Metropolitan Transportation Authority

# 2023

# Combined Continuing Disclosure Filings

**2023 COMBINED CONTINUING DISCLOSURE FILINGS**
**PURSUANT TO SEC RULE 15c2-12**

**relating to**

**METROPOLITAN TRANSPORTATION AUTHORITY**

**and**

**TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY**
**(MTA BRIDGES AND TUNNELS)**

**Transportation Revenue Bonds**
**TBTA General Revenue Bonds**
**TBTA Subordinate Revenue Bonds**
**TBTA Second Subordinate Revenue Bond Anticipation Notes**
**Dedicated Tax Fund Bonds**
**Payroll Mobility Tax Obligations**
**Sales Tax Revenue Bonds**
**Hudson Rail Yards Trust Obligations**

Dated: April 28, 2023

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## INTRODUCTION

This book contains the 2023 Combined Continuing Disclosure Filings prepared by Metropolitan Transportation Authority ("MTA") and Triborough Bridge and Tunnel Authority ("TBTA") pursuant to various written undertakings made to assist the underwriters in complying with their obligations in accordance with SEC Rule 15c2-12 in connection with the following credits:

- MTA Transportation Revenue Bonds,
- TBTA General Revenue Bonds,
- TBTA Subordinate Revenue Bonds,
- TBTA Second Subordinate Revenue Bond Anticipation Notes,
- MTA Dedicated Tax Fund Bonds,
- MTA/TBTA Payroll Mobility Tax Obligations,
- TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox – City Sales Tax), and
- MTA Hudson Rail Yards Trust Obligations.

A roadmap to the continuing disclosure information that MTA or TBTA has contractually agreed to update, in accordance with the respective continuing disclosure agreements in official statements, describing where the materials required may be found in MTA's Annual Disclosure Statement is set forth at the end of this Introduction**.** This Annual Information booklet contains the following information:

**PART I** contains the **MTA Annual Disclosure Statement** ("ADS"). The ADS describes the Related Entities, and includes the information necessary to meet the requirements of the continuing disclosure agreements under MTA and TBTA official statements, offering circulars and remarketing circulars, as applicable, for all credits.

**PART II** includes the following, which are also part of the Annual Continuing Disclosure Filings:

- **Tab 1** lists, by designation, the various issues of securities outstanding for all credits.

- **Tab 2** provides certain details of each series and subseries for MTA and TBTA credits, for the issues listed in Tab 1.

- **Tab 3a** lists any material events that have occurred within the past year for all credits.

- **Tab 3b** lists any voluntary disclosures that have been posted within the past year for all credits.

**APPENDICES**

- **Appendix A** — See Part I.

- **Appendix B** — Metropolitan Transportation Authority Consolidated Financial Statements.

- **Appendix C** — New York City Transit Authority Consolidated Financial Statements.

- **Appendix D** — Triborough Bridge and Tunnel Authority Financial Statements.

- **Appendix E** — History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority.

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## Roadmap for Continuing Disclosure to the Annual Information Statement

As part of all the official statements provided under all of the credits, the continuing disclosure agreements ("CDAs") require the filing of certain Annual Information with the Electronic Municipal Market Access System (EMMA). The following roadmap indicates where information under these CDAs may be found in this annual report, specifically in the **ADS.** There is additional information incorporated into the **ADS** that may not be reflected in the CDAs, so if it is not listed here, see the **ADS** Table of Contents for the detailed listing.

| | | |
|---|---|---|
| **TRANSPORTATION REVENUE BONDS** | **ADS Location** | |
| Continuing Disclosure Document | **Caption(s)** | **Heading(s)** |
| A. Description of the systems operated by the Related Transportation Entities and their operations. | | |
| Related Transportation Entities | 1. GOVERNANCE AND OPERATIONS | All headings |
| Transit System | 1. TRANSIT SYSTEM | All headings |
| Commuter System | 1. COMMUTER SYSTEM | All headings |
| MTA Bus | 1. MTA BUS COMPANY | All headings |
| B. Description of changes to the fares or fare structures charged to users of the systems operated by the Related Transportation Entities. | | |
| Transit System | 1. REVENUES OF THE RELATED ENTITIES | 1. Fares and Tolls – *Transit System Fares* |
| Commuter System | 1. REVENUES OF THE RELATED ENTITIES | 1. Fares and Tolls – *Commuter System Fares* |
| MTA Bus | 1. REVENUES OF THE RELATED ENTITIES | 1. Fares and Tolls – *MTA Bus Fares* |
| C. Operating Data of the Related Transportation Entities. | | |
| Transit System | 1. TRANSIT SYSTEM | All headings |
| | 2. RIDERSHIP AND FACILITIES USE | 1. Transit System (MTA New York City Transit and MaBSTOA) Ridership |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA New York City Transit and MaBSTOA<br>2. MTA Bus<br>3. MTA Staten Island Railway |
| Commuter System | 1. COMMUTER SYSTEM | All headings |
| | 2. RIDERSHIP AND FACILITIES USE | 1. Commuter System Ridership |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. Commuter System |
| MTA Bus | 1. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA Bus |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bus Ridership |

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| D. Information regarding the Transit and Commuter Capital Programs. | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Capital Programs – Background and Development<br>2. Approved 2020-2024 Capital Program<br>3. MTA 2020-2024 Capital Program and December 2021 Amendment to that Program (Amendment #1)<br>4. MTA 2020-2024 Capital Program and July 2022<br>5. 2015-2019 Capital Program<br>6. 2010-2014 Capital Program<br>7. 1992-2009 Transit Capital Programs Objectives<br>8. 1992-2009 Commuter Capital Programs Objectives<br>9. Oversight and Review of Administration of Capital Programs |
| | 2. ENVIRONMENTAL FACTORS | 1. Climate Bond Standard Certification and Compliance |
| E. Presentation of changes to indebtedness issued by MTA under the Transportation Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from pledged revenues. | 1. TRANSPORTATION REVENUE BONDS | 1. TRB Table 1<br>2. TRB Table 2a<br>3. TRB Table 2b |
| F. Information concerning the amounts, sources, material changes in and material factors affecting pledged revenues and debt service incurred under the Transportation Resolution. | 1. REVENUES OF THE RELATED ENTITIES | All headings |
| G. Additional financial information. | See Items E and F above. | |
| H. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA<br>2. Transit System<br>3. Commuter System<br>4. MTA Bus |
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| **TBTA GENERAL REVENUE BONDS** | **ADS Location** | |
| Continuing Disclosure Document | **<u>Caption(s)</u>** | **<u>Heading(s)</u>** |
| A. Certain financial and operating data. | 1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY | 1. MTA Bridges and Tunnels Facilities<br>2. Authorized Projects of MTA Bridges and Tunnels |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles<br>2. Toll Rates<br>3. Competing Facilities and Other Matters<br>4. E-ZPass |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA Bridges and Tunnels |
| B. Information regarding the TBTA, Transit and Commuter Capital Programs. | | |

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| TBTA, Transit and Commuter Systems | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Capital Programs – Background and Development<br>2. Approved 2020-2024 Capital Program<br>3. MTA 2020-2024 Capital Program and December 2021 Amendment to the Program (Amendment #1)<br>4. 2015-2019 Capital Program<br>5. 2010-2014 Capital Program<br>6. 1992-2009 Transit Capital Programs Objectives<br>7. 1992-2009 Commuter Capital Programs Objective<br>8. 1992-2009 MTA Bridges and Tunnels Capital Programs Objectives<br>9. Oversight and Review of Administration of Capital Programs |
| C. Presentation of changes to indebtedness issued by TBTA under the TBTA Senior Resolution, as well as information concerning changes to TBTA's debt service requirements on such indebtedness payable from revenues. | 1. MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS | 1. MTA Bridges and Tunnels Senior Lien Table 1<br>2. MTA Bridges and Tunnels Senior Lien Table 2 |
| D. Historical information concerning traffic, revenues, operating expenses, TBTA Senior Resolution debt service and debt service coverage | 1. REVENUES OF THE RELATED ENTITIES | 1. MTA Bridges and Tunnels Surplus |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles |
| | 3. MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS | 1. MTA Bridges and Tunnels Senior Lien Table 2 |
| E. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA Bridges and Tunnels |
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| **TBTA SUBORDINATE REVENUE BONDS** | **ADS Location** | |
| Continuing Disclosure Document | **<u>Caption(s)</u>** | **<u>Heading(s)</u>** |
| A. Certain financial and operating data. | 1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY | 1. MTA Bridges and Tunnels Facilities<br>2. Authorized Projects of MTA Bridges and Tunnels |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles<br>2. Toll Rates<br>3. Competing Facilities and Other Matters<br>4. E-ZPass |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA Bridges and Tunnels |
| B. Information regarding the TBTA, Transit and Commuter Capital Programs. | | |

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|---|---|---|
| TBTA, Transit and Commuter Systems | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Capital Programs – Background and Development<br>2. Approved 2020-2024 Capital Program<br>3. MTA 2020-2024 Capital Program and December 2021 Amendment to that Program (Amendment #1)<br>4. 2015-2019 Capital Program<br>5. 2010-2014 Capital Program<br>6. 1992-2009 Transit Capital Programs Objectives<br>7. 1992-2009 Commuter Capital Programs Objective<br>8. 1992-2009 MTA Bridges and Tunnels Capital Programs Objectives<br>9. Oversight and Review of Administration of Capital Programs |
| C. Presentation of changes to indebtedness issued by TBTA under the TBTA Senior and Subordinate Resolutions, as well as information concerning changes to TBTA's debt service requirements on such indebtedness payable from revenues. | 1. MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS | 1. MTA Bridges and Tunnels Subordinate Table 1<br>2. MTA Bridges and Tunnels Subordinate Table 2 |
| D. Historical information concerning traffic, revenues, operating expenses, TBTA Subordinate Resolution debt service and debt service coverage | 1. REVENUES OF THE RELATED ENTITIES | 1. MTA Bridges and Tunnels Surplus |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles |
| | 3. MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS | 1. MTA Bridges and Tunnels Subordinate Table 2 |
| E. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA Bridges and Tunnels |
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| **TBTA SECOND SUBORDINATE REVENUE BOND ANTICIPATION NOTES** | **ADS Location** | |
| Continuing Disclosure Document | **Caption(s)** | **Heading(s)** |
| A. Certain financial and operating data. | 1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY | 1. MTA Bridges and Tunnels Facilities<br>2. Authorized Projects of MTA Bridges and Tunnels |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles<br>2. Toll Rates<br>3. Competing Facilities and Other Matters<br>4. E-ZPass |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA Bridges and Tunnels |
| B. Information regarding the TBTA, Transit and Commuter Capital Programs. | | |

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| TBTA, Transit and Commuter Systems | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Capital Programs – Background and Development<br>2. Approved 2020-2024 Capital Program<br>3. MTA 2020-2024 Capital Program and December 2021 Amendment to that Program (Amendment #1)<br>4. 2015-2019 Capital Program<br>5. 2010-2014 Capital Program<br>6. 1992-2009 Transit Capital Programs Objectives<br>7. 1992-2009 Commuter Capital Programs Objective<br>8. 1992-2009 MTA Bridges and Tunnels Capital Programs Objectives<br>9. Oversight and Review of Administration of Capital Programs |
| C. Description of changes to indebtedness issued by TBTA under the TBTA Senior and Subordinate Resolutions, as well as information concerning changes to TBTA's debt service requirements on such indebtedness payable from revenues. | 1. SECOND SUBORDINATE REVENUE BOND ANTICIPATION NOTES (CBDTP) | 1. Pledge Affected by the CBDTP Second Subordinate Resolution<br>2. Revenues and Additional Subordinate MTA Bridges and Tunnels Projects<br>3. Flow of Revenues |
| D. Historical information concerning traffic, revenues, operating expenses, TBTA Subordinate Resolution debt service and debt service coverage | 1. REVENUES OF THE RELATED ENTITIES | 1. MTA Bridges and Tunnels Surplus |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles |
| E. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA Bridges and Tunnels |
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| **DEDICATED TAX FUND BONDS** | **ADS Location** | |
| Continuing Disclosure Document | **Caption(s)** | **Heading(s)** |
| A. Description of the Transit and Commuter Systems operated by MTA and its affiliates and subsidiaries and their operation. | 1. GOVERNANCE AND OPERATIONS<br>2. TRANSIT SYSTEM<br>3. COMMUTER SYSTEM | All headings |
| | 4. RIDERSHIP AND FACILITIES USE | 1. Transit System (MTA New York City Transit and MaBSTOA) Ridership<br>2. Commuter System Ridership |
| | 5. FEDERAL AND STATE LAWS | 1. Transit System<br>2. Commuter System |
| | 6. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA New York City Transit and MaBSTOA<br>2. MTA Bus<br>3. MTA Staten Island Railway<br>4. Commuter System |

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| B. Information regarding the Transit and Commuter Capital Programs. | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Capital Programs – Background and Development<br>2. Approved 2020-2024 Capital Program<br>3. MTA 2020-2024 Capital Program and December 2021 Amendment to that Program (Amendment #1)<br>4. 2015-2019 Capital Program<br>5. 2010-2014 Capital Program<br>6. 1992-2009 Transit Capital Programs Objectives<br>7. 1992-2009 Commuter Capital Programs Objectives<br>8. Oversight and Review of Administration of Capital Programs |
| | 2. ENVIRONMENTAL FACTORS | 1. Climate Bond Standard Certification and Compliance |
| C. Presentation of changes to indebtedness issued by MTA under the DTF Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from DTF Revenues. | 1. DEDICATED TAX FUND BONDS | 1. DTF Table 1<br>2. DTF Table 2 |
| D. Financial information and operating data, including information relating to the following: | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. 2023-2026 Financial Plan (The "2023 February Plan") |
| Description of how the State allocates taxes to the MTA Dedicated Tax Fund. | 1. DEDICATED TAX FUND BONDS | 1. Sources of Payment – Revenues from Dedicated Taxes<br>2. DTF Table 2 |
| Description of the material taxes allocated to the MTA Dedicated Tax Fund, together with a description of the tax rate, the tax base and the composition and collection of such taxes by the State. | 1. DEDICATED TAX FUND BONDS | 1. Sources of Payment – Revenues from Dedicated Taxes<br>2. DTF Table 2<br>3. MTTF Receipts – Dedicated Petroleum Business Tax |
| For the material taxes then constituting a source of revenue for the MTA Dedicated Tax Fund, an historical summary of such revenue, if available, together with an explanation of the factors affecting collection levels, for a period of at least the five most recent completed fiscal years then available. | 1. DEDICATED TAX FUND BONDS | 1. MTTF Receipts – Dedicated Petroleum Business Tax<br>2. MTTF Receipts – Motor Fuel Tax<br>3. MTTF Receipts – Motor Vehicle Fees<br>4. MMTOA Account – Special Tax Supported Operating Subsidies |
| E. Information concerning the amounts, sources, material changes in and material factors affecting DTF Revenues and debt service incurred under the DTF Resolution. | See Items C and D above. | |
| F. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA<br>2. Transit System<br>3. Commuter System |

| **PAYROLL MOBILITY TAX OBLIGATIONS** | **ADS Location** | |
|---|---|---|
| Continuing Disclosure Document | Caption(s) | Heading(s) |
| A. Presentation of changes to indebtedness issued by MTA and TBTA, respectively, under the MTA PMT Resolution and the TBTA PMT Resolution, as well as information concerning changes to TBTA's and MTA's debt service requirements on such indebtedness payable from PMT Receipts. | 1. PAYROLL MOBILITY TAX OBLIGATIONS | 1. PMT Table 1<br>2. PMT Table 6B<br>3. Pledge Effected by the MTA PMT Resolution and the TBTA PMT Resolution |

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| B. Financial information and operating data, including information relating to the following: | 1. PAYROLL MOBILITY TAX OBLIGATIONS | |
| Description of the taxes and fees allocated to the Financing Agreement, currently Mobility Tax Receipts and ATA Receipts. | | 1. PMT Receipts – *Historical Mobility Tax Receipts*<br>2. PMT Receipts – *Historical ATA Receipts*<br>3. PMT Receipts – *Historical PMT Receipts* |
| For the taxes and fees then constituting sources of revenue for the PMT Indebtedness, an historical summary of such revenues, if available, together with an explanation of the factors affecting collection levels, for a period of at least the three most recent completed fiscal years then available. | 1. PAYROLL MOBILITY TAX OBLIGATIONS | 1. PMT Receipts |
| | 2. REVENUES OF THE RELATED ENTITIES | All headings |
| C. Information concerning the amounts, sources, material changes in and material factors affecting PMT Revenues and debt service incurred under the PMT Resolution. | See Items A and B above. | |
| | 2. ENVIRONMENTAL FACTORS | 1. Climate Bond Standard Certification and Compliance |
| D. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA<br>2. Transit System<br>3. Commuter System<br>4. MTA Bridges and Tunnels |
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| **SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)** | **ADS Location** | |
| Continuing Disclosure Document | **Caption(s)** | **Heading(s)** |
| A. Certain financial and operating data. | 1. TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY | 1. MTA Bridges and Tunnels Facilities<br>2. Authorized Projects of MTA Bridges and Tunnels |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles<br>2. Toll Rates<br>3. Competing Facilities and Other Matters<br>4. E-ZPass |
| | 3. EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS | 1. MTA Bridges and Tunnels |
| B. Information regarding the TBTA, Transit and Commuter Capital Programs. | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | All headings |
| C. Presentation of changes to indebtedness issued by TBTA under the TBTA Sales Tax Resolution, as well as information concerning changes to TBTA's debt service requirements on such indebtedness payable from revenues. | 1. SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX) | 1. Sales Tax Revenue Bonds Table 1<br>2. Sales Tax Revenue Bonds Table 2 |
| D. Historical information concerning traffic, revenues, operating expenses, TBTA Sales Tax Resolution debt service and debt service coverage | 1. REVENUES OF THE RELATED ENTITIES | 1. MTA Bridges and Tunnels - Surplus |
| | 2. RIDERSHIP AND FACILITIES USE | 1. MTA Bridges and Tunnels - Total Revenue Vehicles |

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| | 3. SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX) | 1. Sales Tax Revenue Bonds Table 2 |
| E. Material litigation relating to any of the foregoing. | 1. LITIGATION | 1. MTA Bridges and Tunnels |
| | | |
| **HUDSON RAIL YARDS TRUST OBLIGATIONS** | **ADS Location** | |
| Continuing Disclosure Document | **Caption(s)** | **Heading(s)** |
| A. Presentation of the financial results of the Related Transportation Entities prepared in accordance with GAAP for the most recent year for which that information is then currently available | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. 2023-2026 Financial Plan (The "2023 February Plan") |
| B. Presentation of changes to indebtedness issued by MTA under the Transportation Revenue Bond Resolution, as well as information concerning changes to MTA's debt service requirements on such indebtedness payable from pledged revenues | 1. TRANSPORTATION REVENUE BONDS | 1. TRB Table 1<br>2. TRB Table 2a<br>3. TRB Table 2b |
| C. Information concerning the amounts, sources, material changes in and material factors affecting pledged revenues and debt service incurred under the Transportation Revenue Bond Resolution. | 1. REVENUES OF THE RELATED ENTITIES | 1. All headings. |
| D. Financial information of the type included in TRB Table 2 | 1. TRANSPORTATION REVENUE BONDS | 1. TRB Table 2a<br>2. TRB Table 2b |
| E. Material litigation related to any of the foregoing | 1. LITIGATION | 1. MTA<br>2. Transit System<br>3. Commuter System<br>4. MTA Bus |
| F. A summary presentation of the current status of development of the ERY and WRY components of the Hudson Rail Yards Project | 1. FINANCIAL PLANS AND CAPITAL PROGRAMS | 1. Non-Capital Program Projects - Hudson Yards Development and Financing |
| G. Updated Schedule 1 to the Financing Agreement | See item F above. | |

**CUSIP numbers used herein have been assigned by an organization not affiliated with MTA or TBTA and are included solely for the convenience of the holders of the securities listed. Neither MTA nor TBTA is responsible for the selection or uses of these CUSIP numbers, nor is any representation made as to their correctness on the securities or as indicated herein.**


R211 Cars Unveiled, Inaugural Ride March 10, 2023

**MTA ANNUAL DISCLOSURE STATEMENT**

**This Metropolitan Transportation Authority ("MTA") Annual Disclosure Statement ("ADS") is dated April 28, 2023, as supplemented on July 5, 2023, to (i) remove the footnotes designating the 2022 amounts as preliminary in certain tables under the captions "PART 2. FINANCIAL INFORMATION" and "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS", (ii) reflect the inclusion of updated information relating to the State Fiscal Year 2023-2024 Enacted Budget under the captions "PART 2. FINANCIAL INFORMATION – REVENUE OF THE RELATED ENTITIES – Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts – *Mobility Tax Receipts*", "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – PAYROLL MOBILITY TAX OBLIGATIONS – PMT Receipts – *Mobility Tax Receipts – The Payroll Mobility Tax*", and "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – MTTF Receipts – Dedicated Petroleum Business Tax – *General* – Legislative Changes", (iii) reflect the inclusion of updated information under the headings "PART 2. FINANCIAL INFORMATION – REVENUE OF THE RELATED ENTITIES – Congestion Zone Surcharges" and "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Subsequent Developments", (iv) replace the lead in paragraphs, tables and notes for the tables under the headings "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – TRANSPORTATION REVENUE BONDS – Pledged Transportation Revenues Gross Lien and Rate Covenant", titled TRB Table 2a, "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – TRANSPORTATION REVENUE BONDS – Pledged Transportation Revenues Gross Lien and Rate Covenant", titled TRB Table 2b, and "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS – Sources of Payment", titled MTA Bridges and Tunnels Senior Lien Table 2, (v) replace the table under the heading "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – Sources of Payment-Revenues from Dedicated Taxes", titled DTF Table 2, (vi) reflect the inclusion of updated information in the tables under the headings "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – PAYROLL MOBILITY TAX OBLIGATIONS – PMT Receipts – *Mobility Tax Receipts – Current Mobility Tax Rates"*, (vii) reflect the inclusion of updated information relating to MTA's insurance programs, such as the Property Insurance Program, the FMTAC Excess Loss Fund, the owner controlled insurance program, and Builder's Risk insurance in the tables under the respective headings titled "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE – General", "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE – Property Insurance Program", "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE – FMTAC Excess Loss Fund", "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE – Owner Controlled Insurance Program", and "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE – Builder's Risk", (viii) incorporate by specific cross-reference the audited Consolidated Financial Statements for the years ended December 31, 2022 and 2021 of each of MTA, New York City Transit, and Triborough Bridge and Tunnel Authority, which financial statements were filed with the Municipal Securities Rulemaking Board on its Electronic Municipal Market Access system ("EMMA"), and (ix) change references to the unaudited financial statements to audited financial statements, and contains information only through that date (or the specific earlier dates noted herein, such as year-end December 31, 2022 financial and statistical information). MTA intends to update and supplement specific information contained herein (1) through additional updated Continuing Disclosure Filings, (2) on a periodic basis, generally corresponding to its July, November and February financial plan updates and (3) by periodic supplement, as appropriate, in connection with its periodic issuance of bonds, notes and other obligations, or otherwise. MTA expects to file such updated and supplemental information with the Electronic Municipal Market Access system ("EMMA") and may incorporate such information herein by specific cross-reference. Such information is also posted on the MTA website under "MTA Info – Financial Information" at https://new.mta.info/investor-info/disclosure-filings for convenience. Such information is accurate as of its date. MTA retains the right to update and supplement specific information contained herein as events warrant. This ADS may contain information not required by the terms of the various continuing disclosure undertakings made by MTA and MTA Bridges and Tunnels. Inclusion of such information is for the convenience of the reader, and none of MTA, the Related Entities (as defined herein), and MTA Bridges and Tunnels have any obligation under the terms of such continuing disclosure undertakings to update any such information or to include it in any future ADS filings.**

**The factors affecting MTA's financial condition are complex. This ADS contains forecasts, projections, and estimates that are based on expectations and assumptions, which existed at the time they were prepared, and**

**contains statements relating to future results and economic performance that are "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. Such statements generally are identifiable by the terminology used, such as "plan", "expect", "estimate", "budget", "project", "forecast", "anticipate" or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information under the captions "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS" and "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS". The forward-looking statements contained herein are based on MTA's expectations and are necessarily dependent upon assumptions, estimates and data that it believes are reasonable as of the date made but that may be incorrect, incomplete, imprecise or not reflective of actual results. Forecasts, projections and estimates are not intended as representations of fact or guarantees of results. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Except as set forth in the preceding paragraph, MTA does not plan to issue any updates or revisions to those forward-looking statements if or when its expectations change or events occur that change the conditions or circumstances on which such statements are based. Forward-looking statements in this ADS speak only as of the date of this ADS.**

# PART 1. BUSINESS

## GOVERNANCE AND OPERATIONS

### Legal Status and Public Purpose

The Metropolitan Transportation Authority ("MTA") was created by New York State legislation in 1965 (the Metropolitan Transportation Authority Act, New York Public Authorities Law, Title 11, Section 1260, et seq.) as a public benefit corporation. MTA is a corporate entity separate and apart from the State of New York (the "State"), without any power of taxation – frequently called a "public authority". MTA has the responsibility for developing and implementing a unified mass transportation policy for The City of New York (the "City") and Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester counties (collectively with the City, the "MTA Commuter Transportation District" or "MCTD").

MTA carries out these responsibilities directly and through its subsidiaries and affiliates, which are also public benefit corporations. The following entities, listed by their legal names, are subsidiaries* of MTA:

- The Long Island Rail Road Company;
- Metro-North Commuter Railroad Company;
- Staten Island Rapid Transit Operating Authority;
- MTA Bus Company;
- MTA Construction and Development Company (formerly MTA Capital Construction Company); and
- MTA Grand Central Madison Concourse Operating Company.

The following entities, listed by their legal names, are affiliates of MTA:

- Triborough Bridge and Tunnel Authority; and
- New York City Transit Authority, and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority.

MTA and the foregoing subsidiaries and affiliates are collectively referred to herein, from time to time, as the "Related Entities". Throughout this ADS, the Related Entities are referred to by their popular names, which are listed below under "– Use of Popular Names".

Certain insurance coverage for the Related Entities is provided by a State-licensed captive insurance public benefit corporation subsidiary of MTA, First Mutual Transportation Assurance Company ("FMTAC"). See "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – INSURANCE". FMTAC is additionally licensed under the New York Insurance Law.

MTA and its subsidiaries are generally governed by the Metropolitan Transportation Authority Act, being Title 11 of Article 5 of the New York Public Authorities Law, as from time to time amended (the "MTA Act").

Triborough Bridge and Tunnel Authority is generally governed by the Triborough Bridge and Tunnel Authority Act, being Title 3 of Article 3 of the New York Public Authorities Law, as from time to time amended (the "MTA Bridges and Tunnels Act").

New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority, are generally governed by the New York City Transit Authority Act, being Title 9 of Article 5 of the New York Public Authorities Law, as from time to time amended (the "MTA New York City Transit Act").

Due to the interrelationship of the Related Entities and FMTAC, certain provisions contained in these three acts (the MTA Act, the MTA Bridges and Tunnels Act and the MTA New York City Transit Act) relate to some or all of the other Related Entities and FMTAC.

* The MTA subsidiary Metropolitan Suburban Bus Authority discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs.

**Use of Popular Names**

The following table sets forth the legal and popular names of the Related Entities. Throughout this ADS, reference to each agency will be made using its popular name.

| Legal Name | Popular Name |
|---|---|
| Metropolitan Transportation Authority | MTA (also referred to as "MTA Headquarters") |
| New York City Transit Authority | MTA New York City Transit |
| Manhattan and Bronx Surface Transit Operating Authority | MaBSTOA |
| Staten Island Rapid Transit Operating Authority | MTA Staten Island Railway |
| MTA Bus Company | MTA Bus |
| The Long Island Rail Road Company | MTA Long Island Rail Road |
| Metro-North Commuter Railroad Company | MTA Metro-North Railroad |
| MTA Construction and Development Company* | MTA Construction and Development |
| MTA Grand Central Madison Concourse Operating Company | MTA GCMC |
| Triborough Bridge and Tunnel Authority | MTA Bridges and Tunnels |

**Governance**

MTA's Board consists of a Chairman and 16 other voting Members, two non-voting Members and four alternate non-voting Members, all of whom are appointed by the Governor with the advice and consent of the State Senate. Of the voting Members, four Members must reside in Dutchess, Orange, Putnam and Rockland counties, respectively, and cast one collective vote. The other voting Members, including the Chairman, cast one vote each (except that in the event of a tie vote, the Chairman shall cast one additional vote). Members of MTA are, *ex officio*, the Members or Directors of the other Related Entities and FMTAC. The Chairman is by statute also the Chief Executive Officer ("CEO") of MTA and is responsible for the discharge of the executive and administrative functions and powers of the Related Entities and FMTAC. The Chairman and CEO of MTA is, *ex officio*, the Chairman and CEO of the other Related Entities and FMTAC.

For a description of the senior management of the Related Entities and FMTAC, see "PART 4. OPERATIONS".

**Management**

- The Chairman and Members of MTA, by statute, are also the Chairman and Members of the other Related Entities and FMTAC.
- The Chairman of MTA by statute is the CEO of MTA, who is responsible for the discharge of the executive and administrative functions and powers of the Related Entities and FMTAC. The CEO of MTA is, *ex officio*, the CEO of the other Related Entities and FMTAC.
- Each of the Related Entities and FMTAC has its own management that is responsible for its day-to-day operations.

The following are brief biographies of certain MTA senior officers.

John N. "Janno" Lieber has been serving as MTA Acting Chair and Chief Executive Officer since July 2021 and was confirmed as Chair and Chief Executive Officer of MTA on January 20, 2022, following his nomination to that position by Gov. Kathy Hochul. Mr. Lieber is MTA's 15th Chair since MTA was founded in 1968. In this position, Mr. Lieber provides strategic, financial, and operational leadership for MTA. He also heads MTA's Board of Directors, its senior leadership team, and a total workforce of more than 60,000 employees. Mr. Lieber previously served as President of MTA Construction and Development, the organization responsible for planning, developing, and delivering capital projects across MTA. In that position, he led the creation and implementation of MTA's $51.5 billion 2020-2024 Capital Program. He also managed the integration and transformation of construction and development management practice at MTA. Prior to joining MTA, Mr. Lieber served as President of World Trade Center Properties for 14 years. Before that,

* MTA formed the MTA Construction and Development Company in 2020 to replace MTA Capital Construction Company. This entity oversees the integration of all MTA capital planning, development and project delivery by planning and prioritizing capital projects across the MTA service region.

he served as Senior Vice President of Lawrence Ruben Company and as Deputy Assistant Secretary for Policy for the U.S. Department of Transportation under President Clinton. Earlier in his career, Mr. Lieber practiced law at a private law firm and served as a transportation policy advisor in the office of New York City Mayor Ed Koch. He is a graduate of Harvard University and New York University Law School.

Kevin Willens was appointed MTA's Chief Financial Officer on January 20, 2022. In that capacity, Mr. Willens is responsible for managing MTA's budget and finances and accountable for developing the agency's annual budget and four-year financial plan. Mr. Willens has more than 35 years of experience in public finance, having served most recently as Managing Director and Co-head of US Public Finance at Goldman Sachs. Mr. Willens has provided investment banking expertise to MTA for more than 30 years, including serving as MTA's financial advisor for 10 years. From the private sector, Mr. Willens worked with MTA on developing many of its current financing credits, including the development of new revenue sources, such as the regional payroll mobility tax in 2009. He has also executed complex real estate transactions, such as the Hudson Rail Yards financing. Mr. Willens also served as a Board Member of the Municipal Securities Rulemaking Board from 2009 to 2012. He earned his B.A. in Economics and Computer Studies from Northwestern University.

Paige Graves was appointed MTA's General Counsel on January 20, 2022. In that capacity, Ms. Graves is responsible for developing high-level legal and policy strategies for MTA and senior staff regarding key MTA initiatives and priorities and overseeing a law department of more than 350 attorneys and staff. Ms. Graves previously served for nearly two years as Vice President and General Counsel of MTA Long Island Rail Road, four years as Vice President and General Counsel of MTA Bus Company and four years in the MTA New York City Transit Law Department. Ms. Graves has over 25 years of legal experience. Prior to joining MTA in 2012, Ms. Graves started her legal career as a prosecutor in the Manhattan District Attorney's Office, before working in the Forensic Litigation Group at KPMG providing investigative and integrity advisory services, and as senior counsel for an insurance defense firm handling complex litigation matters. She holds a B.S. in Economics from the Wharton School of the University of Pennsylvania and a Juris Doctor degree from Hofstra University.

Biographies of other members of MTA's executive leadership can be found on MTA's website. No portion of MTA's website is included by cross-reference in this ADS.

For a description of the senior management of the Related Entities, see "PART 2. OPERATIONS".

**Facilities Operations**

The following is a summary of the facilities and operations presently conducted by the Related Entities.

*MTA Headquarters*. MTA Headquarters includes the executive staff of MTA, as well as a number of departments that perform largely all-agency functions, including the Business Service Center ("BSC"), information technology, security, audit, budget and financial management, capital programs management, finance, governmental relations, insurance and risk management, legal, planning, procurement, real estate, corporate compliance and ethics, information technology, and treasury. In addition, MTA maintains its own Police Department ("MTA Police Department") with non-exclusive jurisdiction over all facilities of the Related Entities and is responsible for the costs and expenses of such police department.

