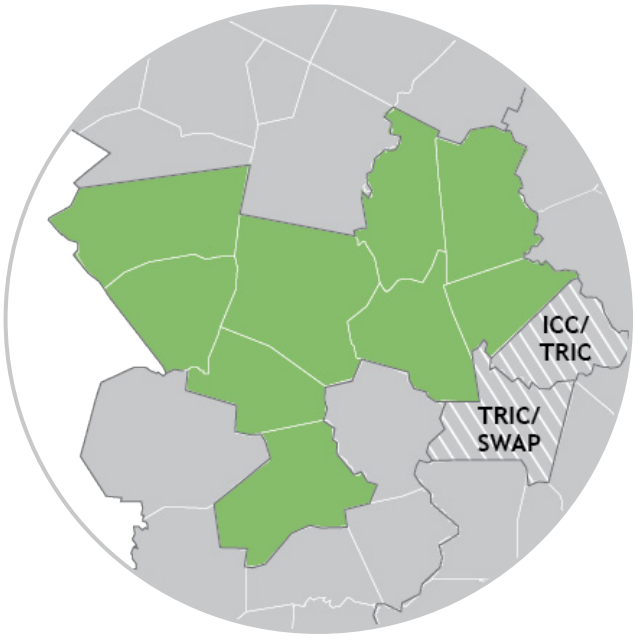
MetroWest Regional Collaborative (MWRC)

Identifying Transportation Needs, Construction Projects, and Studies in Your Subregion



Fall 2019

Boston Region MPO
Metropolitan Planning Organization

Ashland • Framingham • Holliston • Marlborough • Natick • Southborough • Wayland • Wellesley • Weston

WHAT TRANSPORTATION NEEDS DID THE MPO IDENTIFY IN MWRC COMMUNITIES?

The Boston Region Metropolitan Planning Organization (MPO) conducted an assessment of transportation needs in the Boston region to inform the MPO's current Long-Range Transportation Plan (LRTP), *Destination 2040*, adopted in August 2019. MPO staff identified existing transportation conditions and made projections of future conditions and demand on the system. MPO staff also reached out to various subregional groups to discuss their transportation needs and opportunities to improve transportation in their communities. The resulting LRTP Needs Assessment serves as a tool for planning the region's future transportation network, and for prioritizing the MPO's limited funding for transportation projects and studies.

The tables that follow highlight some of the transportation needs identified in the MWRC subregion based on MPO analysis, and the lists below highlight needs identified from past visits to MWRC communities for the Needs Assessment. For more information, please refer to the *Destination 2040* Needs Assessment report and interactive applications on our website: **bostonmpo.org/lrtp**.

Transportation Needs Identified in the *Destination 2040* Needs Assessment

Location of Identified Need	Municipality	HSIP Crash Cluster	Intersects MPO Staff-Identified Truck Crash Cluster(s)	Intersects Massachusetts Top Crash Location(s)	Pedestrian Crash Cluster	Truck Crash Cluster	Priority Congested Location
Route 9 (Worcester Road) west of Caldor Road	Framingham	●					
Downtown Framingham (Waverly, Concord, and Hollis Streets)	Framingham				●		
Route 9 (Worcester Road) at Cochituate Road	Framingham	●		●			
Interstate 90 at Edgell Road	Framingham					●	
Route 16 and Route 126	Holliston						●
Interstate 495 at Interstate 290	Marlborough					●	
Route 9 at Interstate 95	Wellesley	●	●			●	

(cont.)

Location of Identified Need	Municipality	HSIP Crash Cluster	Intersects MPO Staff-Identified Truck Crash Cluster(s)	Intersects Massachusetts Top Crash Location(s)	Pedestrian Crash Cluster	Truck Crash Cluster	Priority Congested Location
Route 16 and Route 9	Wellesley						●
Interstate 95 at Route 30 (north of Exit 24)	Weston	●	●				
Interstate 90 at Oak Street	Weston	●	●				
Interstate 90 at ramps to Interstate 95	Weston	●	●			●	
Interstate 90, Exits 13–14	Weston, Natick						●
US Route 20	Weston						●

Note: MassDOT-identified HSIP crash clusters, MPO staff-identified truck crash clusters, and MassDOT Top Crash Locations were identified using crash data collected from 2013–15. Pedestrian crash clusters were identified using data on crashes involving pedestrians collected from 2006–15. More information on these locations is available in the Safety Chapter of the *Destination 2040* Needs Assessment report, while the Capacity Management and Mobility chapter of that report provides details about MPO staff-identified Priority Congested locations.

