



LONG-RANGE TRANSPORTATION PLAN

*OF THE BOSTON REGION METROPOLITAN
PLANNING ORGANIZATION*

destination
2050





EXECUTIVE SUMMARY

TO THE LONG-RANGE TRANSPORTATION PLAN

Introduction

Destination 2050 is the Boston Region Metropolitan Planning Organization's (MPO) Long-Range Transportation Plan (LRTP). Updated every four years, it guides decisions about investments in the region's transportation network to move the system towards the MPO's vision for its future:

The Boston Region MPO envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

To create a plan designed to implement this vision, the LRTP

- defines goals and objectives that guide the MPO's planning process,
- establishes new investment programs and makes updates to existing programs through which the MPO will invest in transportation projects over the next four years that advance its goals and objectives,
- outlines the transportation needs and challenges the region faces over the next 25 years, and
- identifies strategies to address those needs using financial resources available to the MPO.

The MPO conducted engagement activities throughout the development of the LRTP. Engagement began in fall 2019 with the kick-off development of the Needs Assessment and continued through the 30-day public comment period for the draft LRTP in the summer of 2023. The MPO conducted two public surveys: one on vision, goals, and objectives; and one on investment priorities. The MPO engaged many stakeholders, including the Regional Transportation Advisory Council, municipalities, the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), regional transit authorities, community organizations, economic development and business organizations, transportation equity advocates, environmental advocates, and academic institutions.

Transportation Needs

A critical step in developing the LRTP was to collect, analyze, and identify transportation needs for the Boston region. Using results from data analyses and engagement activities, the Needs Assessment documents the transportation needs of the Boston region since the last LRTP was approved in 2019, focusing on the years between 2019 and 2023. It looks at how people travel; the condition of transportation facilities; the interaction of the transportation system with the built and natural environment and how well it serves minority, low-income, and other disadvantaged populations; and possible changes to travel patterns and demand in the future. It supports the LRTP by providing information about the region's most pressing transportation needs, thereby shaping the MPO's vision, goals, and objectives; and informing the development of new investment programs.



The Needs Assessment summarizes needs within each of the MPO's goal areas. Equity is integrated throughout the Needs Assessment—transportation impacts on transportation equity populations are assessed within the context of each goal area. Some of the needs identified are to

- close gaps in the bicycle network, focusing on roads with a high potential for everyday bicycling as identified by MassDOT;
- improve coordination between transit services, including scheduling and route planning, to increase efficiency and expand access to more people and places;
- reduce pollution emissions through, for example, electrification and mode shift to non-automobile transportation, prioritizing improvements for equity communities that bear a disproportionate burden of pollution impacts;
- expand access to and quality of public transit, for example, by addressing corridors with significant bus delay;
- upgrade and modernize public transit facilities, and improve state of good repair for transit facilities, especially tracks;
- improve the resiliency of transportation facilities to climate impacts, especially those that serve disadvantaged populations that are more vulnerable to these impacts;
- invest in safety interventions in areas with the most vulnerable road users, such as equity populations, people who bicycle, and people who walk; and
- invest in preventative countermeasures on roadways that have been identified as high risk before severe crashes happen.

To explore these and other analyses, see the full Needs Assessment, which is compiled into a series of interactive StoryMaps where readers can explore a series of maps, charts, and tables, and is available on the MPO's website.

Vision, Goals, and Objectives

During each LRTP development cycle, the MPO updates its planning framework, which consists of a vision statement, a set of goals, and a series of objectives associated with each goal (Figure ES-1). These serve as a guide for MPO decision-making for the next four years. The content of this framework—particularly the MPO goals—informs staff proposals and MPO decisions related to creating investment programs for the Transportation Improvement Program (TIP). Further, studies proposed for funding each year in the Unified Planning Work Program (UPWP) are assessed for their support of the MPO goals, and the objectives are translated into criteria for use in the TIP project selection process to ensure projects funded by the MPO support the MPO's goals. Finally, this framework, including its vision, helps communicate the MPO's values to partners, stakeholders, and the public.

Figure ES-1

Destination 2050 Vision, Goals, and Objectives

VISION STATEMENT
The Boston Region Metropolitan Planning Organization envisions an equitable, pollution-free, and modern regional transportation system that gets people to their destinations safely, easily, and reliably, and that supports an inclusive, resilient, healthy, and economically vibrant Boston region.

GOALS	OBJECTIVES
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EQUITY

Facilitate an inclusive and transparent transportation-planning process and make investments that eliminate transportation-related disparities borne by people in disadvantaged communities.

- Facilitate an inclusive and transparent engagement process with a focus on involving people in disadvantaged communities.*
- Ensure that people have meaningful opportunities to share needs and priorities in a way that influences MPO decisions.
- Eliminate harmful environmental, health, and safety effects of the transportation system on people in disadvantaged communities.
- Invest in high-quality transportation options in disadvantaged communities to fully meet residents' transportation needs.

