

JOURNEY to 2030 Projects List
Evaluation Criteria Rating

DRAFT

Page in Universe of Projects and Programs Binder	Community	Project	Mobility													Safety & Security				Preservation	Environment		Regional Equity		Land Use & Economic Development				Revised Current Cost	Project Info.		Notes							
			MMS Data						MMS Data							MMS Data					MMS Data		MMS Data				Current Status of Project	Type of Project											
			Average Daily Traffic Entering Interchange ¹	Peak Hour Speed Index - Range ²	Average Peak Hour Speed Index in Peak Direction	Average Delay Per Mile - AM/PM (Seconds of Delay per Mile)	Average AM/PM Delay at Intersection (Seconds of Delay)	Volume/Practical Capacity - Range	Volume/Practical Capacity - Average	Improves Connections/Access to System	Improves Public Transit Service	Expands System Capacity	Provides Bike & Ped Facilities	Addresses Suburban Transit Needs	Better Access for Target Populations	Improves Freight Mobility	Overall Rating	Crashes Per Year ³	Crashes/Mile	Crash Rate Per Million Vehicles ⁴	Enhances Safety of Infrastructure for Users ⁵	Component of Safety/Security Initiative	Overall Rating	Preserves Existing System	Overall Rating	Improves Air Quality	Protects Water, Open Space, Wildlife, etc.	Preserves Natural/Cultural Resources	Overall Rating	Improves Mobility for EJ Residents	Addresses EJ Issue	Overall Rating	Considers Land Use & Economic Plans	Supports Sustainable Development	Serves Existing Center of Activity	Provides Links for Economic Activities	Overall Rating		

Limited Access Highway Projects - Interchanges (1 of 2)

1-50	Reading and Woburn	I-93/I-95 Interchange	327,000	51-78%	59%	N/A	N/A		2	0	3	0	0	0	2	3	147		1.23	2	3	3	0	0	1	0	0	1	0	0	0	1	2	1	1	1.25	\$194,792,000	RTP	MI/AQ	A high crash location (#1); with moderately high crash rate. It is used daily by the highest number of commuters.
1-14	Canton	I-93/I-95 Interchange	212,000	46-80%	60%	N/A	N/A		2	1	3	0	1	0	2	3	67		0.87	1	3	2	0	0	0	1	0	1	0	0	0	2	-1	-1	1	0.25	\$225,000,000	RTP	MI/AQ	A high crash location (#23) with low crash rate. Chronic congestion AM and PM. LOS F; Route to 128 commuter rail station; used by feeder shuttles to station. Implements previous MPO study; consistent with local growth planning study. Much abutting land protected (ACEC), MBTA station access. economic development district.
5-10	Braintree	I-93/Route 3 Interchange (Braintree Split)	253,000	33-80%	64%	N/A	N/A		2	1	3	0	0	0	2	3	55		0.56	1	3	2	0	0	0	0	0	0	0	0	-1	-1	-1	0	-0.75	\$36,017,000	RTP	MI/AQ*	A high crash location (#30) with low crash rate. Congestion in AM NB (entering split) and PM SB (both entering and leaving split). Implements results of previous MPO study. * AQ depending on alternative chosen.	
1-62	Somerville	I-93/Mystic Avenue Interchange	174,000	31-36%	34%	N/A	N/A		2	1	2	1	0	0	2	2	106		1.67	2	3	3	0	0	0	0	0	0	0	2	2	2	-1	1	2	1.00	\$63,274,000	RTP	MI/AQ	A high crash location (#4) with medium crash rate. Design addresses safety on the arterial local road network. Some elements at LOS F in AM. At the intersection of 2 major regional roadways. Used by 3 MBTA bus routes accessing Orange Line rapid transit and commuter rail stations; will provide access to proposed Assembly Square station and major future development; rezoned to encourage high-density/mixed use development. Somerville is a state economic target area. Lack of direct access from Route 28, south of I-93; lack of pedestrian access under I-93.
1-20	Concord and Lincoln	Route 2/Crosby's Corner Grade Separation ⁶	50,000	66-120%	93%	27.8/34.7	N/A		2	0	3	0	0	0	2	2	31	18	1.70	2	3	2	0	0	1	0	0	1	0	0	0	1	-1	-3	1	-0.50	\$72,000,000	RTP/TIP	MI/AQ	AM and PM LOS F (1995). High commuting use. Consistent with Concord long-range planning. High crash location (#775) with low crash rate.
1-56	Revere	Route 1A/Route 16 Connection ⁶	52,500	60-65%	63%	36.5/88.8	N/A		2	0	1	0	0	0	2	2	N/A		N/A	1	2	1	0	0	0	1	0	0	1	1	1	1	1	1	1.00	\$50,078,000	RTP	MI	A high usage corridor to Boston and Logan. Below 70% posted speed in AM and at LOS E/F in PM. Revere is a state economic target area.	
1-54	Revere	Route 1/Route 16 Interchange	133,000	102-114%	108%	N/A	N/A		2	0	3	0	0	0	2	3	39		0.81	1	2	2	0	0	0	0	0	0	0	1	1	1	-1	-1	1	0.00	\$4,975,000	RTP	AQ	A high crash location (#80) with low crash rate. Will improve mobility regional connections from Routes 1A, 107, and 1. Benefits EJ community. Linked to other improvements in the corridor. Revere is a state economic target area. Route 1/Route 16 would remove traffic now going through Mahoney Circle. Direct connection would relieve Mahoney Circle/Route 60 traffic delays.

