



## **TECHNICAL MEMORANDUM**

**DATE:** November 21, 2024  
**TO:** Boston Region Metropolitan Planning Organization (MPO) Board  
**FROM:** Erin Maguire, MPO Staff  
**RE:** *Destination 2050* Amendment One

This memorandum summarizes a proposed amendment to the Boston Region Metropolitan Planning Organization’s Long-Range Transportation Plan (the Plan), *Destination 2050*. The primary reason for this amendment is to include a line item in the Recommended Projects list to reflect a 17-project bundle for which the MBTA is pursuing a federal discretionary grant to improve the Green Line. The Federal Transit Administration (FTA) requires applicants for the grant to include project bundles in the regional Transportation Improvement Program and Long-Range Transportation Plan before an application is submitted to the FTA.<sup>1</sup> The application is due to the FTA in late December, so MPO staff propose a 21-day public comment period to accommodate the grant application deadline.

### **1 BACKGROUND**

One core function of the Boston Region MPO is the development and implementation of a Long-Range Transportation Plan for the 97 municipalities within the MPO’s borders. This Plan is required to have a time horizon of at least twenty years. The Plan outlines a vision and goals for the region’s multimodal transportation network and contains a fiscally constrained plan with specific regionally significant projects indicated, policies and strategies to achieve the vision, and other required content. The MPO’s current Plan, *Destination 2050*, was endorsed by the MPO board on July 20, 2023.

The MPO’s Public Engagement Plan calls for a 30-day public comment period for amendments to the Plan. The Public Engagement Plan allows for the MPO board to vote to shorten the public comment period in the case of “unforeseen regulatory requirements.”<sup>2</sup> In this case, the MPO staff propose a shortened 21-

---

<sup>1</sup> <https://www.transit.dot.gov/sites/fta.dot.gov/files/2023-01/CIG-Policy-Guidance-January-2023.pdf>

<sup>2</sup> [https://www.ctps.org/data/html/programs/public\\_involvement/PEP-2021/PEP-2021-amended-2022-09-15.html#\\_Toc99531048](https://www.ctps.org/data/html/programs/public_involvement/PEP-2021/PEP-2021-amended-2022-09-15.html#_Toc99531048)

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

day public comment period to accommodate the grant application deadline in December.

## **2 AMENDMENT ONE**

Amendment One to *Destination 2050* proposes the inclusion of a bundle of 17 existing projects that the MBTA intends to pursue with funding from the FTA's Section 5309 Capital Investment Grant Program. These projects would be reflected as a single line item in the Recommended Projects list, referred to as the Green Line Projects, followed by a brief description of anticipated project scopes.

Table 1 contains this amendment to the "Recommended Projects" list, included in Chapter five of *Destination 2050*, as line item number 9.

**Table 1**  
**Proposed Amendment to Destination 2050 Recommended Projects List**

#	Proponent	Project	ID	Current Cost	FFYs 2024-28	FFYs 2029-33	MPO Funding	Other Funding (Non-MPO Funds)
1	MPO	Norwood: Intersection Improvements at Route 1 and University Avenue/Everett Street	605857	\$26,573,400	\$26,573,400		\$26,573,400	
2	MPO	Wrentham: I- 495/Route 1A Ramps	603739	\$17,994,890	\$17,994,890		\$17,994,890	
3	MPO	Boston: Reconstruction of Rutherford Avenue from City Square to Sullivan Square	606226	\$197,759,449	\$42,100,000	\$155,659,449	\$197,759,449	
4	MPO	Somerville: McGrath Boulevard	607981	\$98,840,000	\$65,000,000	\$33,840,000	\$98,840,000	
5	MPO	Framingham: Intersection Improvements at Route 126 and Route 135/MBTA and CSX Railroad	606109	\$115,000,000		\$145,500,000	\$145,500,000	
6	MPO	Lexington: Route 4/225 (Bedford Street) and Hartwell Avenue	NA	\$45,000,000		\$57,000,000	\$57,000,000	
7	MassDOT	Boston: Allston Multimodal	606475	\$675,500,000				\$675,500,000
8	MassDOT	Hopkinton: I-495 and I-90 Interchange	607977	\$300,942,836				\$300,942,836
9	MBTA	Green Line Projects	NA	\$3,014,041,336				\$3,014,041,336