*Transit System*. MTA New York City Transit and its subsidiary MaBSTOA operate all subway transportation and most of the public bus transportation within the City (the "Transit System"). Throughout this ADS, unless otherwise noted, the term "Transit System" includes only the operations of MTA New York City Transit and its subsidiary MaBSTOA, and does not include the operations of MTA Staten Island Railway (except for certain capital projects included in the Transit Capital Program (as defined below under "*–Capital Programs*"), or MTA Bus.

*Commuter System*. MTA Long Island Rail Road and MTA Metro-North Railroad operate commuter rail services in the MTA Commuter Transportation District (the "Commuter System").

- MTA Long Island Rail Road operates commuter rail service between the City and Nassau County and Suffolk County in Long Island and within Nassau County and Suffolk County in Long Island.
- MTA Metro-North Railroad operates commuter rail service between the City and the northern suburban counties of Westchester, Putnam and Dutchess; from the City through the southern portion of the State of Connecticut ("Connecticut"); through an arrangement with New Jersey Transit Rail Operations, Inc. ("NJ Transit"), the Port Jervis and Pascack Valley commuter rail services to Orange and Rockland Counties; and within such counties and Connecticut.

*MTA Bus*. MTA Bus operates certain bus routes in the City formerly served by seven private bus operators pursuant to franchises granted by the City (the "MTA Bus System"). Under an agreement between MTA and the City, the City is responsible for paying MTA Bus the difference between the actual cost of operation and all revenues and subsidies received by MTA Bus and allocable to the operation of the routes. Certain portions of the MTA Bus Capital Program (as defined below) are included in the capital programs approved by the Metropolitan Transportation Authority Capital Program Review Board ("CPRB"). The City is not responsible for paying debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2005-2009 Capital Program. The expense of debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2010-2014, 2015-2019 and 2020-2024 Capital Programs described below is submitted to the City for reimbursement. MTA Bus is an "Additional Related Transportation Entity" within the meaning of the Transportation Resolution (as hereinafter defined), which allows MTA Bus to finance its capital projects with Transportation Revenue Bonds. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – TRANSPORTATION REVENUE BONDS".

*MTA Staten Island Railway*. MTA Staten Island Railway operates a single rapid transit line extending from the Staten Island Ferry Terminal at St. George to the southern tip of Staten Island. The City pays the operating expenses of MTA Staten Island Railway not covered by fares, State and local subsidies, and other amounts. Capital needs of MTA Staten Island Railway are financed under Transit Capital Programs.

*MTA Bridges and Tunnels*. MTA Bridges and Tunnels operates all nine of the intra-State toll bridges and tunnels in the City (the "MTA Bridges and Tunnels Facilities").

- MTA Bridges and Tunnels is authorized to issue its own obligations to finance the cost of capital costs and projects of its own facilities, including the Central Business District tolling program (the "CBD Tolling Program"), and of the Transit and Commuter Systems.
- MTA Bridges and Tunnels' annual operating surplus from MTA Bridges and Tunnels Facilities, after meeting its own expenses and after payment of debt service on its own obligations, is used to fund the operating expenses of the Transit System and the Commuter System and/or to finance the cost of certain capital costs and projects of the Transit System and the Commuter System, including payment of debt service on obligations of MTA issued to finance such costs and projects.
- MTA Bridges and Tunnels' annual surplus investment income from MTA Bridges and Tunnels Facilities, after meeting its own expenses and after payment of debt service on its own obligations, is used at the MTA Board's discretion to fund the operating or capital expenses of any of the Related Entities.

As more fully described herein under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Capital Program Funding Sources", and "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program", MTA Bridges and Tunnels will also operate the CBD Tolling Program.

*MTA Construction and Development.* MTA Construction and Development Company (formerly MTA Capital Construction Company) is responsible for the planning, design and construction of major MTA system expansion projects for the other Related Entities. See "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY)" for a description of current MTA Construction and Development projects.

*MTA GCMC*. MTA GCMC is responsible for management of the terminal along Madison Avenue between 43rd and 48th Streets, built as part of the East Side Access project, that will accommodate MTA Long Island Rail Road trains.

*Capital Programs*. MTA is required to prepare and submit for approval to the CPRB successive five-year capital programs for (1) the Transit System and MTA Staten Island Railway and (2) the Commuter System. MTA Bridges and Tunnels and MTA Bus undertake their own capital planning that is not subject to CPRB approval; however, certain security projects of MTA Bridges and Tunnels and certain capital projects of MTA Bus have been included in CPRB-approved MTA Capital Programs (as defined below).

Capital program documents are distributed to certain elected officials and posted on MTA's website for review by the public. These documents are not a part of this ADS and are not filed on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system ("EMMA"). They are not prepared with a view to providing disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision.

As used in this ADS, the following terms shall have the following definitions:

- The term “Capital Program”, as used in connection with any five-year period, shall refer to the combined “MTA Capital Program” and “MTA Bridges and Tunnels Capital Program” for that period. For example, the term “2020-2024 Capital Program” shall refer to the combined “2020-2024 MTA Capital Program” and the “2020-2024 MTA Bridges and Tunnels Capital Program”.
- The term “MTA Capital Program” as used in connection with any five-year period, shall refer to the combined “Transit Capital Program” and “Commuter Capital Program” for that period. For example, the term “2020-2024 MTA Capital Program” shall refer to the combined “2020-2024 Transit Capital Program” and the “2020-2024 Commuter Capital Program”. As described herein, 2020-2024 MTA Capital Program currently consists of the following components: New York City Transit Core Capital Program, Long Island Rail Road Core Capital Program, Metro-North Railroad Core Capital Program, MTA Bus Core Capital Program, MTA Interagency Core Capital Program and MTA Construction and Development Company Capital Program.
- The term “Transit Capital Program”, as used in connection with any five-year period, shall refer to the capital program for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway that is approved by the CPRB for that five-year period.
- The term “Commuter Capital Program”, as used in connection with any five-year period, shall refer to the capital program for MTA Long Island Rail Road and MTA Metro-North Railroad that is approved by the CPRB for that five-year period.
- The term “MTA Bridges and Tunnels Capital Program”, as used in connection with any five-year period, shall refer to the capital program for the MTA Bridges and Tunnels Facilities that is adopted by the MTA Bridges and Tunnels Board. The MTA Bridges and Tunnels Capital Program does not need the approval of the CPRB to become effective.

**Financial Operations**

MTA’s fiscal year begins on January 1 of each year. The MTA Board has adopted financial planning and budgeting practices for the Related Entities that require the preparation of four-year financial plans covering the existing and three future fiscal years. The preparation of the financial plans of the Related Entities includes provision for capital spending (including debt service) authorized by the Capital Programs of the Related Entities, including those Capital Programs approved by the CPRB as described above.

The implementation of the financial plans, as adopted from time to time, and the Capital Programs, as submitted and amended from time to time, are interrelated and complex. Any failure to implement an important component of one can adversely affect the implementation of the other. See generally “PART 2. FINANCIAL PLANS AND CAPITAL PROGRAMS”.

*Financial Plans and Budgetary Practices.*

- The MTA Board’s financial planning and budgeting practices for the Related Entities require the following in each year:
    - In July of each year, MTA management will submit to the MTA Board a revised forecast of the current year’s finances, a preliminary budget for the next year and an update to the four-year financial plan (which includes the next year and the three years thereafter) (referred to as the “July Plan”).
    - In September, the MTA Board and the operating committees of the MTA Board will include the July preliminary budget and financial plan on their agendas. Public comments will be solicited at the September meeting.
    - In November, a revised forecast of the current year’s finances and a final proposed budget for the next fiscal year, together with a revised four-year financial plan, will be submitted to the MTA Board (referred to as the “November Plan”).
    - A final budget for the next fiscal year, following public comment, will be adopted by the MTA Board by no later than December 31.
    - No later than February of the following year, MTA Budget will issue a plan book containing the financial tables and supporting schedules for the current year’s budget, as well as the financial plan for the next three years, as adopted by the MTA Board the preceding December (referred to as the “February Plan”). The February Plan incorporates applicable below-the-line policies and includes

necessary technical adjustments to the financial plan. The budget is allocated over the 12-month period and becomes the basis on which monthly results are compared.

  - Consistent with the MTA budget process, the financial plans highlight certain policy actions and other adjustments for the benefit of the MTA Board and financial stakeholders. Until these items have been approved by the MTA Board, MTA excludes their financial impact from the "Statement of Operations" (also referred to as the "baseline"). Instead, these items are captured individually, and in total, on the "Plan Adjustments". Such Plan Adjustments are also referred to as being "below-the-line".

- Budget and financial plan documents are distributed to certain elected officials and posted on MTA's website for review by the public. These documents are not a part of this ADS and are not filed on EMMA. They are not prepared with a view to providing disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision.
- The Related Entities (other than MTA Bridges and Tunnels) are each required by law to adopt an annual budget that is self-sustaining on a cash basis, including self-generated fares and other revenues, as well as operating subsidies of various types from numerous sources, including the State and local governments. MTA Bridges and Tunnels transfers surplus funds to finance the Transit and Commuter Systems.
- MTA is required by law each year to update and submit to the Governor a five-year strategic operation plan (that extends by one year the period covered by the four-year financial plan referenced above) that includes not only estimated operating and capital cost information, but also long-range goals and objectives, planned service and performance standards, and strategies to improve productivity.
- The State Comptroller has promulgated regulations that require the Related Entities to follow certain guidelines in reporting certain budget and financial plan information.
- MTA uses a common chart of accounts to present standardized financial reporting among all of the Related Entities.
- MTA prepares quarterly unaudited consolidated financial statements on behalf of the Related Entities as described below under "*–Quarterly Financial Statement Reports*" and files them on EMMA.

*Five-Year Capital Programs.*

- The MTA Act requires the preparation of five-year capital programs for (1) the Transit System and MTA Staten Island Railway and (2) the Commuter System. MTA has included funding for the MTA Bus Capital Program in approved Capital Programs as well as certain MTA Bridges and Tunnels security projects which are similarly included in a broader list of security projects in approved Capital Programs.
- Though not required by law, MTA Bridges and Tunnels prepares its own capital program that covers the same time period as the MTA Capital Programs.
- MTA Bus has identified capital projects (the "MTA Bus Capital Program") that are funded through the overall MTA Capital Program approved by the CPRB.
- The capital programs of MTA Bridges and Tunnels and MTA Bus are not required to be approved by the CPRB.
- For information relating to the most recent Capital Programs, see "PART 2. FINANCIAL PLANS AND CAPITAL PROGRAMS".

*Quarterly Financial Statement Reports*. MTA issues unaudited quarterly financial statement reports for the Related Entities on a consolidated basis. The reports are filed with EMMA and are posted on MTA's website. The review of the quarterly financial statements is conducted in accordance with the standards established by the American Institute of Certified Public Accountants.

*Interagency Loans*. The Related Entities are authorized to transfer their revenues, subsidies and other moneys or securities to another Related Entity for use by such other Related Entity, provided at the time of such transfer it is reasonably anticipated that the moneys and securities so transferred will be reimbursed, repaid or otherwise provided for by the end of the next succeeding calendar year. The use of such interagency loans allows for cash flow management on a more efficient MTA-wide basis and allows the Related Entities to meet their operating needs and other periodic financial commitments generally reducing the need for public or private cash flow borrowings. There are currently no interagency loans outstanding among the Related Entities.

*Public Statements and Reports by Others*. From time to time, the Governor, the State Comptroller, the Mayor of the City, the City Comptroller, County Executives, State legislators, City Council Members and other persons or groups may make public statements, issue reports, institute proceedings or take actions that contain predictions, projections or other information relating to the Related Entities or their financial condition, including potential operating results for the current fiscal year and projected baseline surpluses or gaps for future years, that may vary materially from, question or challenge the information provided herein or in budgets or financial plans prepared by MTA. While MTA may not directly respond to each such statement or action, MTA intends to update and supplement specific information contained herein and to prepare the quarterly financial statement reports and financial plan updates described above. Investors and other market participants should refer to MTA's filings on EMMA, from time to time, for information regarding the Related Entities and their financial condition.

MTA Bridges and Tunnels' independent engineers, Stantec Consulting Services Inc. ("Stantec"), have prepared a report dated April 28, 2023 (the "Stantec Report") entitled "History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority" which is attached to MTA's Combined Continued Disclosure Filings and is incorporated by specific cross-reference herein. The Stantec Report includes projections of traffic, revenues and expenses for the MTA Bridges and Tunnels Facilities; certain historical revenue, traffic, and toll rate information; and a discussion of the physical condition of MTA Bridges and Tunnels facilities. Readers should understand that the projections set forth in the Stantec Report have been developed based upon methodologies and using assumptions that may be different from the methodologies and assumptions used by MTA and MTA Bridges and Tunnels in connection with preparing their budgets and financial plans, including the 2023 February Plan and the 2023 Adopted Budget. Consequently, the projections set forth in the Stantec Report and in such budgets and financial plans may differ.

## ENVIRONMENTAL FACTORS

### MTA Climate Resilience and Sustainability Planning

Beginning in 2022, MTA Construction and Development has unified approaches to climate resilience and sustainability planning across MTA. The Climate Resilience and Sustainability Planning team is housed within MTA Construction and Development's Planning Division together with teams responsible for preparing the 2025-2044 20-Year Needs Assessment. Among the goals of this organizational structure is to ensure that climate resilience and sustainability initiatives are factored into MTA's long term capital planning process in a consistent manner across its operating agencies.

### Climate Resilience Planning

Climate Resilience Planning involves the use of future-facing climate risk data to inform the prioritization and design of projects that reduce exposure to climate hazards made more acute by the unavoidable impacts of climate change. The objective of the Climate Resilience Planning team is to anticipate climate change impacts on MTA's transit infrastructure, MTA's workforce, and MTA's customers, and take steps to adapt long term capital planning accordingly. Prolonged delays in transit services have compounding impacts on the region's economy and delay the recovery of the most vulnerable New Yorkers from extreme weather events. Minimizing recovery time after an event is therefore of paramount importance to MTA.

Climate Resilience Planning is distinct from the operational responsibilities housed in MTA's Emergency Preparedness functions. Climate Resilience Planning considers how the impacts of climate change, described below, should inform long term capital planning decisions for the MTA's system. Emergency Planning, on the other hand, anticipates specific events and coordinates a real-time response together with other local emergency response authorities. The two groups work in tandem and communicate regularly.

MTA continues to invest in and build flood risk mitigations responsive to extreme events, particularly since Superstorm Sandy hit the New York City region in October 2012. Sandy prompted an $8 billion capital investment program that was deployed across the Related Entities, with comprehensive coastal flood mitigations installed within assets of all operating branches. These investments have significantly reduced MTA and its Related Entities' exposure to storm surge risks.

The MTA Climate Resilience Planning team is charged with the responsibility to proactively assess climate risk exposure based on local climate change forecasts, such as those of the New York City Panel on Climate Change. Based on these assessments, the team will devise strategies informed by the New York City region's likely climate of the future to be considered in connection with future capital plans. The MTA Climate Resilience Planning team is investigating exposure to the specific climate hazards that are most prevalent in the New York City region, including, but not limited to:

- floods, including those caused by sea level rise, tidal inundation, storm surge, groundwater table rise and precipitation, snow and resulting pluvial floods;

- extreme temperatures, including prolonged heat waves and cold snaps; and

- winds, including gusts sufficiently strong to impact above grade assets or to topple trees adjacent to MTA infrastructure.

Select Climate Resilience Planning initiatives currently underway include:

- Interagency stormwater management task force: MTA coordinates regularly with the City departments of Environmental Protection and Transportation, along with local utilities including Con Edison and Verizon, to identify ways to reduce the penetration of rainfall from extreme events into MTA subsurface infrastructure, and

- MTA system-wide climate risk assessment: the Climate Resilience Planning team is undertaking a system-wide climate risk exposure and asset vulnerability assessment to the climate hazards described above. Among the goals of this assessment is to identify the magnitude of risk exposure reduced from coastal flood mitigations installed since Hurricane Sandy and to identify areas within the MTA system that should be prioritized for future investments based on future-facing risk information. This MTA climate risk assessment will also be used to inform design standards for infrastructure that is within current or future coastal or pluvial floodplains.

**Climate Sustainability Planning**

Climate Sustainability Planning encompasses programs intended to reduce greenhouse gas emissions caused by burning fossil fuels. MTA's low emissions transportation services underpin the New York City region's greenhouse gas emissions reductions strategies. Average household greenhouse gas emissions in the New York City region are a fraction of national rates because of the magnitude of riders on MTA's low emissions transit services versus those who drive a single-occupancy vehicle in most other U.S. metro areas. MTA carries 40% of the nation's transit riders, and growth of MTA ridership would yield additional sustainability benefits for the region.

Within this context, MTA seeks to further reduce regional greenhouse gas emissions associated with its own operations and capital investment decisions, with a goal of reducing the emissions that result from operations of the Authority's trains, buses and facilities by at least 85% by 2040 from a 2015 baseline. These efforts are coordinated internally within the Climate Sustainability Planning team and involve the actions of many groups within MTA Construction and Development and in MTA operating agencies. The actions of Climate Sustainability Planning are focused on three strategies:

1. Update Facilities: reduce overall energy consumption in facilities through capital upgrades and on-site renewables. MTA manages several buildings across its service area to support transportation operations. As MTA contemplates state-of-good-repair investments in these facilities in the upcoming 20-Year Needs Assessment, MTA will consider low- or no-carbon alternatives for building systems that require repairs or full replacements. MTA will also consider opportunities to install new power generation and power storage within its facilities to reduce the need for power from the grid, provide a measure of operational resilience in the event of a power outage, and participate in peak period energy demand management which will provide energy cost savings and overall grid stability;

2. Transition Fleets: reduce fossil fuel use in all fleets as new technologies emerge. For example, MTA operates the largest public bus system in North America with 10% of all the buses in the United States carrying 14% of the nation's bus passengers. In 2018, MTA committed to transition to a 100% zero-emissions bus and non-revenue vehicle fleet by 2040. Achieving this commitment will require that all new buses must be zero-emissions by 2029. Over the transition every bus depot will require infrastructure installation, facility modifications and the addition of new power supply or other fueling infrastructure. Day-to-day processes across depot operations, fleet planning, crew scheduling, maintenance, road operations, and safety and training are being transformed; and

3. Use Energy Efficiently: optimize energy use across MTA systems through energy management, regenerative energy, and power storage. For example, MTA has completed nearly 200 energy efficiency projects since 2015 in buildings and infrastructure that sustain its transportation services across all operating agencies. Typical project elements include energy-efficiency components relating to lighting, sensors, motors, compressors, fans, burners, demand control ventilation, combustion controls, and rapid roll-up doors. The single most impactful project is the multiphase installation of Remote Control Third Rail Heaters, which replaced a manual control system and has the potential to save an estimated 36,000 MWh of electricity annually depending on the weather.

   MTA intends to evaluate new opportunities to advance energy efficiency projects in buildings managed by all its operating agencies.

In implementing the climate sustainability programs described above, MTA complies with Executive Order 22, signed by Governor Hochul in September of 2022 ("Executive Order 22"). Executive Order 22 contains mandated deadlines for certain sustainability goals, including conversion of fleet to zero-emissions by 2035 for light-duty vehicles and 2040 for medium-and heavy-duty vehicles; decreasing waste by 10% every five years from a 2018 baseline, until a 75% reduction is achieved; tracking of construction-related greenhouse gas emissions by 2023 and avoiding fossil fuel systems in new construction and infrastructure, building systems, and equipment that relies on fossil fuels in construction projects by 2024; implementing energy efficiency targets through 2030; and transitioning to 100% electricity used by MTA generated from a source eligible under the Clean Energy Standard by 2030.

*ISO Certification*. MTA Construction and Development organizes and manages its environmental efforts under the structure of an ISO 14001 Environmental Management System ("EMS"). Since 1999, the former Department of Capital Program Management for MTA New York City Transit had been third-party certified under the ISO-14001 EMS standard. Following the reorganization of MTA in 2020, MTA Construction and Development assumed responsibility for all MTA capital funded construction and development work for MTA New York City Transit, MTA Long Island Rail Road, MTA Metro North Railroad and MTA Bridges and Tunnels. This expansion has been added to the scope of the former MTA New York City Transit ISO 14001 EMS Certification. An EMS is a structured framework where environmental impacts can be managed to ensure compliance, helps make proper and appropriate business decisions with the protection of the environment always under consideration, and helps to monitor and measure environmental performance to ensure continuous improvement. The EMS encourages that environmental metrics, such as embodied carbon in concrete which MTA has begun to measure, be developed to help establish goals and targets for carbon footprint reduction.

*Impact of Central Business District Tolling Program*. The Central Business District Tolling Program ("CBD Tolling Program") was established pursuant to legislation, known as the MTA Reform and Traffic Mobility Act (the "Traffic Mobility Act"), as part of the State budget for Fiscal Year 2019-2020, adopted on April 1, 2019. If the program receives federal approval, the CBD Tolling Program will charge a toll for vehicles entering or remaining in the Central Business District ("CBD"), defined as south of and inclusive of 60th Street in Manhattan, but excluding the FDR Drive, Route 9A (the "West Side Highway"), the Battery Park underpass, and any surface roadway portion of the Hugh L. Carey Tunnel connecting to West Street.

In accordance with the National Environmental Policy Act, an environmental assessment, which evaluated the effect of a range of tolling scenarios, with different tolling rates and toll exemptions, was released on August 10, 2022. The assessment found that, with initiation of the CBD Tolling Program, the number of vehicles entering the CBD would decline between 15.4% to 19.9%, depending on the tolling scenario, with an increase in transit ridership of 1% to 2%. Traffic elsewhere in the region would vary between -1.5% to 0.2%, depending on the location and the tolling scenario. Additionally, the assessment found that air quality would improve overall, with greater beneficial effects within and closer to the CBD.

For a description of the CBD Tolling Program and its current status, see "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program."

**Climate Bond Standard and Certification Compliance**

In early 2016, MTA requested, and the Climate Bonds Standard Board approved, the designation of MTA's Transportation Revenue Bonds, Series 2016A as "Climate Bond Certified" pursuant to the Low Carbon Transport criteria (the "Climate Criteria") under the Climate Bonds Standard 2.0. As part of the certification requirement, MTA engaged Sustainalytics as an independent verifier to review MTA's 2010-2014 Capital Program to identify projects with expenditures that met the Climate Criteria. Sustainalytics reviewed $12.6 billion of spending and concluded that projects totaling $11.3 billion, or 89.7%, qualified under the Climate Criteria, making them eligible projects for Climate Bonds

Initiative ("CBI") certification. CBI and MTA agreed that while MTA's pooled funding of its capital projects makes tracking proceeds to specific bond transactions prior to issuance impractical, the inherent benefit of MTA's Transit and Commuter Systems and the ongoing support and maintenance of them are compatible with an emissions trajectory consistent with the principles underlying the Climate Criteria. Due to the size and complexity of MTA's Capital Program and difficulty in tracking proceeds to specific projects, it is possible that MTA CBI certified bonds may fund or refund projects not specifically identified by the independent verifier as meeting Climate Criteria but essential to MTA's core mission. Additionally, some of these projects may have been funded by other pooled resources available for MTA's Capital Programs. After an analysis of MTA's Capital Program elements, CBI agreed to certify up to a maximum of $11.3 billion of bonds issued by MTA for credits that fund the Transit and Commuter Systems portion of its Capital Programs pursuant to an Application and Agreement for Climate Bond Certification dated October 21, 2019.

In January 2017, the CBI implemented the Climate Bonds Standard 2.1, which created a programmatic approach specifying the ability to identify projects as a pool, similar to the approach MTA has taken since its inaugural issuance in 2016. MTA has issued CBI certified bonds pursuant to both Climate Bonds Standard 2.0 and Climate Bonds Standard 2.1.

Subsequently, MTA engaged First Environment, Inc. as an independent verifier to review MTA's 2015-2019 Capital Program. First Environment, Inc.'s review of MTA's 2015-2019 Capital Program concluded that 93.2% of the program's projects, totaling $28.7 billion, qualify as eligible projects for CBI certification. In July 2021, CBI approved the ongoing programmatic certification of future MTA bond issuances supporting the 2015-2019 Capital Program under the Climate Bonds Standard 3.0 and the sector eligibility requirements of Land Transport Criteria Version 2. Pursuant to an Addendum, by and between CBI, MTA, MTA Bridges and Tunnels, and the State of New York, to the Application for Climate Bond Certification dated October 21, 2019, CBI agreed to certify bonds issued by MTA, MTA Bridges and Tunnels, and the State of New York up to an additional $28.7 billion of bonds for such projects, resulting in an aggregate CBI approval of $40.0 billion of bonds.

In light of various investor interest in "Green Bonds" and specifically what constitutes a "Green Bond", MTA asserts the following with regard to its issuances of CBI certified bonds:

- MTA follows a programmatic approach in connection with its MTA CBI certified bond issuances that complies with CBI standards and has been approved by CBI.
- Any certified MTA CBI bond/bond issuance is not tracked on a project specific basis nor is it tied to specific projects but rather to the CBI Programmatic Approach Certification.
- MTA has engaged an independent verifier to identify and to annually re-verify the total amount of Climate Criteria eligible transit and commuter projects under its Capital Programs.
- MTA has issued in aggregate a total par amount of bonds with the CBI certification that is less than the amount of eligible projects verified.

Commencing in 2017 and consistent with the requirements of the Climate Bonds Standard and Certification Process, MTA has undertaken as part of its continuing disclosure filing obligation with respect to Climate Bond Certified bonds to file with EMMA:

- annually, until the maturity or prior redemption of the Climate Bond Certified bonds, a post-issuance compliance certificate as required by the certification process;
- any event of material non-conformance with the certification process and the action MTA is taking or expecting to take to bring the projects and/or assets into conformance; and
- any revocation of the Climate Bond Certification by the Climate Bonds Standard Board.

MTA expects to file with EMMA a copy of its annual compliance certificate pursuant to the Climate Bonds Standard and Certification Process described above on or about the date hereof.

No portion of the websites of the Climate Bonds Standard Board, the ISO, or the benchmarking and knowledge-sharing organizations referenced above are incorporated into this ADS. Such websites were not prepared with the intent to provide disclosure to investors in the securities of MTA or any of the Related Entities, and, accordingly, should not be relied upon by an investor in making an investment decision.

## MTA-WIDE SECURITY

### Physical Security

*Mission*. The MTA Office of Security works to achieve a secure environment for its customers, ridership, and employees, as well as securing MTA's transportation hubs, infrastructure assets, facilities and rolling stock.

*Management*. The MTA Office of Security under the supervision of the Deputy Chief of Security Management and Deputy Chief of Security Operations, reports to the MTA Chief Safety Officer.

*General*. The MTA Office of Security is pledged to the protection of life and property by adopting and incorporating contemporary technology and best practices in its operations and management based on current intelligence and evolving threat scenarios. The MTA Office of Security:

- Assesses risks and vulnerabilities associated with terrorist threats, traditional crime and quality of life issues, develops mitigation strategies to protect ridership, employees and infrastructure;

- Collects intelligence and provides analysis and investigation to counter terrorism or criminal threats;

- Plans, coordinates and manages security mitigation strategies for all MTA physical assets;

- Manages and coordinates emergency planning and response with local, state and federal agencies;

- Develops training initiatives derived from intelligence information collected in coordination with the MTA Police and other law enforcement agencies; and

- Maintains strategic partnerships with city, state and federal agencies and not-for-profit organizations; collaborating and coordinating regarding evolving security needs.

### Cybersecurity

MTA maintains a cybersecurity division within its Information Technology ("IT") department led by the MTA Chief Information Security Officer, who reports to the MTA Chief Technology Officer. MTA utilizes the National Institute of Standards and Technology (NIST) Cybersecurity Framework to measure the maturity of cybersecurity controls and exposure to cyber risks at MTA and its Related Entities. The current focus is on improving detection, response and recovery capabilities along with a continual review of critical controls for systems which process MTA and its Related Entities corporate/IT data and secure the operational technology systems. Funding has been provided to cover previously identified cybersecurity investment needs. The 2023 MTA operating budget provided $60 million for cybersecurity, and an additional $302.7 million has been allocated over MTA's financial plan period through 2028 to strengthen cybersecurity defenses at MTA and its Related Entities.

MTA Information Technology implements a robust information security program to contend with constantly changing technology, compliance requirements, increasing complexity of information security and evolving threats. MTA Information Technology's security activities involve:

- recommending necessary changes in controls, policies, or procedures;

- maintaining an ongoing risk assessment process with respect to rapidly changing technology and the emergence of new threats;

- making risk management practices an integral part of doing business;

- revisiting information security efforts as needed to maintain their relevance to changes in MTA's mission, operational requirements, threats, environment, or deterioration in the degree of compliance;

- aligning MTA's Cybersecurity Program to applicable laws, regulations, standards, and policies and ensuring compliance therewith;

- achieving industry standard best practices to reduce cyber risk to MTA;

- improving cyber resilience for all MTA critical infrastructure systems in order to protect them from cyber breaches and attacks; and

- assessing the adequacy of cybersecurity controls to protect MTA's critical infrastructure.

## CERTAIN RISK FACTORS

This section discusses certain risks associated with the investment in or ownership of the public debt securities and other financial instruments of MTA and MTA Bridges and Tunnels (collectively, "bonds" in this section), but is not intended to be a dispositive, comprehensive or definitive listing of all risks associated with investment in the bonds. Prospective investors in the bonds should carefully consider the following risks and those risks described elsewhere in this ADS and in any related offering document before making an investment decision.

If any of the following events or circumstances identified as risks actually occur or materialize, an investor's or prospective investor's investment could be materially and adversely affected. Additional risks and uncertainties not presently known to MTA or MTA Bridges and Tunnels, or that are currently deemed immaterial, could also adversely affect MTA and MTA Bridges and Tunnels operations and financial results, and may also impair such investor's investment. The order in which the following information is presented is not intended to reflect the relative importance of any such risks.

Although the various risks discussed in this ADS are generally described separately, prospective investors in bonds of MTA or MTA Bridges and Tunnels should consider the potential effects of the interplay of multiple risk factors. Where more than one significant risk factor is present, the risk of loss to an investor may be significantly increased. In addition, certain risks described herein can have multiple effects that are not necessarily limited to the heading or caption under which the risk is described. Prospective investors should consider the full potential effect of each risk.

This ADS also contains forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described in greater detail below and elsewhere in this ADS.

When making an investment decision with respect to bonds, a prospective investor can have no assurance, based on the information contained herein, that MTA or its Related Entities will have the capability to meet their respective financial obligations under the agreements or instruments to which it is a party.

*Aligning Service with "New Normal" Ridership Levels to Address MTA's Existing and Future Structural Fiscal Imbalance.* In April 2020, MTA hired McKinsey & Company ("McKinsey") to develop an initial financial impact assessment from the COVID-19 pandemic. McKinsey reviewed MTA farebox and toll revenues, along with subsidy receipts and developed forecasts consistent with the likely effect the COVID-19 pandemic would have on the regional and national economies. MTA hired McKinsey to perform a second analysis in 2021. The 2021 analysis considered changes in travel behavior due to the continuation of hybrid work schedules, increased online shopping, slower return of tourism, and increases in alternative travel, such as walking and bicycling and the results of that analysis were incorporated into MTA's utilization projections for the July 2021 Plan. In April 2022, MTA hired McKinsey to provide a further updated analysis. The July 2022 analysis provided revised projections based upon the trends which had developed during the pandemic and which may become permanent or longer lasting in duration. As with the prior McKinsey assessments, MTA incorporated the results of the analysis into its 2022 July Plan. MTA continues to face the challenge of providing a level of service to match the current needs of customers while introducing an appropriate level of service as ridership returns. Simply returning to a pre-pandemic service structure and service levels, without appropriately matching service with "new normal" demand, would continue the unsustainable structural fiscal imbalances that must be addressed and corrected. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – *Impacts of the COVID 19 Pandemic and Economic Study Analysis*."

*Climate Change.* Potential hazards relating to climate change include sea level rise, more severe coastal flooding and erosion hazards and severe storm and wind, all of which may have adverse effects on economic activity in MTA's service area. Any such events, if unmitigated, may also have major impacts to the Related Entities' stations, trackway, traction power, train control and maintenance yard/shops, rail tunnels, wayside facilities and bridge and tunnel crossings. The impacts may directly impact patron safety and cause service disruptions and require prolonged recovery.

MTA and the Related Entities are responding to climate change impacts by developing adaption strategies and hardening their infrastructure against such potential hazards. Current efforts include water intrusion mitigation, erosion control, storm drainage treatment, power redundancy, fire suppression, and seismic event mitigation. MTA and the Related Entities are also working with regional partners of MTA and its Related Entities to plan for regional adaptation needs. No assurance can be given that such measures will be sufficient to protect against all impacts of climate change. See "PART 1. BUSINESS – ENVIRONMENTAL FACTORS".

*Continuation of the Negotiation of Affordable Labor Contracts.* The transportation services provided by the Related Entities, as well as related maintenance and support services, are labor intensive. Consequently, a major portion of the Related Entities' expenses consists of the costs of salaries, wages and fringe benefits for employees and retirees, and achieving affordable wage settlements impacts MTA's financial position. Failure to reach agreements with labor unions, or failure to negotiate affordable labor contracts could have a significant adverse impact on the budgets of MTA and its Related Entities.