HSIP = Highway Safety Improvement Program. MassDOT = Massachusetts Department of Transportation. MPO = metropolitan planning organization. US = United States.

Projects Programmed in the 2020–24 TIP in the MetroWest Regional Collaborative Subregion

TIP Identification Number	Project	Category	Municipality	Year Programmed
604123	Reconstruction on Route 126 (Pond Street)	Complete Streets	Ashland	2020
608228	Reconstruction on Union Avenue	Complete Streets	Framingham	2021
608889	Traffic signal installation at Edgell Road and Central Street	Intersection Improvements	Framingham	2023
608436	Rehabilitation and rail crossing improvements on Cherry Street	Intersection Improvements	Ashland	2024
608006	Pedestrian hybrid beacon installation at Route 9 and Maynard Road	Bicycle/ Pedestrian	Framingham	2024

TIP = Transportation Improvement Program.

Transportation Studies Conducted in MetroWest Region through the Unified Planning Work Program

- Safety and Operations Analysis at Selected Intersections:
  - Turnpike Road (Route 9) and Central Street/Oak Hill Road in Southborough (federal fiscal year [FFY] 2012)
  - Union Avenue and Mount Wayte Avenue in Framingham (FFY 2011)
  - West Central Street (Route 135) and Speen Street in Natick (FFY 2010)
- Subregional Roadway Study Location
  - Route 20 in Marlborough (FFY 2016)—Resulted in two Massachusetts Department of Transportation (MassDOT) funded projects
    - Resurfacing and related work on Route 20, Project # 608467 will funded in 2021
    - Improvement at Route 20 at Curtis Avenue, Project # 608566 will be funded in 2023

Transportation Needs Identified through Outreach in the MWRC Region

Roadway

- Improve on pedestrian, bicycle, and transit accommodations on Route 9 to make crossing this road safer. Route 9 separates neighborhoods, experiences high congestion, and has a perception as a thoroughfare only. There are eight to 10 problematic intersections that are interconnected
- Improve on intersections with safety issues and traffic light timing troubles including Route 16/Route 126, Route 16/Route 27, and Route 16/Route 135
- Incorporate more smart/adaptive signals to manage local versus regional traffic
- Implement best practices for Complete Streets
- Evaluate advancing Transportation Improvement Program (or TIP) projects with uncertainty in funding
- Build infrastructure to support electric vehicles, including alternative fueling
- Research the impact of driverless cars
- Redesign Boulder Brook culvert under Route 9
- Improve Route 135 crossing at railroad tracks in Framingham
- Improve Interstate 90 (I-90), Exit 12 to New York Avenue in Framingham
- Redesign Cordaville Road in Southborough
- Improve Route 27 in Natick and the Route 27/Route 9 bridge
- Improve access to and from Exit 13 and Speen Street, and Route 30 in Framingham and Natick
- Implement Complete Streets on Route 135 in Hopkington and Natick

Transit

- Improve access to commuter rail stations with limited parking and look into park-and-ride options
- Transform Mass Pike Exit 12 intersection into a transit hub with intercity bus and first- and last-mile shuttles to employment centers (reducing traffic and parking in lots), multimodal park-and-ride options, or rail spur
- Create shuttles to downtown Framingham from Dennison power plant and the Golden Triangle
- Enhance reverse commuting opportunities by increasing trains traveling to Framingham/Worcester
- Create a North/South connection in Natick
- Increase rail service to Boston from Wellesley and Weston
- Create a North/South connection between Wellesley and Weston
- Increase MetroWest Regional Transit Authority access and routes in Ashland