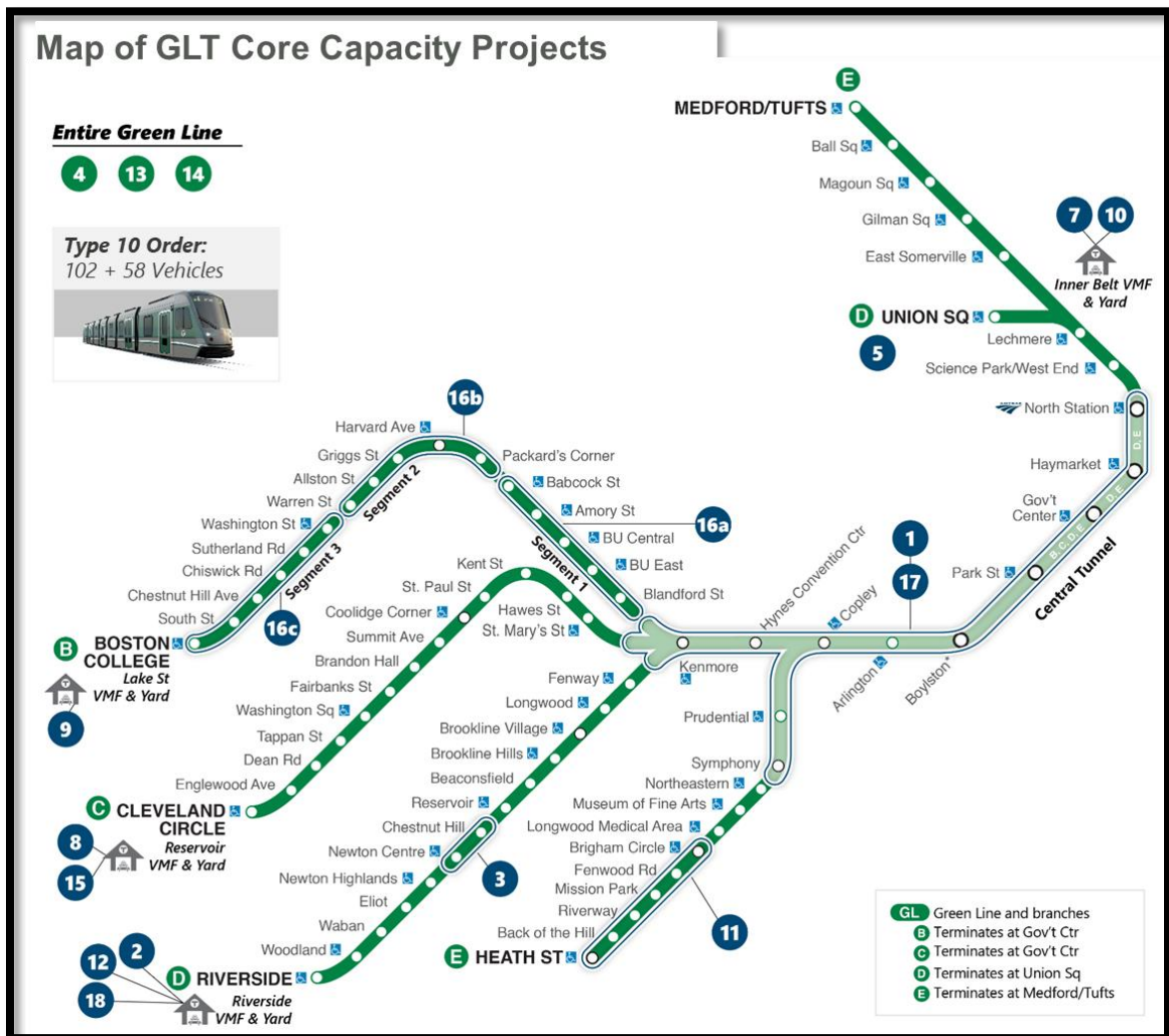
FFY = federal fiscal year. NA = not applicable.  
Source: Boston Region MPO.

## 2.1 Description of the Green Line Projects

### Green Line Transformation (GLT) Core Capacity Program Description

The GLT Core Capacity program consists of 17 existing MBTA projects. Figure 1, provided by the MBTA, contains a map outlining the location of each individual project. A description of each project can be found below. These projects are in various stages of conceptual development, and there will be ongoing opportunities for public input on project details.