See "PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS – EMPLOYEES, LABOR RELATIONS, AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS" for a description of the status of labor negotiations and contracts.

*Continued Severe Impacts from Coronavirus Pandemic and Public Health Threats.* An outbreak of disease or similar public health threat, such as the COVID-19 pandemic, or fear of such an event, could have an adverse impact on MTA's and its Related Entities' financial condition and operating results. Such adverse impact could include, but is not limited to, decreases in usage of public transportation and resulting decrease in farebox revenue, disruptions in global supply chains affecting implementation of capital programs, decrease in economic activity more generally affecting ridership and tax revenues, and actions that may be taken by various governmental authorities and health care providers to contain or mitigate the impact of the public health threat such as "stay at home" or "shelter in place" orders or temporary closures of businesses.

The continued impact of the COVID-19 pandemic on the operations and finances of MTA and its Related Entities is extremely difficult to predict due to the dynamic nature of the COVID-19 pandemic, including, but not limited to, uncertainties relating to its duration and the emergence of dangerous variants, as well as with regard to actions that may be taken by various governmental authorities and health care providers to contain or mitigate its impact. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – *Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis*."

*Cybersecurity Risks.* In the course of its daily business, MTA and its Related Entities collect and store sensitive data, including fare and toll collection data, financial information, security information, proprietary business information, information regarding customers, suppliers and business partners, and personally identifiable information of customers and employees. The secure processing, maintenance and transmission of this information is critical to many of MTA and its Related Entities' operations, including operations of the Transit and Commuter Systems and MTA Bridges and Tunnels' facilities. Despite security and other technical measures currently in place and those which may be adopted in the future, MTA and its Related Facilities' information technology and infrastructure have been and may still be subject to attacks by hackers or other breaches, including as a result of error, malfeasance or other disruptions or failures. Any such breach, disruption or other failure could compromise networks, facility operations and the information stored there could be accessed, disrupted, publicly disclosed, lost or stolen. Any such access, disruption, disclosure, theft or other loss of information could result in disruptions to MTA and its Related Entities' operations and financial or other activities, including as they relate to the Transit and Commuter Systems and MTA Bridges and Tunnels' facilities or otherwise, or legal claims or proceedings, including pursuant to laws that protect the privacy of personal information, or regulatory penalties. Furthermore, the tactics, techniques and procedures used by malicious actors to obtain unauthorized access to information technology systems and networks change frequently and often are not recognized until launched against a target. Accordingly, MTA and its Related Entities may be unable to anticipate these techniques or implement adequate preventative measures. It is possible that MTA and its Related Entities may in the future suffer a cyber attack whereby unauthorized parties gain access to MTA and its Related Entities' information technology networks and systems, including sensitive or confidential financial or operational data, and MTA and its Related Entities may not be able to identify and respond to such an incident in a timely manner.

While MTA cybersecurity and operational safeguards are periodically tested, no assurances can be given by MTA that such measures will ensure against all potential cybersecurity threats and attacks, and accompanying disruptions and costs. See "PART 1. BUSINESS – THE RELATED ENTITIES – MTA-Wide Security".

*Debt Securities and Financial Instruments.* For a description of certain risk factors associated with the public debt securities and other financial instruments of MTA and MTA Bridges and Tunnels, see "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS."

*Implementation of Fare and Toll Yield Increases in 2023 and 2025.* Many costs are dependent on pricing factors outside MTA's direct control (e.g., energy, health and welfare and pensions), and MTA relies, in part, on regularly recurring fare and toll rate increases to help cover these increasing expenses. MTA's current financial plan through 2026 assumes additional fare and toll increases in 2023 and 2025. There is no assurance that such fare and toll increases will be implemented as and when included in the financial plan, or, if implemented will generate the estimated revenue increases described in this ADS. For a description of the proposed toll increases, see "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Changes to the 2022 November Plan".

If projected fare and toll increases are not implemented or realized, MTA's financial situation may, in the absence of additional subsidies or other funding, deteriorate, as revenue will not be able to keep pace with inflation and other cost growth. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS –Challenges to be Addressed".

*Legislative and Governmental Action.* Legislation is introduced from time to time in the State Legislature which, if adopted, may affect MTA and its Related Entities. MTA cannot predict whether or not these bills will be enacted into law or how such legislation may affect the finances, Capital Programs or operations of MTA and its Related Entities. Under the MTA Act, the State has agreed with the holders of the bonds, notes or other obligations of MTA or the Related Entities, among other things, that it will not limit or alter the rights and powers vested by the MTA Act in MTA and its Related Entities to fulfill the terms of any agreements made by any of them with the holders thereof, or in any way impair the rights and remedies of such holders until such notes, bonds or other obligations are fully met and discharged.

Additionally, MTA's finances are influenced by federal public transportation provisions, funding levels and federal tax law. Federal policies on transportation, taxation, and other topics can shift dramatically from one administration to another. Such shifts could result in reductions to levels of federal funding received by MTA and its Related Entities.

*Litigation Risks.* MTA and its Related Entities are involved in numerous litigation actions. No assurance can be given that such litigation or future litigation or legal claims involving MTA or the Related Entities will not arise, that such litigation would not have an adverse effect on the ability of MTA or the Related Entities to perform their respective obligations under applicable agreements to which they are a party, or result in substantial monetary judgments against, or impose burdensome requirements on, MTA or its Related Entities. For a description of certain current litigation involving MTA and its Related Entities see "PART 6. – REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS-LITIGATION".

*Maintenance of Fiscal Discipline over Controllable Overtime.* While overtime can be a cost-effective and efficient means for addressing certain assignments, a consistent approach to managing and overseeing overtime usage is necessary. Reports from both the MTA Inspector General and special outside counsel, Morrison and Foerster, emphasized specific recommendations to address existing deficiencies. MTA, through its Overtime Task Force, put those recommendations into effect with certain overtime savings expectations. However, those savings are unlikely to be realized as a result of necessary extra labor costs due to the COVID-19 pandemic.

MTA's Annual Overtime Report 2021 Results (the "Overtime Report"), released on April 18, 2022, concluded that MTA successfully reduced its overtime spending in 2021, when compared to pre-pandemic levels. Overtime spending was $217 million less than in 2018 and $94 million less than in 2019 – reductions of 16% and 8%, respectively. However, in the face of the COVID-19 pandemic, the Overtime Report concluded that MTA-wide, overtime spending increased slightly in 2021 versus 2020, by 3% or $37 million, from $1.13 billion to $1.16 billion. The full Overtime Report is available on MTA's website, but is not incorporated by cross-reference in this ADS. MTA expects to release its updated overtime report for 2022 in the second quarter of 2023.

*Non-Cash Payment of Tolls and Fares*. Payment of tolls and fares by means other than cash creates potential collection risk and could delay the timing of the actual receipt of payment by the providers. Following the standard industry practice for credit and debit cards, fare and toll payments made by those means will produce cash receipts to the applicable authority and trustee which are net of standard discounts and transaction fees to the merchant processors, card associations and card issuers. Further, the collection of fares and tolls by other governmental entities using an integrated payment system, such as MetroCard or E-ZPass, whereby a customer can purchase a card or pass from any of the entities for use on all of the systems, and the use of the Related Entities' electronic media at commercial establishments, may subject the amounts due to MTA New York City Transit, MTA Bus and MTA Bridges and Tunnels to multiple liens and claims prior to the time that the fares or tolls are actually earned through use of the applicable facilities. The payment of fares and tolls by non-cash methods, including checks and credit and debit cards, is subject to, among other things, collection risk, including, without limitation, bankruptcy, insolvency and other creditor and debtor rights involving both the user of the facilities and the collection and processing entities.

*Other Force Majeure Events.* Operations of MTA and its Related Entities' transportation facilities, and the amount of fare and toll revenues and the availability of State, City and other subsidies are also at risk from other events of force majeure, such as damaging storms, winds and floods, fires and explosions, spills of hazardous substances, pandemic outbreaks, strikes and lockouts, sabotage, wars, terrorism, blockades and riots. MTA cannot predict the potential impact of such events on the financial condition of MTA and its Related Entities at this time or the degree to which financial losses or costs of remediation could exceed available insurance coverage or federal disaster assistance.

*Potential Impediments to Access to Capital Markets or Higher Interest Rates Than Forecasted.* Adverse national and regional economic conditions and MTA financial performance could result in negative ratings actions and constrained access to capital markets, whether from the impacts of increasing inflation, the COVID-19 pandemic, economic recession or otherwise. The current MTA financial plan includes interest rate assumptions consistent with assumptions of the Federal Open Markets Committee ("FOMC"). However, recent actions and policy statements on future actions or a sudden and unexpected increase in economic activity may result in inflationary growth beyond the FOMC's inflation target, which in turn could lead to a further increasing of the federal funds rate. Either of the foregoing could lead to an increase in interest rates for MTA capital or cash-flow borrowings which are higher than projected in the current MTA financial plan.

*Responding to Developing Economic Environment.* MTA's finances are highly influenced by economic factors. Passenger and toll revenues, dedicated taxes and subsidies (including real estate transaction revenue), debt service, pensions and energy costs are all impacted by the economic health of the MTA region, the State and nation. If the economic and other assumptions reflected in MTA's current financial plan are unrealized, particularly in the face of the continuing impacts of the COVID-19 pandemic, inflation, or the conflict in Ukraine, the financial plan's projected results could be materially adversely affected.

*Risks Associated with Federal Funding Plans*. The receipt of capital grants by MTA from the Federal Transit Administration ("FTA") is not assured and is subject to approval by the FTA, the Secretary of Transportation and Office of Management and Budget, as well as appropriation by the U.S. Congress, to the allocation and delivery procedures of the U.S. Department of Transportation ("USDOT") and the FTA, and to compliance by MTA with conditions required by the grants. If federal funding for transit programs is reduced, whether as a result of sequestration or for other reasons, MTA's receipt of FTA grant funding, as well as MTA's substantial recurring revenue from the FTA, could be delayed, not approved or cancelled.

*System Security*. Ridership on the Transit and Commuter Systems is affected by serious incidents of crime and the public's perception of security and order in the systems. High profile events, such as the April 2022 subway shooting and incidents of passengers being pushed onto subway tracks, can also have a negative effect on public perception. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit)", "– Commuter System Ridership", and in this ADS for a discussion of system security and its impact upon ridership.

*Timing of State Funding, FEMA Reimbursements, Implementation of New Programs, Governance or Management Changes, and Operating Efficiency Related Initiatives.* Each of the State legislative initiatives described in this ADS, including funding set forth in the State Fiscal Year 2023-2024 Enacted Budget, reimbursement of direct COVID-related expenses through the Federal Emergency Management Agency ("FEMA"), implementation of the CBD Tolling Program, and expansion of design-build contracting powers, and as well as identification of new operating efficiencies and related MTA governance proposals are complex and require time to implement. No assurances can be given that these actions will occur in the anticipated time period and delays may have an adverse impact on MTA's financial position. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS –Challenges to be Addressed" and "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Changes to the 2022 November Plan".

## PART 2. FINANCIAL INFORMATION

## REVENUES OF THE RELATED ENTITIES

The following is a general description of certain revenues generated by the Related Entities. While it is not a complete list of all revenues available, it does cover substantially all of the revenues pledged to pay any one or more of the securities described under "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS". Each MTA or MTA Bridges and Tunnels credit is supported by specific revenue streams. Reference is made to the audited financial statements of the various entities for more information relating thereto. The information in the audited financial statements may differ from the information set forth below in certain respects due to the classification of revenues or timing of receipt thereof. For example, while the Related Entities use a calendar year as their fiscal year, the State has a fiscal year that begins on April 1 of each year. Some of the information set forth below and under the caption "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS" and "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)" relating to the State subsidies reflects revenues received during the State's fiscal year.

Collections of the different sources of revenues available to the Related Entities have varied, in some cases substantially, for a variety of reasons over the last ten years. Most of the revenues (including fares and tolls, dedicated taxes and miscellaneous concession and other revenues) are affected by general and local economic factors, including population and employment levels, stock market valuations, motor fuel prices and general economic activity, such as retail sales. The real estate-based revenues (i.e., the mortgage recording taxes, the urban taxes for the Transit System and the City "mansion tax"), which are equal to set percentages of the valuations of taxed transactions, are affected by a varying level of commercial and residential real property transactions, as well as, during certain periods, a generally lower value of real estate. In addition, the State's and the City's fiscal condition could affect their ability to subsidize the Related Entities and could affect their willingness to continue to provide revenues at prior or forecasted levels.

The projections provided in this ADS reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

### Fares and Tolls

*Ridership and Use of Bridges and Tunnels*. The level of fare revenues depends to a large extent on ridership levels on the Transit System, Commuter System and MTA Bus System. Similarly, the level of toll revenues depends to a large extent on use levels on its bridges and tunnels. The ridership and use levels are affected by a range of factors, including, without limitation, the safety, quality and efficiency of systems operations financial and economic conditions in the New York City metropolitan area. Since the COVID-19 pandemic, primary factors affecting ridership include changes to in-person work patterns and an increase in remote work, decreased non-work related travel, and overall customer sentiment.

*Fare and Toll Policy*. MTA determines the fares charged to users of the Commuter System and the MTA Bus System; MTA New York City Transit and MaBSTOA, together with MTA, determine the fares for the Transit System; and MTA Bridges and Tunnels determines the tolls for the MTA Bridges and Tunnels Facilities. After adopting operating expense budgets and assessing the availability of governmental subsidies (other than in the case of MTA Bridges and Tunnels), each makes a determination of fares necessary to operate on a self-sustaining cash basis in compliance with State law and covenants in the relevant bond resolutions. After taking into consideration the impact of increased fares on riders and increased tolls on bridge and tunnel users and of both on the regional economy, MTA may attempt to reduce costs or obtain additional revenues from other sources, mainly governmental sources, before increasing fares and/or tolls. As a result, even though MTA does not generally need other governmental approvals before setting fares and MTA Bridges and Tunnels does not generally need other governmental approvals before setting tolls, the amount and timing of fare and toll increases may be affected by the federal, State and local government financial conditions, as well as by budgetary and legislative processes, including the required holding of public hearings. In the case of the New Haven Line, MTA's ability to change fares is subject to the approval of the Connecticut Department of Transportation ("CDOT") pursuant to the terms of the joint service agreement among MTA, MTA Metro-North Railroad and CDOT. At the present time, MTA is exempt from all federal requirements relating to fares charged on interstate travel on the New Haven Line. MTA's obligation to obtain approval of fare increases on the New Haven line from CDOT can also affect the amount and timing of fare increases.

*Methods of Payment and Collection*. MTA New York City Transit employs two fare payment systems: MetroCard and OMNY, each as more fully described under "PART 5. STATISTICAL INFORMATION – RIDERSHIP

AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Automated Fare Collection*".

MetroCards are sold in the transit system through vending machines, and out of system through third party vendors, MTA Long Island Rail Road, MTA Metro-North Railroad, other entities that use MetroCard, and directly to businesses. In connection with certain of these sales, a sales commission is netted out of the amounts paid to MTA New York City Transit.

OMNY is an account-based system that accepts open payments made with contactless credit and debit bank cards and digital wallets in smartphones and watches (known as open loop media) and MTA-issued OMNY cards (known as closed loop media) at transit point-of-entry gates. In May 2019, MTA began the roll out of OMNY, and the installation of OMNY validators was complete for the subway system, all buses and MTA Staten Island Railway by the end of 2020. The OMNY Card first became available for use in October 2021 for full fare payment. A network of retailers selling the OMNY Card was also launched in October 2021. An OMNY Card for Reduced-Fare is in a pilot phase. It is anticipated that OMNY, including an OMNY app for mobile ticketing, will be rolled-out for MTA Long Island Rail Road and MTA Metro-North Railroad customers by 2025. It is also anticipated that MetroCard will be decommissioned in 2025.

MTA New York City Transit's MetroCard and OMNY systems are integrated with MTA Bus. The MetroCard system is integrated with NICE Bus (operated by Nassau County), PATH (operated by Port Authority of New York and New Jersey (the "Port Authority")), JFK Air Train (operated by Port Authority), Westchester County Bee Line, and Roosevelt Island Tram (operated by Roosevelt Island Operating Corporation of the State of New York).

Several ticket purchase options are available to MTA Long Island Rail Road and MTA Metro-North Railroad customers. Payment methods accepted for ticket purchases at station windows include cash, checks, credit/debit cards and vouchers. Ticket vending machines accept cash and credit and debit cards for the purchase of tickets. MTA's website allows customers from both MTA Long Island Rail Road and MTA Metro-North Railroad to establish individual Mail-and-Ride accounts for the purchase of monthly tickets, which are mailed just prior to the beginning of each month. In 2016, MTA Long Island Rail Road and MTA Metro-North Railroad introduced a mobile ticketing option (eTix™), which allows customers to establish accounts with credit cards, purchase electronic tickets using their mobile devices and display onboard to train personnel for validation.

MTA Long Island Rail Road and MTA Metro-North Railroad customers may purchase one-way tickets onboard all trains using cash, credit cards and pin-less debit cards.

MTA Bridges and Tunnels employs an electronic toll collection system ("E-ZPass") at all of its bridges and tunnels. Historically, MTA Bridges and Tunnels' E-ZPass program generally required prepayment on behalf of the customers. Substantially all of the E-ZPass users prepaid with credit cards or checks. As more fully described herein under "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Cashless Open Road Tolling", MTA Bridges and Tunnels has converted to a cashless open road tolling system. MTA Bridges and Tunnels launched its "MTA Reload Card" pilot program on February 23, 2012. This program allows customers who wish to replenish their accounts with cash to receive an MTA Reload Card that is directly linked to their E-ZPass accounts. MTA Bridges and Tunnels also offers E-ZPass customers a "Pay Per Trip" plan, which enables customers to set up an E-ZPass account without a pre-paid balance. Those interested in this program pay for their tolls each day through Automated Clearing House deductions from their checking accounts. For Cashless Tolling, MTA Bridges and Tunnels introduced a Tolls by Mail program, which covers anyone crossing an MTA Bridges and Tunnels facility without an E-ZPass account. Customers who do not have an E-ZPass account are sent a toll bill which can be paid by cash, check or credit/debit card.

*Historical Fare and Toll Increases*. Fares on the commuter rail, subway and bus systems did not increase between 1995 and 2003 and tolls did not increase between 1996 and 2003, both among the longest periods of time without an increase in the history of the systems. During this period, the State increased certain special tax supported operating subsidies and fees in order to assist in the funding of operations and the approved capital programs. Due to general national and regional economic conditions since 2001, fares and tolls have been increased at various times. While ridership of the Transit and Commuter Systems and use of the MTA Bridges and Tunnels Facilities have fluctuated, fare and toll increases have allowed the revenues derived from such sources to generally increase during the last decade. MTA fares and tolls were increased effective in 2009, 2010, 2013, 2015, 2017 and 2019. In February 2021, a toll increase was approved, effective April 11, 2021. In the case of MTA Metro-North Railroad's New Haven line, Connecticut also increased fares for travel between stations in Connecticut and the State, effective 2003, 2005, in each year from 2012-2016, and in 2018. Ridership and fares are more fully described under the captions "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE": "– Transit System (MTA New York City

Transit and MaBSTOA) Ridership – *Fares*", "– Commuter System Ridership – *Fares*", "– MTA Bus Ridership – *Fares*", and "- MTA Bridges and Tunnels – Total Revenue Vehicles".

*Transit System Fares*. Revenues are derived from fares charged to users of the Transit System. Fare revenues on an accrual basis (not including reimbursement for student and senior discount fares and for paratransit program costs, all as described below) for the past ten years were as follows:

| Year | Fare Revenues (in millions) | Year | Fare Revenues (in millions) |
|---|---|---|---|
| 2013 | $4,051.8 | 2018 | $4,446.5 |
| 2014 | 4,191.0 | 2019 | 4,593.8 |
| 2015 | 4,371.4 | 2020 | 2,011.5 |
| 2016 | 4,415.0 | 2021 | 2,320.0 |
| 2017 | 4,486.8 | 2022† | 2,963.6 |

† 2022 data is preliminary.

Transit System revenues dropped dramatically during 2020 due to the impacts of the COVID-19 pandemic and increased in 2021 and 2022 as the pandemic abated.

The projected fare revenue for 2023 on an accrual basis, as reported in the 2023 Adopted Budget, is $3,288.7 million.

The 2023 projected fare revenue on a cash basis, as reported in the 2023 Adopted Budget, is $3,288.9 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

The current fare schedule includes a basic bus and subway fare of $2.75, as well as a variety of discounted fare arrangements (as described in the next paragraph) covering the majority of passenger trips. Special fares are available for senior citizens, persons with disabilities, school children and on certain special services. For a description of historical fare levels and payment and collection methods and discount programs, see "RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Fares*" and "RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Automated Fare Collection*".

For MetroCard users, MTA offers unlimited-ride 7-day and 30-day subway and bus passes and unlimited-ride 7-day combined express bus and regular bus/subway passes. MTA also offers a program for unlimited-ride 30-day and 7-day express pass holders that enables the holder to replace his or her lost pass at no cost (limit of two per calendar year per holder) if the pass was paid for by credit or debit card. For OMNY users, MTA offers a weekly fare cap program which provides that, once a customer has used OMNY (with the same card or electronic device) to pay for 12 trips, such customer rides free for the rest of the week (Monday through Sunday). See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Automated Fare Collection*".

MTA New York City Transit may fix and adjust Transit System fares without the approval or consent of any other body or entity. However, as a recipient of federal funding, MTA New York City Transit is obligated to seek public comment prior to raising fares.

*Transit System Fare Reimbursements from the City and State*. MTA New York City Transit and MaBSTOA are required by law to permit, upon the request of the Mayor of the City, free or reduced fares for one or more classes of users of their facilities upon the agreement of the City to assume the burden of the resulting differential in fares and the associated administrative costs. Pursuant to Mayoral request, MTA New York City Transit and MaBSTOA offer a free fare program for certain school children. Pursuant to federal regulations, there are also half-fare programs for senior citizens and eligible disabled persons.

Beginning in 1996, the State and the City each began paying $45 million annually to MTA toward the cost of the free program for students. In 2009, the State reduced its reimbursement from $45 million to $6.3 million but subsequently increased it to $25.3 million in 2010. The 2010 reimbursement levels were maintained through 2019 by both the State and City with some timing impacts in 2020. The annual reimbursements from the City and the State cover less than 30% of annual program costs.

*MTA Bus Fares*. Revenues are derived from fares charged to users of the MTA Bus System that are the equivalent of fares charged on the bus systems operated by MTA New York City Transit. Fare revenues on an accrual basis (not including reimbursement for student and senior discount fares and for paratransit program costs, all as described below) for the past ten years are as follows:

| Year | Fare Revenues (in millions) | Year | Fare Revenues (in millions) |
|---|---|---|---|
| 2013 | $193.0 | 2018 | $220.5 |
| 2014 | 203.6 | 2019 | 224.8 |
| 2015 | 210.3 | 2020 | 93.7 |
| 2016 | 212.5 | 2021 | 140.2 |
| 2017 | 217.2 | 2022† | 163.4 |

† 2022 data is preliminary.

MTA Bus revenues dropped dramatically during 2020 through 2021 due to the impacts of the COVID-19 pandemic and increased in 2022 as the pandemic abated.

The 2023 projected fare revenue, on both an accrual basis and a cash basis, as reported in the 2023 Adopted Budget is $170.7 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

*Commuter System Fares*. Revenues are derived from fares charged to users of the Commuter System. Fare revenues on an accrual basis for the past ten years were as follows:

| Year | Fare Revenues (in millions) | Year | Fare Revenues (in millions) |
|---|---|---|---|
| 2013 | $1,250.9 | 2018 | $1,480.0 |
| 2014 | 1,308.7 | 2019 | 1,525.4 |
| 2015 | 1,373.0 | 2020 | 515.9 |
| 2016 | 1,416.1 | 2021 | 558.4 |
| 2017 | 1,461.0 | 2022† | 906.2* |

* Includes $448.6 million for MTA Metro-North Railroad and $457.6 million for MTA Long Island Rail Road.
† 2022 data is preliminary.

Commuter rail revenues dropped dramatically during 2020 and 2021 due to the impacts of the COVID-19 pandemic and increased in 2022 as the pandemic abated.

The 2023 projected fare revenue, on an accrual basis, as reported in the 2023 Adopted Budget is $1,049.1 million.

The 2023 projected fare revenue, on a cash basis, as reported in the 2023 Adopted Budget is $1,045.0 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

Fares are set in accordance with complicated formulae and vary in relation to the distance traveled. Discounts are generally available for travel during off-peak hours, for senior citizens, children and persons with disabilities, and for the purchase of weekly or monthly tickets by commuters. Mail and Ride monthly ticket customers can also receive an additional 2% discount for purchasing a joint 30-day unlimited-ride MetroCard with their monthly commuter ticket.

*MTA Bridges and Tunnels Toll Revenues*. Revenues are derived from tolls at the MTA Bridges and Tunnels Facilities. Toll revenues on an accrual basis for the past ten years were as follows:

| Year | Toll Revenues (in millions) | Year | Toll Revenues (in millions) |
|---|---|---|---|
| 2013 | $1,645.2 | 2018 | $1,975.7 |
| 2014 | 1,676.4 | 2019 | 2,071.4 |
| 2015 | 1,808.9 | 2020 | 1,639.8 |
| 2016 | 1,869.7 | 2021 | 2,169.9 |
| 2017 | 1,911.9 | 2022† | 2,332.4 |

† 2022 data is preliminary.

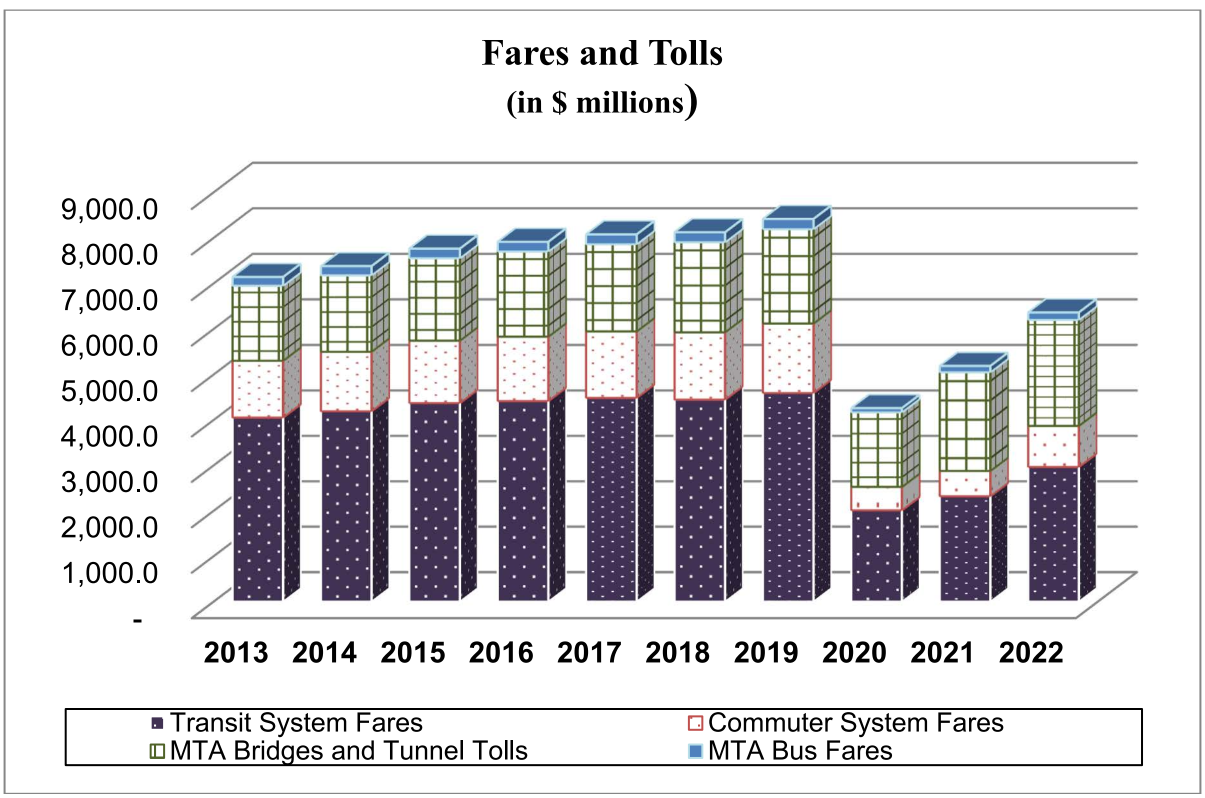
Toll revenues dropped dramatically during 2020 due to the impacts of the COVID-19 pandemic and increased in 2021 primarily due to increased traffic as the pandemic abated and the toll increase implemented on April 11, 2021. The average toll in 2022 was $7.15, which was $0.09 higher than the average toll of $7.06 in 2021. The increase was primarily due to the aforementioned toll increase implemented on April 11, 2021, which was in effect for the full twelve months of 2022.

The 2023 projected toll revenue, on an accrual basis, as reported in the 2023 Adopted Budget, is $2,322.8 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

For more information relating to MTA Bridges and Tunnels' tolls, see "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates". See also the section in the Stantec Report entitled "TOLL COLLECTION ON THE TBTA FACILITIES".

*Combined Transit System, MTA Bus System, Commuter System and MTA Bridges and Tunnels Facilities Fares and Tolls*. The following bar chart shows the level of combined Transit System, MTA Bus System, Commuter System and MTA Bridges and Tunnels Facilities fare and toll revenues for the past ten years (2022 data is preliminary).



**State and Local General Operating Subsidies**

*Section 18-b Program*. The Section 18-b Program, a statewide mass transportation operating assistance program, is administered by the State Commissioner of Transportation (the "Section 18-b Program"). Section 18-b Program payments to MTA for the Transit System and Commuter System are made quarterly on the basis of specific annual appropriations by the Legislature, rather than pursuant to the formula set forth in the statute that is applicable to other transportation systems throughout the State. The City and the counties served by the Commuter System are required to make matching payments. The level of general operating subsidies paid annually to the Related Entities is not dependent on the level of collection of certain taxes or fees or any statutory formula. Consequently, the amount paid to the Related Entities under the Section 18-b Program is dependent on the willingness and the overall financial ability of the State, the City and such counties to make such payments.

Section 18-b Program revenues, on an accrual basis, for the past ten years are as follows:

| Year | Section 18-b Program Revenues (in millions) | Year | Section 18-b Program Revenues (in millions) |
|---|---|---|---|
| 2013 | $375.8 | 2018 | $375.8 |
| 2014 | 375.8 | 2019 | 375.8 |
| 2015 | 375.8 | 2020 | 375.8 |
| 2016 | 375.8 | 2021 | 375.8 |
| 2017 | 375.8 | 2022† | 375.8 |

† 2022 data is preliminary.

The 2023 projected Section 18-b Program revenue, on both an accrual basis and a cash basis, as reported in the 2023 Adopted Budget, is $375.8 million.

The State appropriates substantially all of such Section 18-b Program payments from a separate account (the "Transportation District Account") in a special State fund, the Mass Transportation Operating Assistance Fund (the "MTOA Fund"), the revenues of which are derived from the special taxes described below under "State Special Tax Supported Operating Subsidies". The remainder of such payments is appropriated from the State's General Fund. Appropriation from the Transportation District Account reduces the amount that would otherwise be available to be appropriated to (1) MTA New York City Transit and MaBSTOA and (2) MTA for the Commuter System, from such account, as described below under "State Special Tax Supported Operating Subsidies — *MTTF Receipts and MMTOA Receipts*".

Under the Section 18-b Program:

- Whenever MTA New York City Transit or MaBSTOA receives a Section 18-b Program payment from the State, the City is required to make a matching payment in accordance with amounts established by the Legislature. In the event the City fails to make any required payment, the State Comptroller is authorized to withhold an equivalent amount from certain State aid to the City and to pay such amount directly to MTA New York City Transit or MaBSTOA.
- Whenever MTA receives a Section 18-b Program payment from the State for the Commuter System, the City and counties served by the Commuter System are required to make a matching payment in accordance with amounts established by the Legislature. In the event the City and counties fail to make any required payment, the State Comptroller is authorized to withhold an equivalent amount from certain State aid to the City and counties and to pay such amount directly to MTA for the Commuter System.

**State Special Tax Supported Operating Subsidies**

*MTTF Receipts and MMTOA Receipts*. The Transit System and Commuter System have historically operated at a deficit and have been dependent upon substantial amounts of general operating subsidies from the State as well as the City. Over time, the ongoing needs of mass transportation systems in the State has led the State to supplement the general operating subsidies with additional operating subsidies supported by State special taxes.