- Create rail connection along Route 30
- Create first- and last-mile connections to the Massachusetts Bay Transportation Authority (MBTA) in Weston and Ashland
- Improve Southborough Station on the Framingham/Worcester commuter rail line

Pedestrian

- Focus on pedestrians in downtown Framingham
- Create a pedestrian-dedicated environment by encouraging temporary road closures
- Provide public benches at Farm Pond in Framingham
- Implement wayfinding improvements in downtown Ashland
- Implement wayfinding improvements in downtown Framingham
- Implement a safe path connection to recreational area and ponds in Framingham
- Improve Cedar Street sidewalks in Ashland

Bicycle

- Implement bike share at MBTA stations in MetroWest subregion
- Create bike trail west to Sudbury through wildlife refuge
- Expand Cochituate Aqueduct Trail
- Expand Upper Charles Trail in Ashland
- Connect Weston and Waltham bike path through the Mass Central Rail Trail
- Connect the Cochituate Rail Trail with the Natick Center commuter rail station
- Expand Upper Charles Trail through Sherborn from Holliston to Framingham Center
- Paint bike lanes around schools to create easier multimodal connections for students

Land Use and Technology

- Consider subsidized use of Uber and Lyft for older adults to travel to medical appointments, run errands, and participate in socialization opportunities

Parking

- Expand parking at downtown Natick Center commuter rail station
- Expand parking at Wellesley Square commuter rail station
- Expand parking at Wellesley Hills commuter rail station
- Expand parking at Wellesley Farms commuter rail station
- Provide parking structure over rail stock yard in downtown Framingham

Study Ideas and Opportunities in the MWRC Region

Roadway

- Analyze regional developments and the impact on traffic, such as the development on Route 20 in Weston/Wayland
- Research traffic trends and impacts to create online database for planners to use

Transit

- Research how to bring workers from the Inner Core to MWRC employers

Land Use and Technology

- Study the potential of commercial and residential mixed use development to reduce traffic (work, shop, and live)
- Study the reuse of downtown centers for commercial mixed use development in Natick
- Research the impact of navigation systems (such as Waze) on traffic, especially on side streets
- Evaluate how to make downtowns more attractive to encourage economic development

SELECTED FINDINGS FROM BOSTON MPO REGION-WIDE NEEDS ASSESSMENT

Safety Needs

- Identify fatal and serious roadway crash factors and countermeasures
- Consider capital investment, education, enforcement, and other approaches to improve safety
- Address the MassDOT-identified Top 200 high crash intersections in the Boston region (66 total), such as those on Route 9 in Framingham, Route 107 in Lynn and Salem, and Route 16 in Chelsea, Everett, and Medford
- Improve pedestrian connections at intersections, especially in top-ranking pedestrian crash cluster locations, including those in downtown areas in Chelsea, Lynn, Quincy, Boston, and Framingham
- Expand well-maintained and connected sidewalk and bicycle networks
- Develop separated shared-use paths for pedestrians and bicyclists
- Address top-ranking bicycle crash cluster locations, including those in Boston, Cambridge, and Somerville
- Modernize obsolete interchanges, such as I-90 and Interstate 95 (I-95) interchange in Weston and the I-95 Middlesex Turnpike interchange in Burlington, to reduce truck crashes
- Incorporate Complete Streets design and traffic calming principles in roadway projects

- Identify strategies to manage roadway user priority, parking, and curb space
- Identify and invest in priority transit state of good repair and modernization projects. For instance, positive train control and rapid transit vehicle upgrades
- Monitor advancements in autonomous vehicle (AV) technology and analyze the safety impacts of AV deployments, particularly in the Boston region

System Preservation and Modernization Needs

- Maximize the number of bridges in the region considered to be in good condition and minimize the number of bridges considered to be in poor condition
- Monitor the MassDOT Pavement Management program
- Identify the location of sidewalks and their condition, specifically sidewalks around transit stations
- Support investments that improve the accessibility of transit stations, bus stops, and paratransit services
- Support investments that upgrade transit fleets, facilities, and systems to provide more efficient, reliable, and sustainable service
- Support climate vulnerability assessments and invest in projects and programs resulting from these processes
- Improve connections between intermodal facilities and the regional road network
- Improve resiliency of the region's transportation system to prepare for existing or future extreme conditions, such as sea level rise and flooding