*** Disadvantaged communities are those in which a significant portion of the population identifies as an MPO equity population—people who identify as minority, have limited English proficiency, are 75 years old or older or 17 years old or younger, or have a disability— or has low income.**

SAFETY

Achieve zero transportation-related fatalities and serious injuries and improve safety for all users of the transportation system.

- Eliminate fatalities, injuries, and safety incidents experienced by people who walk, bike, roll, use assistive mobility devices, travel by car, or take transit.
- Prioritize investments that improve safety for the most vulnerable roadway users: people who walk, bike, roll, or use assistive mobility devices.
- Prioritize investments that eliminate disparities in safety outcomes for people in disadvantaged communities.

MOBILITY AND RELIABILITY

Support easy and reliable movement of people and freight.

- Enable people and goods to travel reliably on the region's transit and roadway networks.
- Prioritize investments that address disparities in transit reliability and frequency for people in disadvantaged communities.
- Reduce delay on the region's roadway network, emphasizing solutions that reduce single-occupancy-vehicle trips, such as travel demand management.
- Prioritize investments that reduce delay on the region's transit network.
- Support reliable, safe travel by keeping roadways, bridges, transit assets, and other infrastructure in a state of good repair, and prioritize these investments in disadvantaged communities.
- Modernize transit systems and roadway facilities, including by incorporating new technology that supports the MPO's goals, such as electric-vehicle technologies.

GOALS	OBJECTIVES
● ACCESS AND CONNECTIVITY	
<p>Provide transportation options and improve access to key destinations to support economic vitality and high quality of life.</p>	<ul style="list-style-type: none"> • Improve multimodal access to jobs, affordable housing, essential services, education, logistics sites, open space, and other key destinations. • Prioritizing transportation investments that support the region’s and the Commonwealth’s goals for housing production, land use, and economic growth. • Increase people’s access to transit, biking, walking, and other non-single-occupancy-vehicle transportation options to expand their travel choices and opportunities. • Prioritize investments that improve access to high quality, frequent transportation options that enable people in disadvantaged communities to easily get where they want to go. • Close gaps in walking, biking, and transit networks and support interorganizational coordination for seamless travel. • Remove barriers to make it easy for people of all abilities to use the transportation system, regardless of whether they walk, bike, roll, use assistive mobility devices, or take transit.
● RESILIENCY	
<p>Provide transportation that supports sustainable environments and enables people to respond and adapt to climate change and other changing conditions.</p>	<ul style="list-style-type: none"> • Prioritize investments to make the region’s roadway and transit infrastructure more resilient and responsive to current and future climate hazards, particularly within areas vulnerable to increased heat and precipitation, extreme storms, winter weather, and sea level rise. • Prioritize resiliency investments in disadvantaged communities and in areas that bear disproportionate climate and environmental burdens. • Prioritize investments in transportation resiliency that improve emergency access and protect evacuation routes. • Prioritize investments that include nature-based strategies such as low-impact design, pavement reduction, and landscape buffers to reduce runoff and negative impacts to water resources, open space, and environmentally sensitive areas.
● CLEAN AIR AND HEALTHY COMMUNITIES	
<p>Provide transportation free of greenhouse gas emissions and air pollutants and that supports good health.</p>	<ul style="list-style-type: none"> • Reduce transportation-related greenhouse gases, other air pollutants, and growth in vehicle-miles traveled by encouraging people and goods to move by non-single-occupancy-vehicle modes. • Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants. • Prioritize investments that address air pollution and environmental burdens experienced by disadvantaged and vulnerable communities. • Support public health through investments in transit and active transportation options and by improving access to outdoor space and healthcare.

Updated: February 2, 2023

Funding the Transportation Network

The MPO has approximately \$5 billion, called discretionary, or Regional Target, dollars, to spend between federal fiscal years 2024 and 2050. The LRTP only lists specific projects between 2024 and 2033, and funding from 2034 to 2050 is allocated to investment programs. The dollars allocated in the LRTP to major infrastructure projects and investment programs must remain within the limit of available funding. *Destination 2050* and the short-term capital plan, the TIP, must demonstrate that projects selected by the MPO can be implemented within fiscal constraints. The financial plan for *Destination 2050* reflects how the MPO plans to balance the region's transportation needs while operating under the fiscal constraint of projected revenues.

Regional Target dollars are only a portion of the dollars available to support the region's transportation system. MassDOT has other sources of funding that it spends on highway projects in the Boston region, as do the MBTA, the Cape Ann Transportation Authority, and the MetroWest Regional Transit Authority to provide and improve transit service.