Since 1980, in response to anticipated operating deficits of State mass transit systems, the State has enacted legislation dedicating specified portions of statewide and regional taxes and fees to the Related Entities. Currently, subject to annual appropriation, a specified share of the following revenues is paid to the Related Entities:

- The Mass Transportation Trust Fund Receipts (the "MTTF Receipts") represent the portion of the funds deposited in the State's dedicated mass transportation trust fund that are subsequently paid to MTA by deposit into an MTA dedicated tax fund (the "Dedicated Tax Fund"). The MTTF Receipts are derived from:
    - certain business privilege taxes imposed by the State on petroleum businesses (the "PBT");
    - a portion of the motor fuel tax on gasoline and diesel fuel; and
    - certain motor vehicle fees, including both registration and non-registration fees.
- The Metropolitan Mass Transportation Operating Assistance Account Receipts (the "MMTOA Receipts") represent the portion of the funds in the State's MMTOA Account (hereinafter defined) that are subsequently paid to MTA by deposit into the Dedicated Tax Fund. Any MMTOA Receipts for MTA Staten Island Railway and MTA Bus are allocated directly to the City, which is responsible for the MTA Staten Island Railway and MTA Bus deficits. The MMTOA Receipts are derived from:
    - a 3/8 of 1% regional sales tax and compensating use tax within the MCTD;
    - a regional franchise tax surcharge on certain businesses;
    - taxes on certain transportation and transmission companies; and
    - an additional portion of the business privilege tax imposed on petroleum businesses.

Additionally, a portion of the amounts collected by the City for the benefit of the Transit System from certain mortgage transfer and recording taxes (the Urban Taxes) are paid by the City's Commissioner of Finance directly to MTA New York City Transit on a monthly basis. See " – Urban Taxes for Transit System".

See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – MTTF Receipts – Dedicated Petroleum Business Tax" and " – Motor Fuel Tax" for a more detailed description of the MTTF Receipts.

See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS – MMTOA Account – Special Tax Supported Operating Subsidies" for a more detailed description of the MMTOA Receipts.

The following table sets forth the amount of MTTF Receipts and MMTOA Receipts for each of the past ten years.

| Year | MTTF Receipts (in millions) | MMTOA Receipts* (in millions) | Total† (in millions) |
|---|---|---|---|
| 2013 | $589.8 | $1,514.7 | $2,104.5 |
| 2014 | 659.4 | 1,560.3 | 2,219.7 |
| 2015 | 616.6 | 1,560.2 | 2,176.8 |
| 2016 | 634.1 | 1,664.0 | 2,298.1 |
| 2017 | 606.0 | 1,664.0 | 2,270.0 |
| 2018 | 632.8 | 1,682.5 | 2,315.3 |
| 2019 | 649.1 | 1,819.0 | 2,468.1 |
| 2020 | 503.4 | 1,560.2 | 2,163.6 |
| 2021 | 525.7 | 2,242.0 | 2,767.6 |
| 2022 | 596.7 | 2,594.7 | 3,123.3 |

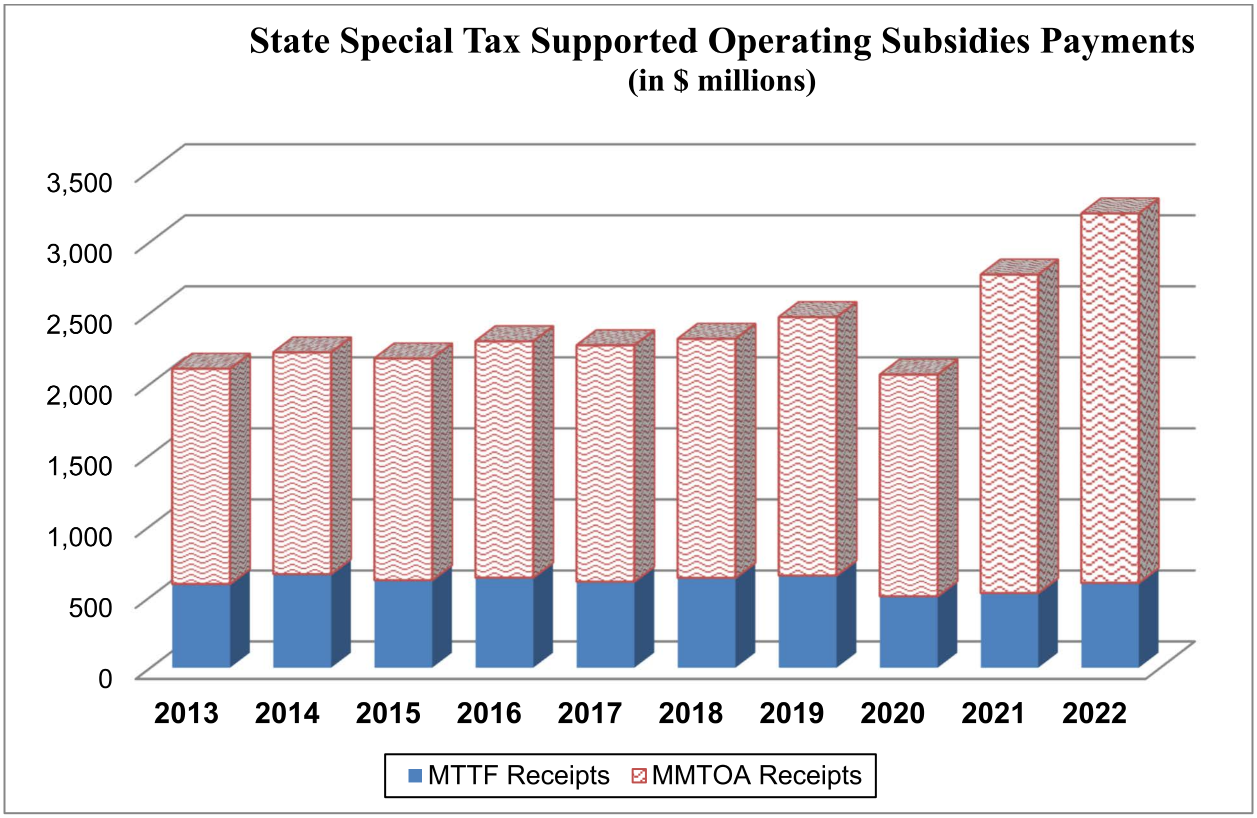
* Excludes MMTOA share for MTA Staten Island Railway.
† Totals may not add due to rounding.

The 2023 projected MTTF Receipts are $610.8 million and projected MMTOA Receipts are $2,756.6 million, on both an accrual basis and a cash basis, as reported in the 2023 Adopted Budget.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND

CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

The following bar chart shows the level of State special tax supported operating subsidies payments for the past ten years (2022 data is preliminary).




*Use of MTTF Receipts and MMTOA Receipts*. MTTF Receipts are used first to pay debt service on the Dedicated Tax Fund Bonds described under "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS". To the extent that MTTF Receipts are insufficient, MMTOA Receipts are used to pay the remainder of the debt service on the Dedicated Tax Fund Bonds. After the payment of debt service on the Dedicated Tax Fund Bonds, all MTTF Receipts and MMTOA Receipts are pledged to the payment of debt service on the Transportation Revenue Bonds. All remaining MTTF Receipts and MMTOA Receipts are then allocated to the Transit System and the Commuter System in accordance with the formula provided by statute (85% to the Transit System and MTA Staten Island Railway and 15% to the Commuter System in the case of MTTF Receipts; the relative percentage of that year's State appropriation to the Transit System and the Commuter System, respectively, in the case of MMTOA Receipts; in each case, in order to establish compliance with the statutory formulae, payments allocated to the Transit System and the Commuter System are adjusted to take into account the respective amounts used to pay debt service on Dedicated Tax Fund Bonds and Transportation Revenue Bonds, if necessary, issued for the Transit System and the Commuter System, respectively).

Collections of each of the above-referenced subsidies vary depending on the level of business activity, either statewide or regionally. In addition, all of these subsidies are subject to State appropriation.

*Fuel Tax Holiday During State Fiscal Year 2022-2023*. In order to address the impact on consumers from the sharp increase in the cost of fuel in the State resulting from geopolitical events, the State Fiscal Year 2022-2023 Enacted Budget included a suspension of the State sales tax imposed on fuel, the motor fuel tax and the MCTD sales tax imposed in respect of the sale of gasoline and highway diesel fuel from June 1, 2022 through December 31, 2022 (the "Fuel Tax Holiday"). However, in order to hold MTA harmless and offset from any lost revenue resulting from the Fuel Tax Holiday, the State made monthly transfers from its General Fund to the MTTF and the MMTOA Account for subsequent transfer to MTA in amounts equal to the tax revenue that would have been distributed to such funds had the Fuel Tax Holiday not been implemented. No such suspension is expected during State Fiscal Year 2023-2024.

**Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts**

*Mobility Tax Receipts*. In May 2009, Governor Paterson signed legislation (the "May 2009 Legislation") imposing a new payroll mobility tax (the "Payroll Mobility Tax" or "PMT") within the Metropolitan Commuter Transportation District (the "MCTD"). Revenues derived from the imposition of the PMT are referred to as "Mobility Tax Receipts". The tax, which became effective in 2009, was imposed on the payroll expense of certain employers who engage in business within the MCTD and the net self-employment earnings of individuals that are attributable to the MCTD. Mobility Tax Receipts are payable twice a month directly to MTA, without appropriation, for deposit in the Metropolitan Transportation Authority Financial Fund (the "MTA Financial Fund") created pursuant to the MTA Act.

In December 2011, Governor Cuomo signed legislation that made the following significant changes to the PMT (the "December 2011 Legislation"), effective April 1, 2012:

- employers with payroll expense less than or equal to $312,500 in any calendar quarter; any public school district, a board of cooperative educational services, a public elementary or secondary school, a school serving students with disabilities of school age and any nonpublic elementary or secondary school that provides instruction in grade one or above; federal, international, and interstate agencies; and individuals with net earnings from self-employment attributable to the MCTD that do not exceed $50,000 for the tax year were no longer subject to the tax;
- reduced the PMT from 0.34% imposed within the MCTD for certain taxpayers as follows: employers with payroll expense greater than $312,500 but not greater than $375,000 in any calendar quarter are subject to a reduced tax rate of 0.11%; employers with payroll expense greater than $375,000 but not greater than $437,500 in any calendar quarter are subject to a reduced tax rate of 0.23%. Employers with payroll expenses in excess of $437,500 in any calendar quarter continue to pay a tax rate of 0.34%.

The December 2011 Legislation further expressly provided that any reductions in aid to MTA attributable to these reductions in the PMT "shall be offset through alternative sources that will be included in the state budget" (the "PMT Revenue Offset"). Unlike the revenue from the PMT, the revenue from the PMT Revenue Offset (the "PMT Revenue Offset Receipts") is subject to appropriation by the State and deposited into the Mobility Tax Trust Account of the Metropolitan Transportation Authority Financial Assistance Fund (the "MTA Financial Assistance Fund") created under the State Finance Law. Revenues in the Mobility Tax Trust Account are transferred monthly to the MTA Financial Fund.

The State Fiscal Year 2015-2016 Enacted Budget included an amendment to the PMT legislation to eliminate the PMT for all public library systems as well as public and free association libraries for taxable periods beginning on or after January 1, 2016.

In addition to the reduction itemized in the previous paragraph, the State Fiscal Year 2017-2018 Enacted Budget also lowered the PMT Revenue Offset appropriation by $65 million for MTA's 2017 fiscal year. This resulted in an appropriation for the PMT Revenue Offset of $244.3 million to MTA beginning in 2017 and continuing through future years.

The State Fiscal Year 2023-2024 Enacted Budget included legislation which increases the maximum rate of the PMT for employers with payroll expense of over $437,500 in any calendar quarter engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond (the counties which comprise New York City) from 0.34% to 0.60%, such increase to become effective on July 1, 2023. The legislation also increases the rate of the PMT imposed on self-employed individuals with net earnings allocated to the MCTD of over $50,000 for the tax year engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond from 0.34% to 0.47%, such increase effective at the start of the tax year beginning on or after January 1, 2023, and from 0.47% to 0.60%, such increase to become effective at the start of the tax year beginning on or after January 1, 2024. No change was made to the existing rates of the PMT on employers and self-employed individuals engaging in business in the MCTD in the counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester.

The Mobility Tax Receipts and PMT Revenue Offset Receipts in the MTA Financial Fund (1) have been pledged by MTA to secure and be applied to the payment of bonds to be issued in the future to fund capital projects of the Related Entities, and (2) can be used by MTA to pay capital costs, including debt service of the Related Entities or (3) can be used to pay operating expenses. As more fully described herein under "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS - PAYROLL MOBILITY TAX OBLIGATIONS", MTA and MTA Bridges and Tunnels authorized the issuance of bonds, notes and other obligations secured by the Mobility Tax Receipts, but not the PMT Revenue Offset Receipts, and the ATA Receipts (as hereinafter defined) under separate bond resolutions in 2021.

Following application under the MTA and MTA Bridges and Tunnels PMT bond resolutions, the Mobility Tax Receipts, together with the PMT Revenue Offset Receipts, are pledged to the payment of debt service on the Transportation Revenue Bonds. Subject to the provisions of such pledges, the Mobility Tax Receipts and the PMT Revenue Offset Receipts can be used by MTA to pay for costs, including operating costs of the Related Entities.

The following table sets forth the amount of Mobility Tax Receipts, on a cash basis, for each of the past ten years, as well as the percentage change from the preceding calendar year.

| Year | Mobility Tax Receipts (in millions) | % Change from Previous Year |
|---|---|---|
| 2013* | $1,215.3 | -- |
| 2014 | 1,262.6 | 3.9% |
| 2015 | 1,316.9 | 4.3 |
| 2016 | 1,372.8 | 4.2 |
| 2017 | 1,435.6 | 4.6 |
| 2018 | 1,482.9 | 3.3 |
| 2019 | 1,560.5 | 5.2 |
| 2020 | 1,560.8 | 0.0 |
| 2021 | 1,713.2 | 9.8 |
| 2022† | 1,796.9 | 4.9 |

* Revisions to the PMT statute effective April 1, 2012, which exempted certain taxpayers and lowered the rate paid by others, reduced Mobility Tax Receipts from that year forward.

† 2022 data is preliminary.

There was no noticeable impact to Mobility Tax Receipts resulting from the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

On a cash basis, the 2023 projected Mobility Tax Receipts, as reported in the 2023 Adopted Budget, are $1,859.1 million.

The Mobility Tax Receipts are part of the pledged revenues for the PMT Resolutions. The PMT Revenue Offset Receipts are not pledged under these resolutions and continue to flow through the Transportation Revenue credit to be available for capital and operations.

The following table sets forth the amount of PMT Revenue Offset Receipts for each of the past ten years.

| Year | PMT Revenue Offset Receipts (in millions) |
|---|---|
| 2013 | $307.2 |
| 2014 | 309.3 |
| 2015 | 309.3 |
| 2016 | 309.3 |
| 2017 | 244.3 |
| 2018 | 244.3 |
| 2019 | 244.3 |
| 2020 | 195.4 |
| 2021 | 293.1 |
| 2022† | 244.3 |

† 2022 data is preliminary.

On a cash basis, the 2023 projected PMT Revenue Offset Receipts, as reported in the 2023 Adopted Budget, are $244.3 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

*ATA Receipts*. The May 2009 Legislation also imposed the following four new taxes and fees (the "MTA Aid Trust Account Receipts" or "ATA Receipts"):

- in the MCTD, a supplemental motor vehicle license fee of a dollar per six-month interval (effective September 1, 2009);
- in the MCTD, a supplemental motor vehicle registration fee of $25 for each year that the registration is valid (effective September 1, 2009);
- a tax of fifty cents on hailed vehicle trips that originate in the City and terminate anywhere within the territorial boundaries of the MCTD (effective November 1, 2009); and
- a supplemental tax of 6% on passenger car rentals in the MCTD; this was originally 5% but was changed to 6% effective June 1, 2019.

The ATA Receipts are payable quarterly directly to MTA, without appropriation, for deposit in the Corporate Transportation Account (the "Corporate Transportation Account") of the Metropolitan Transportation Authority Special Assistance Fund created pursuant to the MTA Act.

The ATA Receipts may be pledged by MTA or pledged to MTA Bridges and Tunnels to secure debt of MTA or MTA Bridges and Tunnels for the benefit of the Transit and Commuter Systems and MTA Bus. The ATA Receipts have been pledged, together with the Mobility Tax Receipts, but not the PMT Revenue Offset Receipts, under the PMT Bond Resolutions. Subject to the provisions of such pledge, such ATA Receipts can be used by MTA for the payment of operating and capital costs for the benefit of the Transit and Commuter Systems and MTA Bus. Because the ATA Receipts are not "Operating Subsidies" under the Transportation Resolution, they are not pledged to the payment of Transportation Revenue Bonds, but MTA may use the ATA Receipts, in its discretion, to make such debt service payments if it so chooses. For further information related to PMT credit, see "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS - PAYROLL MOBILITY TAX OBLIGATIONS".

The following table provides historical information relating to the collection of ATA Receipts based on the calendar year for the past ten years:

**ATA Receipts Collections****
**(in millions)**

| Calendar Year | Supplemental License Fees and Registration Fees** | Taxicab Tax | Supplemental Auto Rental Tax | Total |
|---|---|---|---|---|
| 2013 | $175.9 | $82.1 | $43.5 | $301.6 |
| 2014 | 171.7 | 84.9 | 44.6 | 301.2 |
| 2015 | 176.5 | 74.8 | 46.0 | 297.3 |
| 2016 | 179.1 | 66.7 | 56.8 | 302.6 |
| 2017 | 189.3 | 56.9 | 45.2 | 291.4 |
| 2018 | 192.5 | 53.1 | 50.8 | 296.4 |
| 2019 | 195.3 | 47.5 | 53.1 | 295.9 |
| 2020 | 184.6 | 18.6 | 43.5 | 246.7 |
| 2021 | 196.1 | 14.9 | 57.4 | 268.4 |
| 2022† | 175.9 | 21.9 | 62.8 | 260.6 |

* Collection totals may differ from actual receipts (in table below) due to timing of transfers from the State to MTA.
** Supplemental License and Supplemental Registration Fees are provided by the State as a combined number.
† 2022 data is preliminary.
Source: New York State Division of the Budget.

The following table provides historical information relating to ATA Receipts, as received by MTA, on a cash basis for calendar years for the past ten years:

**Historical Annual ATA Receipts**

| Calendar Year | ATA Receipts ($ in millions) |
|---|---|
| 2013 | $302.9 |
| 2014 | 313.2 |
| 2015* | 284.8 |
| 2016 | 300.3 |
| 2017 | 306.2 |
| 2018* | 272.6 |
| 2019 | 311.0 |
| 2020 | 248.8 |
| 2021 | 263.3 |
| 2022† | 263.3 |

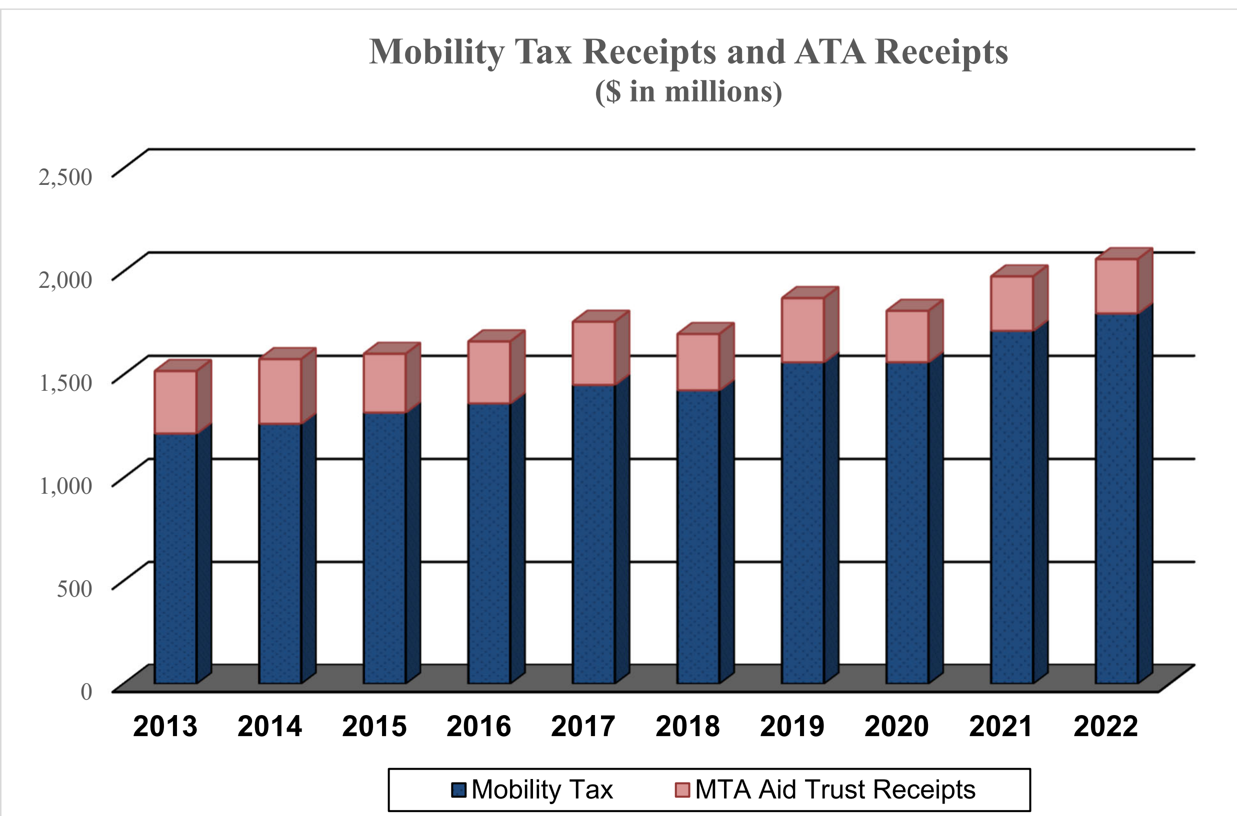
* The decline in ATA Receipts from 2014-2015 reflected a decline in taxicab surcharge receipts due to a reduction in pickups by yellow and green-metered taxicabs, which are subject to the taxicab surcharge. This was a result of an increase in the market share of smartphone app-driven providers in the area, such as Uber and Lyft, which are not subject to the $0.50 taxicab surcharge. The change in 2017-2018 reflects an expansion of For-Hire Vehicle trips (from providers such as Uber and Lyft) taken as acceptance of these providers grew.

† 2022 data is preliminary.

ATA Receipts dropped dramatically during 2020 and 2021 due to the impacts of the COVID-19 pandemic and increased slightly in 2022 as the pandemic abated.

The 2023 projected ATA Receipts, on a cash basis, as reported in the 2023 Adopted Budget, are $282.7 million.

The following bar chart shows the level of Mobility Tax Receipts and ATA Receipts for the past ten years per calendar year on a cash basis (2022 data is preliminary).



The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

**Congestion Zone Surcharges**

In April 2018, legislation was enacted in the State (the "April 2018 Legislation") providing additional sources of revenues, in the form of surcharges, to help address the financial needs of MTA, including the following:

- a surcharge of $2.75 on for-hire transportation trips (the "For-Hire Transportation Surcharge") provided by motor vehicles carrying passengers for hire (or $2.50 in the case of taxicabs that are subject to the $0.50 tax on hailed trips that are part of the MTA Aid Trust Account Receipts), other than pool vehicles, ambulances and buses, on each trip that (1) originates and terminates south of and excluding 96th Street in the Borough of Manhattan (the "Congestion Zone"), (2) originates anywhere in the State and terminates within the Congestion Zone, (3) originates in the Congestion Zone and terminates anywhere in the State, or (4) originates anywhere in the State, enters into the Congestion Zone while in transit, and terminates anywhere in the State; and
- a surcharge of $0.75 for each person (which, together with the For-Hire Transportation Surcharge, is referred to herein collectively as the "Congestion Zone Surcharges") who both enters and exits a pool vehicle (certain carpool arrangements set forth in the April 2018 Legislation) in the State and who is picked up in, dropped off in, or travels through the Congestion Zone.

The Congestion Zone Surcharges do not apply to transportation services administered by or on behalf of MTA, including paratransit services.

The April 2018 Legislation also authorized a program (the Automated Bus Lane Enforcement program or "ABLE") for the use of stationary and mobile (on-bus) bus lane photo devices on up to ten bus rapid transit routes to capture violations of certain bus rapid transit lane restrictions. Pursuant to subsequent legislation, the ABLE program was expanded by the end of 2022 to every borough and covered more than 50% of bus lane miles across the City. ABLE is planned to be further expanded to cover up to 85% of existing bus lane miles by the end of 2023.

The April 2018 Legislation also created the New York City Transportation Assistance Fund, held by MTA, and the following three accounts therein:

- Subway Action Plan Account;
- Outer Borough Transportation Account; and
- General Transportation Account.

Moneys in the Subway Action Plan Account may be used exclusively for funding the operating and capital costs of the subway action plan (such plan developed by MTA New York City Transit and approved by the MTA Board) (the "Subway Action Plan"). Moneys in the Outer Borough Transportation Account may be used exclusively for funding (1) the operating and capital costs of MTA facilities, equipment and services in the counties of Bronx, Kings, Queens and Richmond, and any projects improving transportation connections from such counties to Manhattan, or (2) a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels (the "Outer Borough Transportation Account"). Moneys in the General Transportation Account may be used for funding the operating and capital costs of MTA. In each case, moneys may be used for various operations and capital needs or for debt service and reserve requirements.

In connection with the enactment of the State Fiscal Year 2019-2020 Enacted Budget, moneys from the Outer Borough Transportation Account were earmarked to establish two additional rebate programs. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates – *Additional Outer Borough Transportation Account Funded Toll Rebate Programs*".

The Congestion Zone Surcharges, together with interest and penalties thereon, are deposited daily to the credit of the State Comptroller in trust for MTA. The State Comptroller will retain such amount as is determined to be necessary for refunds and the New York State Commissioner of Taxation and Finance (the "Commissioner of Taxation and

Finance") will deduct reasonable amounts for costs incurred to administer, collect and distribute such amounts. If sufficient amounts are collected and available, then, in accordance with the April 2018 Legislation, on or before the 12th day of each month, after reserving amounts for refunds and reasonable costs, the Commissioner of Taxation and Finance will certify to the State Comptroller the amounts collected in the prior month and the following amounts will be transferred to the following accounts by the 15th business day of each succeeding month (except for the ABLE fines, which are payable quarterly):

- to the Subway Action Plan Account, without appropriation, the first $300 million;
- to the Outer Borough Transportation Account, without appropriation, in each year the next $50 million; provided that any uncommitted balance at the end of each calendar year shall be transferred to the General Transportation Account (the use of any funds paid into the Outer Borough Transportation Account must be unanimously approved by the members of the MTA Capital Program Review Board appointed upon the recommendations of the Temporary President of the Senate and the Speaker of the Assembly and the member appointed by the Governor); and
- to the General Transportation Account, without appropriation, (1) all excess Congestion Zone Surcharges in each calendar year above the amounts required to be deposited to the Subway Action Plan Account and the Outer Borough Transportation Account, (2) the uncommitted balance at the end of each year in the Outer Borough Transportation Account, and (3) ABLE fines, interest and penalties until expiration on September 20, 2025.

Revenues from ABLE fines bypass the Subway Action Plan Account and the Outer Borough Transportation Account and flow directly into the General Transportation Account. These funds are to be remitted by the City to MTA on a quarterly basis.

The following table provides information relating to Congestion Zone Surcharge Receipts on an accrual basis since the onset of the surcharge in 2019:

**Congestion Zone Surcharge**
**(in millions)**

| Year | Subway Action Plan Account* | Outer Borough Transportation Account* | General Transportation Account† |
|---|---|---|---|
| 2019 | $336.4 | $0 | $0 |
| 2020 | 223.2 | 0 | 1.1** |
| 2021 | 235.8 | 0 | 4.4** |
| 2022†† | 300.0 | 37.3 | 4.4** |

* Set by statute.
† Remainder after deposits to Subway Action Plan Account and Outer Borough Transportation Account.
** ABLE fines.
†† 2022 data is preliminary.

The 2023 projected For-Hire Transportation Surcharges, on an accrual basis, as reported in the 2023 Adopted Budget, is $378.7 million, with $300.0 million for the Subway Action Plan, $50.0 million for Outerborough Transportation and $28.7 million for General Transportation, which excludes ABLE fines (Bus Lane Violations). The Outerborough Transportation amount is being set aside to cover expenses and revenue reductions that have yet to be incorporated in MTA's financial plans.

The 2023 projected For-Hire Transportation Surcharges, on a cash basis, as reported in the 2023 Adopted Budget, is $378.7 million, with $300.0 million for the Subway Action Plan, $50.0 million for Outerborough Transportation and $28.7 million for General Transportation, which excludes ABLE fines (Bus Lane Violations). The Outerborough Transportation amount is being set aside to cover expenses and revenue reductions that have yet to be incorporated in MTA's financial plans.

The 2023 projected revenue derived from ABLE fines (Bus Lane Violations), on an accrual basis and a cash basis, as reported in the 2023 Adopted Budget, is $2.882 million.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND

CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

**MTA Bridges and Tunnels Surplus**

*General*. MTA Bridges and Tunnels provides capital and operating assistance to the Transit and Commuter Systems from the tolls collected on the MTA Bridges and Tunnels Facilities in three important ways:

- it pays debt service on bonds that were issued to finance Transit and Commuter System capital projects;
- it generates annual MTA Bridges and Tunnels Operating Surplus, as described below, that is distributed to MTA New York City Transit and to MTA for the Commuter System in accordance with a statutorily mandated formula; and
- it generates an annual MTA Bridges and Tunnels Surplus Investment Income, as described below, that is distributed at the discretion of the MTA Board.

Since 2008, MTA Bridges and Tunnels has not issued new money bonds secured by tolls to finance capital projects for the benefit of the Transit and Commuter Systems. MTA Bridges and Tunnels also provides capital assistance to the Transit and Commuter Systems through the CBD Tolling Program, as more fully described herein.

The following table sets forth for the past ten years MTA Bridges and Tunnels' total support to the Transit and Commuter Systems from the tolls collected on the MTA Bridges and Tunnels Facilities, consisting of (a) the debt service paid on bonds issued for Transit and Commuter System capital projects, (b) the MTA Bridges and Tunnels Operating Surplus and (c) the MTA Bridges and Tunnels Surplus Investment Income.

| Year | Total Support to Transit and Commuter Systems (in millions) |
|---|---|
| 2013 | $1,004.6 |
| 2014 | 992.8 |
| 2015 | 1,124.9 |
| 2016 | 1,126.1 |
| 2017 | 1,122.6 |
| 2018 | 1,090.0 |
| 2019 | 1,138.7 |
| 2020 | 830.2 |
| 2021 | 1,390.1 |
| 2022† | 1,504.7 |

† 2022 data is preliminary.

*MTA Bridges and Tunnels Operating Surplus*. Section 569-c of the MTA Bridges and Tunnels Act and Section 1219-a of the MTA New York City Transit Act require MTA Bridges and Tunnels to transfer, subject to the pledge in favor of the holders of the Transportation Revenue Bonds, its operating surplus ("MTA Bridges and Tunnels Operating Surplus") to MTA New York City Transit and to MTA for the benefit of the Commuter System in accordance with a statutorily mandated formula hereinafter described.

The MTA Bridges and Tunnels Operating Surplus subject to such transfer is the amount remaining from all tolls and other operating revenues derived from the MTA Bridges and Tunnels Facilities after (1) payment of (a) operating, administrative and other expenses of MTA Bridges and Tunnels properly chargeable to such Facilities, and (b) principal of and sinking fund installments and interest on its bonds, including bonds issued under the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution (as defined under "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS"), and any other bond resolutions established from time to time to finance additional authorized projects of MTA Bridges and Tunnels, including the CBD Tolling Program, to the extent, if any, paid from such sources, and (2) provision for (x) reserves and for all contract provisions with respect to any such bonds and (y) other obligations, including certain swap payments (both regularly scheduled payments and termination payments), incurred in connection with any of its authorized projects). See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS". Monies deposited into the CBD Tolling Capital Lockbox Fund (as defined below) are not taken into consideration in the calculation of MTA Bridges and Tunnels Operating Surplus.

The first $24 million of MTA Bridges and Tunnels Operating Surplus must be allocated to MTA New York City Transit, and any excess is divided equally between MTA New York City Transit and the Commuter System. The foregoing allocations are adjusted to take into account the proportional amounts of MTA Bridges and Tunnels' debt service reasonably attributable to the bond proceeds used for their respective benefit.

The MTA Chairman is authorized in his discretion to advance to MTA and MTA New York City Transit monthly, from available funds, an aggregate amount not to exceed 90% of the Chairman's estimate of the sum which that month's operations will contribute to the MTA Bridges and Tunnels Operating Surplus that he anticipates will or may be certified and transferred for the fiscal year in which such month falls.

