



Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, MassDOT Secretary & CEO



June 30, 2020

Mr. Martin Suuberg  
Commissioner  
Department of Environmental Protection  
1 Winter Street  
Boston, MA 02108

Dear Commissioner Suuberg:

The Massachusetts Department of Transportation (MassDOT), in conjunction with the Massachusetts Bay Transportation Authority (MBTA), is submitting the attached report to the Department of Environmental Protection (DEP) in order to fulfill the requirements of 310 CMR 7.36, *Transit System Improvements*. This Annual Report provides a project description and status information for each of the outstanding public transit projects required under the amended State Implementation Plan (SIP).

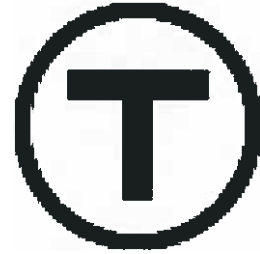
Please do not hesitate to contact me at (857) 368-8865 if you would like to discuss further.

Sincerely,

David J. Mohler  
Executive Director  
MassDOT Office of Transportation Planning

cc: Christine Kirby, Department of Environmental Protection

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Massachusetts Department of Transportation

Massachusetts Bay Transportation Authority

State Implementation Plan – Transit Commitments

2020 Status Report

Submitted to the  
Massachusetts Department of Environmental Protection

June 30, 2020

**For questions on this document, please contact:**

Massachusetts Department of Transportation Office  
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## INTRODUCTION

This report is submitted by the Massachusetts Department of Transportation (MassDOT), in conjunction with the Massachusetts Bay Transportation Authority (MBTA), to the Massachusetts Department of Environmental Protection (DEP) in order to fulfill the requirements of 310 CMR 7.36(7), *Transit System Improvements*. Below is a project description and status information for each of the outstanding public transit projects required under the amended State Implementation Plan (SIP).

As noted in previous Status Reports, MassDOT is no longer reporting on the Red Line/Blue Line Connector Design, Blue Line Platform Lengthening and Station Modernization, the Greenbush Commuter Rail Restoration, and the Construction of 1,000 Parking Spaces. All of those projects have been completed and MassDOT believes that the relevant commitments have been met. On December 8, 2015, the Environmental Protection Agency published a final rule in the Federal Register approving a revision submitted by the Commonwealth of Massachusetts to remove from the SIP the commitment to design the Red Line/Blue Line Connector project.

As always, MassDOT hopes to make the annual Status Report process one of iterative improvement, and looks to DEP and to the public for comments and other suggestions to refine its efforts.

This report (along with past reports and supporting documents) will be posted to MassDOT's SIP Regulations website at:

<https://www.massdot.state.ma.us/planning/Main/PlanningProcess/StateImplementationPlan/SIPTransitCommitmentSubmissions.aspx>

## I. FAIRMOUNT LINE IMPROVEMENT PROJECT

### SIP Requirement

*Before December 31, 2011, construction of the following facilities shall be completed and opened to full public use: Fairmount Line improvements consisting of enhancements of existing stations including without limitation: platform extensions; improved lighting and improved access; a new station in the general location of Four Corners, and a new station in each of the neighborhoods of Dorchester, Mattapan and Roxbury; and bridge upgrades and other measures to improve service and increase ridership (the Fairmount Line project). EOT<sup>1</sup> shall meet the following interim deadlines for the Fairmount Line Project:*

*A. One year from the effective date of this regulation (December 1, 2006), develop a Request for Proposals for a design consultant, complete the competitive procurement process, and issue a notice to proceed for a design consultant.*

✓ Done

*B. Within two years following the issuance of a notice to proceed, complete final design, apply for all necessary permits and grants, file any required legislation, and initiate all public and private land acquisition.*

✓ Done

### Project Description

The 9.2-mile Fairmount commuter rail line runs from South Station, previously served four stations (Uphams Corner, Morton Street, Fairmount, and Readville) in the communities of Dorchester, Mattapan, and Hyde Park, and terminates in the Readville section of Boston. The line, which uses right-of-way entirely owned by the MBTA, also includes 41 bridges. It is the only commuter rail line that exclusively serves neighborhoods within the City of Boston, but ridership has historically been low and passenger facilities along the line have not met modern standards.

The Fairmount Line Improvement Project is defined as the rehabilitation of the existing Uphams Corner and Morton Street Stations, construction of four new stations (Newmarket, Four Corners, Talbot Avenue, and Blue Hill Avenue), reconstruction of six existing railroad bridges (located over Columbia Road, Quincy Street, Massachusetts Avenue, Talbot Avenue, Woodrow Avenue, and the Neponset River), and construction of a new interlocking and upgraded signal system (required to advance the bridge reconstruction work). The intent of these upgrades has been to enhance future service, allowing for increased frequency on the line.

