



# BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Stephanie Pollack, MassDOT Secretary and CEO and MPO Chair  
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## ***TECHNICAL MEMORANDUM***

**DATE:** August 20, 2020  
**TO:** Boston Region Metropolitan Planning Organization  
**FROM:** Anne McGahan and Michelle Scott, Boston Region MPO Staff  
**RE:** Policies for the Boston Region MPO's Major Infrastructure Program

This memorandum was prepared by Boston Region Metropolitan Planning Organization's (MPO) staff to support MPO board member discussions to establish policies for its Major Infrastructure (MI) investment program.

### **1 INTRODUCTION**

This document includes the following information to support the MPO's continued discussion on its MI investment program:

- A summary of the MPO's recent discussion of its MI program
- An overview of the MPO's current set of investment programs, which includes the MI program
- A history of the MPO's MI program, which describes the evolution of relevant cost thresholds and definitions
- An explanation of related Federal Highway Administration (FHWA) terms and requirements, which affect the projects that are included in its long-range transportation plan (LRTP)
- Staff recommendations for MI program definitions, thresholds, and policies to support future MPO decision-making about projects that are included in its LRTP and/or Transportation Improvement Program (TIP)

MPO staff requests that the MPO take action to adopt a set of definitions for its MI program at its August 20, 2020, MPO meeting. Staff's recommendations for MI project definitions include the following:

1. Major Infrastructure projects on the roadway network include those that meet at least one of the following criteria:
  - Projects that improve facilities that are important to regional travel, which include Interstate Highways; Principal Arterial Freeways and Expressways; or all sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access (these

**Civil Rights, nondiscrimination, and accessibility information is on the last page.**

- roads are shown in Figures 1 and 2 of this memorandum)
- Projects that cost \$50 million or more
2. Major Infrastructure projects on the transit network include those that meet at least one of the following criteria:
    - Projects that add new connections to or extend the rail or fixed-guideway transit network or extend the bus rapid transit network; dedicated bus lanes and transit signal priority improvements would be considered under the Complete Streets program
    - Projects that cost \$50 million or more

In addition, staff is proposing recommendations for scoring MI projects as part of the LRTP and TIP. The following recommendations will be introduced for consideration at the August 20, 2020, MPO meeting.

1. Develop a two-step process for scoring MI projects in the LRTP with all projects evaluated using the same LRTP criteria. Each project will be assigned an LRTP score regardless of its design status. Any MI projects that have advanced to approximately the 25 percent design phase will *also* get a TIP score using the TIP criteria. This will provide a comparable set of scores for all LRTP projects, plus extra TIP scores for those that have advanced in their design.
2. Review the status of MI projects included in previous LRTPs to ensure they are moving toward implementation. If there is no movement in design or construction or a schedule for implementation is not available, the MPO should consider placing the project in the Universe of Projects for consideration in future LRTPs.

## 2 RECENT MPO DISCUSSIONS ABOUT THE MPO'S MI PROGRAM

As part of the adoption of the *Destination 2040* LRTP in August 2019, the MPO approved funding for six different investment programs. The six programs include

- Complete Streets,
- Intersection Improvement,
- Bicycle Network and Pedestrian Connections,
- Community Connections,
- Transit Modernization, and
- Major Infrastructure.

The MI program, as described in *Destination 2040*, includes projects that change the capacity to the transportation network and/or cost more than \$20 million. Relevant highway projects include those that change the capacity of the roadway

network (such as adding or removing travel lanes) or those that exceed the \$20 million cost threshold. Relevant transit projects include those that (1) create new transit connections, (2) change capacity on fixed-guideway transit facilities or bus rapid transit routes, or (3) cost more than \$20 million. When developing *Destination 2040*, the MPO considered including an interchange modernization program but ultimately did not adopt this element into the program.

*Destination 2040* and previous LRTPs describe funding amounts that the MPO would allocate to its six investment programs over the LRTP planning horizon of at least 20 years. *Destination 2040* also reaffirmed the MPO's policy of continuing an operations and management approach to programming—giving priority to low-cost, non-major infrastructure projects. Table 1 provides the current description of these programs and the funding goals of the MPO Regional Target dollars that the MPO intends to allocate to each program between now and 2040. In addition to describing these funding goals, *Destination 2040* and previous LRTPs describe each MI project that the MPO plans to fund because of its relatively high cost or because it may meet FHWA definitions of projects that may affect regional air quality. When the MPO crafts its LRTP, it assigns these MI projects to a five-year time band within the 20-year or more life of the plan. The MPO lists specific projects that it plans to fund through the five other investment programs when developing the TIP.

**Table 1**  
**Destination 2040 Investment Programs**

<b>Program</b>	<b>Description</b>	<b>Funding Goal (Share of MPO Regional Target Funds in the LRTP)</b>
Major Infrastructure	<p><i>Program Purpose:</i> The MPO's Major Infrastructure program includes projects that are high cost and/or change the capacity of the roadway or transit networks. These projects are listed specifically in the LRTP.</p> <p><i>Improvement Types:</i> The Major Infrastructure program includes projects that change the capacity to the transportation network and/or cost more than \$20 million. Relevant highway projects include those that change the capacity of the roadway network (such as by adding or removing travel lanes) or those that exceed the \$20 million threshold. Relevant transit projects include those that (1) create new transit connections, (2) change capacity on all fixed-guideway transit facilities or bus rapid transit routes, or (3) projects that cost more than \$20 million.</p>	<p>No more than 30 percent of MPO Regional Target funding.</p> <p>In addition, the MPO will not program a single Major Infrastructure project if it requires more than 30 percent of funding in a particular LRTP five-year time band.</p>
Complete Streets	<p><i>Program Purpose:</i> This program modernizes roadways to improve safety and mobility for all users. Projects will reduce delay and improve bus transit reliability. Improved corridors will expand transportation options and provide better access to transit to improve mobility for all and to encourage mode shift.</p> <p><i>Improvement Types:</i> Improvements can consist of continuous sidewalks and bicycle lanes, cycle tracks, other bicycle facilities, and dedicated bus lanes, as well as updated signals at intersections along a corridor. Improvements can also address other roadway infrastructure in the corridor, such as bridges, drainage, pavement, and roadway geometry.</p>	At least 45 percent of Regional Target funding
Intersection Improvement	<p><i>Program Purpose:</i> This program improves intersections to increase safety for all users, reduce delay, improve bus transit reliability, and address accessibility needs for pedestrians.</p> <p><i>Improvement Types:</i> Improvements may include adding or modernizing signals, improving signal operations, adding turning lanes, shortening crossing distances for pedestrians, providing striping and lighting for bicyclists, and improving sidewalks and curb cuts.</p>	At least 13 percent of Regional Target funding
Bicycle Network and Pedestrian Connections	<p><i>Program Purpose:</i> This program expands bicycle and pedestrian networks to improve safe access to transit, school, employment centers, and shopping destinations.</p> <p><i>Improvement Types:</i> Bicycle and pedestrian connection projects include constructing new, off-road bicycle or multiuse paths, improving bicycle and pedestrian crossings, or building new sidewalks. Improvements can also consist of traffic calming, sidewalk network expansion, and upgrades similar to those in a Complete Streets Program, or enhanced signage and lighting.</p>	At least 5 percent of Regional Target funding