Ratings scale: -3 to 3

MI = Major Investment (Over \$10 Million)
AQ = Regionally Significant for AQ Conformity

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Limited Access Highway Projects - Interchanges (2 of 2)

1-52	Revere	Mahoney Circle Grade Separation	52,500	35-53%	44%	36.5/88.8	N/A		2	1	2	1	0	0	2	2	48	2.52	3	3	3	0	0	1	0	0	0	0	1	0	2	2	1	1	1	1	1.00	\$16,224,000	RTP	MI/ AQ	Questionable community support. Development of parcels in project area will hinder project. A high crash location (#46) with high crash rate. LOS D in AM and LOS D and F in PM. The 18th most delayed intersection in the MPO region. Moves regional trips from local roads; benefits this EJ community. Revere is a state economic target area. Within 1/2 mile of MBTA Blue Line rapid transit station.
1-40	Marlborough and Hudson	I-495/I-290/Route 85 Connector Interchange ⁶	97,000	83-98%	91%	N/A	N/A		2	0	2	0	0	0	2	2	53	1.50	2	3	3	0	0	0	0	0	0	0	0	0	0	2	1	1	1	1.25	\$29,852,000	RTP	MI/ AQ	Existing safety problems. A high crash location (#48), with medium crash rates; truck rollovers. Ramps at or near LOS F.	
1-16	Canton	I-95 Northbound/Dedham Street Ramp and Bridge	106,500	71-80%	76%	N/A	N/A		3	1	3	0	1	0	2	3	NA	NA	1	2	1	0	0	0	0	0	0	0	0	0	0	2	-1	1	1	0.75	\$3,786,000	RTP	AQ	Benefit for local streets and access to major industrial/commercial area. Improves access to Westwood and MBTA 128 commuter rail station. Implements previous MPO study; consistent with local growth planning study. In protected area (ACEC). Provides direct connection with Westwood business district and MBTA commuter station, eliminating circuitous access from I-95/Route 128. Canton opposition.	
1-18	Concord	Concord Rotary/Route 2 ⁶	42,000	36-48%	42%	21.4/69.8	N/A		3	0	2	0	0	0	2	2	41	2.44	3	3	3	0	0	0	0	0	0	0	0	0	0	-2	-1	-1	0	-1.00	\$43,264,000	RTP	MI	A high crash location (#123) and high crash rate. One of 5 busiest radial routes to Boston; high commuting use. Questionable support by Concord.	
1-8	Boston	Route 1A/Boardman Street Grade Separation ⁶	65,500	33-40%	36%	55.4/133.5	N/A		2	1	2	0	0	0	2	2	8	0.32	1	2	2	0	0	1	0	0	0	1	0	0	0	1	-1	1	1	0.25	\$10,816,000	RTP	MI/ AQ	A high crash location (#600). LOS D in AM and F in PM. Ranked 1A's worst intersection. Air quality benefits.	
1-22	Danvers and Peabody	Route 1/Route 114 Corridor Improvements	77,000	N/A	N/A	N/A	N/A		2	0	2	0	0	0	1	2	40	1.41	2	2	2	0	0	0	0	0	0	0	0	0	2	-1	-1	1	0.25	\$50,619,000	RTP	MI/ AQ	A high crash location (#15). Serious congestion in AM and PM. Corridors are in designated redevelopment districts.		
1-72	Wilmington and Reading	I-93/Route 129 Interchange Improvement Project	177,000	88%	88%	N/A	N/A		1	0	1	0	0	0	1	1	49	0.76	1	2	2	0	0	0	0	0	0	0	0	0	0	-1	-1	1	-0.25	\$18,928,000	RTP	MI/AQ	Two high crash locations (#46 and #136). LOS D in PM at one ramp; LOS F in AM and E in PM at another (the 15th most delayed intersection in N. Suburban subregion in PM).		