### Planning Conformity

Throughout the life of the project, improvements to the Fairmount Line have been included in all relevant transportation planning documents, including the Regional Transportation Plans of the Boston Region Metropolitan Planning Organization (MPO).

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<sup>1</sup> EOT is the predecessor to the legislatively-created Massachusetts Department of Transportation (MassDOT). For the purposes of referencing 310 CMR 7.36(7) *Transit System Improvements* of the SIP, this report will continue to use the EOT designation. However, the MassDOT designation will be used for all other language or text contained in this report.

## **Project Status**

The sections below describe the current status of the different elements of the Fairmount Line Improvement Project.

### *Systems*

Necessary upgrades to the required interlocking and signal systems have been completed and are currently in use, which has allowed for the reconstruction of structurally deficient bridges along the Fairmount Line.

### *Bridges*

A construction contract to replace the Columbia Road, Quincy Street, and Massachusetts Avenue bridges was awarded in October of 2007, and construction was completed in 2010. The construction of the Talbot Avenue and Woodrow Avenue bridges is complete (see “New Stations” below). Construction of three bridges over the Neponset River began in fall 2010, and was completed in summer 2013.

### *Existing Stations*

As stated above, existing stations at Uphams Corner and Morton Street required only rehabilitation for the project. The MBTA held a station re-opening at Uphams Corner on January 23, 2007. The reconstruction of Morton Street was celebrated at a station re-opening on July 17, 2007. New elements at both stations include extended high-level passenger platforms, accessible walkways, canopies, benches, windscreens, signage, bicycle racks, variable messages signs, lighting, and landscaping. Work at both stations is complete.

### *New Stations*

**Four Corners Station** opened for service July 1, 2013. The station had been under construction since January 2010. The construction of Four Corners Station experienced delays due to unforeseen geotechnical conditions, relocation of existing utilities, and a redesign of the inbound sloped walkway structure at Geneva Avenue. Substantial completion of Four Corners Station occurred in June 2013 and final construction was complete in September 2013. All outstanding change orders have been paid and the project is officially closed out.

The construction of Talbot Avenue Station and the Talbot and Woodrow Avenue Bridges Rehabilitation projects began in fall 2010. The construction lasted approximately twenty-six months, with substantial completion of the station and the bridges in October 2012 and final completion of work in January 2013. The structural replacement of the two bridges was completed over weekends in November and December 2011. Talbot Avenue Station opened in November 2012.

Newmarket Station opened for service on July 1, 2013. The station had been under construction since October 2010. Delay in the completion of the station was attributed to the discovery of an existing power duct bank for the South Bay Shopping Center not previously identified on any existing utility plans. The necessity to redesign elements of the inbound and outbound retaining walls and a delay in the manufacturing of the precast concrete platform panels further contributed to the delay.

90% design plans were received in July 2015 and 100% plans were submitted March 2016 for Blue Hill Avenue Station. A public meeting was held in September 2016 to announce the project advertisement and bid date. MBTA advertised the project on December 9, 2016 with an engineer's estimate of \$19,326,378. The bid opened on January 17, 2017. There were seven (7) bidders and McCourt Construction was the low bidder (\$16,973,094.00). Notice to Proceed (NTP) was issued on February 2, 2017. Construction was completed and the station opened for service in February 2019.

### **Project Funding**

In August 2007, MassDOT and the MBTA executed a contract to transfer approximately \$39 million from the 'immediate needs' Transportation Bond Bill of 2007 (which provided Commonwealth bond funding to support the costs of the SIP projects) from MassDOT to the MBTA to support the costs of (1) signal work, (2) reconstructing the Columbia Road, Quincy Street, and Massachusetts Avenue Bridges, (3) designing the Talbot Avenue, Woodrow Avenue, and Neponset River Bridges, and (4) designing the Newmarket, Talbot, and Blue Hill Avenue Stations.

A supplemental funding agreement providing \$23,756,574 in Commonwealth bond funding to the MBTA was executed in June 2009 in order to advance the construction of the station at Four Corners. A third funding agreement, approved in June 2011 in the amount of \$61,616,500, has allowed the remaining stations (including Blue Hill Avenue) and bridges to advance. These contracts total approximately \$124.4 million in authorized spending on the Fairmount Line Improvement Project to this point. In September 2015, the funding agreement was renewed. after expiring, for \$26,500,000 for the remaining value to cover Blue Hill Avenue Station construction costs and remaining legacy costs.

### **SIP Requirement Status**

Community concerns regarding the construction of the Blue Hill Avenue Station, as well as construction challenges throughout the Fairmount Line project, resulted in a delay of the overall Fairmount Line Improvement Project beyond the December 31, 2011 SIP deadline. However, three of the four stations - Four Corners, Talbot Avenue, and Newmarket - are open for service, although they were completed after the required SIP deadline. The Blue Hill Avenue Station opened to the public on February 25, 2019.