Program	Description	Funding Goal (Share of MPO Regional Target Funds in the LRTP)
Transit Modernization	<p><i>Program Purpose:</i> Increasing investments in transit modernization and maintenance projects would allow the MPO to use its discretionary funding to augment planned transit improvements throughout the region and help the MPO reach its transit-related goals as established in the LRTP.</p> <p><i>Improvement Types:</i> The MPO would identify transit maintenance and modernization projects identified through coordination with the MassDOT, MBTA, MWRTA, and CATA. Projects could include accessibility improvements, station modernization projects, parking improvements at stations, infrastructure state of good repair projects, fleet modernization, bus maintenance facility updates, and climate resiliency projects.</p>	At least 5 percent of Regional Target funding
Community Connections	<p><i>Program Purpose:</i> This program enables the MPO to help address first- and last-mile access needs in the region, which can improve safety, expand mobility options, and increase transit use.</p> <p><i>Improvement Types:</i> The Community Connections program supports a variety of project types:</p> <ul style="list-style-type: none"> <li>• Transit Operations: Projects that close gaps in the transit network (first- and last-mile shuttles, partnerships with transportation network companies, transit enhancements, and technology updates)</li> <li>• Parking Management: Additional parking for automobiles and bicycles, and leasing off-site parking near transit stations with shuttle connections</li> <li>• Bicycle and Pedestrian Improvements: Bicycle and pedestrian improvements for transit access, improvements to nonautomotive transportation infrastructure for travelers with mobility impairments, and training and equipment for bicycles on transit</li> <li>• Education and Wayfinding: Projects could include travel instruction, training on new technologies, signage, and pilot or demonstration projects</li> <li>• Connect Elderly Adults with Transportation: Projects that connect elderly adults with transportation options, such as transportation network companies</li> </ul>	At least 2 percent of Regional Target funding

CATA = Cape Ann Transit Authority. LRTP = Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MBTA = Massachusetts Bay Transportation Authority. MPO = Metropolitan Planning Organization. MWRTA = Metrowest Regional Transit Authority.  
Source: Boston Region Metropolitan Planning Organization staff.

Recently MPO staff proposed changes to the definition of the MI program in response to FHWA's recommendations that the MPO revisit the \$20 million cost threshold for a project to be identified as a MI project. In November 2019, the MPO discussed whether the current definition should continue to include the \$20 million threshold, and at that meeting, voted to keep that element in the definition.

However, this issue arose again in spring 2020 when the MPO considered a Federal Fiscal Years (FFY) 2020–24 TIP Amendment. Cost increases resulted in three Complete Streets projects reaching the \$20 million dollar threshold, thus requiring the MPO to designate them as MI projects and incorporate them into the LRTP via an amendment. This situation caused MPO members to question whether Complete Streets projects that cost more than \$20 million should be included in the MI Program or in the Complete Streets Program, because including them in the MI Program would affect the funding goals for investment programs that the MPO established in *Destination 2040*.

The MPO discussed MI Program definitions and thresholds again at the MPO's May 14, 2020, meeting. MPO members raised several issues and ideas.

- There should be some cost threshold to retain a level of scrutiny for projects that are expensive.
- The MI definition should capture projects that have a regional impact, such as an interchange improvement or significant transit extension.
- There should be some way of accounting for projects that do not change capacity but have an impact on a wide range of the public. The MPO could identify these projects by the project roadway type or the vehicle-miles traveled on that roadway.

After this discussion, several members expressed support for increasing the threshold amount to \$50 million. The Chair conducted a straw poll asking members if they agreed with that threshold. Most members were in agreement, though some preferred no threshold at all. The Chair asked staff to provide members with FHWA definitions of regionally significant projects.

At the June 25, 2020, MPO meeting, staff presented additional information about how FHWA defines regionally significant projects (see Section 3.1 for more details). Members continued discussion on the cost threshold amount and the types of projects that should be included in this program and agreed to continue this conversation at a subsequent meeting. In response to issues raised at that meeting, staff assembled this memorandum to aid in the discussion.

### 3 THE EVOLUTION OF THE BOSTON MPO'S MI PROGRAM

As previously mentioned, the MPO included a MI investment program in its *Destination 2040* LRTP, as well as in prior LRTPs. Historically, the MPO has identified major infrastructure projects based on cost or whether they change capacity on the transportation network. This section describes these elements of past and current MI definitions, where they come from, and how they have changed over time. These details may support MPO decisions about whether and how these elements should be incorporated into future MI definitions and policies.

#### 3.1 Projects that Change Capacity of the Transportation Network

In the MPO's last four LRTPs (the earliest of which was adopted in 2008), the MI program included projects that change the capacity of the transportation network. This criterion responded to federal regulations for air quality conformity, because the MPO needed to perform air quality conformity determinations for LRTP and TIP approval. The air quality conformity determination process and requirements specific to the Boston Region MPO are described in detail in Chapter 7 of *Destination 2040* and in Chapter 5 of the endorsed FFYs 2021–25 TIP. The relevant aspect for the MPO's discussion of MI definitions and policies is that the MPO must reflect projects that FHWA defines as "regionally significant" in travel demand model runs to account for existing and projected emissions of ozone and carbon monoxide (CO). This is intended to help the MPO ensure that proposed projects would not contribute to a net increase in emissions in the region. In particular, the MPO must reflect "regionally significant" projects in the travel demand model. The FHWA defines regionally significant projects as

A transportation project (other than an exempt project) that is on a facility that serves regional transportation needs (such as access to and from the area outside of the MPO region; major activity centers in the region; major planned developments, such as new retail malls and sport complexes; and transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed-guideway transit facilities that offer an alternative to regional highway travel.

Because of the requirements related to air quality conformity determinations required for its LRTP, the MPO chose to define MI projects as those that change the capacity of the transportation network that can be included in the travel demand model. This includes all projects that add or reduce travel lanes as well as all new fixed-guideway transit service. Currently, the MPO's travel demand model includes all interstate highways, arterials, and collector roadways.

The Boston Region MPO's air quality designations have changed over time, and while it still must perform air quality conformity determinations for its TIPs and LRTPs, it is no longer required to produce a regional emissions analysis for ozone and CO using the travel demand model. MPO staff still use the travel demand model to analyze projected carbon dioxide emissions from LRTP projects to fulfill Massachusetts Global Warming Solutions Act requirements. These results are not subject to federal approval.

The MPO will continue to include projects that change the capacity of the transportation system in air quality analyses that use the travel demand model. However, the MPO does not need to use this criterion as a basis for its definition of major infrastructure projects if it does not support the MPO's broader policy and spending decisions.

### **3.2 FHWA and MassDOT Guidance on Cost Thresholds**

The MPO's past and current definitions of major infrastructure projects have also been shaped by guidance from FHWA and Massachusetts Department of Transportation (MassDOT) on what projects should be included in MPO LRTPs. This guidance, which has varied over time, has suggested cost thresholds for LRTP projects, as well as other project characteristics.

#### ***Federal Guidance for the FFY 2009 LRTP (Journey to 2030 Major Amendment)***

In 2008, FHWA provided guidance recommending that all projects with a cost of \$10 million or higher be included in the Boston Region MPO's LRTP, in accordance with the Project Oversight Agreement between MassDOT and FHWA Massachusetts Division. This guidance also indicated that projects that require FHWA to approve an Environmental Assessment (EA) or Environmental Impact Statement (EIS) should be included in the list of recommended projects and accounted for in the LRTP's financial constraint. In addition, it stated that regionally significant projects as defined above must be included in the LRTP prior to MassDOT seeking action from FHWA/Federal Transit Administration (FTA), including any environmental action. These projects had to be listed in the LRTP and included in its travel demand modeling analyses.

#### ***Federal Guidance for the FFY 2016 LRTP (Charting Progress to 2040)***

FHWA's guidance for the development of the 2016 LRTP stated that all projects with a total cost of \$20 million or greater should be included in the LRTP. It added that the following projects should also be included in the LRTP regardless of funding source:

- Projects that may be of regional significance (including those projects that are regionally significant for air quality conformity purpose)

- Projects that require an EA or EIS
- Projects that have other potential complexities
- Any Federal-aid eligible roadway that has generated, or has the potential to generate, significant interest or impacts, including and not limited to interchanges, Transportation Investment Generating Economic Recovery (TIGER grant projects), Public/Private Partnerships
- Projects that cross MPO boundaries

### ***Federal Guidance for the FFY 2019 LRTP (Destination 2040)***

FHWA's guidance for development of the 2019 LRTPs stated that the LRTP should contain all regionally significant projects requiring approval by FHWA/FTA, whether or not the projects are federally funded or are 100 percent state or privately funded. For public information and conformity purposes, the TIPs shall contain all regionally significant projects, including all major infrastructure projects, proposed to be funded with federal and nonfederal funds. There is no reference to a specific cost threshold for projects in this guidance.