¹ "Average Daily Traffic Entering Interchange" is a measure of the traffic activity at the interchange. It is defined by the sum of the ADT entering the interchange from all approaches, highway and arterial/other. ADT volumes were collected in 2003-2008.

² Speeds were collected during spring 2004-fall 2007.

³ Crash data is from 2004 - 2006

⁴ Crash rate per million entering vehicles = (Avg. # of crashes per year * 10⁶) / (ADT * 365)

⁵ Safety Rating is largely based on the following criteria: crash rate < 1; crash rate greater than 1 but less than 2; crash rate > 2: 3

⁶ ADT counts are from major road only, not all 4 approaches to the interchange.

**JOURNEY to 2030 RTP Projects List
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			Average Major Road ADT ¹	Range of Peak Hour Speed Index ²	Average Peak Hour Speed Index ³	Average Delay Per Mile - AM/PM (Seconds of Delay per Mile)	Average AM/PM Delay at Intersection / Intersection (Seconds of Delay)	Range of Volume/Practical Capacity ⁴	Average of Volume/Practical Capacity ⁵	Improves Connections/Access to System	Improves Public Transit Service	Expands System Capacity	Provides Bike & Ped Facilities	Addresses Suburban Transit Needs	Better Access for Target Populations	Improves Freight Mobility	Overall Rating	Crashes Per Year	Crashes/Mile		Crashes/Average Annual Daily Traffic (Crashes per Million Vehicles)	Enhances Safety of Infrastructure for Users	Component of Safety/Security Initiative	Overall Rating	Preserves Existing System	Overall Rating	Improves Air Quality				Protects Water, Open Space, Wildlife, etc.	Preserves Natural/Cultural Resources		Overall Rating	Improves Mobility for EJ Residents	Addresses EJ Issue	Overall Rating	Considers Land Use & Economic Plans	Supports Sustainable Development	Serves Existing Center of Activity
Limited Access Highway Projects - Segments (1 of 1)																																								
1-4	Beverly to Peabody	Route 128 Capacity Improvements	80,200	73-102%	89%		73-125%	100%	2	0	3	0	0	0	3	3	271	41		3	3	3	2	2	1	0	0	1	0	0	0	2	-3	-1	1	-0.25	\$156,832,000	RTP	MI/ AQ	Eight high crash locations (#22 to #166). Oldest remaining section of 128; poor design standards and high volumes.
1-38	Malden and Revere	Route 1 Improvements	86,600	30-110%	85%		108%	108%	1	0	3	0	0	0	3	3	100	55		3	3	3	0	0	0	0	0	0	0	0	2	-1	1	1	0.75	\$70,304,000	RTP	MI/ AQ	A high crash location (#79). Congestion SB AM and NB PM peaks. Two redevelopment areas in project area; state economic target area. High crash location and substandard horizontal curve design.	
1-68	Weymouth to Duxbury	Route 3 South Additional Lanes	85,900	60-105%	96%		82-130%	107%	1	0	3	0	0	0	3	3	321	20		2	3	3	0	0	1	0	0	1	0	0	-3	-3	-1	1	-1.50	\$227,785,000	RTP	MI/ AQ	Four high crash locations (#8 to #84). LOS E and F AM and PM peaks; breakdown lane used in peaks.	

