampscott town line in Lynn

Route 1A from Plainville town line to Route 140 in Wrentham

Performance Measure Scores

Performance Measure	Features	Goal	Weight	Unweighted Score	Weighted Score
Sidewalk Presence	Sidewalks are present on Less than 50% of the corridor (one side of the stree and in a short section in Wrentham Center (on both sides).	Capacity Management and Mobility	3	1	3
Crossing Opportunities	Total 8 crosswalks in 3.1 miles = 2.6 crosswalks per mile	Capacity Management and Mobility	2	1	2
Walkway Width	Very few sidewalks are at least 5 feet wide on either side of the street	Capacity Management and Mobility	1	1	1
Pedestrian Volumes	Estimated 60 or more pedestrians in Downtown Wrentham	Economic Vitality	1	3	3
Adjacent Bicycle Accommodations	None	Economic Vitality	1	1	1
Pedestrian Crashes	No HSIP pedestrian clusters	Safety	3	3	9
Average Vehicle Travel Speeds	40 MPH (miles per hour)	Safety	1	1	1
Vehicle-Pedestrian Buffer	3' buffers	Safety	1	1	1
Sidewalk Condition	Sidewalks are not in fair condition on one side of the street and not present on other side.	System Preservation	1	1	1
Transportation Equity Factor	Two out of four factors (schools nearby, high presence of senior citizens)	N/A	N/A		

The weighted scores of all the performance measures within the same category are averaged and given a grade of poor, fair, or good based on the average weighted category score. The average weighted scores are classified as follows:

- Good – Score is 2.3 or more (maximum 3.0).
- Fair – Score is between 1.7 and 2.3.
- Poor – Score is 1.7 or less (maximum 0).

Pedestrian Report Card Assessment

Goal	weight points	weighted score	Final score	Rating
Capacity Management and Mobility	6	6	1.0	Poor
Economic Vitality	2	4	2.0	Fair
Safety	5	11	2.2	Fair
System Preservation	1	1	1.0	Poor

Route 109 from Walpole town line to Interstate 95 in Westwood

Performance Measure Scores

Performance Measure	Features	Goal	Weight	Unweighted Score	Weighted Score
Sidewalk Presence	Sidewalks are present on one side of the street at most locations and on both sides at some locations.	Capacity Management and Mobility	3	2	6
Crossing Opportunities	Total 12 crosswalks in 3.9 miles = 3.1 crosswalks per mile	Capacity Management and Mobility	2	1	2
Walkway Width	4' wide sidewalks	Capacity Management and Mobility	1	1	1
Pedestrian Volumes	Estimated 60 or more pedestrians per hour in Downtown Westwood	Economic Vitality	1	3	3
Adjacent Bicycle Accommodations	None	Economic Vitality	1	1	1
Pedestrian Crashes	No HSIP pedestrian clusters	Safety	3	3	9
Average Vehicle Travel Speeds	40MPH	Safety	1	1	1
Vehicle-Pedestrian Buffer	4' buffer	Safety	1	1	1
Sidewalk Condition	Sidewalks are not in fair condition in some sections.	System Preservation	1	1	1
Transportation Equity Factor	Two out of four factors (schools nearby, high presence of senior citizens)	N/A	N/A		

The weighted scores of all the performance measures within the same category are averaged and given a grade of poor, fair, or good based on the average weighted category score. The average weighted scores are classified as follows:

- Good – Score is 2.3 or more (maximum 3.0).
- Fair – Score is between 1.7 and 2.3.
- Poor – Score is 1.7 or less (maximum 0).

Pedestrian Report Card Assessment

Goal	weight points	weighted score	Final score	Rating
Capacity Management and Mobility	6	9	1.5	Poor
Economic Vitality	2	4	2.0	Fair
Safety	5	11	2.2	Fair
System Preservation	1	1	1.0	Poor

Route 129 from Washington Street to Swampscott town line in Lynn

Performance Measure Scores

Performance Measure	Features	Goal	Weight	Unweighted Score	Weighted Score
Sidewalk Presence	Sidewalks are present on both sides of the street.	Capacity Management and Mobility	3	3	9
Crossing Opportunities	Total 17 crosswalks in 1.2 miles = 14.2 crosswalks per mile	Capacity Management and Mobility	2	3	6
Walkway Width	6' wide sidewalks	Capacity Management and Mobility	1	3	3
Pedestrian Volumes	Estimated 60 or more pedestrians per hour in the area	Economic Vitality	1	3	3
Adjacent Bicycle Accommodations	None	Economic Vitality	1	1	1
Pedestrian Crashes	One HSIP pedestrian cluster covering about a quarter of the corridor	Safety	3	1	3
Average Vehicle Travel Speeds	40MPH	Safety	1	1	1
Vehicle-Pedestrian Buffer	2' or less	Safety	1	1	1
Sidewalk Condition	Sidewalks generally are in good condition.	System Preservation	1	3	3
Transportation Equity Factor	Four factors (schools nearby, Environmental Justice area, high presence of senior citizens, and high presence of careless households)	N/A	N/A		

The weighted scores of all the performance measures within the same category are averaged and given a grade of poor, fair, or good based on the average weighted category score. The average weighted scores are classified as follows:

- Good – Score is 2.3 or more (maximum 3.0).
- Fair – Score is between 1.7 and 2.3.
- Poor – Score is 1.7 or less (maximum 0).

Pedestrian Report Card Assessment

Goal	weight points	weighted score	Final score	Rating
Capacity Management and Mobility	6	18	3.0	Good
Economic Vitality	2	4	2.0	Fair
Safety	5	5	1.0	Poor
System Preservation	1	3	3.0	Good

APPENDIX B

Support Letter from the Town of Wrentham



Commonwealth of Massachusetts
Town of Wrentham
Board of Selectmen
79 South Street, Wrentham, MA 02093



TEL: (508) 384-5400
FAX: (508) 384-5403

March 7, 2017

Chen-Yuan Wang, Project Manager
Chief Transportation Planner
Central Transportation Planning Staff (CTPS)
10 Park Plaza, Suite 2150
Boston, MA 02116-3968

Re: Route 1A Corridor Study

Dear Mr. Wang:

The Town of Wrentham wishes to express its support for the inclusion of the Route 1A corridor study as part of the Central Transportation Planning Staff's (CTPS) upcoming work program. Route 1A, which is known as Dedham Street and South Street serves as Wrentham's de facto main street. It is the major connector from the northeast to south boundary of the town linking us to Walpole to the northeast and Plainville to the south. It serves as a key route for our police, fire, and ambulance services.

The section from the intersection with Route 140 to the intersection with Route 121 at Wampum Corner is considered to be Wrentham's center business and governmental district. The area serves as an important arterial for Wrentham and the surrounding towns and is one to the two principal routes (the other being route 140) to the Wrentham Town Center.

The section from the I-495 interchange to the Plainville line is dominated by the Wrentham Village Premium Outlet Mall a major regional shopping destination, Wrentham's largest single taxpayer. This area is also, according to our Police Department the most congested area of the town and also the general location of most traffic accidents. The I-495 interchange at Route 1A has, for several years been identified as one of the interchanges in the state that is most in need of improvement.

The Town of Wrentham, for the above reasons, strongly supports the study of the Route 1A corridor as part of the upcoming work program of the CTPS. Thank you for your attention. If you have any questions or require further information, please contact John Charbonneau, Director of Planning & Development, at jcharbonneau@wrentham.ma.us or (508) 384-5486.

Sincerely,


William F. Ketcham
Town Administrator

Cc: Board of Selectmen
Planning Board
Police Department
Fire Department
Department of Public Works