All guidance from 2008 through 2019 referred to regionally significant projects. FHWA's 2019 guidance also includes a reference to major infrastructure projects, which it defines as a project that costs more than \$500 million. In addition, MassDOT's guidance to MPO's for 2019 LRTP development stated that all projects of regional significance, including capacity-expansion projects and projects more than \$20 million in cost, should be included in the LRTP.

## **4 CONSIDERATIONS FOR FUTURE MI DEFINITIONS AND POLICIES**

Past and current MPO definitions for MI projects and the recent discussions of this topic at MPO meetings highlight several themes that the MPO can consider when updating MI definitions and policies.

- Cost thresholds may provide a way for the MPO to identify projects that merit further scrutiny; these thresholds may need occasional updates.
- Transportation projects may not need to add or remove capacity to have regional impacts, depending on the project's location and other characteristics. Conversely, a project may add or remove capacity, but not in ways that have regional impacts.
- MI definitions for projects that focus on federal requirements for projects that must be included in LRTPs may not meet the needs of the MPO as it decides how to allocate its limited funds across transportation projects and programs.

Historic definitions and guidance and MPO member feedback also highlight project characteristics that the MPO can incorporate into updated MI definitions and policies. These include not only cost and changes to capacity, but also

- roadway functional classification;
- EA or EIS requirements;
- projects requiring specific levels of federal or state approval or oversight;
- projects that cross MPO boundaries;
- projects that will be funded (entirely or in part) through specific federal discretionary grant programs;
- projects that serve specific destinations within the region;
- other project characteristics, such as whether a project includes an interchange.

MPO staff considered these items and, in the case of roadways, concluded that functional classification of roadways was the best characteristic to determine if a project is affecting regional travel. Functional classification information is provided below. Projects requiring federal approval or oversight must still continue to be listed in the LRTP per federal guidance.

#### **4.1 Functional Classification of Roadways in the Boston Region MPO**

This section provides further detail about the functional classification of roadways in the Boston region, which may help the MPO to define projects that are important to regional travel. For example, as previously mentioned in FHWA's definition of a regionally significant project, a minimum of all *principal arterial highways* are required to be included in the modeling of projects in the MPO region. These roadway types serve regional transportation needs. MPO staff also note the levels of access control that are prevalent on each class of roadway.

Definitions of various classes of roadways are as follows:

- Interstate Highways—Interstates are the highest classification of arterials and designed and constructed with mobility and long-distance travel in mind. They are defined by United States statute that forms a system whose components extend from state to state across the contiguous 48 states. Access to these roadways is through entrance and exit ramps.
- Principal Arterial Freeways or Expressways—a broad class of roads that include express highways built to interstate standards that are not designated as part of the interstate system. Access to these roadways is also provided through entrance and exit ramps.

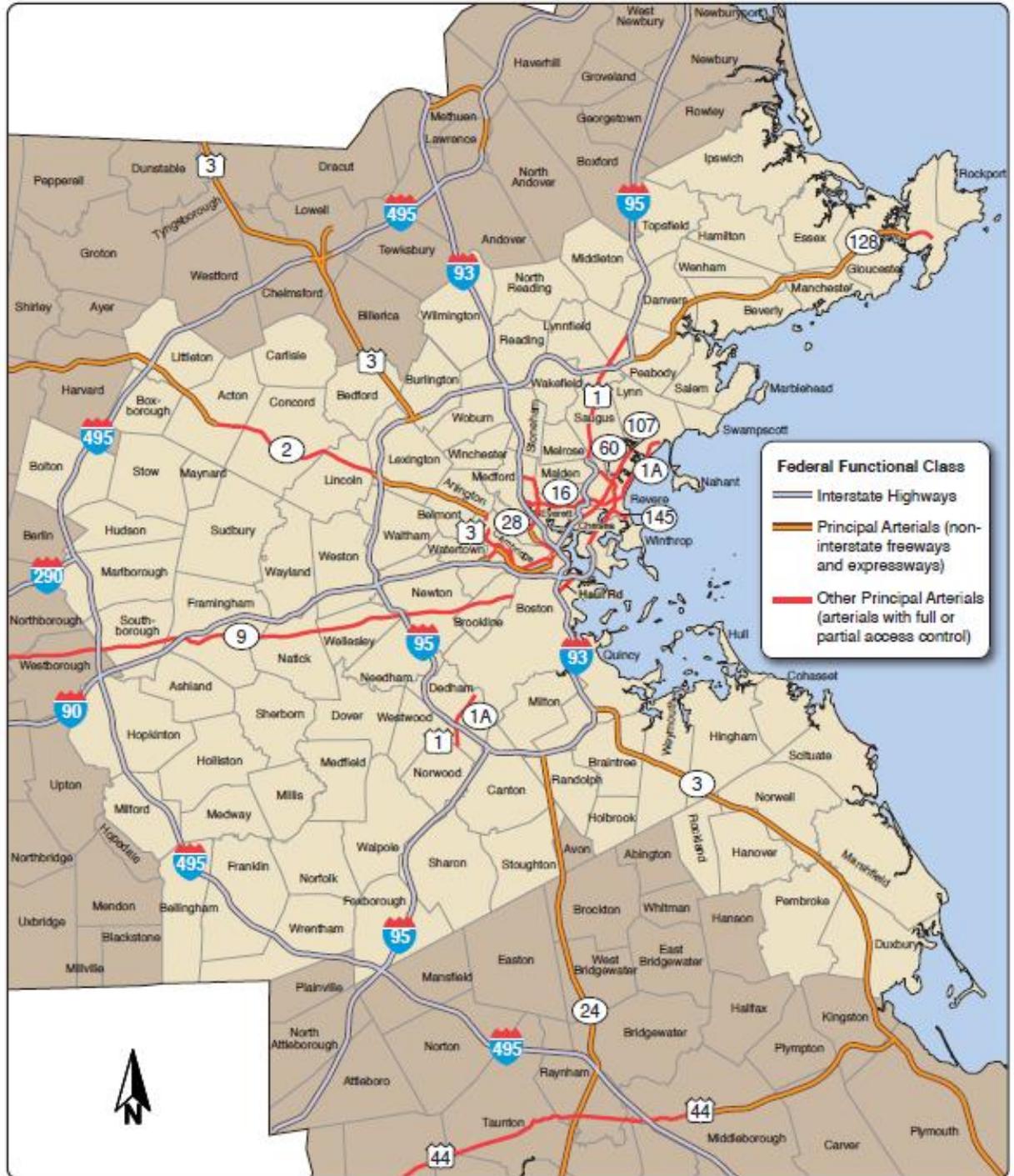
- Principal Arterials, Other—These roadways serve major centers of metropolitan areas and provide a high degree of mobility. Unlike their access-controlled counterparts, abutting land uses can be served directly. Forms of access for Other Principal Arterial roadways include driveways to specific parcels and at-grade intersections with other roadways; however, some of these roadways do have fully or partially controlled access, which includes entrance and exit ramps or side roads that intersect the road at grade, instead of ramps.

Interstate and principal arterial roadways in the Boston Region MPO are shown in Figure 1. Figure 2 shows these roadways in the region's Inner Core area.

