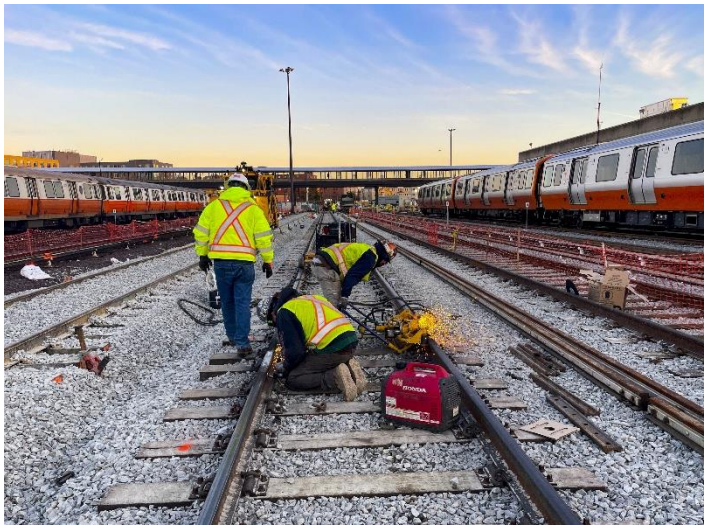
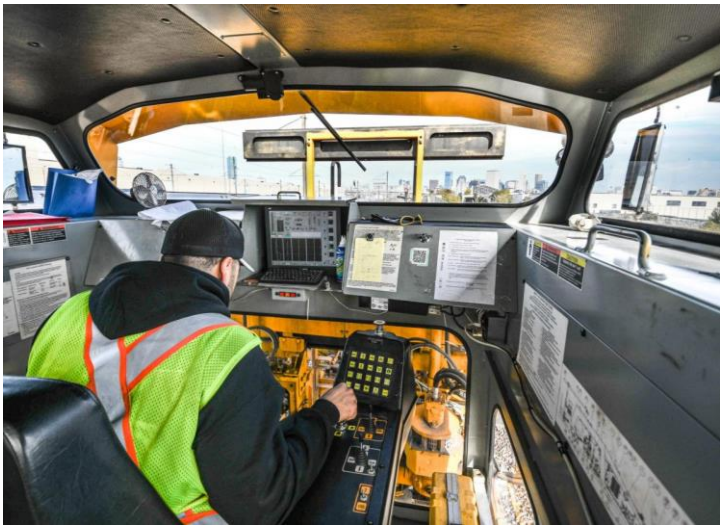
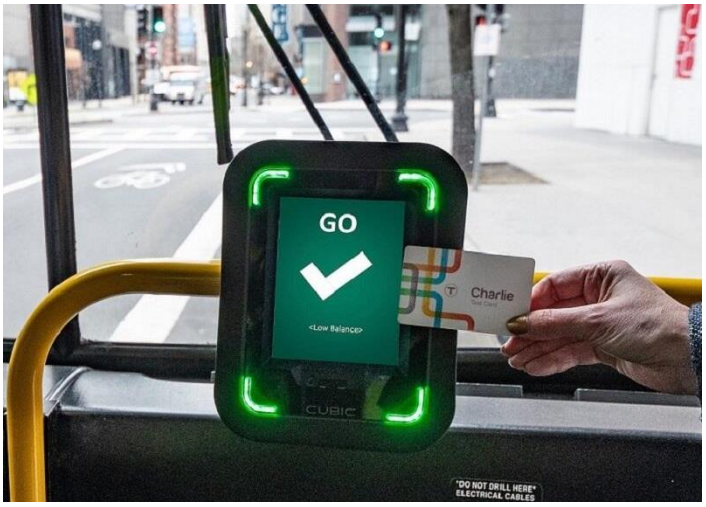
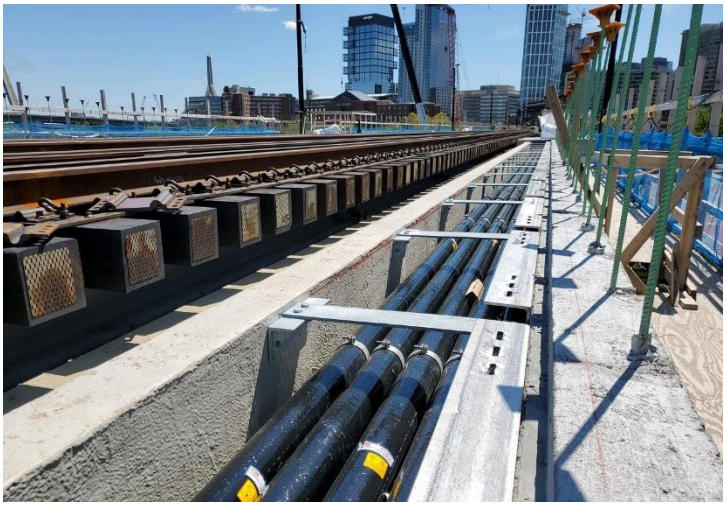