Given the delays in final completion of the project, MassDOT prepared a Petition to Delay and an Interim Emission Offset Plan, to be implemented for the duration of the delay. Both the Petition and Offset Plan were submitted to DEP on July 27, 2011, and are posted to the MassDOT SIP website.

As described in the Offset Plan, MassDOT estimated the reduced emissions expected to be generated by the implementation of the new Fairmont Line stations. MassDOT and the MBTA, in consultation with Fairmount Line stakeholders, identified a set of potential interim emission reduction offset measures that would meet the emissions reduction targets. MassDOT submitted these proposed measures to DEP in a July 27, 2011 petition, after which time MassDOT and the MBTA continued to work to refine the offset concepts for implementation, including a second letter to DEP (dated November 29, 2011) describing changes to the proposed offsets. On January 2, 2012 (the first weekday following January 1), the offset measures were implemented: additional trips via a dedicated shuttle on the CT3 bus route between Andrew Station and Boston Medical Center and increased weekday frequency on the Route 31 bus. The opening of the Blue Hill

Avenue Station saw the return to regular service on the Fairmount Line.

The completion of the Blue Hill Avenue Station in February 2019 marked the completion of the Fairmount Line Improvement Project. Construction on four new stations (Four Corners, Talbot Avenue, Newmarket, and Blue Hill Avenue) has been completed, along with improvements to existing stations along the Fairmount Line. Construction to six bridges along the Fairmount Line is complete, as well as upgrades to the signal and interlocking systems on the line. The offset measures have been removed now that the project is complete and regular service has resumed.

## II. GREEN LINE EXTENSION TO SOMERVILLE AND MEDFORD

### SIP Requirement

*Before December 31, 2021, construction of the following facilities shall be completed and opened to full public use: 1. The Green Line Extension Medford Branch from Lechmere Station to College Ave Station; 2. The Green Line Extension Union Square Branch from Lechmere Station to Union Sq. Station;*

- ✓ *On or before 18 months following the effective date of the regulation (December 1, 2006), MassDOT must develop a request for proposals for a design consultant, complete the competitive procurement process, and issue a notice to proceed.*
  - ✓ Done
- ✓ *Within 15 months of the completion of the above requirements, MassDOT must complete conceptual design and file an Environmental Notification Form.*
  - ✓ Done
- ✓ *On or before two years after MEPA's issuance of a scope for a Draft Environmental Impact Report or a Single Environmental Impact Report, MassDOT must complete preliminary design and file a DEIR or SEIR.*
  - ✓ Done
- ✓ *On or before one year after MEPA's issuance of a scope for a Final Environmental Impact Report, MassDOT must file an FEIR.*
  - ✓ Done
- ✓ *On or before 18 months after MEPA's issuance of a certificate on an FEIR or an SEIR, MassDOT must complete final design, apply for all necessary permits, funds and grants, file any required legislation, and initiate all public and private land acquisition.*
  - ✓ Done
- ✓ *Upon completion of all of the above milestones, DEP and MassDOT shall establish a schedule for project construction and deadlines for project completion.*
  - ✓ Done

Extensive information about the Green Line Extension project can be found at

## **Project Description**

The Green Line Extension project is a 4.7-mile light rail line, which will extend the current Green Line service from a relocated Lechmere Station in East Cambridge, Massachusetts, to a terminus at College Avenue in Medford, Massachusetts and a spur to Union Square in Somerville, Massachusetts. This project is moving forward with a new cost estimate of \$2.289 billion. Funding is in place, including a combined \$1.99 billion in federal and state funds and pledged contributions totaling approximately \$296 million from the Cities of Cambridge and Somerville (\$75 million), the Boston Region Metropolitan Planning Organization (\$157.1 million), and MassDOT (\$64.3 million through Special Obligation Bonds).

In early 2017, the MBTA initiated a procurement process for a Design-Build (DB) entity to design and construct the project. In November 2017, Board approval was received to execute a Design-Build contract with GLX Constructors. The notice to proceed under the contract was issued in December 2017. The Federal Transit Administration obligated an initial tranche (\$100 million) of Capital Investment Grant funds for the project in December 2017, under the 2015 Full Funding Grant Agreement (FFGA). Additional funds have since followed.

The contract with GLX Constructors is in the amount of \$999.7 million.

The primary goals of the Project are to improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for sustainable development in Cambridge, Somerville, and Medford. This project comprises light rail service on two new branches extending from Lechmere Station in Cambridge to Union Square Station in Somerville and College Avenue Station in Medford, together with a Vehicle Maintenance Facility (“VMF”) and a multiuse path.