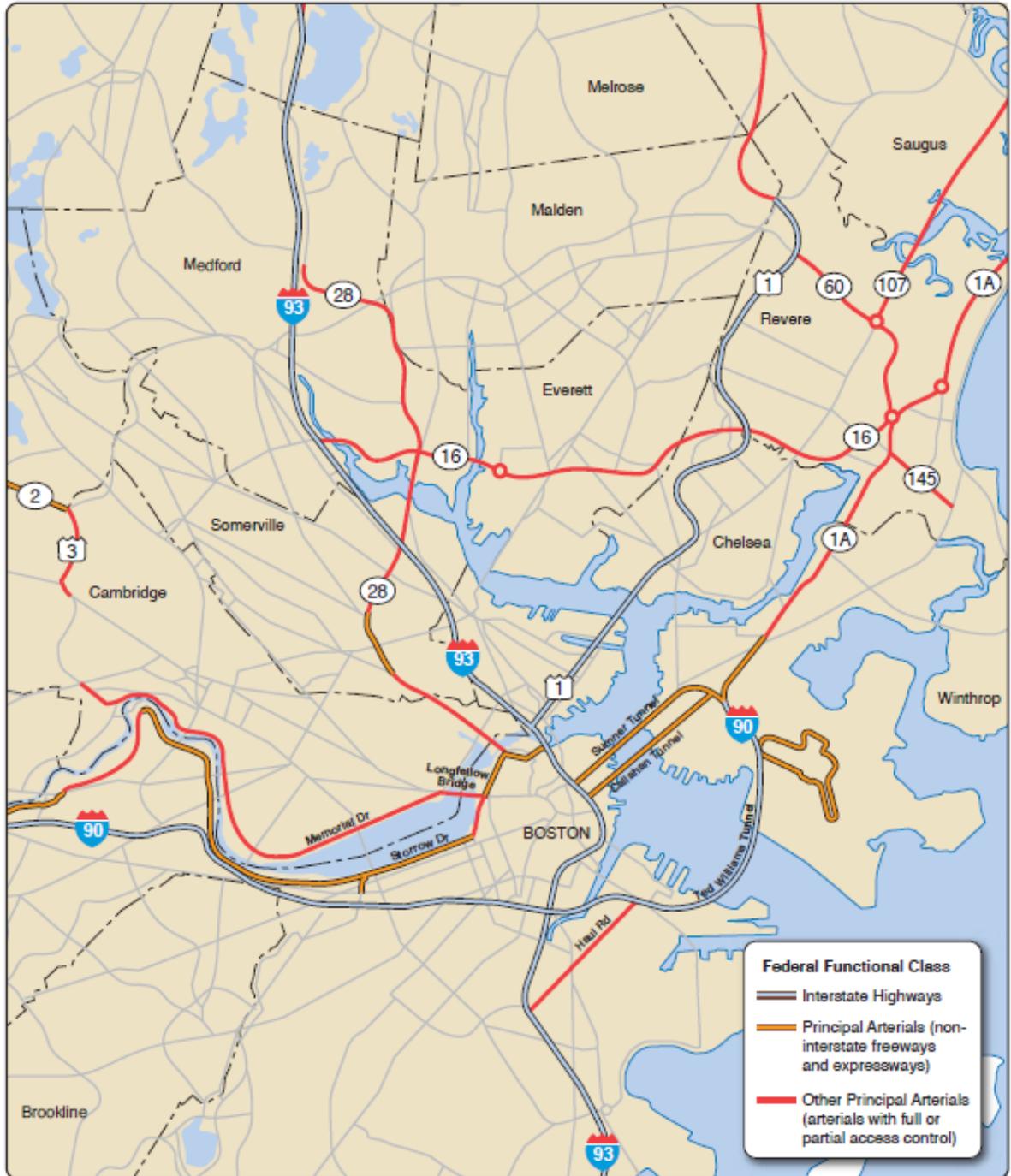
Lower-level classes of roadways include Minor Arterials, Collector Roadways, and Local Roads.

- Minor Arterials—Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system. In an urban context, they interconnect and augment the higher Arterial system, provide intra-community continuity and may carry local bus routes.
- Collector Roadways—Collector roadways serve a critical role in the roadway network by gathering traffic from local roads and funneling them to the arterial network.
- Local Roads—Local roads account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip. Bus routes generally do not run on local roads. They are often designed to discourage through traffic.

**Figure 1**  
**Interstate Highways, Principal Arterial Freeways and Expressways,**  
**and Other Fully or Partially Access-Controlled Principal Arterials in the**  
**Boston Region MPO**



**Figure 2**  
**Interstate Highways, Principal Arterial Freeways and Expressways, and**  
**Other Fully or Partially Access-Controlled Principal Arterials in the**  
**Boston Region MPO's Inner Core**



## 4.2 Functional Classification of Projects included in the TIP and LRTP

For MPO members to understand the types of projects considered for programming in the region, staff assembled a list of projects that are included in the *Destination 2040* LRTP and the FFYs 2021–25 TIP, along with a selected list of projects included in the Universe of Projects from both documents. Tables 2 through 6 include the projects by roadway classification, investment category, cost, and status in the LRTP and TIP. This information can be used in the discussions to determine the types of projects that should be considered as part of the MI program.

**Table 2  
Programmed and Conceptual Projects on Interstate Highways in the LRTP and TIP**

<b>PROJIS Number</b>	<b>Municipality</b>	<b>Project Proponent</b>	<b>Project Name</b>	<b>Status</b>	<b>Current Investment Program</b>	<b>Capacity Change</b>	<b>Federal Roadway Classification</b>	<b>Cost Estimate</b>	<b>Meets \$50 Million Threshold</b>	<b>Proposed Investment Program</b>
606475	Boston	MassDOT	Replacement of Allston I-90 Elevated Viaduct, B-16-359, including Interchange Reconstruction, Beacon Park Yard Layover, and West Station	LRTP	Major Infrastructure	Y	Interstate	\$936,100,000 – \$1,200,000,000	Y	NC
603739	Wrentham	MassDOT	Construction of I-495/Route 1A Ramps*	TIP	Intersection Improvement	N	Interstate	\$16,786,952		Major Infrastructure
607701	Southborough, Westborough	MassDOT	Improvements at I-495 and Route 9	U	Major Infrastructure	N	Interstate	\$35,000,000		NC
605605	Woburn, Reading, Stoneham, Wakefield	MassDOT	Interchange Improvements to I-93/I-95	U	Major Infrastructure	Y	Interstate	\$276,708,800	Y	NC
604862	Bellingham	MassDOT	Ramp Construction and Relocation, I-495 at Route 126 (Hartford Avenue)	U	TBD*	N	Interstate	\$13,543,400		NC
87790	Canton, Dedham, Norwood	MassDOT	Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening	U	Major Infrastructure	Y	Interstate	\$202,206,000	Y	NC
608128	Boston	MassDOT	Southeast Expressway Modification (Southampton Interchange)	U	Major Infrastructure	Y	Interstate	\$143,750,000	Y	NC
N/A	Newton	Newton	Newton Corner Rotary (Interchange 17) Improvements	U	TBD*	TBD	Interstate	N/A		NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
N/A	Newton	Newton	New Route 128 Ramp to Riverside Station	U	Major Infrastructure	Y	Interstate	N/A		NC
N/A	Braintree	Braintree/MassDOT	I-93/Route 3 Interchange (Braintree Split)	U	Major Infrastructure	Y	Interstate	\$53,289,000	Y	NC
N/A	Randolph	MassDOT	I-93/Route 24 Interchange	U	TBD*	TBD	Interstate	N/A		NC

\* Funded with MPO Regional Target funds.

\*\* No Investment Program was assigned. The MPO chose not to include an Interchange Improvement Program as part of its Major Infrastructure Program.

I = Interstate. LRTP = In the Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MPO = Metropolitan Planning Organization. N = No. NC = No change. TBD = To be determined. TIP = In the Transportation Improvement Program. U = In the Universe of the LRTP or TIP. Y = Yes.

Source: Boston Region Metropolitan Planning Organization staff.