2022 SUSTAINABILITY BOND PROGRESS REPORT

Massachusetts Bay Transportation Authority
March 2023

Assessment 2022 Subseries A-2 (Sustainability Bonds)

Introduction

As described in its Environmental Management & Sustainability Policy, sustainability is a priority for the Massachusetts Bay Transportation Authority (MBTA). The transit agency has a goal to make transportation more eco-friendly, reliable, and equitable; and Sustainability Bonds play a key role in financing capital initiatives that advance this goal.

The MBTA relies on its Sustainability Bond Framework to identify capital projects that make targeted environmental and social improvements. Environmental goals help to achieve low-carbon emissions, building climate resilient infrastructure and a sustainable community. Social goals help to construct critical infrastructure to make sure communities have equal and affordable access to safe public transportation.

In April 2022, the MBTA issued Sustainability Bonds on its Assessment lien to fund a diverse set of projects focused on sustainability. The 2022 Subseries A-2 provided capital for 18 different projects. The projects that dominated spending were the **Wellington Yard Complete Upgrade** ($15 million), **Fare Transformation** project ($14 million), and the **Lechmere Viaduct Rehabilitation** project ($8 million).

The Wellington Yard Complete Upgrade project will make it easier for crews to move Orange Line vehicles and reduce time needed for maintenance, allowing for a safer workplace environment. Fare Transformation has been a major project for the MBTA that will make paying for transit easier and more convenient for our customers. The Lechmere Viaduct carries Green Line trains from Lechmere Station into Downtown Boston. The rehabilitation will allow for increased capacity expected from the Green Line Extension project and the future new Green Line fleet.

An additional $36,847,333.26 was used for 15 other projects focused on sustainability. As of the publication of this report, all of bond proceeds have been spent. There will be no further disclosure relating to this series of bonds.

The MBTA continues spending on its **$325 million Subordinated Sales Tax Bond Anticipation Notes, Series 2021** for the Commuter Rail Safety and Resiliency Program's Automatic Train Control (ATC) program. As of January 1, 2023, there was $122 million remaining in unspent proceeds.

Sustainability remains a central focus of the MBTA, and we anticipate further issuances of Sustainability Bonds.

Sincerely,

Mary Ann O'Hara, Chief Financial Officer

Patrick Landers, Treasurer

Christina Marin, Director of Treasury Services and P3 Finance

Sustainability Bond Framework & Capital Projects

Since 2017, MBTA has issued several sustainability bonds to fund capital projects and most recently issued the 2022 Assessment bonds as Sustainability Bonds.

New Issuance	Outstanding Issuance
$97,200,000 Assessment Bonds Subseries A-2 AAA/Stable (S&P) and AAA/Stable (Fitch) CUSIP: 575577NZ0 Maturity: July 1, 2052	**$325,000,000 Subordinated Sales Tax Bond Anticipation Notes, Series 2021** AA/Positive (S&P) and Aa3/Stable (Moody's) CUSIP: 575579M95 Maturity: May 1, 2025

Capital projects that are eligible for sustainability funds are selected by an internal Sustainability Committee, which relies on the MBTA Sustainability Bond Framework to identify projects. The framework evaluates the environmental and social benefits provided by these projects. The use of proceeds from a sustainability bond fall into one (or more) of the following categories:

Environment

The Massachusetts Bay Transportation Authority is dedicated to providing safe, reliable, world-class public transportation in an environmentally responsible manner.
Built environment: Respecting, protecting and improving the built environment and enhancing the quality of the travel experience.
Capacity: Reducing emissions from personal vehicle trips by increasing capacity to carry passengers and increasing the attractiveness of public transit by offering more frequent, reliable, and comfortable service.
Carbon, energy and climate resilience: Reducing carbon emissions and preparing for the potential impacts of climate change and extreme weather.
Natural environment: Respecting, protecting and enhancing the natural environment and its contribution to the quality of life.
Noise: Managing and controlling transport-related noise and vibration.
Pollution prevention: Proactively managing activities to minimize and control pollution.
Resource management: Using resources (including water) wisely and minimizing waste.

Social

The MBTA acknowledges that high quality public transportation and transit-oriented development can produce meaningful social benefits.
Affordability: Balancing our customers' means, particularly low-income riders, with the organization's financial constraints.
Accessibility: Operating an inclusive system with facilities designed to accommodate a diverse customer base.
Availability: Ensuring that communities within the service area have reasonable, equitable access to the system.
Equity: Offsetting social and environmental burdens experienced by populations or communities within the service area and/or striving for an even distribution of benefits and burdens across the diverse modes, customer bases, and service area.
Safety: Protecting the well-being of passengers, operators, and the general public.
Workplace environment: Maintaining a safe, empowering, and satisfying workplace environment for MBTA and affiliated employees.