## **Planning Conformity**

Throughout the life of the project, the Green Line Extension project has been included in all relevant transportation planning documents, including the Regional Transportation Plans of the Boston Region Metropolitan Planning Organization (MPO).


## **Project Schedule**

### **Early Works Activities – Keolis / Railroad Operations**

Three ‘early action’ tasks began in 2017 in order to have some of the early track, drainage, retaining wall, and signal work activities completed prior to the start of heavy construction. This work was completed as of Fall 2018.

## Overall Project Baseline Schedule

Milestones for project completion have been established and made part of the Design Build contract. The milestones have been incorporated into that contract. By establishing these milestones, MassDOT has met the sixth and final interim milestone found in the SIP regulation. (“Upon completion of all of the above milestones, DEP and MassDOT shall establish a schedule for project construction and deadlines for project completion.”). The schedule as of July 1, 2020 is shown below.

| <br><b>Design/Construction Contract Completion</b><br><b>Milestone Description</b> | <b>Current</b><br><b>Contractual</b><br><b>Completion</b><br><b>Milestone</b><br><b>Date</b> | <b>MBTA</b><br><b>Forecast</b><br><b>Date</b><br><br>(A) Actual | <b>DB Entity Forecast*/</b><br><br><b>Actual</b><br><i>(Monthly</i><br><i>Update #27 DRAFT)</i> |
|---|--|---|---|
| <b>Notice to Proceed</b>  | <b>20-Dec-17</b>   | 20-Dec-17 (A)   | <b>20-Dec-17 (A)</b>  |
| <b>Milestone 5 – VMF Functionally Complete &amp; Ready for MBTA Operational Testing</b>   | <b>17-Jan-21</b>   | 17-Jan-21   | <b>22-Mar-21</b>  |
| <b>Milestone 4C – Revenue Service for the Union Branch (One)</b>  | <b>12-Aug-21</b>   | 12-Aug-21   | <b>9-Dec-21</b>   |
| <b>Milestone 3C – Revenue Service for Medford Branch (Two)</b>  | <b>24-Oct-21</b>   | 24-Oct-21   | <b>8-Mar-22</b>   |
| <b>Milestone 2 – Contract Substantial Completion</b>  | <b>5-Dec-21</b>  | 5-Dec-21  | <b>19-Apr-22</b>  |
| <b>Milestone 1 – Final Acceptance</b>   | <b>3-Feb-22</b>  | 3-Feb-22  | <b>20-Jun-22</b>  |

## SIP Requirement Status

By filing an Expanded Environmental Notification Form, procuring multiple design consultants, and publishing both Draft and Final Environmental Impact Reports, MassDOT has met the first four interim milestones associated with the Green Line Extension project. MassDOT – which has committed substantial resources to the Green Line Extension project, a top transportation priority of the Commonwealth and the largest expansion of the MBTA rapid transit system in decades – has transitioned the project from the planning and environmental review phases to design, engineering, and eventual construction, coupled with the tasks associated with programming federal funding.

In the 2011 SIP Status Report, MassDOT reported that the Green Line Extension project would not meet the legal deadline of December 31, 2014.

The timeline for overall project completion represents a substantial delay beyond the SIP deadline of December 31, 2014, triggering the need to provide interim emission reduction offset projects and measures for the period of the delay (beginning January 1, 2015). Working with the Central Transportation Planning Staff, MassDOT and the MBTA calculated the reductions of NMHC, CO, and NOx – reductions equal to or greater than the reductions projected for the Green Line Extension itself, as specified in the SIP

regulation – that are required for the period of the delay.

In June 2012, MassDOT released a list of potential mitigation ideas received from the public that could be used as offset measures. In the summer and fall of 2012, MassDOT solicited public comments on these potential measures. The MBTA created an internal working group to determine a final portfolio of interim mitigation measures to implement by December 31, 2014, the legal deadline for the implementation of the Green Line Extension.

This work resulted in a recommendation to implement the following three interim mitigation measures, which collectively would meet the emissions reduction target for the project:

- Additional off-peak service along existing routes serving the corridor, including the Green Line, and bus routes 80, 88, 91, 94 and 96;
- Purchase of 142 new hybrid electric vehicles for The RIDE;
- Additional park and ride spaces at the Salem and Beverly intermodal facilities.

The Petition to Delay was submitted to the Massachusetts Department of Environmental Protection (DEP) on July 22, 2014, and expanded further on the analysis and determination of the interim offset measures. In a letter dated July 16, 2015, the DEP conditionally approved MassDOT's request to delay the Green Line Extension project and the implementation of the above interim mitigation measures. Both the 2014 Petition to Delay and the July 2015 Conditional Approval are available on MassDOT's website. Interim offset measures remain in place for as long as is necessary.