**Table 3  
Programmed and Conceptual Projects on Principal Arterial Freeways or Expressways in the LRTP and TIP**

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
607981	Somerville	Somerville	McGrath Boulevard Project*	LRTP	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$82,500,000	Y	NC
606476	MassDOT	MassDOT	Sumner Tunnel Reconstruction*	TIP	Major Infrastructure	N	Principal Arterial - Other Freeway	\$22,115,687	Y**	NC
605012	Malden, Revere, Saugus	MassDOT	Reconstruction and Widening on Route 1, from Route 60 to Route 99	U	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$172,500,000	Y	NC
604638	Peabody	MassDOT	Mainline Improvements on Route 128 (Phase II)	U	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$24,031,419		NC
N/A	South Shore	MassDOT	Route 3 South Widening	U	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$800,000,000	Y	NC
N/A	Revere	Revere (MassDOT)	Route 1/Route 16 Connector	U	Major Infrastructure	Y	Principal Arterial - Other Freeway	N/A		NC
607727	Beverly	Beverly	Interchange Reconstruction at Route 128/Exit 19 at Brimbal Avenue (Phase II)	U	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$23,000,000		NC

\* Funded with MPO Regional Target funds.

\*\* The total project cost estimate is more than \$50 million. The cost estimate shown is the amount funded by the MPO.

LRTP = In the Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MPO = Metropolitan Planning Organization. N = No. N/A = Not applicable. NC = No change. TBD = To be determined. TIP = In the Transportation Improvement Program. U = In the Universe of the LRTP or TIP. Y = Yes.

Source: Boston Region Metropolitan Planning Organization staff.

**Table 4**  
**Programmed and Conceptual Projects on Principal Arterial Highways Classified as “Other” in the LRTP and TIP**

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
607981	Somerville	Somerville	McGrath Boulevard Project*	LRTP	Major Infrastructure	Y	Principal Arterial - Other Freeway	\$82,500,000	Y	NC
N/A	Lexington	Lexington	Route 4/225 (Bedford Street) and Hartwell Avenue*	LRTP	Major Infrastructure	Y	Principal Arterial - Other	\$30,557,000		Complete Streets
609246	Lynn	Lynn	Reconstruction of Western Avenue (Route 107)*	LRTP	Major Infrastructure	N	Principal Arterial - Other	\$36,205,000		Complete Streets
606109	Framingham	Framingham	Intersection Improvements at Route 126/135/MBTA and CSX Railroad*	LRTP	Major Infrastructure	Y	Principal Arterial - Other	\$115,000,000	Y	NC
605313	Natick	MassDOT	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements*	LRTP	Major Infrastructure	N	Principal Arterial - Other - Fully Controlled Access	\$25,793,370		NC
606635	Newton, Needham	Newton, Needham	Reconstruction of Highland Avenue, Needham Street, and Charles River Bridge*	TIP	Major Infrastructure	Y	Principal Arterial - Other	\$29,601,000		Complete Streets
604123	Ashland	MassDOT	Reconstruction on Route 126 (Pond Street)*	TIP	Major Infrastructure	N	Principal Arterial - Other	\$19,569,554		Complete Streets
606043	Hopkinton	Hopkinton	Signal and Intersection Improvements on Route 135*	TIP	Complete Streets	N	Principal Arterial - Other	\$11,346,564		NC
606453	Boston	Boston	Improvements on Boylston Street*	TIP	Complete Streets	N	Principal Arterial - Other	\$9,192,999		NC
602077	Lynn	Lynn	Reconstruction on Route 129 (Lynnfield Street)*	TIP	Complete Streets	N	Principal Arterial - Other	\$6,484,734		NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
606501	Holbrook	Holbrook	Reconstruction of Union Street (Route 139)*	TIP	Complete Streets	N	Principal Arterial - Other	\$3,036,628		NC
606226	Boston	Boston	Reconstruction of Rutherford Avenue*	TIP	Major Infrastructure	Y	Principal Arterial - Other	\$115,640,366	Y	NC
607777	Watertown	Watertown	Rehabilitation of Mount Auburn Street (Route 16)*	TIP	Major Infrastructure	Y	Principal Arterial - Other	\$28,340,091		Complete Streets
608078	Chelsea	Chelsea	Reconstruction of Broadway, from City Hall to the Revere City Line*	TIP	Complete Streets	N	Principal Arterial - Other	\$10,278,940		NC
608887	Bellingham	Bellingham	Rehabilitation and Related Work on Route 126, from Douglas Drive to Route 140*	TIP	Complete Streets	N	Principal Arterial - Other	\$6,132,594		NC
608051	Wilmington	Wilmington	Reconstruction of Route 38 (Main Street), from Route 62 to the Woburn City Line*	TIP	Complete Streets	N	Principal Arterial - Other	\$19,599,506		NC
608933	Peabody	Peabody	Rehabilitation of Central Street*	TIP	Complete Streets	N	Principal Arterial - Other	\$10,432,800		NC
608007	Cohasset, Scituate	MassDOT	Corridor Improvements and Related Work on Justice Cushing Highway (Route 3A) from Beechwood Street to Henry Turner Bailey Road*	TIP	Complete Streets	N	Principal Arterial - Other	\$8,971,635		NC
605743	Ipswich	Ipswich	Resurfacing and Related Work on Central and South Main Streets*	TIP	Complete Streets	N	Principal Arterial - Other	\$3,104,609		NC
605168	Hingham	Hingham	Intersection Improvements at Route 3A/Summer Street Rotary*	TIP	Complete Streets	N	Principal Arterial - Other	\$15,272,850		NC
608045	Milford	MassDOT	Rehabilitation on Route 16, from Route 109 to Beaver Street*	TIP	Complete Streets	N	Principal Arterial - Other	\$3,887,537		NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
610662	Woburn	Woburn	Roadway and Intersection Improvements at Woburn Common, Route 38 (Main Street), Winn Street, Pleasant Street, and Montvale Avenue*	TIP	Complete Streets	N	Principal Arterial - Other	\$16,680,800		NC
608347	Beverly	Beverly	Intersection Improvements at Three Locations*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$4,394,886		NC
608443	Littleton/Ayer	Littleton/Ayer	Intersection Improvements on Route 2A at Willow Road and Bruce Street*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$2,287,523		NC
607305	Reading	MassDOT	Intersection Signalization at Route 28 & Hopkins Street*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$1,683,095		NC
608146	Marblehead	Marblehead	Intersection Improvements to Pleasant Street at Village/Vine/Cross Streets.*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$565,486		NC
608229	Acton	Acton	Intersection Improvements at Massachusetts Avenue (Route 111) and Main Street (Route 27) (Kelley's Corner)*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$14,687,418		NC
605857	Norwood	Norwood	Intersection Improvements at Route 1 and University Avenue/Everett Street*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$9,789,988		NC
609253	Wilmington	Wilmington	Intersection Improvements at Lowell Street (Route 129) and Woburn Street*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$5,063,392		NC
608067	Burlington, Woburn	Burlington, Woburn	Intersection Reconstruction at Route 3 (Cambridge Road) and Bedford Road and South Bedford Street*	TIP	Intersection Improvements	N	Principal Arterial - Other	\$1,670,400		NC
608396	Lynn, Revere	MassDOT	Bridge Reconstruction, L-18-015=R-05-008, Route 1A over Saugus River	U	Bridge	N	Principal Arterial - Other	\$74,750,000	Y	NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
N/A	Cambridge	Cambridge	Bridge Rehabilitation of River Street and Western Avenue Bridges	U	Bridge	N	Principal Arterial - Other	N/A		NC
5399	Salem	MassDOT	Reconstruction of Bridge Street, from Flint Street to Washington Street	U	Complete Streets	Y	Principal Arterial - Other	\$24,810,210		NC
608927	Lynn, Salem	MassDOT	Reconstruction of Route 107 Multimodal Improvements along Blue Hill Avenue/Warren Street, from River Street to Dudley Street	U	Complete Streets	N	Principal Arterial - Other	\$38,155,000		NC
N/A	Boston	Boston	Multimodal Improvements along Columbia Road, from Blue Hill Avenue to Kosciuszko Circle	U	Complete Streets	N	Principal Arterial - Other	\$80,000,000	Y	NC
N/A	Boston	Boston	Multimodal Improvements along Summer Street, from Boston Wharf Road to First Street	U	Complete Streets	N	Principal Arterial - Other	\$21,000,000		NC
N/A	Everett	Everett	Everett-Sweetser Circle (Route 16 and Route 99)	U	Major Infrastructure	TBD	Principal Arterial - Other - Fully Controlled Access	N/A		NC
601513	Saugus	MassDOT	Interchange Reconstruction at Walnut Street and Route 1, includes S-05-016 (Phase II)	U	Major Infrastructure	Y	Principal Arterial - Other - Partially Controlled Access	\$19,581,123		NC
N/A	Revere	Revere (MassDOT)	Route 1/Route 16 Connector	U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	N/A		NC
602091	Concord	Concord	Improvements and Upgrades to Concord Rotary (Routes 2/2A/119)	U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	\$103,931,250	Y	NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
N/A	Boston	Boston	Boardman Street at Route 1A	U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	\$13,686,000		NC
N/A	Revere	Revere (MassDOT)	Mahoney Circle Grade Separation	U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	\$60,000,000	Y	NC
N/A	Revere	Revere (MassDOT)	Route 1A/Route 16 Connector Reconstruction and Widening on Route 2, from Sandy Pond Road to Bridge over MBTA/B&M Railroad	U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	N/A		NC
608015	Concord	MassDOT		U	Major Infrastructure	Y	Principal Arterial - Other - Fully Controlled Access	\$8,000,000		NC