¹ Average Major Road ADT: Values were calculated based on the information presented in the Traffic Volumes on Major Highways in Massachusetts book (May 2007). The ADT values were determined by matching the project area to the road segments presented in the book, converting the AWDT to ADT with a 0.875 adjustment factor and then averaging the segment values for the project.

² Range of Peak Hour Speed Index: The speed index values were calculated by matching up the project area to the travel time run values conducted by the MMS. The speed from each segment of the travel time run was divided by the posted speed limit for that segment for Northbound/Eastbound and Southbound/Westbound direction during both the AM and PM Peak Hour. The results of these calculations were then used to define the range of values.

³ Average Peak Hour Speed Index: The speed index values were calculated by matching up the project area to the travel time run values conducted by the MMS. The speed from each segment of the travel time run was divided by the posted speed limit for that segment for Northbound/Eastbound and Southbound/Westbound direction during both the AM and PM Peak Hour. The results of these calculations were then averaged by project.

⁴ Range of Volume/Practical Capacity: Values were calculated based on the information presented in the Traffic Volumes on Major Highways in Massachusetts book (May 2007). The ADT values were determined by matching the project area to the road segments presented in the book, converting the AWDT to ADT with a 0.875 adjustment factor. These values were then divided by the Practical Capacity (20,000 vehicle per lane) to generate the V/PC figures for each segment within the project area. The V/PC were then used to define the range.

⁵ Average of Volume/Practical Capacity: Values were calculated based on the information presented in the Traffic Volumes on Major Highways in Massachusetts book (May 2007). The ADT values were determined by matching the project area to the road segments presented in the book, converting the AWDT to ADT with a 0.875 adjustment factor. These values were then divided by the Practical Capacity (20,000 vehicle per lane) to generate the V/PC figures for each segment within the project area. The V/PC were then average to provide the value per project.