The Recommended Plan

The Recommended Plan includes the MPO's investment programs, as well as the major infrastructure projects that federal guidance requires to be listed in the LRTP. Investment programs prioritize the types of transportation projects that the MPO funds through the TIP. *Destination 2050's* investment programs include the following:

- **Complete Streets:** Funds projects that create continuous sidewalks, construct bicycle lanes, improve roadway geometry and bridges, and fortify storm water drainage systems.
- **Major Infrastructure:** Funds large-scale projects that expand major roadways and rail lines. Projects on facilities that are important to regional travel, that extend the rail network, or that cost \$50 million or more are included in this program.
- **Intersection Improvements:** Funds projects that improve signals and include geometric improvements to shorten crossings for pedestrians, add turning lanes for vehicles, and improve sidewalks.
- **Bicycle Network and Pedestrian Connections:** Funds projects that expand bicycle networks, create new shared-use paths, implement traffic calming measures, and enhance signage.



- Community Connections: Funds first- and last-mile shuttles, updates to transit technology, car and bicycle parking near transit stations, bicycle and pedestrian infrastructure (including for people with mobility impairments), and travel instruction and education.
- Transit Transformation: Funds transit-related investments such as multimodal access improvements near or at transit stations, transit system electrification projects, or customer amenities such as bus shelters.
- Bikeshare Support: Funds capital costs associated with expanding the regional bikeshare system and replacing or upgrading existing stations.

Table ES-1 shows the percentage of funding dedicated to each investment program in each time band and the total funding allocated to each investment program over the entire plan. The allocations in 2029–33 differ from those in the other time bands because of the combined cost of the Major Infrastructure projects that the MPO selected for that time band.

Table ES-1

Funding Allocated to MPO Investment Programs in *Destination 2050*

Investment Program	Percentage Allocation, 2024-28 and 2034-50	Percentage Allocation, 2029-33	Funding Allocation, 2024-2050
Complete Streets	45%	30%	\$2,130,828,621
Major Infrastructure	30%	47%	\$1,643,425,636
Intersection Improvements	12%	10%	\$584,554,172
Bicycle Network and Pedestrian Connections	5%	5%	\$250,506,232
Transit Transformation	5%	5%	\$250,506,232
Community Connections	2%	2%	\$100,202,493
Bikeshare Support	1%	1%	\$50,101,246
Total			\$5,010,124,631

Note: Years are federal fiscal years

Source: Boston Region Metropolitan Planning Organization.

The Recommended Plan also includes major infrastructure projects that will be built in the region by 2050. Major infrastructure projects are either

- roadway projects that improve roadways that are important to regional travel, including interstate highways, principal arterials, freeways, and expressways, and all other arterials with controlled access or cost \$50 million or more, or
- transit projects that add new connections to or extend the rail or fixed-guideway network or cost \$50 million or more.

Major infrastructure projects listed in LRTP are shown in Table ES-2. The first project in Table ES-2, Allston Multimodal, is included in the plan for illustrative purposes only and is not within the fiscal constraint of the plan. The second project, I-495 and I-90 Interchange, is funded mostly using MassDOT statewide program priority funding and is also not within the fiscal constraint of the plan.

Table ES-2
Recommended Plan Projects

Project Name	Current Estimated Cost	Time Bands	Within Fiscal Constraint?
Boston: Allston Multimodal	\$675,500,000	2024-28	No
Hopkinton: I-495 and I-90 Interchange	\$300,942,836	2024-28	No
Boston: Reconstruction of Rutherford Avenue from City Square to Sullivan Square	\$197,759,449	2024-33	Yes
Framingham: Intersection Improvements at Route 126 and Route 135/MBTA and CSX Railroad	\$115,000,000	2029-33	Yes
Lexington: Route 4/225 (Bedford Street) and Hartwell Avenue	\$45,000,000	2029-33	Yes
Norwood: Intersection Improvements at Route 1 and University Avenue/Everett Street	\$28,699,272	2024-28	Yes
Somerville: McGrath Boulevard	\$98,840,000	2024-33	Yes
Wrentham: I-495/Route 1A Ramps	\$20,117,638	2024-28	Yes

Note: Years are federal fiscal years.

Source: Boston Region Metropolitan Planning Organization.



Disparate Impact and Disproportionate Burden Analysis Results

The disparate impact and disproportionate burden analysis shows that there would be six instances of disparate impacts and disproportionate burdens if the MPO's Regional Target projects were built by 2050. There are projected to be three disparate impacts for the minority population associated with access to healthcare by transit, average travel time by highway, and average travel time by transit. There are projected to be three disproportionate burdens for the low-income population associated with access to jobs by transit, access to healthcare by transit, and access to parks by highway. In all instances, the difference between the impact on the minority and nonminority populations and the low-income and non-low-income populations, respectively, is expected to be relatively small. In compliance with federal regulations, the MPO will identify and implement opportunities to mitigate the impacts of these disparate impacts and disproportionate burdens through future planning and project funding decisions.

Conclusion

Destination 2050 continues the MPO's practice of providing funding to support bicycle, pedestrian, and transit projects, along with major roadway improvements that promote safety, equity, and multimodal connectivity in the region. Continuing along this course will help to achieve its transportation vision for the future, improve the quality of life for Boston region residents, and enhance the environment in the whole region.