Capacity Management and Mobility Needs

- Reduce congestion on expressways, interchanges and arterials
- Reduce congestion at bottleneck locations on the regional roadway network
- Continue to monitor car sharing as it is poorly integrated with other modes and not accessible in all areas
- Continue to monitor Transit Demand Management (TDM) services
- Research strategies for TDM as relatively few municipalities in the Boston region have TDM ordinances
- Reduce congestion on regional roadways to facilitate the movement of freight
- Reduce conflicts between automobiles and delivery trucks that are competing for curb space
- Improve access to transit service that runs frequently, and increase capacity at park-and-ride lots that are at or approaching capacity
- Improve the reliability of bus service as bus speeds are projected to decline due to increased congestion. The introduction of more dedicated bus lanes could be a potential solution
- Address increased transit delays resulting from the system's aging rapid transit infrastructure

- Address crowding on rapid transit lines and bus routes. According to a 2040 no-build scenario, crowding is projected to increase to unacceptable levels in some locations
- Address the need for sufficient MBTA garage space to fully modernize and expand the fleet
- Examine off-peak and reverse commute options between suburban areas and the Boston Central Business District as the commuter rail mostly serves peak-period travel
- Identify challenges to making first- and last-mile connections, which are major barriers to transit usage
- Expand pedestrian and bicycle infrastructure so that residential areas and employment locations are close to facilitates that are conducive to regular use
- Connect the disjointed elements of the bicycle network to create a cohesive network
- Create a comprehensive inventory of exiting sidewalk data, including sidewalk coverage and condition

Clean Air and Sustainable Community Needs

- Reduce carbon dioxide emissions from MPO-funded transportation projects and programs to help meet the requirements of the Global Warming Solutions Act, particularly projects that help to reduce vehicle-miles traveled
- Prioritize transportation projects that meet the Green Communities certification and assist municipalities in meeting or maintaining these certifications
- Provide data and assistance to municipalities in developing their greenhouse gas inventories and energy reduction plans
- Reduce volatile organic compounds, nitrogen oxides, carbon monoxide, and particulate matter emissions from MPO-funded transportation projects and programs (particularly those that help to reduce vehicle-miles traveled) to help maintain the air quality standards in the region
- Identify projects and programs that can meet criteria established to protect wetlands, cultural resources, open space, and wildlife
- Ensure that infrastructure to reduce storm water pollution and impacts from natural hazard events (for example, flooding or winter storms) is incorporated in project design

Transportation Equity Needs

- Address the lack of transit service for transportation equity (TE) populations compared to service available to non-TE populations
- Increase reliability of rapid transit and bus service for populations whose only option is transit
- Address inadequate access to safe bicycle facilities for elderly and youth populations
- Increase docked bikeshare facilities in the Inner Core for some communities with a high share of low-income or minority populations
- Increase off-road active transportation routes in communities with a high share of TE populations that live near congested roadways

- Improve coordination of schedules, routes, and services between towns and the MBTA and other regional transit authorities
- Expand transit service (late night, early morning, and reverse commute) between job-rich centers, such as Longwood Medical Area, the Seaport, suburban job centers, and underserved neighborhoods
- Provide new transit service between low-income suburban residential communities and suburban job centers
- Consider building transit-oriented developments that provide affordable housing near transit hubs and employment centers to meet the needs of TE populations
- Improve sidewalks and street crossings, especially around schools, so that they are safe for children and elderly adults
- Document potential exposure of TE populations to climate change impacts and determine how the ability to access transportation may be affected

Economic Vitality Needs

- Administer infrastructure improvements to support growth in the priority development areas, including improving equitable access to employment and housing via public transit, walking, and biking options
- Arrange better commuter rail scheduling including more frequent, reliable off-peak, late-night, and weekend service to support reverse commuting, especially for service workers
- Coordinate with regional transit authorities to address the needs of customers who travel between different regional transit authority service areas
- Provide funding sources to connect regional transit authority services