**Figure 1**  
**Map of GLT Core Capacity Projects Bundle**



Source: MBTA.

1. **Project # 1 | Central Tunnel – Package I:** Upgrades will be made to the Central Tunnel to support Type 10 vehicle operations and are required for the arrival of the Type 10 pilot vehicles. Package I focuses on upgrades to the interlockings and the legacy signal relays, removing the existing signal system and associated wayside equipment at Government Center, Copley, and Park Street interlockings and replacing these with track circuits and signal heads to support Type 10 operation.
2. **Project #2 | Riverside VMF – Package I:** Riverside Vehicle Maintenance Facility (VMF) improvements include extending the inspection pits on two tracks, installing portable jacks, and lengthening work platforms. This project will accommodate the qualification process including assembly, inspection, static testing, and validation testing of the new vehicles. These modifications are necessary to support the assembly and testing of the Type 10 pilot vehicles.
3. **Project #3 | Type 10 Dedicated High-Speed Test Track:** To create a more efficient way of performing dynamic vehicle testing during passenger service hours, this project will install a series of track crossovers along the D Branch to allow safe single tracking operation and testing. The scope includes track modifications, interlockings and signal work. A high-speed test track is required for acceptance testing of the Type 10 vehicles.
4. **Project #4 | Overhead Catenary System Relocation:** Type 10 vehicles will have a different interface with the Overhead Contact System (OCS) and occupy a different clearance envelope than the legacy vehicles. Work will realign the existing overhead wire position to be compatible with the operation of both the legacy vehicles and the new Type 10s.
5. **Project #5 | Type 10 Simulator – Training Facility Upgrade:** Two Type 10 training simulators will be installed at the MBTA's Unified Training Center to support operator training.
6. **Project #6:** Project was removed from the scope.
7. **Project #7 | Innerbelt VMF:** This project modifies the existing Vehicle Maintenance Facility to accommodate heavy repair of Type 10 vehicles. This project will change the hoist configuration to align with the additional track and add overhead work platforms to maintain equipment on the roof of the vehicle.
8. **Project #8 | Reservoir Lower Yard and Non-Revenue Track:** This project upgrades the track and OCS alignment to allow for the operation of the Type 10 vehicles by removing prohibitively tight curves and track slopes. This project includes updates to switches and connections between the B Branch and C Branch along the non-revenue track.
9. **Project #9 | Lake Street Yard:** This project will redesign the yard to eliminate prohibitively tight track curves and increase storage to accommodate the longer Type 10 vehicles. The scope includes removal of

- the existing car inspection building, which is too short for Type 10 vehicles, and power upgrades required to operate two-car Type 10 trains.
10. **Project #10 | Inner Belt Yard:** This project expands yard storage for the longer Type 10 vehicles. This project will ensure vehicle storage locations are able to support scheduled morning pullouts heading westbound. The project also includes the addition of a new Engineering and Maintenance (E&M) building.
  11. **Project #11 | E-Branch Accessibility and Infrastructure Improvements:** This project redesigns the in-street-running portion of the E Branch to include new accessible platforms between Brigham Circle and Heath Street to support berthing two-car Type 10 trains. The scope includes track and signal work, utility relocation, and construction of platforms.
  12. **Project #12 | Riverside Yard:** This project reconfigures yard tracks to accommodate additional storage for the longer Type 10 vehicles and improves track curvature and operational flow for service on the D Branch.
  13. **Project #13 | Traction Power Upgrades:** This project upgrades the available traction power to accommodate two-car Type 10 train operation. This project will include the addition of new traction power substations and the upgrade of existing power cables and connections.
  14. **Project #14 | Type 10 Additional Vehicles:** The MBTA will procure an additional 58 Type 10 vehicles as a piggyback to the MBTA's preexisting 102 Type 10 based order. The 58 additional vehicles will enable two-car Type 10 train operations on the D and E Branches, which will increase ridership capacity in the central tunnel beyond the required 10 percent.
  15. **Project #15 | Reservoir VMF:** This project improves the VMF so that it can service the new Type 10 vehicles. The scope includes modifications to the catenary cut-out locations, the addition of overhead work platforms, and modified pit tracks.
  16. **Project #16 (a,b,c) | B-Branch Accessibility and Infrastructure Improvements:** This project improves B Branch stations to accommodate longer two-car Type 10 trains by changing the alignment of the track, building new accessible platforms, and increasing the traction power supply. Work will be performed in three segments. Segment I (16a) will go from Blandford Portal to Babcock Street. Segment II (16b) will go from Babcock Street to the west side of Warren Street Station. Segment III (16c) will progress from the west side of Warren Street Station to the Lake Street Yard.
  17. **Project #17 | Central Tunnel – Package II:** This project modifies track alignment, traction power, signal systems, and related structural and drainage work to support Type 10 operations. Track alignment will be

modified to increase track curvature at turnouts and locations with short and tight radii curves.