Project Highlights

Wellington Yard Complete Upgrade

The Wellington Yard Complete Upgrade consists of design and construction-related services to reconstruct and update Orange Mainline track structure. It is a key aspect of the larger Orange Line Transformation (OLT) project which is modernizing the 120-year-old rapid transit line serving the communities of Malden, Medford, Somerville, and Boston.

The OLT Program will result in faster, more comfortable trips, as well as less crowding. The program will also support the expansion of the Orange Line fleet, which will create space for 30,000 more riders per day.

The upgrade included:

- An **efficient**, environmentally friendly vehicle washing station that uses recycled wash water, which will allow the Authority to clean trains more proactively
- All new tracks, power systems, and signals to improve **safety** and reliability for workers and Orange Line riders
- New sprinkler safety system in maintenance facility to improve **workplace safety**
- New diagnostic equipment and more space for vehicle maintenance, which will enable efficient and **reliable** maintenance of trains
- Expanded secure vehicle storage space (completed in fall 2020) to support new fleet that will increase **capacity**

An improved maintenance system was needed to make sure service availability and capacity for current and the new fleet of Orange Line vehicles. The mobility improvements from this project will create a reliable delivery of service, improve rides and customer experience.

Contract awarded: January 2023

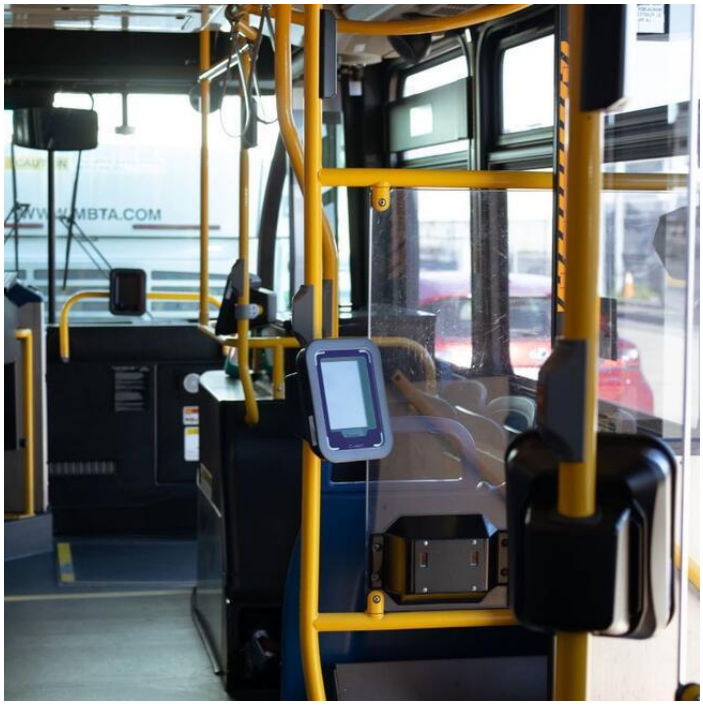
Project completed: September 2022

Budget: $201 million

Sustainability Bond Proceeds Used: $15 million

Fare Transformation Project

The Fare Transformation project will make paying for all MBTA transportation services more convenient and easier for customers. MBTA's current proprietary method of fare collection is very complex, labor intensive and has reached the end of its useful life.



Customers will have the ability to pay for their fare with a single tap of their credit card, debit card, smartphone or fare media. Fare transformation will not only make the front end of the fare process more efficient it will also simplify and improve the backend processes, making it less labor intensive and reducing future cost. Additionally, the project will move away from the current cash system in buses and light rail and allow all door boarding. Opening all the doors on buses and Green line cars will significantly reduce stop time allowing passengers to quickly get on board.

A unified fare collection system for all modes of MBTA transportation will increase accessibility. The new fare system will allow for fare policy flexibility providing tools to enhance equity and attract new riders. Some examples of possible future policies include distance-based fare prices, time of day fares and fare capping which could enable affordability and equity for riders. The system is also designed to meet the needs of riders with disabilities in the design of fare vending machine and gate technology, and those who do not speak English as their first language. Moreover, reduced wait times will decrease idling engine pollution.