As set forth below in the "MTA Bridges and Tunnels Combined Surplus" chart, the MTA Bridges and Tunnels Operating Surplus has fluctuated in amount over the past ten years. In 2012 and 2014, the decrease in MTA Bridges and Tunnels Operating Surplus was primarily the result of higher operating expenses and, in 2012, an increase in the funding of the Necessary Reconstruction Reserve, a reserve established by MTA Bridges and Tunnels primarily for its own capital projects (the "Necessary Reconstruction Reserve"). The balances for the Necessary Reconstruction Reserve were $374.2 million in 2015, $421.6 million in 2016, $416.8 million in 2017, $410.6 million in 2018, $411.5 million in 2019, $398.3 million in 2020 and $387.6 million in 2021. In 2013, the MTA Bridges and Tunnels Operating Surplus increased primarily due to increased operating revenues. A toll increase became effective on March 3, 2013, and there was a 0.6% increase in traffic as compared to 2012 levels. In 2014, the MTA Bridges and Tunnels Operating Surplus increased primarily due to increased operating revenues and decreased debt service costs. In 2015 and 2016, the MTA Bridges and Tunnels Operating Surplus increased primarily due to additional toll revenues generated by a 4% growth in traffic volume in 2015, in addition to a toll increase implemented on March 22, 2015, and a 3% growth in traffic volume in 2016. In 2017 and 2018, the MTA Bridges and Tunnels Operating Surplus declined due to increased operating and debt service costs in 2017 and a contribution to the MTA Bridges and Tunnels Capital Program in 2018. In 2019, the MTA Bridges and Tunnels Operating Surplus increased due to higher operating revenue, which was a result of higher traffic volume and a toll increase implemented on March 31, 2019. In 2020, the MTA Bridges and Tunnels Operating Surplus declined mainly due to the impact caused by COVID-19, which contributed to a decrease in toll revenues of $431.7 million. In 2021, the MTA Bridges and Tunnels Operating Surplus increased by $559.9 million mainly due to higher traffic volume and a toll increase implemented on April 11, 2021. In 2022, the MTA Bridges and Tunnels Operating Surplus increased by $147.7 million mainly due to a 6.2% increase in traffic volume and one full year of increased toll rates from the April 11, 2021 toll increase.

*MTA Bridges and Tunnels Surplus Investment Income*. MTA Bridges and Tunnels generates investment income on funds held by it (the "MTA Bridges and Tunnels Surplus Investment Income"), principally from the debt service funds and operating and capital reserves (including the Necessary Reconstruction Reserve) held by MTA Bridges and Tunnels.

*Combined Surplus Amounts*. The MTA Bridges and Tunnels Operating Surplus and the MTA Bridges and Tunnels Surplus Investment Income (together, the "MTA Bridges and Tunnels Combined Surplus") are used to fund the operating expenses of the Transit System and the Commuter System and/or to finance the cost of certain capital costs and projects of the Transit System and the Commuter System, including payment of debt service on obligations of MTA issued to finance such costs and projects. As more fully described above, MTA Bridges and Tunnels Operating Surplus is, subject to the pledge in favor of the holders of the Transportation Revenue Bonds, distributed to MTA New York City Transit and MTA for the benefit of the Commuter System in accordance with a statutory formula. The MTA Bridges and Tunnels Surplus Investment Income is not subject to the pledge in favor of the holders of the Transportation Revenue Bonds, and is distributed at the MTA Board's discretion.

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The MTA Bridges and Tunnels Combined Surplus amounts transferred for each of the past ten years on an accrual basis, set forth in the table below, are net of amounts paid for debt service and other obligations described above.

**MTA Bridges and Tunnels Combined Surplus**

| Fiscal Year | | MTA New York City Transit Share | MTA Share (Commuter System) | MTA Bridges and Tunnels Combined Surplus |
|---|---|---|---|---|
| 2013 | | | | |
| Operating Surplus | | $246,901,830 | $367,308,419 | $614,210,249 |
| Investment Income | | -0- | 131,302 | 131,302 |
| | Total | $246,901,830 | $367,439,721 | $614,341,551 |
| 2014 | | | | |
| Operating Surplus | | $265,569,841 | $371,984,103 | $637,553,944 |
| Investment Income | | -0- | 136,988 | 136,988 |
| | Total | $265,569,841 | $372,121,091 | $637,690,932 |
| 2015 | | | | |
| Operating Surplus | | $318,434,758 | $432,281,958 | $750,716,715 |
| Investment Income | | -0- | 182,604 | 182,604 |
| | Total | $318,434,758 | $432,464,562 | $750,899,319 |
| 2016 | | | | |
| Operating Surplus | | $312,901,028 | $430,007,919 | $742,908,948 |
| Investment Income | | -0- | 634,951 | 634,951 |
| | Total | $312,901,028 | $430,642,870 | $743,543,899 |
| 2017 | | | | |
| Operating Surplus | | $310,366,954 | $429,776,887 | $740,143,841 |
| Investment Income | | -0- | 1,476,772 | 1,476,772 |
| | Total | $310,366,954 | $431,253,659 | $741,620,613 |
| 2018 | | | | |
| Operating Surplus | | $290,134,527 | $411,821,544 | $701,956,071 |
| Investment Income | | -0- | 2,602,773 | 2,602,773 |
| | Total | $290,134,527 | $414,424,317 | $704,558,844 |
| 2019 | | | | |
| Operating Surplus | | $334,064,042 | $445,011,233 | $779,075,275 |
| Investment Income | | -0- | 3,688,754 | 3,688,754 |
| | Total | $334,064,042 | $448,699,987 | $782,764,029 |
| 2020 | | | | |
| Operating Surplus | | $180,670,716 | $292,083,816 | $472,754,532 |
| Investment Income | | -0- | 763,475 | 763,475 |
| | Total | $180,670,716 | $292,847,291 | $473,518,007 |
| 2021 | | | | |
| Operating Surplus | | $463,826,536 | $573,208,103 | $1,037,034,639 |
| Investment Income | | -0- | 94,397 | 94,397 |
| | Total | $463,826,536 | $573,302,500 | $1,037,129,036 |
| 2022† | | | | |
| Operating Surplus | | $546,826,694 | $637,806,761 | $1,184,711,455 |
| Investment Income | | -0- | 3,717,603 | 3,717,603 |
| | Total | $546,826,694 | $641,524,364 | $1,188,429,058 |

† 2022 data is preliminary.

The MTA Bridges and Tunnels operating surplus for 2020 was significantly lower as it was impacted by the COVID-19 pandemic. See "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

**Financial Assistance and Service Reimbursements from Local Municipalities**

*Commuter System Station Maintenance Payments*. The City and each of the seven counties in the MTA Commuter Transportation District outside the City are billed an amount fixed by statute for the operation, maintenance and use of Commuter System passenger stations within the City and each county. The amount is adjusted each year for increases or decreases in the consumer price index for wage earners and clerical workers in the New York, Northeastern-New Jersey Consolidated Metropolitan Statistical Area. The Legislature has not made any changes in the base amounts since 2000. Further modifications may be made by the Legislature. In the event the City or any of the counties do not make their payments on a timely basis, the statute provides a mechanism whereby the State Comptroller can withhold certain other payments in order to satisfy the payments to MTA. Consequently, the Commuter System station maintenance payments are stable and generally grow gradually with corresponding annual inflation.

The following table sets forth the station maintenance, operation and use assessments received by MTA on an accrual basis in each of the last ten years:

| Year | Payments (in millions) | Year | Payments (in millions) |
|---|---|---|---|
| 2013 | $161.7 | 2018 | $168.5 |
| 2014 | 163.7 | 2019 | 171.0 |
| 2015 | 162.0 | 2020 | 174.1 |
| 2016 | 161.8 | 2021 | 177.6 |
| 2017 | 165.2 | 2022[†] | 187.6 |

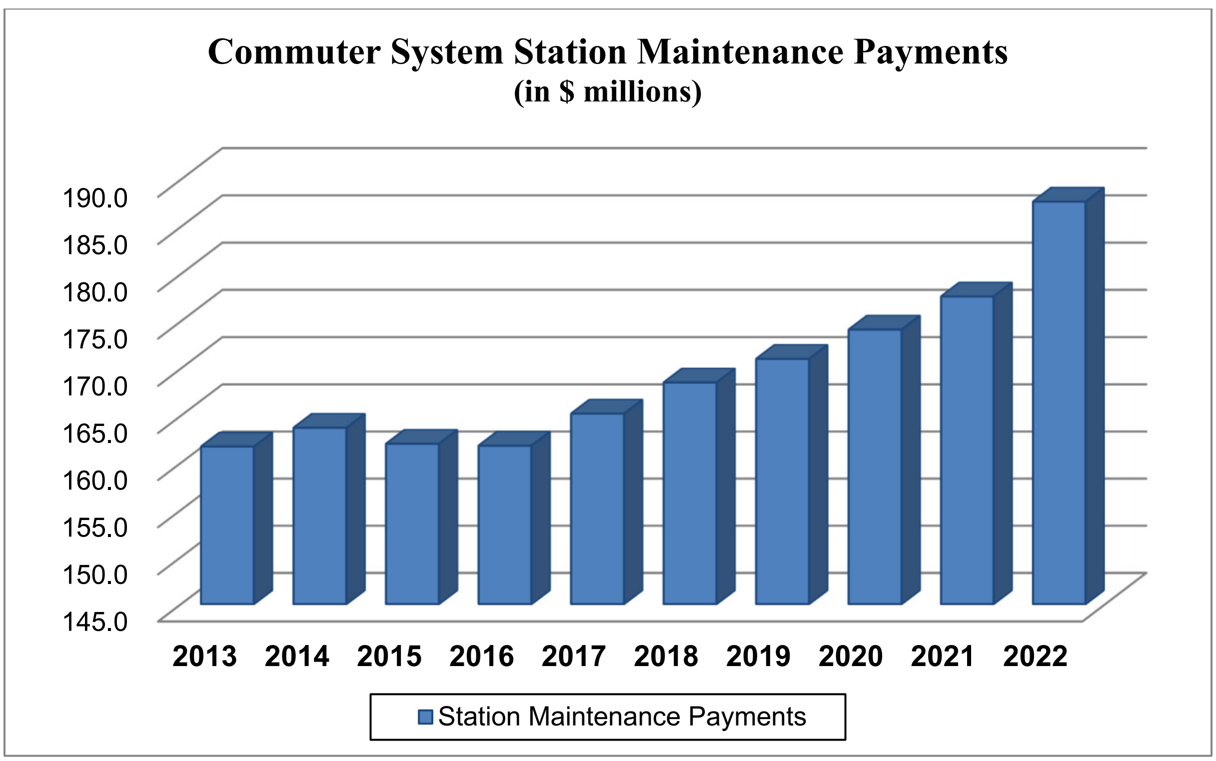
[†]2022 data is preliminary.

There was no noticeable impact to Commuter System Station Maintenance payments resulting from the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

The 2023 projected Commuter System Station Maintenance payments, on an accrual basis, are $202.7 million, as reported in the 2023 Adopted Budget.

The 2023 projected Commuter System Station Maintenance payments, on a cash basis, are $199.9 million, as reported in the 2023 Adopted Budget.

The following bar chart shows the level of Commuter System station maintenance payments made in the past ten years (2022 data is preliminary). Certain additional funding not reflected in the following bar chart was received from the Federal government in the years 2020 through 2022.



*Transit System Policing Costs*. Policing of the Transit System is carried out by the New York City Police Department (the "NYPD") at the City's expense. MTA New York City Transit is responsible for certain capital costs and support services related to such police activities.

*MTA Bus Reimbursements from the City*. The City reimburses MTA Bus the difference between the actual cost of operation of the MTA Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the MTA Bus Routes. The annual amounts payable by the City to MTA Bus are subject to review by the City. The amount and timing of payments received from the City could be affected by the financial condition of the City.

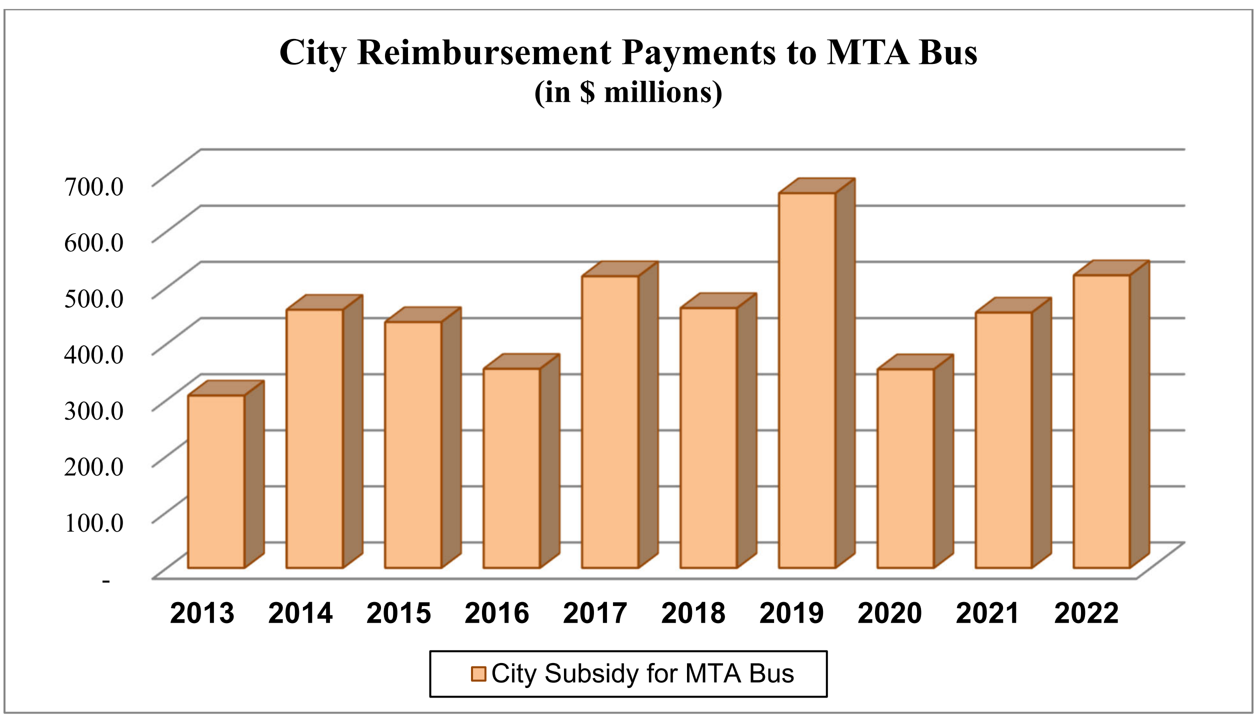
MTA Bus reimbursements from the City are reported on a cash basis rather than on an accrual basis. See "PART 4. OPERATIONS – MTA BUS COMPANY".

The following table sets forth the amounts of MTA Bus operating costs reimbursed by the City in each of the past ten years:

| Year | Payments (in millions) | Year | Payments (in millions) |
|---|---|---|---|
| 2013 | $307.5 | 2018 | $463.2 |
| 2014 | 460.2 | 2019 | 667.6 |
| 2015 | 438.3 | 2020 | 354.2* |
| 2016 | 355.0 | 2021 | 455.3 |
| 2017 | 519.9 | 2022† | 521.5 |

* The data provided is the net reimbursement from the City of New York. This includes the impact from CARES Act Funding received and applied to MTA Bus in 2020 and from CRRSAA Federal Aid in 2021 and 2022.
† 2022 data is preliminary.

The following bar chart shows the level of City reimbursement payments to MTA Bus for the past ten years (2022 data is preliminary). Certain additional funding not reflected in the following bar chart was received from the Federal government in the years 2020 through 2022.




*Paratransit*. Prior to July 2020, pursuant to a 1993 agreement between the City and MTA (the "Paratransit Agreement"), the City was required to subsidize a portion of the MTA's paratransit services net operating costs on an annual basis. Under that agreement, for each calendar year, the City was required to contribute the lesser of (1) 33% of the paratransit program's operating deficit, calculated after taking into account paratransit passenger revenue, certain

Urban Tax revenues (as defined below) and MTA New York City Transit eligible administrative expenses or (2) an amount 20% greater than the amount that was required to be contributed by the City for the preceding calendar year. The balance of the operating deficit was funded by MTA New York City Transit. See "PART 4. OPERATIONS – TRANSIT SYSTEM – Description of the Transit System – *Paratransit*".

Beginning in July 2020, pursuant to State legislation, on an annual basis, the City is required to subsidize 50% of the MTA's paratransit services net operating costs, subject to the following annual caps: 2020 - $215 million; 2021 - $277 million; 2022 - $290 million; and 2023 - $310 million. The State Fiscal Year 2023-2024 Enacted Budget extends the City contribution to paratransit, originally set to expire on June 30, 2024, to June 30, 2030. The budget also increases the City contribution to paratransit during the period from July 1, 2023 through June 30, 2025. During that period, the City is required to fund 80% of the net paratransit operating expenses; provided, however, that such contribution may not exceed the sum of: (i) 50% of the net paratransit operating expenses for such twelve month period; and (ii) $165 million.

The following table sets forth the amount of paratransit program costs that the City funded on an accrual basis in each of the last ten years:

| Year | New York City Contribution (in millions) | Year | New York City Contribution (in millions) |
|---|---|---|---|
| 2013 | $127.5 | 2018 | $150.0 |
| 2014 | 129.0 | 2019 | 170.4 |
| 2015 | 126.1 | 2020 | 151.4 |
| 2016 | 133.3 | 2021 | 177.1 |
| 2017 | 134.1 | 2022† | 203.3 |

†2022 data is preliminary.

**Miscellaneous Revenues**

*Transit System and MTA Bus*. MTA New York City Transit, MaBSTOA and MTA Bus receive revenues from concessions granted to vendors, revenues from advertising and other space rented in transit vehicles and facilities, and fines collected by the Transit Adjudication Bureau.

The following table sets forth the miscellaneous revenues received by MTA New York City Transit, MaBSTOA and, beginning in 2014, MTA Bus, on an accrual basis in each of the last ten years:

| Year | Miscellaneous Revenues (in millions) | Year | Miscellaneous Revenues (in millions) |
|---|---|---|---|
| 2013 | $116.3 | 2018 | $141.6* |
| 2014 | 133.6 | 2019 | 144.7* |
| 2015 | 159.3 | 2020 | 101.3*† |
| 2016 | 159.6* | 2021 | 160.2*† |
| 2017 | 153.9* | 2022†† | 183.0*† |

* Miscellaneous revenues for the Transit System include MTA Bus which consists of $6.1 million of advertising revenues for 2016, $4.1 million for 2017, $3.4 million for 2018, $2.8 million for 2019, $0.9 million for 2020, $3.6 million for 2021, and $3.2 million for 2022.

† Note: The 2020 Miscellaneous Revenues exclude FTA CARES Act Funding. The 2021 and 2022 Miscellaneous Revenues exclude CRRSAA Federal Aid and ARPA Federal Aid.

†† 2022 data is preliminary.

*Commuter System*. MTA Long Island Rail Road and MTA Metro-North Railroad receive revenues from concessions granted to vendors, advertising and other space rented in Commuter System vehicles and facilities, the sale of power and other sundry revenue.

The following table sets forth the miscellaneous revenues (other than rental and concession revenues from Penn Station and Grand Central Terminal, which are not pledged under the Transportation Resolution) received by MTA Long Island Rail Road and MTA Metro-North Railroad on an accrual basis in each of the last ten years:

| Year | Miscellaneous Revenues (in millions) | Year | Miscellaneous Revenues (in millions) |
|---|---|---|---|
| 2013 | $64.1 | 2018 | $60.1 |
| 2014 | 69.0 | 2019 | 54.3 |
| 2015 | 74.2 | 2020 | 45.1* |
| 2016 | 73.4 | 2021 | 36.8* |
| 2017 | 64.2 | 2022† | 54.1 |

* The 2020 Miscellaneous Revenues exclude FTA CARES Act Funding. The 2021 Miscellaneous Revenues exclude CRRSAA Federal Aid.

† Includes $35.4 million for MTA Long Island Rail Road and $18.7 million for MTA Metro-North Railroad. The 2022 Miscellaneous Revenues exclude ARPA Federal Aid. 2022 data is preliminary.

**Mortgage Recording Taxes**

The mortgage recording taxes (MRT-1 and MRT-2) are described below.

*General*. Certain moneys paid to MTA by the City and counties in the MTA Commuter Transportation District pursuant to certain mortgage recording taxes may be used for the operating and capital costs, including debt service and reserve requirements, of or for MTA, MTA New York City Transit and their subsidiaries. Such taxes do not secure any outstanding MTA or MTA Bridges and Tunnels bonds, provided, however, the MTA Board, in its sole discretion may determine from time to time that specific amounts of mortgage recording taxes be applied to the payment of debt service for specific periods of time. Subject to the preceding sentence, neither MTA nor MTA Bridges and Tunnels currently expects to secure future bonds with mortgage recording taxes.

*MRT-1 Receipts*. Pursuant to Section 253(2)(a) of the New York Tax Law (the "Tax Law"), a tax is imposed (the "MRT-1 Tax") on recorded mortgages of real property situated within the State, subject to certain exclusions (such net MRT-1 Tax collections relating to properties within the MCTD remitted to MTA are referred to as the "MRT-1 Receipts"). The tax is currently 30 cents per $100 of mortgage recorded. The MRT-1 Tax is paid by the property owner taking out the mortgage loan.

MRT-1 Receipts must be applied by MTA:

- first, to meet MTA Headquarters Expenses (as hereinafter defined), and
- second, to make deposits into the Transit Account (55% of the remaining amount) and the Commuter Railroad Account (45% of the remaining amount) of the Special Assistance Fund.

Moneys in the Transit Account are required to be used to pay operating and capital costs of MTA New York City Transit, its subsidiaries, and MTA Staten Island Railway, and moneys in the Commuter Railroad Account, after first making the transfers described below under "*Transfers to State Suburban Transportation Fund from MRT-1 Receipts*", are required to be used to pay operating and capital costs of the commuter railroad operations of MTA, other than MTA Staten Island Railway.

*MRT-2 Receipts*. Pursuant to Section 253(1-a) of the Tax Law, an additional tax is imposed (the "MRT-2 Tax") on recorded mortgages of real property situated within the State, subject to certain exclusions. The MRT-2 Tax is paid by the institution (or other persons) making the mortgage loan to the property owner(s). The Tax Law requires that the portion of the MRT-2 Tax collected on certain residential dwelling units be remitted to MTA for deposit into the Corporate Transportation Account of the Special Assistance Fund (such net MRT-2 Tax collections relating to properties within the MCTD remitted to MTA are referred to as the "MRT-2 Receipts").

Moneys deposited into the Corporate Transportation Account from the MRT-2 Tax are applied as follows:

- first, to make deposits into the Dutchess, Orange and Rockland Payment Subaccount described below under "*Transfers to Counties from MRT-2 Receipts*", and
- second, to make deposits into the Corporate Purposes Subaccount to be used to pay operating and capital costs, including debt service and debt service reserve requirements, if any, of, or incurred for the benefit of, MTA, MTA New York City Transit and their respective subsidiaries.

*MRT-1 and MRT-2 Receipts*. Under existing law, no further action on the part of the Legislature is necessary for MTA to continue to receive such moneys (i.e., the State is not required to appropriate the moneys to MTA, so the moneys continue to be paid to MTA whether or not the State budget has been adopted). However, the State is not obligated to impose, or to impose at current levels, the MRT-1 Tax or the MRT-2 Tax or to direct the proceeds to MTA as presently provided.

MRT-1 Receipts and MRT-2 Receipts (collectively, "MRT Receipts") are subject to significant volatility from year-to-year. This volatility reflects the discretionary nature of the transactions that lead to the collection of the tax.

The following charts show the historical annual MRT Receipts, on an accrual basis, available for operations and capital costs for the past ten years.

| Year | MRT-1 Receipts (in millions) | Increase/ (Decrease) | Year | MRT-1 Receipts (in millions) | Increase/ (Decrease) |
|---|---|---|---|---|---|
| 2013 | $255.8 | 32% | 2018 | $316.6 | 0.7% |
| 2014 | 271.9 | 6 | 2019 | 332.0 | 5 |
| 2015 | 320.6 | 18 | 2020 | 303.4 | (9) |
| 2016 | 330.1 | 3 | 2021 | 419.3 | 38 |
| 2017 | 314.4 | (5) | 2022† | 424.2 | 1 |

† 2022 data is preliminary.

| Year | MRT-2 Receipts (in millions) | Increase/ (Decrease) | Year | MRT-2 Receipts (in millions) | Increase/ (Decrease) |
|---|---|---|---|---|---|
| 2013 | $109.7 | 17% | 2018 | $131.2 | (15)% |
| 2014 | 94.7 | (14) | 2019 | 135.6 | 3 |
| 2015 | 113.5 | 20 | 2020 | 161.2 | 19 |
| 2016 | 130.0 | 15 | 2021 | 238.2 | 48 |
| 2017 | 138.3 | 6 | 2022† | 200.1 | (16) |

† 2022 data is preliminary.

*Deductions for Headquarters Expenses*. The general, administrative and operating expenses of MTA, net of reimbursements, recoveries and adjustments ("MTA Headquarters Expenses"), to the extent not paid from other sources, are required to be paid from MRT-1 Receipts prior to making any deposits to the Transit Account or the Commuter Railroad Account. MTA Headquarters Expenses do not include capital expenditures for headquarters operations. Since 2014, all MRT-1 Receipts and MRT-2 Receipts (after legislative deductions) have been utilized for MTA Headquarters Expenses. Among other uses, MTA pays the following annual amounts as MTA Headquarters Expenses:

- expenses of operating MTA Headquarters, including MTA Police Department, and
- an amount paid to MTA Bridges and Tunnels to fund a toll rebate program for residents of Broad Channel and the Rockaway Peninsula when using E-ZPass on the Cross Bay Veterans Memorial Bridge.

The amount of MTA Headquarters Expenses in any year is neither contractually nor statutorily limited. The amount of MTA Headquarters Expenses in future years may be affected by inflation, expansion or contraction of activities the expenses for which are not reimbursable, non-recurring expense items and other circumstances including changes in MTA's reimbursement practices with respect to the other Related Entities. The amount of MRT-1 Receipts received by MTA each month that is required to be applied to MTA Headquarters Expenses may vary widely based on MTA's cash flow requirements and the timing of reimbursements from the other Related Entities.

*Transfers to State Suburban Transportation Fund from MRT-1 Receipts*. State law requires MTA in each year to transfer up to $20 million of MRT-1 Receipts (in equal quarterly installments of $5 million) deposited in the Commuter Railroad Account to the State Suburban Transportation Fund to pay for or finance certain types of highway capital projects in certain areas of the MTA Commuter Transportation District. In the event the transfer would result in an operating deficit, the amount of the deficit is appropriated to MTA for commuter railroad operating purposes. Due to such a deficit, no transfers have been made since 2008.

*Transfers to Counties from MRT-2 Receipts*. MTA is required to transfer, in equal quarterly installments, in each year from the MRT-2 Tax in the Corporate Transportation Account to the Metropolitan Transportation Authority Dutchess, Orange and Rockland Fund an annual amount of $1.5 million for each of the counties of Dutchess and Orange, and $2.0 million for the county of Rockland. Additionally, MTA must transfer from that Account to such fund for each of these three counties, respectively, an amount equal to the product of (1) the percentage by which such county's mortgage recording tax payment to MTA in the preceding calendar year (calculated as if the 2005 increase in the MRT-1 Tax from 25 cents per $100 to 30 cents per $100 did not occur) increased over such payment in calendar year 1989 and (2) $1.5 million each for Dutchess and Orange Counties and $2.0 million for Rockland County.

The following table shows the amounts transferred to the counties for the past ten years:

| Year | County | Additional Amounts |
|---|---|---|
| 2013 | Dutchess | $ 2,027,838 |
| | Orange | 2,357,214 |
| | Rockland | 3,459,238 |
| | | $ 7,844,290 |
| 2014 | Dutchess | $ 1,842,282 |
| | Orange | 1,703,155 |
| | Rockland | 2,637,400 |
| | | $ 6,182,837 |
| 2015 | Dutchess | $ 2,183,911 |
| | Orange | 1,997,223 |
| | Rockland | 3,253,259 |
| | | $ 7,434,395 |
| 2016 | Dutchess | $ 2,402,397 |
| | Orange | 2,348,958 |
| | Rockland | 3,872,577 |
| | | $ 8,623,933 |
| 2017 | Dutchess | $ 2,502,821 |
| | Orange | 2,854,947 |
| | Rockland | 4,032,653 |
| | | $ 9,390,421 |
| 2018 | Dutchess | $ 2,545,853 |
| | Orange | 2,900,396 |
| | Rockland | 3,949,750 |
| | | $ 9,395,989 |
| 2019 | Dutchess | $ 2,708,474 |
| | Orange | 3,288,965 |
| | Rockland | 4,315,857 |
| | | $ 10,313,296 |
| 2020 | Dutchess | $ 3,763,755 |
| | Orange | 4,189,069 |
| | Rockland | 5,381,523 |
| | | $ 13,334,347 |
| 2021 | Dutchess | $ 5,653,455 |
| | Orange | 6,078,759 |
| | Rockland | 9,126,243 |
| | | $ 20,858,457 |
| 2022† | Dutchess | $ 4,657,141 |
| | Orange | 6,350,724 |
| | Rockland | 6,984,794 |
| | | $ 17,992,659 |

† 2022 data is preliminary

For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

**Urban Taxes for Transit System**

In addition to the special tax supported subsidies described above under "State Special Tax Supported Operating Subsidies", a portion of the amounts collected by the City from certain mortgage recording and real property transfer taxes with respect to certain real property located within the City (collectively, the "Urban Taxes") are, as required by State statute, paid by the City's Commissioner of Finance directly to MTA New York City Transit on a monthly basis. As in the case of mortgage recording taxes described above, the Urban Taxes can change dramatically from year-to-year depending on the level of real estate activity.

The following table sets forth the amount of Urban Taxes received by MTA New York City Transit on an accrual basis in each of the last ten years.

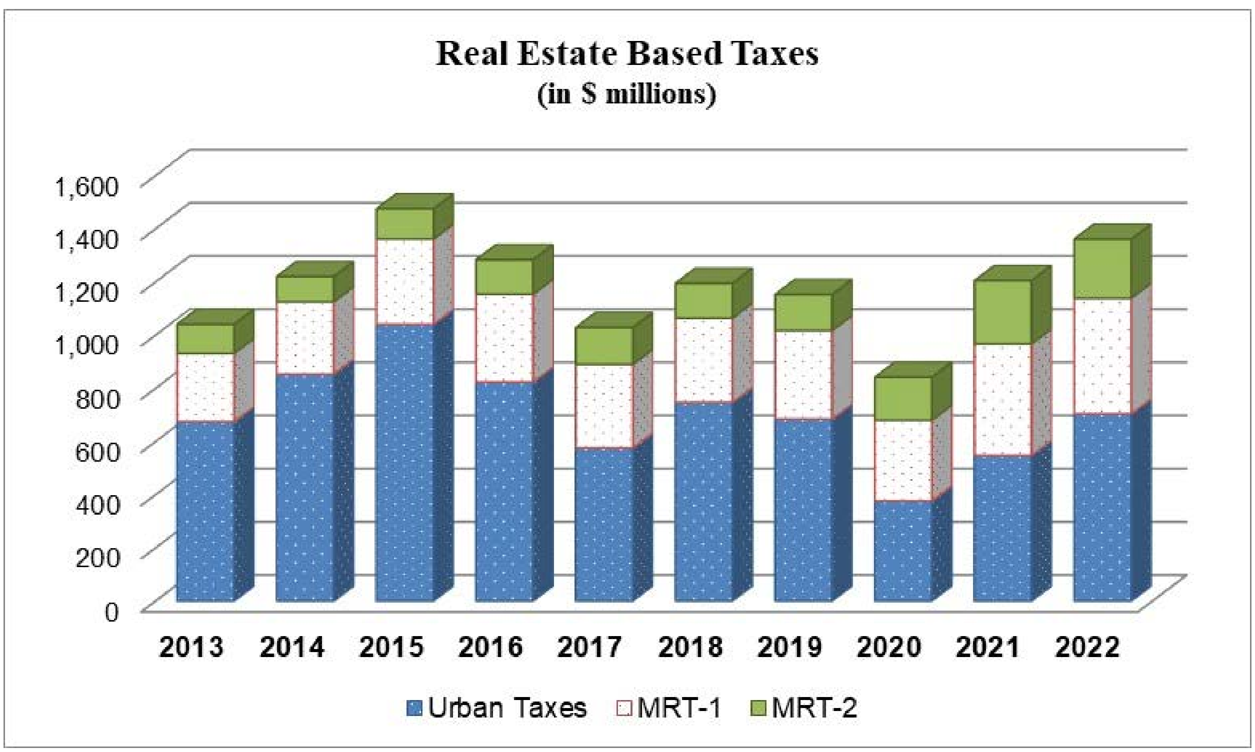
| Year | Urban Taxes (in millions) | Year | Urban Taxes (in millions) |
|---|---|---|---|
| 2013 | $674.2 | 2018 | $746.4 |
| 2014 | 852.9 | 2019 | 684.1 |
| 2015 | 1,040.0 | 2020 | 376.2 |
| 2016 | 822.9 | 2021 | 546.9 |
| 2017 | 575.1 | 2022† | 700.5 |

† 2022 data is preliminary.

The 2023 projected Urban Tax revenue, on an accrual basis, as reported in the 2023 Adopted Budget, is $536.7 million.

The 2023 projected Urban Tax revenue, on a cash basis, as reported in the 2023 Adopted Budget, is $533.4 million.

The following bar chart shows the amount of real estate-based taxes received by MTA on an accrual basis for the past ten years. This includes mortgage recording taxes (both MRT-1 and MRT-2) and Urban Taxes received directly by MTA New York City Transit (2022 data is preliminary).