18. **Project #18 | Riverside VMF – Package II:** This project includes extending pits, lengthening overhead work platforms, changing catenary power cut-outs, and converting the in-floor hoists.

## 2.2 Funding Source

The anticipated funding source of this amendment is the FTA’s Section 5309 Capital Improvement Grants Program, which is a discretionary grant program. This program funds three types of projects: New Starts, Small Starts, and Core Capacity. The projects proposed within Amendment One are classified as Core Capacity, which is defined as a project that “expands capacity by greater than or equal to 10 percent in an existing fixed guideway corridor that is at capacity today or will be in ten years.”<sup>3</sup> It is a requirement for project bundles to be reflected in the regional Transportation Improvement Program and Long-Range Transportation Plan before an application is submitted to the FTA.<sup>4</sup>

## 2.3 Alignment with MPO Vision and Goals

*Destination 2050* establishes a planning framework that outlines the vision, goals, and objectives of the Boston Region MPO. The modernization of the Green Line, as proposed in this amendment, supports the MPO’s vision for 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.

The GLT Core Capacity Program, as proposed in this amendment, could support key goal areas identified in the Plan, including equity, safety, mobility and reliability, access and connectivity, resilience, and clean air and healthy communities. More specifically, it supports the following goals:

- Prioritize investments that improve safety for the most vulnerable roadway users: people who walk, bike, roll, or use assistive mobility devices.
- 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.
- Prioritize investments that reduce delay on the region’s transit network.

---

<sup>3</sup> [https://www.transit.dot.gov/sites/fta.dot.gov/files/2023-10/CIG-Program-Overview-For-Website-10-20-23\\_1.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/2023-10/CIG-Program-Overview-For-Website-10-20-23_1.pdf)

<sup>4</sup> <https://www.transit.dot.gov/sites/fta.dot.gov/files/2023-01/CIG-Policy-Guidance-January-2023.pdf>

- Modernize transit systems and roadway facilities, including by incorporating new technology that supports the MPO's goals, such as electric-vehicle technologies.
- 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.
- 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.
- Support transit vehicle electrification and use of electric vehicles throughout the transportation system to reduce greenhouse gases and other air pollutants

### **3 REQUESTED ACTION**

To enable the MBTA to pursue federal funding through the FTA's Section 5309 Capital Investment Grant Program, MPO staff request that the MPO board votes to release this amendment for an abbreviated 21-day public review period.

Should the MBTA be selected by the FTA to be a recipient of the grant program for the Green Line Projects, the MPO will evaluate the aggregate impact of the nine recommended projects in the Plan for air quality and equity outcomes, in compliance with federal regulations.



## CIVIL RIGHTS NOTICE TO THE PUBLIC

Welcome. Bem Vinda. Bienvenido. Akeyi. 欢迎. 歡迎



You are invited to participate in our transportation planning process, free from discrimination. The Boston Region Metropolitan Planning Organization (MPO) is committed to nondiscrimination in all activities and complies with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin (including limited English proficiency). Related federal and state nondiscrimination laws prohibit discrimination on the basis of age, sex, disability, and additional protected characteristics.

For additional information or to file a civil rights complaint, visit [www.bostonmpo.org/mpo\\_non\\_discrimination](http://www.bostonmpo.org/mpo_non_discrimination).

To request this information in a different language or format, please contact:

**Boston Region MPO Title VI Specialist**

10 Park Plaza, Suite 2150

Boston, MA 02116

Phone: 857.702.3700

Email: [civilrights@ctps.org](mailto:civilrights@ctps.org)

For people with hearing or speaking difficulties, connect through the state MassRelay service, [www.mass.gov/massrelay](http://www.mass.gov/massrelay). Please allow at least five business days for your request to be fulfilled.