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			Range of Average daily Traffic	Range of Peak Hour Speed Index	Average Peak Hour Speed Index	Average Delay Per Mile - AM/PM (Seconds of Delay per Mile)	Average AM/PM Delay at Intersection (Seconds of Delay)	Range of Volume/Practical Capacity	Average Volume/Practical Capacity	Improves Connections/Access to System	Improves Public Transit Service	Expands System Capacity	Provides Bike & Ped Facilities	Addresses Suburban Transit Needs	Better Access for Target Populations	Improves Freight Mobility																									
Arterial Roadway Projects - Intersections																																									
1-28	Framingham	Route 126/Route 135 Grade Separation	36,800			218/220			2	0	0	1	0	0	2	2	33	2.46	3	2	3	0	0	1	0	0	1	0	1	1	2	2	2	2	2.00	\$54,080,000	RTP	MI	A high crash location (#130). Intersection at LOS F in AM and PM. Second worst in MetroWest subregion and 8th worst in MPO region. MBTA commuter rail station in the vicinity and LIFT buses operate in area. Is an identified EJ community. Linked to downtown redevelopment.		
Arterial Roadway Projects - Segments																																									
1-66	Weymouth	Route 18 Capacity Improvements	25,200 to 36,600			51/55			3	0	3	1	0	0	2	3	355	71	3	2	3	0	0	0	0	0	0	0	0	0	3	1	1	2	1.75	\$26,100,000	RTP/TIP	MI/AQ	Three high crash locations (#8 to #298). Six intersections in the top 25 most delayed in South Shore Coalition subregion. Provides access to South Weymouth commuter rail station on Plymouth Line. Part of development plan for S. Weymouth Naval Air Station, site designated for redevelopment. Weymouth is a state economic target area.		
1-26	Everett, Medford, Revere	Route 16 (Revere Beach Parkway)	40,200 to 52,800			102/102			2	0	3	0	0	0	2	3	197	86	3	2	3	0	0	0	0	0	0	0	1	1	1	1	-1	1	0.50	\$101,238,000	RTP	MI/AQ	Four high crash locations (#11 to #539). LOS E/F in AM and PM. Would improve access to MBTA Wellington Orange Line station. Important access to Telecom City site. Everett is a state economic target area.		
1-2	Bedford, Burlington and Billerica	Middlesex Turnpike Improvements	15,000-20,000			25/28			1	0	3	1	0	0	2	2	11	5	1	2	1	0	0	0	0	0	0	0	0	2	-1	-1	1	0.25	\$19,200,000	RTP/TIP	MI/AQ	LOS E in AM and PM along Turnpike. LOS F at 6 of 7 intersections. Adding sidewalks. Improvements in a multi-community Economic Opportunity Area.			
	Hudson	Washington Street (Route 85) Widening	26,000			17/19			1	0	2	2	0	0	1	2	118	75	1	1	1	0	0	0	0	0	0	0	0	2	1	1	1	1.25	\$8,400,000	AQ	AQ				
1-44	Newton and Needham	Needham Street/Highland Avenue	25,200 to 34,000			N/A			1	0	1	0	0	0	1	1	90	65	2	2	2	0	0	0	0	0	0	0	0	2	-1	-1	1	0.25	\$8,100,000	RTP	AQ?	One high crash location (#41). LOS E/F in AM and PM. MBTA bus route uses Needham St. in Newton. Needham section in a redevelopment district; project would facilitate.			
1-10	Boston	Rutherford Avenue	12,600 to 29,100			N/A			1	1	-1	0	0	0	0	0	23	20	1	2	1	0	0	0	0	0	0	0	0	2	2	2	3	2.25	\$85,507,000	RTP	MI	Two Orange Line rapid transit stations adjacent to project. An Urban Ring Phase 2 route. Would improve access to historic resources and park; improve pedestrian facilities; add open space. Boston is a state economic target area.			
	Woburn	Montvale Avenue	33,600 to 36,400						1	0	2	0	0	0	1	1	79	66	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$3,400,000		AQ	Improvements in traffic flow. Adding additional lanes between I-93 and Washington Street and will improve flow at Montvale and Washington Street intersection.		
7-10	Marshfield	Route 139 Improvements	6,200 to 20,100			10/14			1	0	2	0	0	0	1	1	60	25	1	1	1	0	0	0	0	0	0	0	0	0	1	-1	-1	1	0.00	\$7,150,200		AQ	Sidewalks and shared bicycle lane (shoulder) included. Development consistent with local master plan.		
7-4	Milford	Route 16 Bypass Road	17,800 to 25,000			56/68			2	0	3	0	0	0	1	2	23	48	0	0	0	0	0	0	0	0	0	0	0	2	-1	-2	0	-0.25			AQ	Improvements in traffic flow and a bike trail extension. Crash information is for Route 16 in area of bypass.			

Ratings scale: -3 to 3

MI = Major Investment (Over \$10 Million)
AQ = Regionally Significant for AQ Conformity