\* Funded with MPO Regional Target funds.

LRTP = In the Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MPO = Metropolitan Planning Organization. N = No. N/A = Not applicable. NC = No change. TBD = To be determined. TIP = In the Transportation Improvement Program. U = In the Universe of the LRTP or TIP. Y = Yes.

Source: Boston Region Metropolitan Planning Organization staff.

**Table 5  
Programmed and Conceptual Projects on Minor Arterials in the LRTP and TIP**

<b>PROJIS Number</b>	<b>Municipality</b>	<b>Project Proponent</b>	<b>Project Name</b>	<b>Status</b>	<b>Current Investment Program</b>	<b>Capacity Change</b>	<b>Federal Roadway Classification</b>	<b>Cost Estimate</b>	<b>Meets \$50 Million Threshold</b>	<b>Proposed Investment Program</b>
604996	Woburn	Woburn	Bridge Replacement, New Boston Street over MBTA*	TIP	Major Infrastructure	Y	Minor Arterial	\$18,280,891		NC**
602261	Walpole	MassDOT	Reconstruction on Route 1A (Main Street)*	TIP	Complete Streets	N	Minor Arterial	\$25,653,571		NC
607652	Everett	Everett	Reconstruction of Ferry Street*	TIP	Complete Streets	N	Minor Arterial	\$25,000,000		NC
608275	Malden	Malden	Exchange Street Downtown Improvement Project*	TIP	Complete Streets	N	Minor Arterial	\$1,993,717		NC
608228	Framingham	Framingham	Reconstruction of Union Avenue*	TIP	Complete Streets	N	Minor Arterial	\$10,218,923		NC
601607	Hull	Hull	Reconstruction of Atlantic Avenue and Related Work*	TIP	Complete Streets	N	Minor Arterial	\$8,303,865		NC
608348	Beverly	Beverly	Rehabilitation of Bridge Street*	TIP	Complete Streets	N	Minor Arterial	\$8,248,361		NC
608707	Quincy	Quincy	Reconstruction of Sea Street*	TIP	Complete Streets	N	Minor Arterial	\$6,068,190		NC
607244	Winthrop	Winthrop	Revere Street Roadway Improvements*	TIP	Complete Streets	N	Minor Arterial	\$6,323,116		NC
607899	Dedham	Dedham	Pedestrian Improvements along Bussey Street*	TIP	Complete Streets	N	Minor Arterial	\$5,355,932		NC

PROJIS Number	Municipality	Project Proponent	Project Name	Status	Current Investment Program	Capacity Change	Federal Roadway Classification	Cost Estimate	Meets \$50 Million Threshold	Proposed Investment Program
609252	Lynn	Lynn	Rehabilitation of Essex Street*	TIP	Complete Streets	N	Minor Arterial	\$18,956,000		NC
609257	Everett	Everett	Rehabilitation of Beacham Street, from Route 99 to Chelsea City Line*	TIP	Complete Streets	N	Minor Arterial	\$10,921,632		NC
606130	Norwood	Norwood	Intersection Improvements at Route 1A and Upland Road/Washington Street and Prospect Street/ Fulton Street*	TIP	Intersection Improvements	N	Minor Arterial	\$7,952,280		NC
608889	Framingham	Framingham	Traffic Signal Installation at Edgell Road and Central Street*	TIP	Intersection Improvements	N	Minor Arterial	\$2,036,172		NC
608436	Ashland	Ashland	Rehabilitation and Rail Crossing Improvements on Cherry Street*	TIP	Intersection Improvements	N	Minor Arterial	\$1,316,339		NC
608514	Beverly	MassDOT	Bridge Replacement, B-11-001, Bridge Street over Bass River (Hall-Whitaker Drawbridge)	U	Bridge	N	Minor Arterial	\$34,500,000		NC
605276	Beverly, Salem	MassDOT	Drawbridge Replacement/Rehabilitation, B-11-005=S-01-013, Kernwood Avenue over Danvers River	U	Bridge	N	Minor Arterial	\$47,750,300		NC

\* Funded with MPO Regional Target funds.

\*\* This project is now considered a Major Infrastructure project because it adds capacity to the system. Under the proposed Major Infrastructure definition, it would no longer fit into an existing investment program.

Since the project is programmed in Federal Fiscal Year 2021 of the current TIP and will be moving forward this year, staff proposes no change. The MPO can consider a bridge investment program in the future.

L RTP = In the Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MPO = Metropolitan Planning Organization. N = No. NC = No change. TBD = To be determined. TIP = In the Transportation Improvement Program. U = In the Universe of the L RTP or TIP. Y = Yes.

Source: Boston Region Metropolitan Planning Organization staff.

**Table 6  
Programmed and Conceptual Projects on Collector and Local Roadways in the LRTP and TIP**

<b>PROJIS Number</b>	<b>Municipality</b>	<b>Project Proponent</b>	<b>Project Name</b>	<b>Status</b>	<b>Current Investment Program</b>	<b>Capacity Change</b>	<b>Federal Roadway Classification</b>	<b>Cost Estimate</b>	<b>Meets \$50 Million Threshold</b>	<b>Proposed Investment Program</b>
609054	Littleton	Littleton	Reconstruction of Foster Street*	TIP	Complete Streets	N	Major Collector	\$4,281,978		NC
N/A	Boston	South Boston Transportation Study	Cypher Street Extension from D Street to E Street and Reconstruct and Extend E Street from Cypher Street to Summer Street	LRTP	Major Infrastructure	Y	Local	\$9,700,000		Complete Streets
606265	Boston	MassDOT/ Boston	Bridge Rehabilitation, B-16-184, Northern Avenue over Fort Point Channel	U	Bridge	N	Local	\$55,000,015	Y	NC

\* Funded with MPO Regional Target funds.

LRTP = In the Long-Range Transportation Plan. MassDOT = Massachusetts Department of Transportation. MPO = Metropolitan Planning Organization. N = No. N/A = Not applicable. NC = No change. TBD = To be determined. TIP = In the Transportation Improvement Program. U = In the Universe of the LRTP or TIP. Y = Yes.

Source: Boston Region Metropolitan Planning Organization staff.

## 5 STAFF RECOMMENDATIONS FOR UPDATED MI DEFINITIONS

When developing recommendations for updating the MPO's definitions of MI projects, staff aimed to suggest clear definitions that would help define the MI investment program in relation to other programs. These would ideally simplify the MPO's classification and consideration of projects when making funding decisions, and would provide more clarity for project proponents on how their projects will be evaluated. When crafting proposals, staff's goal was to develop an approach that addresses both federal and state requirements and supports scrutiny of projects with higher costs and/or the potential for regional impacts. Staff also considered how these definitions may affect administrative work resulting from amendments to both the LRTP and TIP documents when project costs change.