**Capital Program Funding Sources**

The State Fiscal Year 2019-2020 Enacted Budget established new dedicated revenue streams for MTA that included a new Real Property Transfer Tax Surcharge (sometimes referred to as the "Mansion Tax"), effective July 1, 2019, which increases the transfer tax on an increasing scale by one-quarter of 1% of consideration of at least $2 million, with a combined top rate of 4.15% on the sale of City residential properties valued at $25 million or above. The State Fiscal Year 2019-2020 Enacted Budget also eliminated the tax loophole that exempted third-party internet marketplace providers from collecting and remitting State sales taxes on transactions conducted on their sites. Sales and compensation use taxes are a large component of the operating subsidies for MTA. In addition to the general Sales and Compensating Use Taxes of 4% collected statewide and the Sales and Use Taxes imposed by each county within New York State of between 3% and 4.5%, counties in the MCTD also collect sales and use taxes at a rate of 0.375% (three-eighths of 1%). This applies to all taxable sales within the counties of Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island), Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester. The Sales and Compensating Use Taxes are the second largest component of the MMTOA Account (defined below), which provides general operating subsidies for MTA and other downstate transportation systems. Sales and use taxes accounted for approximately 42% of the total MMTOA revenues in 2021. See "State Special Tax Supported Operating Subsidies — MTTF Receipts and MMTOA Receipts".

The State and City Sales tax components are MTA Bridges and Tunnels' allocated portion of the State and City sales taxes. State law specifies the annual amounts of State and City sales tax receipts that are allocable to MTA Bridges and Tunnels, as follows:

(i) from State sales tax receipts collected by the New York State Department of Taxation and Finance (the "Department of Taxation and Finance" ), the following annual amounts will be deposited monthly in substantially equal proportion by the State Comptroller in a new State-held fund, the New York Central Business District Trust Fund, and thereafter, subject to appropriation, such funds have been and will be paid into the CBD Tolling Capital Lockbox Fund (as defined below):

- State FY 2020-2021 (ended March 31, 2021) - $150 million
- State FY 2021-2022 and every year after—an amount equal to 101% of the amount deposited the previous year.

(ii) the State Comptroller has and will withhold from the City, sales tax revenue from the sales tax imposed by the City ("City Sales Taxes") and deposit such revenues monthly, in substantially equal proportion, without appropriation, into the CBD Tolling Capital Lockbox Fund in the following annual amounts (such statutorily defined portions are referred to herein as the "Sales Tax Receipts"):

- FY 2020-2021 (ended March 31, 2021) - $170 million
- FY 2021-2022 and every year thereafter—an amount equal to 101% of the amount deposited the year before.

The proceeds from these new streams are deposited into MTA's Central Business District Tolling Program capital lockbox (the "CBD Tolling Capital Lockbox Fund") and are used to finance infrastructure and operating costs of the CBD Tolling Program and to support financing for the 2020-2024 Capital Program and later capital programs. The comprehensive package of new resources for the MTA Capital Program also includes a CBD Tolling Program. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program".

Monies in the CBD Tolling Capital Lockbox Fund cannot be commingled with any other MTA Bridges and Tunnel monies and will be held free and clear of claims arising under the CBD Tolling Program. The following revenues will be deposited into the CBD Tolling Capital Lockbox Fund:

(i) all monies MTA Bridges and Tunnels receives from the CBD Tolling Program;

(ii) revenues of the Mansion Tax; and

(iii) statutory allocation of State and City sales tax revenues.

Funds on deposit in the CBD Tolling Capital Lockbox Fund shall be applied to:

(i) operating, administration and other necessary expenses relating to the CBD Tolling Program, including to NYCDOT pursuant a Memorandum of Understanding; and

(ii) costs of MTA capital projects included in the 2020-2024 Capital Program or any successor capital program.

Such funds in the CBD Tolling Capital Lockbox Fund may be:

(i) pledged by MTA Bridges and Tunnels to pay any bonds issued by MTA Bridges and Tunnels to finance (a) costs of the CBD Tolling Program, including the tolling infrastructure, CBD tolling collection system and CBD tolling customer service center and (b) the costs of any MTA capital projects in the 2020-2024 Capital Program or later capital program; or

(ii) used by MTA Bridges and Tunnels to pay capital costs of the CBD Tolling Program and the costs of any MTA capital projects in the 2020-2024 Capital Program or later capital program on a pay-go basis; or

(iii) transferred to MTA and either (x) pledged by MTA to pay MTA bonds issued to pay for costs of MTA capital projects in the 2020-2024 Capital Program or later capital program, or (y) used by MTA to pay costs of MTA capital projects in the 2020-2024 Capital Program or later capital program on a pay-go basis.

Since 2022, MTA Bridges and Tunnels has issued its Sales Tax Revenue Bonds (TBTA Capital Lockbox – City Sales Tax), secured by the City portion of Sales Tax Receipts, but not any portion of the sales and compensating use taxes imposed by the State, held in the CBD Tolling Capital Lockbox Fund. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)."

The State Fiscal Year 2019-2020 Enacted Budget further provided that capital project costs paid from the CBD Tolling Capital Lockbox Fund are subject to the following revenue split:

- 80% for MTA New York City Transit, MaBSTOA, MTA Staten Island Railway and MTA Bus capital project costs, with priority given to subway system, new signaling, new subway cars, track and car repair, accessibility, buses and bus system improvements and further investments in expanding transit availability in the outer boroughs;
- 10% for MTA Long Island Rail Road capital projects, including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability; and
- 10% for MTA Metro-North Railroad capital projects including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability.

The temporary authorization contained in the State Fiscal Year 2020-2021 Enacted Budget to allow MTA to use monies in the CBD Capital Tolling Lockbox Fund for two years (2020 and 2021) to offset decreases in revenue (i.e., lost taxes, fees, charges, fares and tolls) or increases in operating costs due in whole or in part to the State emergency disaster caused by the COVID-19 pandemic, has expired. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

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The following table provides information relating to Mansion Tax and statutory allocations of State and City sales tax revenues receipts on an accrual basis since 2019:

**Capital Program Funding Sources**
**($ in millions)**

| Year | Real Property Transfer Tax (Mansion Tax) | Statutory Allocation of State and City Sales Tax Revenues | Transfer to Capital Program |
|---|---|---|---|
| 2019 | $73.8 | $85.1* | $159.0 |
| 2020 | 160.7 | 260.0 | (79.3)† |
| 2021 | 374.5 | 344.9 | 717.0 |
| 2022†† | 524.4 | 325.6 | 852.4 |

* The 2019 statutory allocation of State and City sales tax revenues consisted only of the City collections and remittances to MTA. The State portion was not transmitted to MTA in 2019 because the State portion is subject to appropriation by the State Legislature, which did not appropriate the funds in the State Fiscal Year 2019-2020 Enacted Budget. The State appropriated $150 million in the State Fiscal Year 2020-2021 Enacted Budget and has continued to appropriate the authorized amounts in succeeding State Fiscal Years.

† Public Authorities Law 553-j was amended in the 2020-2021 State Enacted Budget to allow MTA to use monies in the Central Business District Tolling Lockbox Fund through the end of 2021 to offset revenue declines or operating expense increases resulting from the COVID-19 pandemic. Currently, receipts from the Real Property Transfer Tax Surcharge and the statutory allocation of State and City sales taxes are deposited in the lockbox. In 2021, $499.9 million of revenue deposited in the lockbox was transferred to the operating budget to fund revenue declines and operating expense increases from the COVID-19 pandemic.

†† 2022 data is preliminary.

The 2023 projected Capital Program Funding Sources on both an accrual basis and a cash basis, as reported in the 2023 Adopted Budget, is $820.8 million before the transfer of $809.7 million to the capital program.

The foregoing projections reflect the effects of the COVID-19 pandemic. For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis" below.

**Shared Vehicle Tax**

In 2022, the State enacted legislation imposing a 3% tax (the "Shared Vehicle Tax") on the driver of a Shared Vehicle when the transfer of such Shared Vehicle takes place within the MTA Commuter Transportation District. "Shared Vehicles" are defined as motor vehicles that are available for rental via a peer-to-peer car sharing program, but are not used exclusively for peer-to-peer sharing and are not part of a rental fleet.

Similar to the ATA Receipts, the Shared Vehicle Taxes are payable directly to MTA for deposit in the Corporate Transportation Account.

The Shared Vehicle Taxes may be pledged by MTA or pledged to MTA Bridges and Tunnels to secure debt of MTA or MTA Bridges and Tunnels for the benefit of the Transit and Commuter Systems and MTA Bus. The Shared Vehicle Taxes have not been so pledged. In addition, because the Shared Vehicle Taxes are not "Operating Subsidies" under the Transportation Resolution, they are not pledged to the payment of Transportation Revenue Bonds, but MTA may use the Shared Vehicle Taxes, in its discretion, to make such debt service payments on the Transportation Revenue Bonds, or any other debt of MTA or MTA Bridges and Tunnels for the benefit of the Transit and Commuter Systems and MTA Bus if it so chooses. Subject to the provisions of any such future pledge or the prior application to debt service payments, such Shared Vehicle Taxes can be used by MTA for the payment of operating and capital costs for the benefit of the Transit and Commuter Systems and MTA Bus.

MTA did not receive any Shared Vehicle Taxes in 2022. MTA has not budgeted any receipts for 2023, but has received nominal amounts to date.

**Operating Funding for the Transit and Commuter Systems**

The chart on the following page shows the types of revenues and relative percentages of revenue streams that are currently available and required to be used to fund the Transit System (MTA New York City Transit and MaBSTOA) and the Commuter System (MTA Long Island Rail Road and MTA Metro-North Railroad). From time to time, MTA may, in its discretion, additionally subsidize the Transit System and Commuter System operations, or the operations of the other Related Entities, from other available excess moneys, including ATA Receipts, MTA Bridges and Tunnels Surplus Investment Income, moneys on deposit in the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account, mortgage recording taxes and Shared Vehicle Taxes. All of the revenues listed on the following chart are revenues that are pledged for the payment of Transportation Revenue Bonds (as described in "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – TRANSPORTATION REVENUE BONDS"), with the exception of (1) mortgage recording taxes that do not become pledged revenues (by direction of the MTA Board) until, in the case of MRT-1, after the payment of MTA Headquarters Expenses, and (2) concession revenues at Penn Station and Grand Central Terminal. This chart does not include revenues from the PMT, taxes and fees deposited in the MTA Aid Trust Account, moneys on deposit in the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account, and Shared Vehicle Taxes, which may be applied to fund operating and capital needs of the Transit and Commuter Systems and/or MTA Bus in amounts and relative percentages determined by MTA consistent with the applicable statues; to the extent such PMT and General Transportation Account amounts are available to be applied to operating needs of the Transit System and the Commuter System, they constitute revenues that are pledged for the payment of Transportation Revenue Bonds. This chart also does not include revenues deposited into the CBD Tolling Capital Lockbox Fund, none of which moneys can be applied to fund operating needs of the Transit System and the Commuter System.

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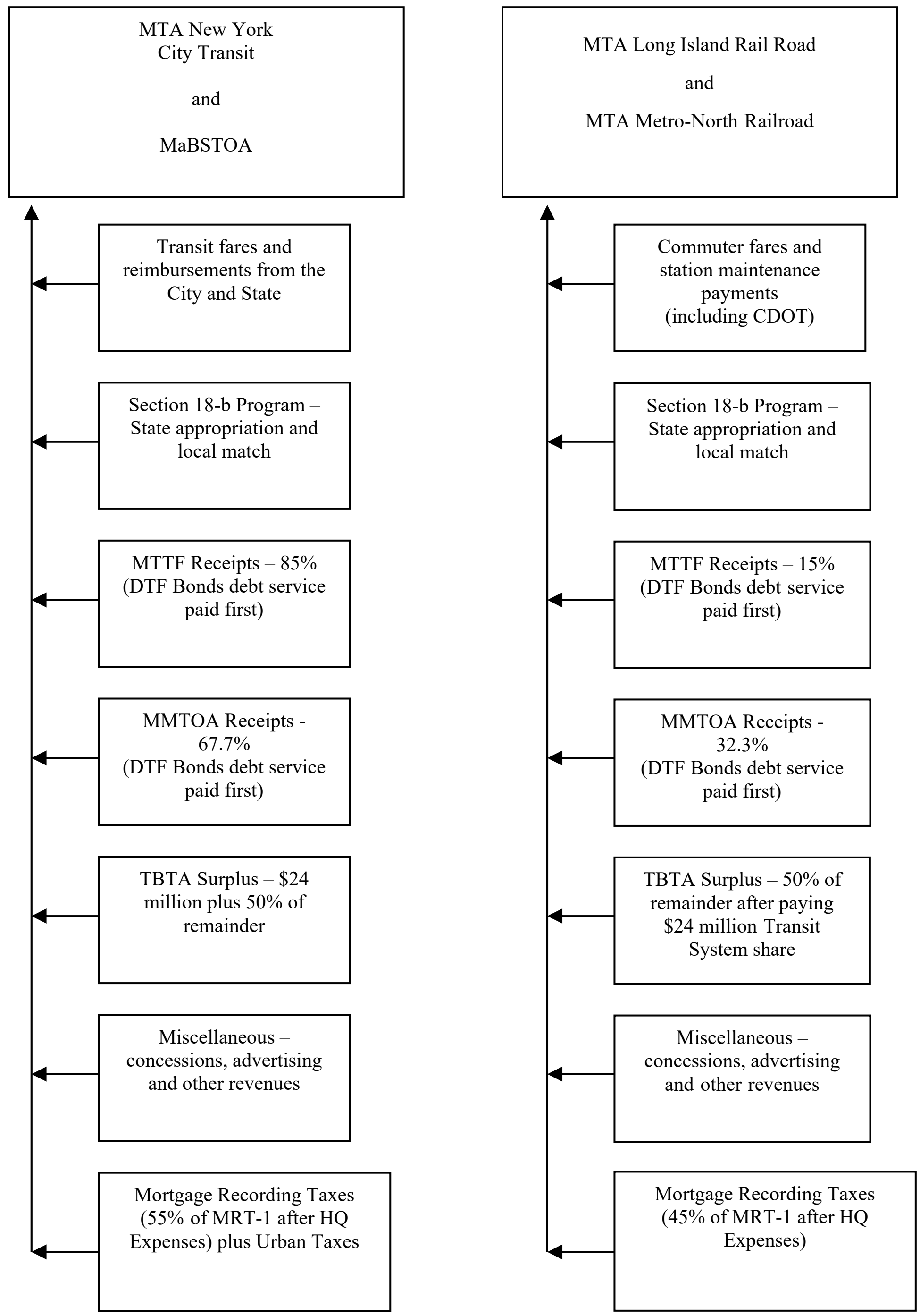
The percentages of MMTOA Receipts reflected below for the Transit and Commuter Systems are based upon the State Fiscal Year 2022-2023 Enacted Budget.



## FINANCIAL PLANS AND CAPITAL PROGRAMS

### 2023-2026 Financial Plan (The "2023 February Plan")

### Overview

The purpose of the 2023 February Plan is to incorporate Board-approved MTA adjustments that were captured "below-the-line" and on a consolidated basis in the 2022 November Plan (defined below) into the Related Entities' Financial Plan baseline budgets and forecasts, and provide updated estimates of existing proposals. "Above-the-line" items are all items that are incorporated in the Related Entity and corporate-wide (such as subsidies and debt service) financials. Items are "below-the-line" for one or more of several reasons, such as: (i) they are a late adjustment and MTA cannot revise the aforementioned financials (the FEMA reimbursement, for example); (ii) they are proposed actions that require future Board approval (such as fare and toll increases); or (iii) they are actions which have yet to be allocated to each Related Entity (such as yet unidentified non-personnel savings). The 2023 February Plan also established a 12-month allocation of the 2023 Adopted Budget for financials, utilization and positions, which will be compared with actual results. Variances will be analyzed and reported monthly to Board Committees. The 2023 February Plan, unlike the 2022 July Plan and 2022 November Plan, typically does not include new proposals or programs.

### Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis

The 2023 February Plan, as with prior financial plans since the onset of the COVID-19 pandemic, reflects the impact the COVID-19 pandemic and the ensuing effect that the COVID-19 pandemic has had on MTA's service area, with focus on MTA's financial stability as it strives to provide essential regional service. Based on information available to MTA management, the COVID-19 pandemic can be expected to have an extended impact over the entire financial plan period through 2025.

In April 2020, MTA hired McKinsey to develop an initial financial impact assessment from the COVID-19 pandemic. McKinsey reviewed MTA farebox and toll revenues, along with subsidy receipts, and developed alternative forecasts consistent with the effect the COVID-19 pandemic could have on the regional and national economies, based upon various assumptions. The results were used in developing the 2020 July Plan, and updated analyses provided by McKinsey were also used in developing the 2020 December Plan and 2021 February Plan as well as the 2021 July Plan.

In April 2022, MTA retained McKinsey to develop an updated financial impact assessment from the COVID-19 pandemic. The updated McKinsey projections are centered around behavioral changes that began during the pandemic and the degree to which those changes become more permanent or longer lasting. Two scenarios were prepared – a "high case" and a "low case". The "high case" scenario is more optimistic regarding ridership recovery, where in-person work increases during the projection period from current levels for the sectors that have the ability for hybrid work arrangements. Loss of non-work trips from factors such as e-commerce, telehealth, etc. also declines over time. Additional consumer sentiment factors, such as COVID-19 concerns and safety perception, also decline over time. It should be noted that even under this "high case" scenario, a lower "new normal" in ridership is forecast reflecting the more permanent impact of these factors. The "low case" scenario is more cautious regarding ridership recovery, where higher levels of remote work persist, non-work trips rebound more slowly, and other customer factors lead to slower return to transit over time. As with prior updates, MTA incorporated the midpoint between the two McKinsey analysis scenarios in the 2022 July Plan. MTA Bridges and Tunnels traffic had already returned to pre-pandemic levels, and this update only focused on ridership. These assumptions options were maintained in both the 2022 November Plan and the 2023 February Plan. Farebox revenue for the first two months of 2023 has been about 1.5% above budget, reflecting more favorable ridership than was assumed in the 2023 February Plan as well as higher than projected fare per trip. MTA will continue to evaluate ridership projections in the 2023 July Plan and subsequent plans.

### The 2022 November Plan

The 2022 November Plan, which the MTA Board approved in December 2022 (the "2022 November Plan"), projected further expense reduction, additional revenues, or acceleration of federal COVID-19 aid to achieve a balanced budget for 2023 that would have otherwise been used to reduce deficits in the years after 2023. Projected annual deficits of $1.2 billion in 2024 and 2025, and a deficit of $1.6 billion in 2026 remain. MTA operating efficiencies, applying the financial resources stemming from federal COVID-19 aid to reduce debt and operating costs throughout the 2022 November Plan period, and the cash repayment (rather than long-term bonding) of the Federal Reserve loan are reflected in these deficits, which otherwise would have been significantly higher.

**Update on Additional Funding**

The 2022 November Plan proposed to lower projected deficits for 2023 through 2026, which totaled $11.4 billion, through a series of MTA actions, including applying federal COVID-19 aid to offset MTA liabilities and cover a portion of the deficits in each year of the 2022 November Plan. The proposed actions, which were in addition to actions proposed in earlier plans, included: (i) identify operating efficiency initiatives that would generate savings of $100 million in 2023, $400 million in 2024, and $416 million in 2026; (ii) use a portion of federal COVID-19 aid to repay, rather than long-term bond, the Federal Reserve Municipal Liquidity Facility Bond Anticipation Note at maturity, eliminating debt service of $558 million during the 2022 November Plan period; (iii) increase the 2023 fare and toll revenue targets from 4% to 5.5%, which would generate a total of $1,309 million – or $350 million more than would be generated at 4% – during the Plan period; (iv) apply the remaining federal COVID-19 funds to both offset a portion of the deficits in 2023 and reduce debt and liability costs through 2026; and (v) assume $600 million in additional government funding and/or additional MTA actions, both of which were unspecified. If additional government funding was not made available, MTA actions could include further expense reduction, additional revenues, or acceleration of federal COVID-19 aid to achieve balance in 2023 that would otherwise be used to reduce deficits in the years after 2023.

Governor Hochul's Executive Budget for State Fiscal Year 2024 addressed the $600 million needed for 2023 as well as the deficits projected to start in 2024. The additional and recurring governmental support in Governor Hochul's Executive Budget, combined with MTA operating efficiencies, proposed fare and toll increases and other MTA actions set forth in the 2022 November Plan, are expected to be sufficient to achieve balanced budgets for MTA for 2023 through 2026 and potentially longer.

**Changes to the 2022 November Plan**

The 2023 February Plan incorporates into the MTA baseline several MTA Board-approved actions that were captured below-the-line in the 2022 November Plan:

- **MTA Operating Efficiencies Phase 1**. Remaining Operating Efficiencies from Phase 1, totaling $44 million in 2023, $48 million in 2024, and $46 million thereafter.

- **Provision for Increased Pension Costs**. To conform with the increase in pension costs for NYCERS in New York City's November Financial Plan, MTA included a provision below-the-line totaling $83 million in 2023, $176 million in 2024, $263 million in 2025 and $344 million in 2026.

- **Savings from Deficit Note Repayment**. Repayment from the unspent proceeds of the borrowing of the PMT MLF BAN will eliminate debt service costs of $178 million in 2024 and $190 million in each of 2025 and 2026.

- **Investment Income from Deficit Note Proceeds**. Investment Income generated by the unspent proceeds from the borrowing of the PMT MLF BAN will generate $111 million in revenue in 2023.

- **Financial Resources Stemming from Federal COVID Aid for Operating and Debt Costs**. MTA use of federal COVID-19 aid for direct deficit funding, debt payments, pension payments and retiree health deposits over the financial plan period. The 2022 November Plan anticipated using remaining financial resources made available from CRRSAA aid ($1,166 million) and ARPA aid ($776 million) to eliminate the 2022 deficit. Through the remainder of the 2022 November Plan period, $598 million of financial benefit from ARPA aid will be applied against MTA Bus and MTA Staten Island Railway deficits, reducing New York City subsidies by the same amount and therefore not available to offset MTA deficits. This leaves $5,620 million of remaining resources stemming from ARPA aid available, with $4,365 million utilized through 2026 and $1,255 million to offset liabilities beyond the financial plan period to moderate the potential growth of deficits beyond the 2022 November Plan period. The financial benefit from federal COVID-19 aid have been moved from below-the-line and are incorporated in the consolidated subsidy tables in the 2023 February Plan, with the impact on the bottom line unchanged from the 2022 November Plan.

Minor technical changes to the 2023 Adopted Budget and 2023 Financial Plan are included in the 2023 February Plan and result in a minor favorable change totaling $4 million over the 2022 November Plan period.

Additionally, the 2023 February Plan assumes a later start of revenue collection for the CBDTP, from the beginning of 2024 to the start of the second quarter of 2024. This change will reduce anticipated CBDTP revenue for the Capital Lockbox from $1 billion to $750 million in 2024. The operating budget is not impacted by this adjustment.

Several items remain below-the-line in the 2023 February Plan:

- **MTA Operating Efficiencies Phase 2**. MTA operating agencies are engaged in an ambitious effort to identify innovative ways of doing business more efficiently and, as a result, reduce expenses and improve service to customers. Operating Agency and Headquarters leadership have identified concrete initiatives to generate sizeable savings and help shrink the outyear deficits. The operating efficiency initiatives are projected to generate $100 million in 2023, $400 million in 2024, $408 million in 2025 and $416 million in 2026. This is unchanged from the 2022 November Plan.

- **Fare and Toll Increase in 2023**. The 2023 February Plan assumes a 5.5% fare and toll increase beginning in June 2023 that is subject to public hearing and MTA Board approval. This increase, if approved, is projected to generate for MTA, after factoring in subsidy impacts for MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels, $201 million in 2023, $362 million in 2024, $369 million in 2025, and $375 million in 2026. This is unchanged from the 2022 November Plan when factoring in the $100 million in annualized additional fare and toll revenue from the "Additional Fare/Toll Revenue Above Base Assumptions" which were also included in the 2022 November Plan.

- **Fare and Toll Increase in 2025**. A 4% fare and toll increase in April 2025 is assumed. This will require public hearing and MTA Board approval. This increase is projected to generate for MTA, after factoring in subsidy impacts for MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels, $210 million in 2025 and $283 million in 2026. This is unchanged from the 2022 November Plan.

- **FEMA COVID-19 Reimbursement**. Reimbursement of direct COVID-19 related expenses through FEMA is expected to increase by $44 million to a total of $749 million, reflecting reimbursable expenses incurred through July 2022. Claims and supporting documentation were submitted to FEMA through the State in October of 2022. The 2023 February Plan assumes MTA will receive reimbursements of $250 million in 2023, $100 million in 2024, $250 million in 2025 and $149 million in 2026, although timing for receipt of these funds remains uncertain. This assumption is unchanged from the 2022 November Plan.

- **New Government Funding or Additional MTA Actions**. The 2023 Adopted Budget assumes $600 million in additional government funding and/or additional MTA actions, some of which have not yet been specified. If no additional government funding becomes available, MTA actions could include further expense reduction, additional revenues, or acceleration in the use of the financial benefit from federal COVID-19 aid to achieve a balanced budget in 2023 that would have otherwise been used to reduce deficits in the years after 2023. As noted earlier, the State Fiscal Year 2024 Executive Budget includes actions to provide an additional $600 million in 2023, as well as providing additional resources to reduce deficits in the out-years of the 2022 November Plan period. As the State Budget process proceeds, MTA will monitor these proposals and will adjust the 2023 July Plan accordingly.

**Challenges to be Addressed**

There are numerous challenges facing MTA over the course of the 2023 February Plan:

- **New government funding does not materialize**. The 2023 February Plan anticipates $600 million in new government funding to balance the 2023 budget, but if that does not materialize MTA will need to take actions to replace this assumed funding in order to achieve budget balance in 2023.

- **Ridership improvements can fall short of projections**. Should ridership be lower than the midpoint forecast between the "high case" and "low case" McKinsey report scenarios, reduced projected revenue could have significant fiscal impacts.

- **The economy slows or falls into recession**. The dedicated taxes MTA relies on to cover its operating budget are sensitive to economic downturns, and a significant and sustained decline in economic activity could reduce dedicated tax receipts.

- **Inflation remains stubbornly high**. The 2023 February Plan assumes inflation subsides to just under 5% in 2023 and reverts to approximately 2% annually in 2024 from current levels.

- **Achieving affordable collective bargaining agreements**. MTA is committed to negotiating affordable collective bargaining agreements with its unions. The 2023 February Plan assumes annual wage increases of 2% following the expiration of existing collective bargaining agreements.

- **Implementation of biennial fare and toll increases in 2023 and 2025**. Through 2026, the 2023 February Plan assumes a combined $1.8 billion in additional fare and toll revenue from the projected 2023 and 2025 fare and toll increases, including an approximate 5.5% fare and toll increase in 2023, followed by a 4% fare and toll increase in 2025.

- **Finding and implementing operational efficiencies**. MTA must remain focused on existing cost control efforts, in order to achieve the operational efficiencies of $100 million in 2023 and approximately $400 million annually through the remaining 2023 February Plan years.

For a broad description of risk factors to MTA's finances and operations, see "PART 1. BUSINESS – CERTAIN RISK FACTORS".

**Subsequent Developments**

*2022 Actual Cash Results and Cash Balance Projections.* MTA's 2022 preliminary closing indicates a balanced budget, including the use of a $1,166 million carryover from 2021. The 2022 year-end balance includes favorable results of $613 million from operations and debt service. Approximately $249 million (preliminary) is favorable net cash timing variances that are projected to have an unfavorable impact in 2023. Excluding these timing variances, preliminary operating and debt service results were $365 million favorable. Taxes and State and Local Subsidies were unfavorable by $6 million, investment income was favorable by $10 million, and the MTA Bridges and Tunnels surplus transfer and CDOT subsidy to cover its portion of MTA Metro-North Railroad expenses were favorable by a combined $21 million. The 2022 final estimate projected $776 million of resources stemming from Federal COVID Aid would be needed to balance the 2022 budget. Preliminary closing estimates indicate only $597 million of such resources will be needed to balance the 2022 budget on a cash basis for a positive variance of $179 million. This lower amount of resources required are due to the positive operating and debt service variances described above less $279 million in funding of labor reserves for anticipated retroactive wage adjustments and $185 million cash funding of the General Reserve Fund, which was the amount included in the approved operating budget. See "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis".

**New York State Budget for State Fiscal Year 2023-2024**

On May 3, 2023, the New York State Budget for State Fiscal Year 2023-2024 (the "State Fiscal Year 2023-2024 Enacted Budget") was enacted into law. MTA continues to analyze the State Fiscal Year 2023-2024 Enacted Budget regarding its impacts on MTA and the Related Entities, and will incorporate such impacts into future financial plans.

*Appropriations for MTA*

The State Fiscal Year 2023-2024 Enacted Budget contains, among other things, three key appropriations for MTA:

- $300 million in one-time State aid to address the extraordinary impact of the COVID-19 pandemic on MTA operating revenues;
- $35 million in investment to improve subway service on weekday middays, weekends and weeknights; and
- $65 million to reduce the proposed 2023 fare increase from 5.5% to 4%.

These appropriations, along with the other measures described below, will be incorporated into the 2023 July Financial Plan.

*Payroll Mobility Tax Increase*

The State Fiscal Year 2023-2024 Enacted Budget included legislation which increases the maximum rate of the PMT for employers with payroll expense of over $437,500 in any calendar quarter engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond (the counties which comprise New York City) from 0.34% to 0.60%, such increase to become effective on July 1, 2023. The legislation also increases the rate of the PMT imposed on self-employed individuals with net earnings allocated to the MCTD of over $50,000 for the tax year engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond from 0.34% to 0.47%, such increase effective at the start of the tax year beginning on or after January 1, 2023, and from 0.47% to 0.60%, such increase to become effective at the start of the tax year beginning on or after January 1, 2024. No change was made to the existing rates of the PMT on employers and self-employed individuals engaging in business in the MCTD in the counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester.

*Downstate Casino Revenues*

The State has authorized three licenses for casinos which may be located in the counties of Nassau, Putnam, Rockland, Suffolk, or Westchester (the "Downstate Counties") or the City. The State Fiscal Year 2023-2024 Enacted Budget provides that, if such casino licenses are granted for casinos to be located in the Downstate Counties or the City, 100% of the license fees will be paid to MTA.

Additionally, the State Fiscal Year 2023-2024 Enacted Budget provides that 50% of future casino tax revenues will be paid to MTA if such casino is located within the City and is not operated by an entity which held a video gaming lottery license prior to January 1, 2022, and 40% of future downstate casino tax revenues to MTA if such casino is located within the Downstate Counties and is not operated by an entity which held a video gaming lottery license prior to January 1, 2022. If the licenses are granted to an entity which held a video gaming lottery license prior to January 1, 2022, then tax revenues will be paid to the Commercial Gaming Revenue Fund until a statutory amount is reached, after which 80% of the revenues shall be paid to MTA.

MTA cannot predict the timing or amount of revenue, if any, it will receive from casino license fees or casino taxes.

*NYC Paratransit Contribution*

The State Fiscal Year 2023-2024 Enacted Budget extends the City contribution to paratransit, originally set to expire on June 30, 2024, to June 30, 2030. The budget also increases the City contribution to paratransit during the period from July 1, 2023 through June 30, 2025. During that period, the City is required to fund 80% of the net paratransit operating expenses; provided, however, that such contribution may not exceed the sum of: (i) 50% of the net paratransit operating expenses for such twelve month period; and (ii) $165 million.

*Corporate Franchise Tax Surcharge*

Starting on January 1, 2024, the Corporate Franchise Tax Surcharge is fixed at a rate of 30%, rather than being determined annually by the State Department of Taxation and Finance as had been the case since 2015.

*Automated Bus Lane Enforcement ("ABLE") Program Expansion*

The State Fiscal Year 2023-2024 Enacted Budget creates a five-year pilot program authorizing MTA and the New York City Department of Transportation to use automated cameras for enforcement of four additional bus operation-related violations including: violation of posted no standing rules at bus stops; general no stopping zones on bicycle lanes; double parking; and general no standing zones on bus lane. The budget also extends the current ABLE program, which was to expire in 2025, through 2028.

*Fare-Free Bus Pilot*

The State Fiscal Year 2023-2024 Enacted Budget requires MTA to establish a fare-free bus pilot program. The legislation requires that the program include five fare-free bus routes, one in each of the five boroughs of the City; provided that the program may not cost more than $15 million in net operating costs. Such routes are to remain fare-free for six to twelve months.

*Additional Appropriations*

The State Fiscal Year 2023-2024 Enacted Budget includes appropriations of $5 million to the Outer Borough Transportation Account to make up for shortfalls in receipts in 2022 and $7 million to provide revenue to maintain the SIR Rebate Program in anticipation of the expected 2023 MTA Bridges and Tunnels toll increase.

**Capital Programs – Background and Development**

*Transit and Commuter Systems*. The MTA Act requires MTA to submit to the Capital Plan Review Board ("CPRB"), for its approval, successive five-year capital programs; one for the Transit System and MTA Staten Island Railway and another for the Commuter System. The CPRB approved capital programs for the Transit System and MTA Staten Island Railway and the Commuter System for the five-year periods beginning in the years 1982, 1987, 1992, 1995, 2000 and 2005. The projects included in the 1982-2009 MTA Capital Programs have been substantially completed.