Contract awarded: January 2016

Projected completion: May 2024

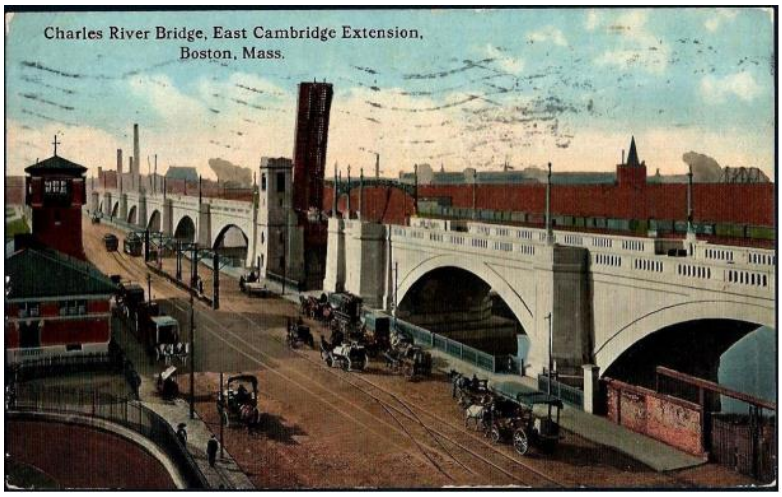
Budget: $792.39 million

Sustainability Bond Proceeds Used: $19.04 million

Lechmere Viaduct Rehabilitation Project

The Lechmere Viaduct carries Green Line trains from Lechmere Station across the Charles River into downtown Boston. Streetcars first crossed the bridge in June 1912. As of project initiation, the structure was in need of critical rehabilitation. As a consequence, train speed was limited and a reduced number of trains were permitted on the viaduct at any one time.

Work includes the complete reconstruction of track, signals, and traction power on the viaduct. The viaduct was strengthened to handle heavier loads and increased train frequency, while also preserving its historic façade. The upgrades allow more trains to pass over the bridge, ultimately serving a completely new Lechmere Station and the new stations constructed as part of the Green Line Extension Project.



The MBTA estimates that approximately 10,000 daily pre-pandemic transit trips (0.5% of system ridership) made by existing riders benefit from safety improvements (approximately 22% of which are made by riders in low-income households and 30% of which are made by riders of color).

The project also increases capacity for the system as up to 366,000 daily pre-pandemic trips made by travelers on all modes (cars, bikes, and pedestrians) could gain rapid transit as an option for completing their trips as a result of the Green Line Extension project (GLX), approximately 42% of which are made by people in low-income households and 27% of which are made by people of color.

Contract awarded: December 2019

Project Completed: March 2022

Budget: $99.6 million

Sustainability Bond Proceeds Used: $13.96 million

Automatic Train Control

The Federal Railroad Administration (FRA) has mandated the installation of wayside Automatic Train Control (ATC) systems on the MBTA's North Side Commuter Rail Lines as part of Positive Train Control (PTC) requirements.

Installation of ATC is both a safety and resiliency project for the MBTA, fortifying the system against preventable train accidents and providing safe transport to riders, and also providing uniformity of operations along the commuter rail network. ATC (Automatic Train Control, or Cab Signals) automatically slows a speeding train due to malfunction or operator error.

As of December 2022, ATC has been installed and is in service on 121 of 170 total miles (72% completed). This includes the New Hampshire Main Line (Lowell Line) and Wildcat Branch, the 50 miles of the Fitchburg Line owned by MBTA, the Gloucester Branch, and 29 miles of the Newburyport Line.

Projected completion: December 2024

Budget: $416.75 million

Sustainability Bond Proceeds Used To-Date: $203 million

Additional Projects Financed

PROJECT	Sustainability Priority Satisfied	AMOUNT
Cabot Yard Complete Upgrade	Resiliency, Pollution Prevention	$4,244,213.88
Facility Roof Replacement	Resiliency	$6,824,914.18
Green Line Transformation	Resiliency, Accessibility, Capacity	$4,173,574.46
Bus Facility Interim Improvements	Safety, Workplace environment	$4,010,314.23
Alewife Garage Rehabilitation	Resiliency	$4,003,627.03
Route 128/University Park Garage Improvements	Resiliency	$3,890,452.59
Orange Line - PM/CM Professional Services	Safety, Resiliency, Capacity	$3,568,051.10
Court House Station Leaks	Resiliency	$2,374,480.49
Red Line - PM/CM Professional Services	Safety, Resiliency, Capacity	$2,193,227.14
Franklin Double Track and Signal	Availability, Capacity	$311,298.88
Green Line E Branch Surface Improvements	Safety, Capacity	$266,669.67
Green Line C Branch Surface Improvements	Built Environment, Resiliency	$35,120.72
Bond Costs		$831,209.38
Power Systems Resiliency Program	Resiliency	$81,928.45
Hynes Station	Resiliency, Accessibility, Safety	$38,251.06

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Sajid Ahsan contributed to this report.