Staff's recommendations for an updated definition for MI projects include the following:

1. MI projects will be defined separately from projects that are considered regionally significant for air quality analysis and travel demand modeling purposes or projects that must be listed in the LRTP to meet federal or state requirements. While these definitions may have overlapping elements, the MPO can structure its MI definition in ways that will best help the MPO to
  - identify projects with regional impacts or merit increased scrutiny;
  - allocate its dollars across investment programs; and
  - focus on the types of projects it would like to prioritize for funding.
2. The cost threshold amount for a project to be designated as MI would increase from \$20 million to \$50 million. This would allow the MPO to maintain a level of scrutiny for higher cost projects, while creating a more distinct separation between the MI program and other investment programs and potentially reducing the need for LRTP amendments.
3. Even if a roadway project does not meet the \$50 million cost threshold, it would be classified as a MI project if it improves roadways that are classified as
  - Interstate Highways;
  - Principal Arterial Freeways and Expressways; or
  - Principal Arterial "Other" that have fully or partially controlled access.

MPO staff suggests specifying these roadways to focus the MI program on facilities that are important to regional travel. Figures 1 and 2 identified

regional roadways in each category. These roadways not only carry higher volumes of traffic, but they are also designed to move people from one part of the region to another, as opposed to within municipalities or small groups of municipalities. In addition, by focusing on the facility classification instead of the nature of project improvements (such as whether a project changes roadway capacity), the definition can accommodate a variety of project types.

4. Even if a project does not meet the \$50 million cost threshold, a transit project would be classified as a MI project if it created new connections or extended the MPO's rail or fixed-guideway rail and transit network or bus rapid transit network.

## 5.1 Proposed Major Infrastructure Definition

The proposed updated Major Infrastructure definitions could read as follows:

1. Major Infrastructure projects on the roadway network include those that meet at least one of the following criteria:
  - Projects that improve facilities that are important to regional travel, which include Interstate Highways; Principal Arterial Freeways and Expressways; or all sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access
  - Projects that cost \$50 million or more
2. Major Infrastructure projects on the transit network include those that meet at least one of the following criteria:
  - Projects that add new connections to or extend the rail or fixed-guideway transit network or the bus rapid transit network
  - Projects that cost \$50 million or more

## 5.2 Reference to Regionally Significant Projects in LRTP Analyses and Documents

The MPO would continue to apply the definition of regionally significant projects when conducting air quality analyses using the travel demand model to meet federal and state requirements. These analyses will continue to include all projects that change the capacity of the transportation network whether or not they are considered to be major infrastructure projects under this new definition. The MPO can also list any projects specified by federal or state agencies without classifying them as MI projects.

### **5.3 Impacts of Changing the MI Program Definition**

#### ***Potential Changes to Investment Program Descriptions***

Table 7 shows how the definitions and descriptions of the MPO's six existing investment programs would change if the MPO adopts staff's proposed MI project definitions.

**Table 7**  
**Changes to MPO Investment Programs under MPO Staff's Proposed Major Infrastructure Definition**

Program	Current Relationship to Major Infrastructure Program	Potential Relationship to Major Infrastructure Program Under Proposed Definition	Proposed New Investment Definition
Major Infrastructure	The MPO's Major Infrastructure program includes projects that are high cost (\$20 million or more) and/or change the capacity of the roadway or transit networks.	Not applicable	<p>Major Infrastructure projects on the roadway network include those that meet at least one of the following criteria:</p> <ul style="list-style-type: none"> <li>• projects that improve facilities that are important to regional travel, which include Interstate Highways, Principal Arterial Freeways and Expressways, or any section of roadways classified as Principal Arterial "Other" that have fully or partially controlled access</li> <li>• projects that cost \$50 million or more</li> </ul> <p>Major Infrastructure projects on the transit network include those that meet at least one of the following criteria:</p> <ul style="list-style-type: none"> <li>• projects that add new connections to or extend the rail or fixed-guideway transit network or the bus rapid transit network</li> <li>• projects that cost \$50 million or more</li> </ul>
Complete Streets	Currently this program includes corridor improvement projects on any roadway class that cost less than \$20 million. The projects in the program do not add or reduce capacity on the roadway network.	<p>Complete Streets projects would be moved to the Major Infrastructure program if they</p> <ul style="list-style-type: none"> <li>• are located on an Interstate Highway, Principal Arterial Freeway or Expressway, or the sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access; OR</li> <li>• cost more than \$50 million.</li> </ul> <p>Projects would no longer be classified based on whether they change the capacity of the roadway or transit network.</p>	This program would include corridor improvement projects that

Program	Current Relationship to Major Infrastructure Program	Potential Relationship to Major Infrastructure Program Under Proposed Definition	Proposed New Investment Definition
Intersection Improvement	<p>Currently this program includes intersection improvement projects on any roadway class that cost less than \$20 million. The projects in the program do not add or reduce capacity.</p>	<p>Intersection Improvement projects would be moved to the Major Infrastructure program if they</p> <ul style="list-style-type: none"> <li>• are located on an Interstate Highway, Principal Arterial Freeway or Expressway, or the sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access; OR</li> <li>• cost more than \$50 million.</li> </ul>	<p>This program would include intersection improvement projects that</p> <ul style="list-style-type: none"> <li>• cost less than \$50 million; AND</li> <li>• are located on principal arterial roadways without access controls, minor arterials, collectors, or local roads</li> </ul>
Bicycle Network and Pedestrian Connections	<p>Currently this program includes on-road improvements for bicyclists and pedestrians, including sidewalk and crossing improvements, traffic calming, or signage and lighting improvements, if these elements are not being addressed as part of an Intersection Improvement or Complete Streets project. It also includes off-road projects such as new, off-road bicycle or multiuse paths.</p> <p>This program has an implicit cost criterion for \$20 million or less, but candidate projects have not yet reached this ceiling.</p>	<p>Bicycle Network and Pedestrian Connections could be moved to the Major Infrastructure program if they cost \$50 million or more.</p>	<p>This program would fund bicycle and pedestrian projects (that are not improvements included in an Intersection Improvements or Complete Streets project) that cost less than \$50 million.</p>
Transit Modernization	<p>This relatively new investment program is expected to include accessibility improvements, station modernization projects, parking improvements at stations, infrastructure state of good repair projects, fleet modernization, bus maintenance facility updates, and climate resiliency projects. It is not explicitly focused on expanding transit networks.</p> <p>This program has an implicit cost criterion for \$20 million or less, but the MPO has not yet programmed any projects in this program.</p>	<p>Transit modernization projects would be moved to the Major Infrastructure program if they cost \$50 million or more.</p>	<p>This program would include transit infrastructure modernization projects that:</p> <ul style="list-style-type: none"> <li>• Cost less than \$50 million; AND</li> <li>• Do not expand the transit network</li> </ul>

Program	Current Relationship to Major Infrastructure Program	Potential Relationship to Major Infrastructure Program Under Proposed Definition	Proposed New Investment Definition
Community Connections	<p>Currently this program encompasses projects that</p> <ul style="list-style-type: none"> <li>• close gaps in non-fixed-guideway portions of the region's transit network;</li> <li>• support auto and bicycle parking management and potentially adding parking;</li> <li>• make bicycle/pedestrian improvements that support access to transit;</li> <li>• address accessibility needs for accessing transit;</li> <li>• support education and wayfinding; and</li> <li>• connect elderly adults with transportation options.</li> </ul> <p>This program does not support capacity-adding projects.</p> <p>This program has an implicit cost criterion of \$20 million or less; the main limiting factor is that currently the MPO capped this program at \$2 million per year.</p>	<p>A Community Connections project could be moved to the Major Infrastructure program if it cost \$50 million or more; however, this program is currently capped at \$2 million.</p>	<p>This program would include first- and last-mile/connections to transit projects that cost less than \$50 million.</p>

MPO = Metropolitan Planning Organization.

Source: Boston Region Metropolitan Planning Organization staff.