MTA and the CPRB have also approved separate five-year MTA Capital Programs covering the periods 2010-2014, 2015-2019 and most recently 2020-2024. These Capital Programs are described in detail below. The 2020-2024 Capital Programs for both MTA and MTA Bridges and Tunnels were presented to the MTA Board and approved September 2019. The MTA Capital Program was proposed to the CPRB on October 1, 2019, as required by law. The CPRB approved the MTA 2020-2024 Capital Program in January 2020. Since approval of the new 2020-2024 Capital Program and the amendments to the prior two programs, there was an amendment to the 2020-2024 Capital Program that was approved by both the Board and CPRB in December 2021 and another amendment to the same program in July 2022. MTA anticipates proposing another amendment of the 2020-2024 program to the CPRB in June 2023.

Funding for the MTA Capital Programs comes from a variety of sources, including bonds, pay-as-you-go monies ("PAYGO"), State, City and MTA Bridges and Tunnels assistance, and federal funds. The federal government supplied on average 30% of the funds required for the 1982-2024 Capital Programs. Bonds issued to finance the MTA Capital Programs are subject to a statutory ceiling, as further described in "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS".

There can be no assurance that all the necessary governmental actions to implement any MTA Capital Program will be taken, that funding sources currently proposed or assumed will be available in the amounts or at the times projected, or that the projects included in any MTA Capital Program, or parts thereof, will not be delayed or reduced. MTA regularly evaluates the status of all funding sources and projects and may, from time to time, submit amendments to an MTA Capital Program needed to bring funding sources and expected project costs into balance. If the implementation of an MTA Capital Program or any modification thereof is significantly delayed, MTA's efforts to bring the entire Transit System and Commuter System to a state of good repair and to prevent deterioration of portions of the Transit System and the Commuter System that have already reached a state of good repair may be impeded, with potential negative effects on ridership and fare revenues.

*MTA Bridges and Tunnels Facilities*. Beginning in 1989, MTA Bridges and Tunnels undertook its first multi-year capital program totaling $160 million for the three-year period 1989-1991. The funds for the program were raised from revenues deposited in its own capital reserve fund and the proceeds of MTA Bridges and Tunnels bonds.

Since then, while not required to do so by statute, MTA Bridges and Tunnels has developed its own five-year capital programs covering the same periods as the MTA Capital Programs to enable MTA Bridges and Tunnels to keep its own facilities in good operating condition while also maintaining its role in MTA's unified transportation policy. The MTA Bridges and Tunnels Capital Programs are not subject to approval by the CPRB and bonds issued to finance MTA Bridges and Tunnels Facilities and the CBD Tolling Program are not subject to a statutory ceiling.

Although substantial annual investments in major maintenance have regularly been made and additional expenditures are planned, MTA Bridges and Tunnels expects that capital investments in the rehabilitation or reconstruction and painting of its facilities will continue to be necessary as components approach the end of their respective useful lives and require normal replacement.

**Approved 2020-2024 Capital Program**

At its September 25, 2019 meeting, the MTA Board reviewed and authorized a submission to the CPRB of the MTA 2020-2024 Capital Program totaling approximately $51.5 billion, as well as a five-year capital program for MTA Bridges and Tunnels for the years 2020-2024 (the "2020-2024 MTA Bridges and Tunnels Capital Program") totaling approximately $3.3 billion, along with revised 2015-2019 and 2010-2014 MTA Capital Programs, which were not required to be submitted to the CPRB for approval.

The MTA 2020-2024 Capital Program was proposed to the CPRB on October 1, 2019, as required by law. The CPRB approved the MTA 2020-2024 Capital Program in January 2020.

*Changes to MTA's Capital Planning*. Since 2019, a few important changes to MTA's overall capital program were implemented:

- The State Fiscal Year 2019-2020 Enacted Budget required that, among other things, MTA use a design-build methodology for all contracts over $25 million. The State Fiscal Year 2022-2023 Enacted Budget increased the threshold from $25 million for all contracts to $200 million for new construction contracts and $400 million for contracts predominantly relating to rehabilitation or replacement of existing assets. Any deviations to this will require a formal waiver from the State Division of Budget.
- The State Fiscal Year 2019-2020 Enacted Budget further required MTA to engage in a full capital program audit which it did by procuring the services of the audit firm Crowe LLP. A briefing was provided to the MTA Board and the public at MTA's December 2019 Board meeting and a final report was made available to the public in early January 2020.

*Effect of COVID-19 Pandemic*. Since early March 2020, the COVID-19 pandemic has severely impacted the New York City Metropolitan region, affecting the operations of MTA and its Related Entities, the various revenue streams that support them and the delivery of their respective capital programs. Service was temporarily reduced, and passenger volume and revenue had dramatically fallen in 2020 and 2021. Although passenger volume and service is on the path to recovery, the full effects of the COVID-19 pandemic on the ability of MTA to support its full MTA 2020-2024 Capital Program has not yet been determined. For further information related to the impact of the COVID-19 pandemic on the operations of MTA and its Related Entities, see "– FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis".

*Federal Infrastructure Funding*. On November 15, 2021, the Infrastructure Investment and Jobs Act (the "IIJA") was signed into law by President Joe Biden. MTA anticipates that it will benefit from this new legislation. The July 2022 amendment to the 2020-2024 Capital Plan described below added $1.681 billion to the Plan's Federal Formula assumption, due to the significant increase in funding expected from the IIJA as compared to MTA's initial projections.

**MTA 2020-2024 Capital Program and December 2021 Amendment to that Program (Amendment #1)**

The MTA's 2020-2024 Capital Program was amended in December 2021 with both MTA Board and New York State CPRB approvals coming in the next calendar year. The amendment increased the total funding from $54.799 billion to $55.334 billion. Changes to the capital program address the following: (a) budget adjustments in the MTA New York City Transit program for a track and structures project; (b) increases to the sizes of the MTA Long Island Rail Road and MTA Metro-North Railroad programs; (c) two new MTA Interagency elements required to help administer the capital program; (d) budget adjustments within and to the MTA Network Expansion program to support the Penn Station Access (PSA) project; and (e) elements with 10% increases which require CPRB approval.

**MTA 2020-2024 Capital Program and July 2022 Amendment to that Program (Amendment #2)**

The MTA's 2020-2024 Capital Program was amended in July 2022 with both MTA Board and New York State CPRB approvals (CPRB approval happened on August 30, 2022). This amendment increased the capital program by $108 million from $55.334 billion to $55.442 billion. Amendment #2 included new projects, additional support for existing projects, reflected changes to project budgets based on refined scope, timing and cost estimates and identified elements in the CPRB portion of the program that had 10% budget issues and required CPRB approval to advance critical work. Also included in the program was the MTA Bridges and Tunnels program which remained unchanged at $3.327 billion and included changes to project budgets. MTA Bridges and Tunnels does not require CPRB approval to amend its program.

CPRB Core Program: $42.703 billion. MTA and the Related Entities continued to make investments that renew and enhance the networks of MTA New York City Transit, the MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Bus and MTA Interagency. Overall, the Core Program decreased from $43.674 billion to $42.703 billion and included changes already approved in Amendment #1. The proposed amendment reflects the following notable changes:

MTA New York City Transit. MTA New York City Transit's program is reduced by $779 million since the originally approved 2020-2024 Capital Program in December 2019. The principal change presented in this amendment is a re-sequencing of signal modernization projects (the "Communication-Based Train Control" or "CBTC") and related changes to investments in subway cars and power infrastructure to focus on state of good repair signaling projects, as opposed to capacity related signal improvements. This amendment also includes adjustments to reflect refined project scopes and cost estimates, bid experiences, schedule changes, and market conditions since the last update to the Board including cost increases in station improvements and structural projects and rescheduled rolling stock purchases. This amendment also includes the addition of new projects to address emerging needs including implementing recommendations of the Track Trespassing Task Force and to mitigate stormwater flooding at various locations throughout the system. In addition to these changes, nearly $800 million was transferred from MTA New York City Transit's budgets to support Penn Station Access in both Amendment #1 and the current amendment to the program.

MTA Long Island Rail Road. The MTA Long Island Rail Road's program is reduced by $114 million since the originally approved 2020-2024 Capital Program in December 2019. Notable increases include additional signaling needs, four additional ADA stations identified leaving only five non-ADA accessible stations after this program and more support for the Hall Interlocking project as part of Jamaica capacity improvements. Decreases include a reduction to work locomotives in this plan to reflect market and vendor constrains and the deprogramming of the Central Branch's proposed electrification from this program to support core MTA Long Island Rail Road state of good repair efforts. In addition to these changes, a portion of the locomotive purchase budget was transferred from the MTA Long Island Rail Road to support MTA Expansion's Penn Station Access project in both Amendment #1 and the current amendment to the program.

MTA Metro-North Railroad. MTA Metro-North Railroad's program is reduced by $101 million since the originally approved 2020-2024 Capital Program. Important changes included in this amendment include accelerating support for the first phase of the Park Avenue Viaduct Replacement, which now include additional scope for additional segments which had been assumed to be addressed in the future 2025-2029 program. Reductions to the planned locomotive purchase have been made to support other state of good repair and system expansion needs. The amendment also includes a new $40 million project to address state of good repair needs on the Port Jervis branch. Budget has been added from the Connecticut Department of Transportation to support administrative assets in MTA Metro-North Railroad's program. The amendment also includes several project budget reductions in the Grand Central Terminal element which reflect the timing of investments which are assumed to be advanced in the future 2025-2029 program. The amendment includes other scope, estimate and timing adjustments to MTA Metro-North Railroad's program. Finally, the net reduction reflects budget support made available to the Penn Station Access project.

MTA Expansion Program: $9.413 billion. The MTA Expansion program has been altered to reflect additional budget revisions for the Penn Station Access project and to create a new capital program element and projects to support the State's Penn Reconstruction project. These changes increase the MTA Expansion budget by $697 million.

Penn Station Access. The design-build contract was awarded in December 2021 and an amendment to the capital program (Amendment #1) was approved by the MTA Board and CPRB to address the $921 million initial budgetary needs at award. As a part of this amendment MTA is adding $385 million to support the New Rochelle Yard and $312 million to support initial fleet acquisition needs for MTA Metro-North Railroad to support service on this new line. The total increase of $697 million comes from MTA New York City Transit, the MTA Long Island Rail Road and MTA Metro-North Railroad.

Penn Reconstruction. The State is advancing a new project to address the reconstruction of Penn Station. In this amendment there is a new project to support the general engineering contract award which was awarded in the Fall of 2022 (the contract was not executed until 2023). The State will be providing funding to support this award.

Overall budgets for East Side Access, Second Avenue Subway Phase 2 and Regional Investments remained unchanged.

CPRB 10% Element Issues. This amendment also identified capital program elements that required CPRB approval to advance work in elements where the budget has increased greater than 10% from the last CPRB approved level. Elements are identified in the body of the book. CPRB approval is required to advance work in these elements.

MTA Bridges and Tunnels: $3.327 billion. Overall, MTA Bridges and Tunnels' budget remained unchanged since the originally approved 2020-2024 Capital Program. Budget adjustments were made within the program to reflect the timing of awards, refinement of scope and to provide additional support for the rehabilitation of the RFK Bridge's suspended span. In addition, some new projects were added to the program including a project for a shared use bicycle path on the Henry Hudson Bridge. The $503 million budget for the Central Business District Tolling program was broken out from a larger miscellaneous category but remained unchanged since its award in late 2019.

**MTA 2020-2024 Capital Program All-Agency Summary**
**($ in millions)**

| | 2020-2024 Capital Program Amount (in millions) |
|---|---|
| MTA New York City Transit, MaBSTOA and MTA Staten Island Railway | $34,610 |
| MTA Long Island Rail Road | 3,623 |
| MTA Metro-North Railroad | 3,457 |
| MTA Bus | 871 |
| MTA Interagency Program | 142 |
| MTA Network Expansion | 9,413 |
| Total* | $52,116 |
| | |
| MTA Bridges and Tunnels (including the CBD Tolling Program) | $ 3,327 |
| Total Capital Program* | $55,442 |

* Totals may not total due to rounding

*2020-2024 Capital Program Funding*. The combined funding sources for the 2020-2024 Capital Program include, as subsequently amended and approved by the CPRB in July 2022, $15 billion in capital from CBD Tolling Program sources, $10 billion in capital from new revenue sources (State and City sales taxes and Mansion Tax), $8.037 billion in MTA bonds and PAYGO, $3.1 billion in funding from the State (including $0.1 billion for Penn Reconstruction), $3.007 billion in funding from the City, $9.171 billion in federal formula funding, $2.905 billion in federal New Start funding for Second Avenue Subway Phase Two, $0.275 billion in federal flexible funding, $0.015 billion in Federal Railroad Administration ("FRA") funding for Penn Station platform project, $0.033 billion in federal other/discretionary grants for bus/bus depot projects, $0.030 billion in federal security funding, $0.500 billion from Amtrak for Penn Station Access, $0.028 billion from Connecticut DOT for administrative assets, $0.014 billion in MTA cash, and $3.327 billion in MTA Bridges and Tunnels self-funded dedicated funds).

| | 2020-2024 Capital Program Amount (in millions) |
|---|---|
| Capital from Central Business District Tolling Sources | $15,000 |
| Capital from New Revenue Sources | 10,000 |
| MTA Bonds & PAYGO | 8,037 |
| Federal Formula* | 9,171 |
| State of New York Capital | 3,100 |
| City of New York Capital | 3,007 |
| Federal New Starts (Second Avenue Subway, Phase Two)* | 2,905 |
| AMTRAK | 500 |
| Federal Flexible | 275 |
| Other | 42 |
| Federal Other | 48 |
| CPRB Program Subtotal† | $52,115 |
| MTA Bridges and Tunnels (Self -Funded) | 3,327 |
| Total† | $55,442 |

* Subject to future federal appropriation and guidance.

† As of December 31, 2022. Totals may not add due to rounding.

The following table shows, for each of the Related Entities or programs in the 2020-2024 Capital Program, the totals and the amounts budgeted, committed, expended and completed as of December 31, 2022:

As of December 31, 2022 (in billions)

| Agency | Total | Committed | Expended | Completed |
|---|---|---|---|---|
| MTA New York City Transit and MTA Staten Island Railway | $34.610 | $10.804 | $2.183 | $0.773 |
| MTA Metro-North Railroad and MTA Long Island Rail Road | 7.079 | 2.623 | 0.689 | 0.205 |
| MTA Network Expansion | 9.413 | 3.294 | 1.066 | 0.000 |
| MTA Bus | 0.870 | 0.340 | 0.000 | 0.000 |
| MTA Bridges and Tunnels | 2.823 | 0.620 | 0.161 | 0.074 |
| MTA Interagency Program | 0.146 | 0.027 | 0.011 | 0.003 |
| CBD Tolling Program | 0.503 | 0.367 | 0.171 | 0.000 |

*2020-2024 Transit Core Program*. This 2020-2024 Capital Program totaling $34.610 billion embodies the major capital investment strategies and priorities of the program:

- Accelerated investments in state-of-the-art signal systems, and associated fleets and infrastructure, to transform the reliability and capacity of the subway system;
- Accelerated investments in accessibility for customers with disabilities;
- Accelerated state of good repair investments in critical subway infrastructure and stations; and
- An enhanced, zero-emission bus fleet to serve a reimagined route network.

The following table represents the capital program, as approved, by category of work for the New York City Transit System and MTA Staten Island Railway under the 2020-2024 Transit Capital Program.

| | Transit Authority 2020-2024 Transit Core Program (in millions)* |
|---|---|
| Subway Cars | $4,659 |
| Buses | 1,866 |
| Passenger Stations | 9,778 |
| Track | 2,558 |
| Line Equipment | 381 |
| Line Structures | 3,005 |
| Signals & Communications | 6,743 |
| Power | 1,793 |
| Shops & Yards | 561 |
| Depots | 857 |
| Service Vehicles | 226 |
| Miscellaneous/Emergency | 1,810 |
| MTA Staten Island Railway | 373 |
| Total† | $34,610 |

* Does not include MTA Network Expansion Projects related to the Transit System, which are described below under the "MTA Network Expansion" section.

† Total may not add due to rounding.

Among the projects included in the Transit Core component of the 2020-2024 MTA Capital Program, as approved, are the following:

Subway Cars - $4,659 million. For the B Division, MTA New York City Transit will purchase 640 cars to complete the replacement of the R46 fleet, and purchase an additional 437 cars for fleet growth, including for the Second Avenue Subway Phase Two. These cars will be purchased via options to the ongoing R211 contract. These investments will provide a sufficient number of railcars compatible with new signal technology. For the A Division, car investments need to be accelerated to align with signal modernization that is planned for the 2020-2029 period. MTA New York City Transit will purchase cars to replace a portion of the R62/62A fleet (about 40 years old). The purchases will be coordinated to support the rollout of advanced signal technology on the A Division. Production of the new cars is anticipated to extend into the 2025-2029 capital program.

Buses - $1,866 million. MTA New York City Transit plans to purchase 1,548 buses, including 1,088 standard buses, 345 articulated buses, and 115 express buses. 1,454 of the buses to be purchased will replace buses that have reached the end of their useful life, and the other 94 buses will provide fleet growth. 375 of the standard buses and 100 of the articulated buses will feature all-electric propulsion.

Passenger Stations - $9,778 million. Overall, the 2020-2024 Capital Program plans to perform component or renewal work at approximately 175 stations, representing over 35% of all stations in the system, with a total element investment budget of $3.1 billion. The program addresses the most significant component repairs to ensure a safe, reliable environment, and renewing stations where the approach is cost-effective. An additional $1.4 billion will be devoted to elevator and escalator replacement, because elevators and escalators are an essential part of accessing transit for many customers.

Additional ancillary investments in stations include:

- The construction of a new customer connection between Livonia Avenue station on the Canarsie (L) line and Junius Street station on the New Lots (3) line, to be coordinated with ADA investments;
- Purchase of turnstiles and other fare collection equipment, including wider turnstiles/gates for improved access for customers with disabilities;
- Water condition remediation and other miscellaneous station investments; and
- A new pilot project for installing and evaluating platform screen doors at up to 3 stations.

The 2020-2024 Capital Program's plan for MTA New York City Transit and MTA Staten Island Railway includes accessibility investments at up to 70 selected subway stations, including any stations accelerated into earlier programs, for a total commitment not to exceed $5.1 billion in the 2020-2024 Capital Program. These projects will increase the percentage of total stations that are accessible to approximately 43%.

Track & Switch - $2,558 million. The 2020-2024 Capital Program includes:

- Replacement of nearly 60 miles of mainline track to maintain a state of good repair, largely consistent with prior programs;
- Replacement of approximately 250 mainline switches, accelerated to coordinate with signal modernization; and
- New investments in continuously welded rails.

Line Equipment - $381 million. MTA New York City Transit will undertake upgrades to tunnel lighting to meet current standards, replacement fan components at various locations, rehabilitation pump rooms at various locations, and back-flushing of deep wells on up to 3 lines.

Line Structures - $3,004 million. MTA New York City Transit will undertake the following projects:

- Subway component repairs, to be focused on locations with the highest concentrations of priority defects;
- Extensive rehabilitation or replacement of elevated structures on up to five subway lines, to address priority conditions identified by MTA New York City Transit engineering assessments;
- Continue the installation of netting beneath elevated structures;
- Paint elevated structures on various elevated lines; and
- $55 million for stormwater mitigation.

Signals & Communications - $6.743 billion. MTA New York City Transit plans to spend $5.442 billion on Signal projects and $1.301 billion on communications projects.

Signal projects will include:

- Contracts to install modernized signals on segments of several lines including Queens Blvd, East, the Crosstown Line, 6th Ave and 63rd Street lines, and the Fulton Line as well as all associated interlockings. Investments related to CBTC investments for the Lexington Line were removed from the 2020-24 Capital Program as part of Amendment #2.

Communications projects will include:

- Public Address ("PA") and Customer Information System upgrades at approximately 76 stations on the B Division. New state-of-the-art PA and Customer Information System systems with clearer audio, digital signage, and remote announcement capabilities will improve communication with customers, under both normal operations and in the event of a service disruption;
- Various network investments, including the completion of Connection-Oriented Ethernet, which has been prioritized in coordination with security projects that require additional bandwidth;
- Upgrades to the LiftNet elevator and escalator monitoring system to provide customers and maintenance personnel with more reliable and timely notification of outages;
- System-wide rollout of passenger identification closed circuit television at stations that do not already have the technology, and security enhancements in under-river tunnels and other strategic locations; and
- Normal replacement of selected phone and radio system equipment and communications cables, to address known failures and operational liabilities.

Power - $1,793 million. MTA New York City Transit expects to make investments for normal replacement and state of good repair investments in traction power, including comprehensive renewals of up to 6 substations, targeted component repairs or replacement of equipment at various substations, rehabilitation of up to 11 circuit breaker houses, upgrades to power cables and related assets system-wide, and power improvements on up to seven lines to improve reliability and support higher train throughput made possible by signal modernization.

Shops and Yards - $561 million. MTA New York City Transit expects to invest for repair projects to address deficient shop components at various Department of Car Equipment ("DCE") maintenance and Maintenance of Way support shops, as well as both DCE overhaul facilities; larger-scale investments at the Livonia Maintenance Shop and the Atlantic Avenue Power Cable Shop; replacement of yard and non-revenue track and more than 15 yard switches; and upgrades to fencing and lighting at one yard.

Depots - $857 million. MTA New York City Transit will undertake projects benefitting bus depots, including modifications necessary to accommodate an electric bus fleet, repairs to address deficient shop components, the reconstruction of the Jamaica Bus Depot, modifications necessary to accommodate the ongoing rollout of Automated Bus Lane Enforcement, and continued investment in miscellaneous depot equipment, including bus lifts and facility elevators.

Service Vehicles - $226 million. MTA New York City Transit plans to purchase locomotives and flat cars to replace older models; selected other classes of work train cars, such as tampers, crane cars, signal supply cars, and a track geometry car; and rubber-tire vehicles.

Miscellaneous/Emergency - $1.810 billion. The Miscellaneous/Emergency category includes:

- employee facility repairs at various locations;
- investments to support the implementation of the 2020-2024 Capital Program, including funding for environmental remediation, Enterprise Asset Management consultant support services, insurance, and scope development and design for future projects;
- funding for environmental remediation, consultant support services, insurance, and scope development and design for future projects;
- investments in information technology and fire safety systems;
- environmental and system safety items, engineering services, insurance; and
- other program reserves and miscellaneous investments to support the entire 2020-2024 Capital Program.

MTA Staten Island Railway - $373 million. As part of the total investment in accessibility of up to 70 stations, up to three MTA Staten Island Railway stations will be made accessible to customers with disabilities, with elevators and/or ramps providing stair-free access to station platforms, to fulfill the goal of ensuring that no customer is more than two stations away from an accessible station. Repairs will be made at up to eight stations, to address specific stairs and platform and mezzanine components system-wide. Mainline track and switch replacement will be made at locations system-wide. MTA New York City Transit will also undertake comprehensive rehabilitation of up to two elevated structures and overcoat painting at up to six additional bridges.

*2020-2024 Commuter Core Program*. MTA Long Island Rail Road and MTA Metro-North Railroad together constitute the MTA's Commuter Core program. Each railroad's 2020-2024 capital program is discussed separately below. MTA Network Expansion projects that might benefit each railroad are discussed separately in the MTA Network Expansion section below.

The following table represents the capital program by agency and category of work for the Commuter System under the 2020-2024 MTA Capital Program, as approved.

| MTA Long Island Rail Road | 2020-2024 Commuter Core Program (in millions)* |
|---|---|
| Rolling Stock | $ 155 |
| Stations | 869 |
| Track | 1,077 |
| Line Structures | 330 |
| Communications and Signals | 452 |
| Shops and Yards | 200 |
| Power | 313 |
| Miscellaneous | 228 |
| Total† | $3,623 |
| | |
| MTA Metro-North Railroad | |
| Rolling Stock | $ 726 |
| Grand Central Terminal, Stations and Parking | 899 |
| Track and Structures | 1,227 |
| Communications and Signals | 316 |
| Power | 155 |
| Shops and Yards | 13 |
| Miscellaneous | 123 |
| Total† | $3,457 |

* Does not include MTA Network Expansion Projects related to the Commuter System which are described below under "MTA Network Expansion".
† Total may not add due to rounding.

MTA Long Island Rail Road

Among the projects included in the Commuter Core Program component of the 2020-2024 MTA Capital Program are the following projects for MTA Long Island Rail Road:

Rolling Stock - This program will purchase new dual mode revenue locomotives and 17 coaches to support service to MTA Long Island Rail Road's non-electrified territory and address peak period service demands.

Stations - The program focuses investment on those stations with the worst rated platforms. Replacement of platforms will be paired with platform extensions where applicable and with ADA elevators, tactile strips and braille signage.

Stations with concentrations of poorly rated components will be identified for the 2020-2024 Capital Program which will renew station buildings and replace platform signage, shelters sheds, pedestrian overpasses, railings and lighting. In addition, elevators and escalators reaching the end of their useful life will be replaced and ticket vending machines and ticket selling equipment will be upgraded as part of the overall MTA-wide OMNY fare payment program as discussed herein.

Penn Station and Grand Central Terminal. Platform level renewal and upgrade for Penn Station will include staircase replacement, platform surface and tactile renewal, architectural column cladding and ceiling treatments, upgraded LED lighting, new signage, and other targeted investments. Also planned for Penn Station is the replacement of aging air handlers for the HVAC system, upgrades to the radio antenna system, and targeted replacement/upgrade of the complex's various building systems. Elements of this overall renovation process were begun as part of the 2015-2019 Capital Program.

With completion of East Side Access bringing MTA Long Island Rail Road into Grand Central Terminal, an allowance has been identified to address various needs of the new Grand Central Madison Concourse. This includes elements such as back of house fit-outs, safety and security equipment, and other station components.

Track - Annual Track Rehabilitation Program. This portion of the track program will include replacement of and upgrades to up to 32 miles of wood ties with new concrete ties, along the busiest segments of the network, including segments of the Main Line, Atlantic Branch, Port Washington Branch, Port Jefferson Branch, the Queens Interlocking, and the Babylon Branch. Right of Way investments will include addressing various culvert, drainage, track stability, and retaining wall state of good repair needs, along with the installation of high security fencing. Rehabilitation of yard track systems, including the installation of switch heaters, rehabilitation of walkways, replacement of switches, as well as other track work, will also be included. Finally, this portion of the program includes equipment to be purchased to support the delivery of the Track Rehabilitation Program, such as new ballast cars, a crane, a tamper, and a new track geometry car.

Other Track Improvements. In support of anticipated service demand following the opening of East Side Access, MTA Long Island Rail Road continues to undertake a multi-phase effort to modernize and improve the infrastructure in Jamaica. The 2020-2024 program will focus on replacing, upgrading and modernizing the signal system which serves the Jamaica area. In addition, the Jamaica E Yard Extension will construct a new closed-deck rail bridge over 150th Street to allow for increased train capacity in the Jamaica Complex.

Finally, Amtrak Territory Investments provides funding for MTA Long Island Rail Road's Baseline Capital Contribution to the Northeast Corridor pursuant to the Passenger Rail Investment and Improvement Act and other major investments in the Penn Station and East River Tunnel including the continuation of the total track replacement work in the East River Tunnels.

Line Structures - Bridge rehabilitation and bridge replacement will include rehabilitation or replacement of up to ten bridges which address both railroad bridge and highway bridge investment needs, including replacement of the Cherry Valley Road Bridge and the Webster Avenue Highway Bridge. MTA Long Island Rail Road also will rehabilitate three bridges located in Brooklyn and five bridges in Nassau and Suffolk counties.

MTA Long Island Rail Road will consider undertaking a system-wide viaduct condition assessment by third party structural engineers, followed by renewal and replacement of selected viaducts, based upon structural condition prioritization. A similar system-wide bridge assessment will be undertaken for all MTA Long Island Rail Road-owned bridges and associated line structures.

MTA Long Island Rail Road will continue the bridge painting program established in the 2005-2009 program and will continue with drainage improvements and waterproofing projects.

Tunnels - The 2020-2024 Capital Program will continue structural renewal and improvements on the Atlantic Branch in Brooklyn and Queens by addressing structural components of the Atlantic Avenue Tunnels, including completing tunnel hatchway work, progressing reconstruction of deteriorated tunnel floor beams, and rehabilitating the Bedford Avenue Tunnel Portal. Also included are tunnel systems replacement and upgrades to include waterproofing, drainage, and lighting, as well as fire life safety systems.

Communications and Signals

Communications - The Communications program includes upgrading fiber optic network, cyclical replacement of communication pole lines and other communications components, replacement and upgrades to radio system components, and improving radio coverage in-line with regulatory mandates. Also included is the roll-out of Help Points at MTA Long Island Rail Road branch line stations and terminals, implementing new communications system technology, as well as station technology upgrades and the installation of new cameras at MTA Long Island Rail Road grade crossings. Finally, a new Customer Information Technology project has also been established.

Signals - Signals projects will modernize and upgrade segments of MTA Long Island Rail Road's signal systems. Including:

- Replacement of and upgrades to aging signal equipment near Babylon Station, including switches, signals, cables and other signal system components;
- Construction of a new signal system between Huntington Station and Smithtown Station (commonly referred to as "Hunt to Post") on the Port Jefferson Branch, including two new signal system designs;
- The implementation of centralized train control, which will enable MTA Long Island Rail Road to monitor all trains from a centralized location, improving operations, communications and the ability to respond to service disruptions;
- Signal improvements to Divide Interlocking in Hicksville;
- A significant signal replacement program in the 2020-2024 Capital Program, which targets relays, cables, batteries, switch machines, huts, and signals for replacement and upgrading; and
- Additional Positive Train Control requirements for traditional as well as new East Side Access territory.

Shops and Yards - Shops and Yards investments will support future service increases and planned fleet growth, while upgrading the facilities for undertaking critical fleet inspections, repairs, maintenance and cleaning, and thus supporting fleet reliability and maintaining interior and exterior fleet appearance, including in Morris Park, Ronkonkoma, Hillside and West Side Shop. Also included is the second phase of enhancing Maintenance of Equipment facilities at Mid-Suffolk Yard in Ronkonkoma and progressing an environmental review for a new East End Maintenance Shop.

Investments will be made to employee facilities to enhance the operational facilities for MTA Long Island Rail Road's Engineering, Maintenance of Equipment, Stations, Transportation, and Training facilities, and address various structural, mechanical, electrical, plumbing and other systems within these employee facilities. The investments include rehabilitation of the Atlantic Terminal facilities, systems renewal at the Jamaica Corporate Building, continued upgrades to fire protection systems at the Hillside Support Facility, component renewal at numerous employee facilities in Nassau, Suffolk and Queens counties, and paving work at various locations targeting parking lots, sidewalks and roadways. This program will also include renewal of the Boland's Landing platform which is located at an employee-only station. Finally, construction fit-out of a new consolidated employee facility along with construction of improved space for signal employee training operations has also been included. Employee Facilities also includes an allowance towards third party contracts awarded under the Small Business Development Program ("SBDP").

Power - The 2020-2024 Capital Program will replace as many as five traction power substations in Queens and Nassau County. In addition to replacing substations and substation components, MTA Long Island Rail Road will also target various traction power components for replacement and upgrade. Also, yard lighting and amenities will be addressed at Hillside Yard and other priority locations.

Power investments also include completing the final phase of the Atlantic Avenue Tunnel Lighting replacement and upgrade between Dunton and Woodhaven and the replacement of station and building electrical systems and platform lighting.

The electrification of the Central Branch was removed from the 2020-2024 Capital Program as part of Amendment #2.

Miscellaneous - The Miscellaneous category includes security investments (security camera replacement system-wide, improvements to access control and physical perimeter hardening at key locations, upgrades for three security command centers, a modern centralized video storage solution system, a physical assessment of right-of-way to enhance security, and a project to enhance security in the Atlantic Avenue Tunnels in Brooklyn and Queens), an allowance for future environmental remediation, along with projects for program administration, insurance, Enterprise Asset Management, program development, MTA Long Island Rail Road's contribution to the MTA's Independent Engineer and administration of the SBDP.

MTA Metro-North Railroad

Among the projects included in the Commuter Core Program component of the 2020-2024 MTA Capital Program are the following projects for MTA Metro-North Railroad:

Rolling Stock – In the 2020-2024 Capital Program, MTA Metro-North Railroad will replace the worst-performing M-3 railcars and continue in the next capital program to replace the remainder of the existing M-3 fleet, and provide for growth, and will complete the replacement of the Genesis dual-mode locomotive fleet, which provides East of Hudson service.

Grand Central Terminal, Stations & Parking

Grand Central Terminal Renewal Projects. The 2020-2024 MTA Capital Program includes priority repairs to the Grand Central Terminal trainshed to preserve safe operations, as well as initial phases of trainshed replacement, with critical construction work undertaken in the first section while design work prepares MTA Metro-North Railroad for construction of the next section to be completed as part of the 2025-2029 Capital Program. The Park Avenue Tunnel project will construct four additional emergency exits in two new locations, improving egress from six to ten exits along in this critical tunnel running under the streets of Manhattan.

Additional repairs to Grand Central Terminal building will include completing escalator replacement, replacing a key freight elevator in the terminal, replacing fire and sprinkler standpipe infrastructure, repairing leaks in the terminal building, renewing elements of the vast systems of utilities in Grand Central Terminal and allocating funds for the SBDP.