As shown in Table 7, most of the changes would occur with the Complete Streets program since projects would no longer be classified based on whether they change the capacity of the roadway network but would be classified based on roadway type. For all other investment programs, other than the MI program, the main criteria would be if the project costs more than \$50 million.

### ***Potential Changes to LRTP and TIP Project Categorization***

A number of projects would be removed from the MI program based on these new recommendations. The projects are shown in Tables 2 through 6. The majority of these projects will move from the MI program to the Complete Streets program.

When a project is submitted by a project proponent for consideration in the LRTP and/or TIP, the project is then assigned an investment program. There may be some projects that do not fit into one of the existing investment programs. An example, as shown in Table 5, is bridge replacement projects. The MPO does not currently have a bridge program, although these projects could include Complete Streets elements (bicycle lanes, sidewalks, and dedicated bus lanes). In this case, the project could be evaluated as a Complete Streets project. If the project does not have any of these elements in its design, the MPO may choose to establish a bridge program in the next LRTP or to fund this project at its discretion, much like it did for the New Boston Street Bridge project in Woburn.

### ***Potential Changes to Destination 2040 Funding Goals***

Using this new MI definition, staff recalculated the funding percentages for the investment programs for projects that are currently programmed in the *Destination 2040* LRTP and FFY 2021–25 TIP. Table 8 shows the LRTP funding goals and current and proposed percentages using the new definition. As mentioned above, the majority of projects move from the MI program to the Complete Streets program as shown by the percentages in Table 8.

**Table 8  
Current and Proposed LRTP Funding Goal Percentages**

Investment Program	<i>Destination 2040</i> Goals	Current Definition	Proposed Definition	Current Definition	Proposed Definition
		FFYs 2020–24	FFYs 2020–24	FFYs 2025–29	FFYs 2025–29
Major Infrastructure	No more than 30%	34%	29%	41%	36%
Complete Streets	45	48	52	34	38
Intersection	13	12	13	13	14

Improvement					
Bicycle/Pedestrian	5	5	5	5	5
Community	2	1	1	2	2
Connections					
Transit Modernization	5	0	0	5	5
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

FFYs = Federal Fiscal Years  
 Source: Boston Region MPO

## 6 MPO POLICY ON SCORING MI PROJECTS IN THE LRTP

### 6.1 Background

As part of reviewing the definitions for the MPO’s MI projects, MPO staff considered the related issue of how MI projects are evaluated as part of LRTP and TIP project selection processes. The MPO may wish to modify existing practices to ensure they have sufficient information to assess projects, particularly as the projects evolve over time.

As previously mentioned, the LRTP specifically lists and describes MI projects, which have historically included relatively high cost projects and those that change the capacity of the region’s roadway and transit network, regardless of whether these projects will be funded by the MPO or another transportation agency. FHWA requires projects that need any federal review and approval to be listed in the LRTP prior to their review. This shows that the project is moving through design and when design is completed, funding will be available for construction in the future.

Much like the TIP, MPO MI projects in the LRTP are evaluated and scored based on how well the project will address the MPO’s goals established in the LRTP. A more detailed explanation of the LRTP scoring process can be found in Appendix B in *Destination 2040*. Projects in the LRTP’s first five-year time band generally coincide with the five years of the TIP. As expected, these projects will be further along in design and will have more information available for scoring the project as part of the TIP development process. It can be expected that they will be constructed over the first five years of the plan. Projects that are programmed in the later time bands may not have a detailed design; therefore, the projects are scored based on the available information about how they will advance the MPO’s goals.

In almost all cases, once the project is listed in the LRTP in the later time bands, the project will automatically be programmed in the TIP when the project’s design is advanced and the project is ready for programming in the TIP. The project may be rescored as part of the TIP process, using the more detailed design

information; however, it is assumed that it will be programmed in the TIP regardless of its score. The project is not necessarily compared to other projects that are being considered for programming at that time.

## 6.2 Staff Recommendations on MI Project Scoring

The MPO is now revising its TIP scoring criteria based on the revised goals and objectives established in *Destination 2040*. Along with new criteria, these criteria will be applied by investment program rather than being applied to all projects uniformly. With that in mind, it is worth exploring the policy of scoring MI projects in the LRTP and TIP. Staff is offering the following recommendations for discussion and consideration by the MPO board at the August 20, 2020, MPO meeting. This discussion can be continued at subsequent MPO meetings.

### ***Develop a Two-Step Process for Scoring MI Projects in the LRTP***

Staff is recommending that all projects being considered for programming in the LRTP continue to be evaluated on how well they address the MPO goals established in the LRTP. Using the same LRTP criteria, each project will be assigned an LRTP score regardless of its design status. Any MI projects that have advanced to approximately the 25 percent design phase will *also* get a TIP score using the TIP criteria. This will provide a comparable set of scores for all LRTP projects, plus extra TIP scores for those that have advanced in their design.

In addition, staff is recommending that the MPO adopt a formal policy of rescoreing *all* MI projects when they are ready for programming in the TIP. It should not be assumed that the project will automatically be programmed in the TIP. When the project has moved through the design process, more detailed information should be available, especially if it was a project that had been programmed in the outer time bands of the LRTP. At this point, the MPO can review whether it is still appropriate to program the project in the TIP. Changes to the projects may include the following conditions:

- The cost may have increased since its inclusion in the LRTP. A second evaluation gives the MPO an opportunity to reevaluate the project in relation to a cost increase and the MPO's goals and objectives.
- When the project is ready for programming in the TIP, project proponents would have had the opportunity to address concerns received during the public input process for design of the project. It can also be assumed that from this point forward, the design of the project won't be altered dramatically.

Once the TIP scoring has been completed, the project can then be compared to other projects within the MI program and other investment programs. The MPO can then review the funding goal policies adopted in the LRTP to ensure that the projects in the TIP are addressing the MPO goals and objectives.

### ***Review the Status of MI Projects included in Previous LRTPs***

Staff also recommends that the MPO adopt a policy that the status of all MI projects included in the previous LRTP be reviewed during the development of a new LRTP. This will ensure that projects are moving forward in their design and approval process. If there is no movement in design or construction or a schedule for implementation is not available, the MPO should consider placing the project in the Universe of Projects for consideration in future LRTPs. This will allow availability of MI program funding for projects that are currently being designed or those that require approvals from FHWA and FTA.

## **7 CONCLUSION**

This memorandum provides the background for the MI program as well as staff recommendations for MPO board member discussion and consideration. Four sets of staff recommendations are included:

1. The definition of MI projects on the roadway network should include those that meet at least one of the following criteria:
  - Projects that improve facilities that are important to regional travel, which include Interstate Highways; Principal Arterial Freeways and Expressways; or all sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access
  - Projects that cost \$50 million or more
2. The definition of MI projects on the transit network should include those that meet at least one of the following criteria:
  - Projects that add new connections to or extend the rail or fixed-guideway transit network or the bus rapid transit network
  - Projects that cost \$50 million or more
3. Develop a two-step process for scoring MI projects in the LRTP with all projects evaluated using the same LRTP criteria. Each project will be assigned an LRTP score regardless of its design status. Any MI projects that have advanced to approximately the 25 percent design phase will *also* get a TIP score using the TIP criteria. This will provide a comparable set of scores for all LRTP projects, plus extra TIP scores for those that have advanced in their design.

4. Review the status of MI projects included in previous LRTPs to ensure they are moving toward implementation. If there is no movement in design or construction or a schedule for implementation is not available, the MPO should consider placing the project in the Universe of Projects for consideration in future LRTPs.

Staff is requesting that the MPO adopt the MI definitions at its August 20, 2020, MPO meeting. Staff will introduce the scoring policies for consideration by the MPO board at that meeting. Discussion on the scoring policies can be continued at subsequent MPO meetings.

It is important to establish the definitions and policies for the MI program while the MPO is revising its TIP project selection criteria so they can be applied correctly during TIP development. In addition, establishing this policy early in the development of the next LRTP will set up the policy moving into project selection for the next LRTP to be adopted in 2023.

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