Outlying Stations Projects. Station upgrades may include new platforms, new lighting, improved customer information systems, new platform canopies, modernized passenger waiting areas, and improved mobility access for customers. Upgrades may include new elevators and/or ramps. Priority component repairs at select stations along the Upper Hudson and Upper Harlem Lines will improve the condition of these stations and provide an enhanced customer experience, including station repairs such as platforms and edges, railings, and stairs.

In cooperation with its Related Entities, MTA is developing OMNY, an MTA-wide, integrated fare payment system. As part of this effort, the machines and equipment serving MTA Metro-North Railroad's current ticket selling system, which has surpassed its useful life, will be replaced as part of the New Fare Payment Equipment project. Component investments in stations are also planned to be undertaken as part of the SBDP.

Parking Projects. The Southeast Parking project includes upgrading and expanding the existing parking to a new parking structure east of the existing station.

Track and Structures

Track. Track investments provide for the replacement of ties and rail along with cyclical rail surfacing on the Hudson, Harlem and New York portion of the New Haven Lines, the replacement of interlocking switches and turnouts, the cyclical replacement of switches and stick/jointed rail in the platform areas, the multi-phased rock slope remediation program to stabilize rock slope at priority locations, and the phased rebuild of the retaining wall near the Marble Hill Station.

Structures. The Structures program includes the start of the multi-program, multi-phased replacement of the deteriorated Park Avenue Viaduct. The 2020-2024 Capital Program will advance the first phase to replace critical sections of the existing viaduct that will improve its reliability and lower the risk of service disruptions. Investments in undergrade and overhead bridges on all three East of Hudson lines also continue in this program. The Undergrade Bridge Program includes the design and/or repair or replacement of undergrade bridges at priority locations on the Hudson, Harlem and New Haven Lines. The bridge program includes the design and/or repair or replacement of bridges at priority locations primarily sited on the New Haven Lines in the State.

Other structure improvement projects include Railtop Culverts, Bridge Walkways, Replace Timbers on Undergrade Bridges, Hudson Line Tunnels Inspection, and Right-of-Way Fencing. Component investments in structures are also planned to be undertaken as part of the SBDP.

West of Hudson Infrastructure. West of Hudson projects include repairs to both Moodna and Woodbury viaducts, evaluation of potential ways of improving service for West of Hudson customers, such as the use of passing sidings and a new midpoint yard to provide capacity improvements on the Port Jervis Line. Phased investments will support future additional off-peak and reverse peak passenger service on the line. Projects in this program will include the design and construction of a new passing siding near Tuxedo. At the same time, MTA Metro-North Railroad continues to make state of good repair investments to address the deteriorated West of Hudson infrastructure, including the cyclical program to maintain track assets, undergrade bridge repairs and rock slope remediation. Component investments in structures are also planned to be undertaken as part of the SBDP.

Communications and Signals - The 2020-2024 Capital Program includes replacement of the existing wayside signal and communication systems and infrastructure between Croton-Harmon and Poughkeepsie. In addition, priority component investments will address needs and obsolescence in MTA Metro-North Railroad's Communications Infrastructure System.

Other communications and signals projects include Private Branch Exchange ("PBX") Replacement, Voice Recorder Replacement, Station PA System, Radio Systems, Fire Alarm and Suppression Systems, CCTV, Grade Crossing Improvements, Hot Box and Dragging Equipment, Replace High Cycle Relays, and Track Circuit Reliability.

Power - New Haven Line power investments include construction of a permanent substation at Pelham and replacement of two traction power substations. On the Hudson Line, an allowance is included for the preliminary estimate to electrify portions of Track 1 on the Hudson Line. The program to replace motor-alternator sets at all six sites with a signal substation continues as well with one site to be designed and constructed.

Power investments also include replacement of deteriorated components. Other projects include replacement of motor-alternator power supplies for signal power, substation rehabilitation, upgrade of New Haven Line power feeders, replacement of signal power transformers and section switches and transformer rehabilitation work.

Shops and Yards - In this program, MTA Metro-North Railroad will replace and upgrade the aged, deteriorated Automotive Fuel Systems located at Harmon, North White Plains, and Brewster. Component shops and yards investments are also planned to be undertaken as part of the SBDP.

Miscellaneous - MTA Metro-North Railroad has included allocations in this category to support two MTA-wide initiatives: administration and support for the SBDP Program and support for the MTA-wide Enterprise Asset Management initiative. Projects are included to support MTA managed insurance coverage for Railroad Protective Liability insurance and Owner Controlled Insurance, as well as MTA Metro-North Railroad scope development and program management and implementation costs.

*MTA Bus*

The MTA Bus 2020-2024 Capital Program totals $870 million and includes the purchase of over 800 buses, including over 500 standard buses, 79 articulated buses, 25 standard electric buses, and 250 express buses. Deficient components at up to five MTA Bus depots will be addressed, targeting structural elements, heating/ventilation, and electrical systems. Continued investment will be made in miscellaneous depot equipment, including bus lifts. The first MTA Bus depot will be modified to support an electric fleet with power upgrades, the chargers, and other improvements necessary to maintain this fleet. Overall, MTA Bus will invest $870 million.

*MTA Interagency*. The total for the MTA Interagency Program budget is $142 million.

MTA Police Department - $39 million. MTA Police Department's investment strategy remains consistent with past capital programs with one deviation: this capital program does not include an allocation for the dedicated MTA Police Department public safety radio system. That project is funded in prior capital programs and is well into construction. Investments in the 2020-2024 Capital Program focus on long-standing goals of achieving a state of good repair at the various district offices. In addition to facility needs there are allocations to provide for the normal replacement of communications equipment and systems as they reach the end of their useful lives. Equipment will be upgraded or replaced in-kind depending on the requirements and evolution of technologies. Finally, the program includes an allocation to address several smaller needs in the areas of other facility requirements, large vehicle replacements (not including patrol cars) and program administration.

MTA Planning Initiatives and Program Support - $80 million. Projects in Core and Corridor planning and other Capital Support initiatives areas directly provide for the activities needed to support efforts required to invest in the future. Specific activities funded in these projects include:

- Upgrade MTA ridership and transportation models to identify current and future regional mobility needs and to evaluate impacts of transit network disruptions and closures;
- Update regional travel surveys to understand our customers' uses of the system, remain eligible for New Starts funding, and inform the Capital Programming process; and

- Strategic planning evaluations responding to short- and long-term policy questions, such as data informing the impacts of possible fare policy revisions and analyses of regional demographic, economic, and travel trends.

Improvements to capital program planning will emphasize enhanced operational safety MTA-wide for customers and employees. Additionally, MTA will develop pilot studies in support of these and additional strategic initiatives.

As part of the December 2021 program amendment, new elements and projects for the MTA Mentoring Program Administration ($4 million) and MTA Construction and Development Administration ($19 million) were created. These projects will centralize common administrative efforts with contributions from agency budgets which were transferred into these new projects. Both projects are expected to grow during the progression of the 2020-2024 Capital Program as annual needs are transferred from the agencies' budgets into these administrative projects.

*MTA Network Expansion*

The total Network Expansion budget is $9.413 billion, allocated to East Side Access, Penn Station Access, Second Avenue Subway Phase Two, the MTA Long Island Rail Road Mainline Expansion Project, Regional Investments, Penn Reconstruction and Miscellaneous projects.

| Current MTA Network Expansion Projects | Funding in Prior Capital Program(s)* | Funding in 2020-2024 Capital Program* | Project Total* |
|---|---|---|---|
| East Side Access | $10,335 | $798 | $11,133 |
| Regional Investments | 601 | 540 | 1,141 |
| Penn Station Access | 431 | 2,749 | 3,180 |
| Second Avenue Subway, Phase Two | 1,735 | 4,555 | 6,290 |
| MTA Long Island Rail Road Mainline Expansion (3rd Track) | 2,050 | 439 | 2,489 |
| Penn Reconstruction | 0 | 100 | 100 |
| Miscellaneous | 280 | 232 | 512 |
| Total | $15,432 | $9,413 | $24,845 |

* Totals may not total due to rounding.

Note: Previously completed expansion projects such as the #7 Line Extension, Fulton Transit Center and Second Avenue Subway, Phase One are not included in the above table

East Side Access - $798 million. Revenue service began in early 2023. The 2020-2024 MTA Capital Program will fund $798 million to complete East Side Access. Key initiatives to control both cost and schedule have been implemented to deliver this critical regional asset.

For a description of the East Side Access Project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – East Side Access".

Second Avenue Subway, Phase Two - $4,555 million. The 2020-2024 Capital Program budgets $4.555 billion for Second Avenue Subway, Phase Two. This includes $1,650 million in MTA local funding and $2,905 million in potential federal New Starts funding, noting that the federal application process is still ongoing. Combined with the $1,735 million programmed in the 2015-2019 Capital Program, the budget brings MTA's total proposal for Phase Two to $6,290 million. Project costs are to be shared approximately 50/50 between federal and local sources. Any potential Full Funding Grant Agreement approval or funding is, however, subject to further discussion with the FTA.

Implementation of the full Second Avenue Subway Phase Two will span several capital programs. The 2020-2024 Capital Program includes budgets for elements supporting Second Avenue Subway Phase Two: additional construction reserves - $3,700 million; and additional reserves for Program Management, Construction Management, Project Support and Real Estate - $855 million.

For a description of the Second Avenue Subway project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – Second Avenue Subway".

Penn Station Access - $2.749 billion. After entering into a Memorandum of Understanding with Amtrak in February 2019, allowing MTA to advance design, construct and run service on the Hell Gate Line, a Notice to Proceed was issued to the General Engineering Consultant on February 12, 2019.

The project achieved a significant milestone in December 2021 when MTA awarded a design-build contract for this project. The award required a capital program amendment which increased the size of the project. The budget in the 2020-2024 program increased from $1.131 billion to $2.052 billion as a result and was reflected in Amendment #1. In the July 2022 program amendment (Amendment #2) a further $697 million was added to the project to reflect previously deferred project costs (portion of contingencies and support costs) as well as the delay of the option of the New Rochelle Yard. In addition, $312 million of the $697 million increase reflects the initial investment to begin the purchase of rolling stock necessary for MTA Metro-North Railroad to provide service into Penn Station.

Funds totaling $431 million were previously allocated in MTA's 2015-2019 Capital Program. The balance of funds required to complete the project is included in this program. $21 million of the former $452 million 2015-2019 program budget for Penn Access was removed from the project to support other MTA needs.

For a description of the Penn Station Access project, see "PART 4. OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT COMPANY (formerly known as MTA CAPITAL CONSTRUCTION COMPANY) – Penn Station Access".

MTA Long Island Rail Road Expansion Project - $438 million.

The MTA Long Island Rail Road Expansion Project entails the following major components, which will be performed across both the 2015-2019 Capital Program as well as the 2020-2024 Capital Program:

- Installation of a third Main Line track from the Floral Park to Hicksville stations;
- Elimination of seven grade crossings to provide grade-separated crossings or, in two cases, full closures to vehicular traffic;
- Modification of overpasses, signal systems, substations, culverts, interlockings, crossovers, sidings, track bed, power systems, communications and signals;
- Construction of retaining walls along portions of the corridor;
- Installation of sound attenuation walls along portions of the corridor;
- Relocation of utilities including electric, signal, communications, gas, water, and sewer systems;
- Modification of/improvement to passenger rail stations, platforms, overpasses, ramps, and parking, including ADA enhancements and construction of new parking facilities at selected stations;
- Construction of new pedestrian overpasses with elevators and ADA-compliant pedestrian underpasses; and
- As part of the December 2021 capital program amendment, $100 million was removed from the project's 2020-2024 budget as project savings had been identified.

The total project budget is now $2.489 billion. Completion of the Design-Build contract remains scheduled for 2023. The $438.5 million included in the 2020-2024 Capital Program will fully fund completion of the MTA Long Island Rail Road Expansion Project.

Regional Investment - $540 million.

Regional Investments include work at Harold Interlocking. The introduction of East Side Access service will result in an additional 24 trains in the peak hour traveling through this already busy interlocking. The work includes MTA Metro-North Railroad bringing trains from the Hudson Valley and Connecticut through Harold Interlocking and Sunnyside Yard to Penn Station. Recognizing the long-term regional benefit of building an operationally "robust" complex through Harold Interlocking that would accommodate the future needs of the MTA Long Island Rail Road, Amtrak, NJ Transit and MTA Metro-North Railroad, Regional Investments will provide critical operational flexibility for all the railroads to meet their long-term service plans. The investments include: an East Bound Re-route, which eliminates existing train conflicts between Amtrak and MTA Long Island Rail Road and increases speeds heading east and north; a Westbound Bypass, which will allow Amtrak and MTA Metro-North Railroad to travel through the Harold complex without conflicting with trains heading into or out of Penn Station; and a Loop Track Interlocking, which allows flexibility for access to both Penn Station and the Mid-day Storage yard and increases capacity and speeds for Amtrak and NJ Transit entering Sunnyside Yard.

Regional Investments also include the purchase of a small number of MTA Long Island Rail Road cars to support East Side Access growth.

Penn Reconstruction - $100 million

The 2020-2024 Capital Program Amendment #2 added $100 million to the Network Expansion program to progress early design of proposed Penn Reconstruction work. This project will be coordinated with multiple partner agencies. The $100 million represents the budget for the General Engineering Consultant design contract to support the State's effort to rebuild Penn Station. The funding for this project will be provided by the State.

Miscellaneous - $232 million.

The 2020-2024 Capital Program includes $135 million to manage MTA Construction and Development's 2020-2024 Capital Program.

*MTA Bridges and Tunnels*

*2020-2024 MTA Bridges and Tunnels Capital Program*. This investment program provides for $3.327 billion in capital commitments, which is expected to be financed with MTA Bridges and Tunnels bonds.

| Category of Project | 2020-2024 Capital Program (in millions) |
|---|---|
| Structures | $1,109 |
| Roadway & Decks | 811 |
| Transportation Systems Management Operations | 50 |
| Utilities | 209 |
| Building & Sites | 78 |
| Miscellaneous | 173 |
| Structural Painting | 394 |
| Sub-total | $2,823 |
| Central Business District Tolling Program | $ 503 |
| Total* | $3,326 |

* As of December 31, 2022. The total may not add due to rounding.

Among the major MTA Bridges and Tunnels projects included are the following:

- Verrazzano-Narrows Bridge ("VNB") - $829 million. A safety fence was installed on the upper and lower-level suspended spans. In addition, the Brooklyn approach ramps will be reconstructed while reconfiguring the non-standard left-exit Belt Parkway off ramps into right-hand exits with shoulders meeting current design standards which will improve traffic flow and traffic safety. The Belt Parkway is being widened between its east-bound VNB merge ramp and the Bay 8$^{th}$ Street exit to eliminate its substandard traffic merge, and widened in the west-bound direction along the same section of roadway, thereby reducing traffic congestion and improving motorist safety, and the lower level suspended span deck is being rehabilitated to extend its service life and maintain a state of good repair.
- Robert F. Kennedy Bridge ("RFKB") - $775 million. The work at the RFKB includes suspended span structural repairs and upgrades to address flagged conditions, meet modern load criteria for trucks, and eliminate wind vulnerabilities, along with dehumidification of the main cables, painting of the suspended spans, and structural upgrades to the anchorages. The Harlem River Lift Span tower fender systems are being upgraded to improve protection against accidental marine vessel collisions. New Randall's Island vehicular and bicycle/pedestrian ramps are being constructed to improve traffic flow within the Randall's Island Interchange as well as bicycle/pedestrian access to Randall's Island from Manhattan and the Bronx. In addition, the south-bound FDR Drive from the Robert F. Kennedy Bridge to 116th street will be widened to improve traffic flow just downstream of the Robert F. Kennedy Bridge which will improve traffic flow and enhance safety on the bridge.

- Henry Hudson Bridge - $74 million. The substations at the Henry Hudson Bridge are being replaced and upgraded to meet current codes and ensure full reliability and redundancy of the Henry Hudson Bridge electrical distribution system. In addition, the walkway on the lower level will be widened and new ADA compliant bicycle-pedestrian ramps will be constructed on both sides of the bridge to improve accessibility and the upper-level north abutment and retaining wall will be rehabilitated as part of a bundled project.
- Throgs Neck Bridge - $219 million. Work focuses on replacing the tower fender protection system to protect the bridge towers from accidental marine vessel collisions, as well as structural painting, rehabilitation of the tower elevators and inspection of the main cables.
- Bronx-Whitestone Bridge – $106 million. Work will address the electric service reliability and redundancy issues at the Bronx-Whitestone Bridge facility by replacing electrical system components and upgrading the power distribution system including interconnecting the electric power distribution system of the Bronx-Whitestone Bridge Service Building with the bridge service feeds, along with a corresponding upgrade of the standby generator to provide reliable backup power for the entire Bronx-Whitestone Bridge facility and tolling equipment. In addition, miscellaneous structural rehabilitation and painting is being performed.
- Marine Parkway Bridge - $50 million. The tower elevators are being replaced to ensure they meet current codes and improve their reliability. In addition, miscellaneous steel repairs and painting of the lift span steel is being performed.
- Cross Bay Bridge - $36 million. The navigation spans are being strengthened with a structural retrofit and miscellaneous repairs are also being performed on the approach spans. In addition, the existing pedestrian ramp is being replaced with an ADA compliant bicycle/pedestrian ramp to improve accessibility.
- Hugh L. Carey Tunnel ("HCT") and Queens Midtown Tunnel ("QMT") - $52 million. These facilities underwent considerable restoration following Superstorm Sandy. At the QMT, work focuses on the reconfiguration of the electrical services for the Queens Service Building and relocation of fueling facilities. Work at the HCT will address the rehabilitation of the structure supporting the Manhattan Entrance/Exit plaza.
- CBD Tolling Program - $503 million. On April 11, 2019, legislation was signed into law enabling MTA Bridges and Tunnels to implement the nation's first ever CBD Tolling Program as part of the State Fiscal Year 2019-2020 Enacted Budget. The planning, design, construction, operations and maintenance of the CBD Tolling Program is the responsibility of MTA Bridges and Tunnels though it requires the involvement of several local and regional agencies and stakeholders. Further, it also requires authorization by the USDOT Federal Highway Administration; to that end, an Environmental Assessment is currently underway. The CBD Tolling Program is expected to reduce congestion and enhance mobility in Manhattan's Central Business District (south of and inclusive of 60th street), while minimizing the footprint of the new system while making the technology/infrastructure "fit" within the urban landscape. The construction and implementation costs for the CBD Tolling Program are being funded through a variety of distinct financing sources, and MTA Bridges and Tunnels expects that capital costs associated with the planning, design, installation, and construction of the CBD Tolling Program will be paid or reimbursed from funds available in the CBD Tolling Capital Lockbox Fund that are generated by CBDTP revenues, if the CBD Tolling Program receives federal approval. MTA continues to work closely with the project sponsors and FHWA in the environmental review. A decision from FHWA is expected in early 2023. Should it be favorable, construction is anticipated to start shortly thereafter.

For further discussion of the physical condition of MTA Bridges and Tunnels facilities, see the Stantec Report, which is attached to MTA's Combined Continued Disclosure Filings and, for convenience, has also been posted on the MTA website under "About the MTA – Financial Information – Investor Information" at https://new.mta.info/investor-info. The Stantec Report is incorporated by specific cross-reference herein.

**2015-2019 Capital Program**

*General.* The five-year capital program for the Transit and Commuter Systems, MTA Staten Island Railway, MTA Bus and MTA Bridges and Tunnels for the 2015-2019 period as amended to date (the "2015-2019 Capital Program") totals approximately $33.940 billion. This program has not been amended since 2019.

The 2015-2019 Capital Program consists of the following components:

- Transit Core Program;

- Commuter Core Program;
- MTA Bus Capital Program;
- MTA Network Expansion;
- MTA Interagency Program; and
- MTA Bridges and Tunnels Program.

*Funding*. The combined funding sources for the last MTA Board approved 2015-2019 Capital Program include $8.398 billion in MTA bonds, $2.942 billion in MTA Bridges and Tunnels dedicated funds, $9.196 billion in funding from the State, $7.638 billion in federal funds, $2.669 billion in funding from the City, $2.156 billion in PAYGO capital, and $0.969 billion from other sources.

| | 2015-2019 Capital Program Amount (in millions) |
|---|---|
| Federal Formula, Flexible, Misc.* | $ 6,898 |
| Federal Core Capacity* | 100 |
| Federal New Starts* | 500 |
| Federal High Speed Rail | 122 |
| Federal security | 18 |
| City of New York Capital | 2,669 |
| State of New York Capital | 9,196 |
| MTA Bonds (Not including MTA Bridges and Tunnels) | 8,398 |
| PAYGO | 2,156 |
| Asset Sales / Leases | 806 |
| Other MTA Sources | 163 |
| MTA Bridges and Tunnels Bonds & PAYGO | 2,942 |
| Total† | $33,969 |

* Subject to future federal appropriation and guidance.
† As of December 31, 2022. Totals may not add due to rounding.

The following table shows, for each of the Related Entities or programs in the 2015-2019 Capital Program, the totals and the amounts committed, expended and completed:

As of December 31, 2022 (in billions)

| Agency | Total | Committed | Expended | Completed |
|---|---|---|---|---|
| MTA New York City Transit. and MTA Staten Island Railway | $16.749 | $16.229 | $10.985 | $8.740 |
| MTA Metro-North Railroad and MTA Long Island Rail Road | 6.142 | 5.611 | 4.657 | 2.889 |
| MTA Network Expansion | 7.507 | 5.760 | 5.135 | 1.604 |
| MTA Bus | 0.376 | 0.330 | 0.238 | 0.072 |
| MTA Bridges and Tunnels | 2.935 | 2.516 | 2.240 | 2.174 |
| MTA Interagency Program | 0.273 | 0.151 | 0.117 | 0.081 |

*2015-2019 Transit Core Program*. The following table represents the capital program by category of work for the Transit System and MTA Staten Island Railway under the 2015-2019 Transit Core Capital Program:

| | Transit Authority 2015-2019 Transit Core Program (in millions)* |
|---|---|
| Subway Cars | $ 1,486 |
| Buses | 1,199 |
| Passenger Stations | 4,945 |
| Track | 1,832 |
| Line Equipment | 179 |
| Line Structures | 919 |
| Signals & Communications | 3,021 |
| Power | 735 |
| Shops & Yards | 408 |
| Depots | 279 |
| Service Vehicles | 385 |
| Miscellaneous | 868 |
| MTA Staten Island Railway | 493 |
| Total† | $16,749 |

* Does not include MTA Network Expansion Projects related to the Transit System, which are described below under "*MTA Network Expansion*".

† Total may not add due to rounding.

*2015-2019 Commuter Core Program*. The following table represents the capital program by agency and category of work for MTA Long Island Rail Road and MTA Metro-North Railroad under the 2015-2019 MTA Commuter Core Capital Program:

| MTA Long Island Rail Road | 2015-2019 Commuter Core Program (in millions)* | MTA Metro-North Railroad | 2015-2019 Commuter Core Program (in millions)* |
|---|---|---|---|
| Rolling Stock | $ 613 | Rolling Stock | $ 381 |
| Stations | 1,232 | Stations | 481 |
| Track | 822 | Track and Structures | 429 |
| Line Structures | 120 | Communications and Signals | 358 |
| Communications and Signals | 363 | Shops and Yards | 474 |
| Shops and Yards | 224 | Power | 89 |
| Power | 135 | Miscellaneous | 252 |
| Miscellaneous | 169 | Total† | $2,464 |
| Total† | $3,678 | | |

* Does not include MTA Network Expansion Projects related to the Commuter System which are described below under the "*MTA Network Expansion*" section.

† Total may not add due to rounding.

*MTA Bus*

The 2015-2019 MTA Capital Program of $376 million includes allocations for bus purchases, facility and equipment projects, and program administration and engineering support.

*MTA Interagency*

The total for the MTA Interagency Program budget is $273 million. The interagency program includes planning, police, mentoring administration and support for MTA Construction and Development. In 2022 $14 million was added to the ongoing project to demolish the former MTA Headquarters complex on Madison Avenue. This project is budgeted in the MTA Planning portion of the program.

*MTA Network Expansion*

The current total Network Expansion budget is $7.507 billion, allocated to East Side Access, Penn Station Access, Second Avenue Subway Phase Two, the MTA Long Island Rail Road Mainline Expansion Project, Regional

Investments and program support. For more information regarding the status of certain of the Network Expansion projects, see "PART 4. – OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT".

See "PART 1. BUSINESS – CERTAIN RISK FACTORS – *Responding to Developing Economic Environment*".

*MTA Bridges and Tunnels*

*2015-2019 MTA Bridges and Tunnels Capital Program*. This investment program provides for $2.935 billion in capital commitments, which is expected to be financed with MTA Bridges and Tunnels bonds and PAYGO.

| Category of Project | 2015-2019 Capital Program (in millions) |
|---|---|
| Structures | $1,017 |
| Roadways & Decks | 727 |
| Toll Plazas & Traffic Mgmt. | 580 |
| Utilities | 362 |
| Buildings & Sites | 33 |
| Miscellaneous | 58 |
| Structural Painting | 158 |
| Total* | $2,935 |

* As of December 31, 2022. The total may not add due to rounding.

All but one of the major projects included in the currently approved 2015-2019 MTA Bridges and Tunnels Capital Program have been completed.

**2010-2014 Capital Program**

*General*. The current five-year capital program for the Transit and Commuter Systems, MTA Staten Island Railway, MTA Bus and MTA Bridges and Tunnels for the 2010-2014 period as amended to date (the "2010-2014 Capital Program") totals approximately $31.719 billion (higher than the amount of the last plan amendment in 2019 which was $31.704 billion). The 2010-2014 Capital Program includes amendments made to add projects for the repair and restoration of MTA agency assets damaged as a result of Superstorm Sandy, which struck the region on October 29, 2012, as well as to include new storm-related resilience/mitigation initiatives.

The 2010-2014 Capital Program consists of the following components:

- Transit Core Program;
- Commuter Core Program;
- MTA Bus Capital Program;
- MTA Network Expansion Program;
- MTA-Wide Security/Disaster Recovery Program (including Bridges and Tunnels);
- MTA Interagency Program; and
- MTA Bridges and Tunnels Program.

*Funding*. The combined funding sources for the last MTA Board approved 2010-2014 Capital Program includes $11.701 billion in MTA Bonds, $2.025 billion in MTA Bridges and Tunnels dedicated funds, $7.327 billion in federal funds, $0.132 billion in MTA Bus Federal and City Match, $0.611 billion from the City, $1.378 billion from other sources (including $0.250 billion from disposition of real estate assets) and $0.770 billion in state assistance.

The 2010-2014 Capital Program funding strategy for Superstorm Sandy repair, restoration and resiliency initiatives assumes $6.697 billion in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), $171 million in pay-as-you-go capital and asset sale, supplemented, to the extent necessary, by external borrowing of up to $889 million in additional MTA and MTA Bridges and Tunnels bonds. Given the 2010-2014 Capital Program's predominant reliance on federal governmental programs as the funding source for Superstorm Sandy mitigation efforts, MTA's ability to carry out specific Superstorm Sandy initiatives will depend upon the future award of federal grants to provide funding for proposed repair and resiliency projects.

| | 2010-2014 Capital Program Amount (in millions) |
|---|---|
| Federal Formula, Flexible, Misc. | $ 5,794 |
| Federal Security | 89 |
| Federal High Speed Rail | 173 |
| Federal New Start | 1,271 |
| City | 611 |
| MTA Bus Federal and City Match | 132 |
| State Assistance | 770 |
| MTA Bonds (not including MTA Bridges and Tunnels) | 11,701 |
| Other | 1,378 |
| MTA Bridges and Tunnels | 2,025 |
| Superstorm Sandy Recovery Funds | |
| • Federal Reimbursement/Insurance Proceeds* | 6,697 |
| • Pay-as-you-go capital/Cash | 171 |
| • MTA Bonds (including MTA Bridges and Tunnels) | 887 |
| Total† | $31,700 |

* Subject to future federal appropriation and guidance.
† As of December 31, 2022. Totals may not add due to rounding.

The following table shows, for each of the Related Entities or programs in the 2010-2014 Capital Program, the totals and the amounts committed, expended and completed:

As of December 31, 2022 (in billions)

| Agency | Total | Committed | Expended | Completed |
|---|---|---|---|---|
| MTA New York City Transit and MTA Staten Island Railway | $11.372 | $11.298 | $10.731 | $10.250 |
| MTA Metro-North Railroad and MTA Long Island Rail Road | 3.921 | 3.836 | 3.693 | 3.140 |
| MTA Network Expansion | 5.861 | 5.281 | 5.184 | 4.583 |
| MTA Bus | 0.297 | 0.291 | 0.272 | 0.240 |
| MTA Bridges and Tunnels | 2.022 | 1.948 | 1.925 | 1.937 |
| MTA-Wide Security Program | 0.256 | 0.247 | 0.233 | 0.238 |
| MTA-Wide Superstorm Sandy Repair/Mitigation Program | 7.774 | 6.290 | 5.235 | 3.727 |
| MTA Interagency Program | 0.216 | 0.212 | 0.203 | 0.212 |

*2010-2014 Transit Core Program*. The following table represents the capital program by category of work for the Transit System and MTA Staten Island Railway under the 2010-2014 Transit Core Capital Program:

| MTA New York City Transit | 2010-2014 Transit Core Program (in millions) |
|---|---|
| Subway Cars | $ 1,029 |
| Buses | 1,353 |
| Passenger Stations | 2,152 |
| Track | 1,482 |
| Line Equipment | 279 |
| Line Structures | 434 |
| Signals & Communications | 2,738 |
| Power | 180 |
| Shops & Yards | 232 |
| Depots | 480 |
| Service Vehicles | 137 |
| Miscellaneous | 778 |
| MTA Staten Island Railway | 96 |
| Total* | $11,372 |

* As of December 31, 2022. The total may not add due to rounding.

*2010-2014 Commuter Core Program*. The following table represents the capital program by category of work for MTA Long Island Rail Road and MTA Metro-North Railroad under the 2010-2014 Commuter Core Capital Program:

| MTA Long Island Rail Road | 2010-2014 Commuter Core Program (in millions) | MTA Metro-North Railroad | 2010-2014 Commuter Core Program (in millions) |
|---|---|---|---|
| Rolling Stock | $ 390 | Rolling Stock | $ 242 |
| Passenger Stations | 102 | Passenger Stations | 187 |
| Track | 887 | Track & Structures | 301 |
| Line Structures | 132 | Communications & Signals | 307 |
| Communications & Signals | 413 | Power | 116 |
| Shops & Yards | 125 | Shops & Yards | 323 |
| Power | 148 | Miscellaneous | 84 |
| Miscellaneous | 163 | Total* | $1,560 |
| Total* | $2,361 | | |

* As of December 31, 2022. The total may not add due to rounding.

*2010-2014 MTA Bus Program*. The primary focus of MTA Bus's $296 million 2010-2014 Capital Program is meeting the needs of the bus fleet and depots, the core of its service. The 2010-2014 Capital Program includes the purchase of 288 new buses consisting of 75 articulated buses and 213 standard buses.

*2010-2014 MTA Network Expansion Projects*. The $5.861 billion 2010-2014 Capital Program includes funding for Phase One of the Second Avenue Subway, the East Side Access Project, and Regional Investments to support the East Side Access Project improvements and to enhance travel quality. For more information regarding the status of certain of the Network Expansion projects, see "PART 4. – OPERATIONS – MTA CONSTRUCTION AND DEVELOPMENT".

*2010-2014 MTA-Wide Security/Sandy Disaster Recovery Program*. In the wake of the September 11, 2001 attacks, MTA initiated a comprehensive security review of its infrastructure. Security experts defined critical vulnerabilities and better strategies to protect people and infrastructure. Capital investments included hardening assets and implementing the networks and equipment necessary to conduct targeted surveillance, control access, stop intrusion and provide command and control systems to support incident response. MTA began implementing these investments in the 2000-2004 and 2005-2009 Capital Programs. The 2010-2014 Capital Program continued this commitment.

Amendments to the 2010-2014 Capital Program added projects to repair and restore MTA assets of all the Related Entities damaged by Superstorm Sandy, as well as projects meant to harden the system against future storms or other catastrophic damage.

*2010-2014 Interagency Program*. The MTA Interagency section of the 2010-2014 Capital Program includes several categories of investments related to the MTA Business Service Center initiative and other facilities, a small business development program, a new initiative to install communications equipment and planning studies to support MTA's Capital Program.

*2010-2014 MTA Bridges and Tunnels Capital Program*. Following the September 25, 2019, amendments approved by the MTA Board, this investment program provides for $2.022 billion in capital commitments, which has been financed with MTA Bridges and Tunnels bonds.

| Category of Project | 2010-2014 Capital Program (in millions) |
|---|---|
| Structures | $ 427 |
| Roadways & Decks | 1,148 |
| Toll Plazas & Traffic Mgmt. | 27 |
| Utilities | 202 |
| Buildings & Sites | 13 |
| Miscellaneous | 36 |
| Structural Painting | 168 |
| Total* | $2,022 |

* As of December 31, 2022. The total may not add due to rounding.

All of the major projects included in the currently approved 2010-2014 MTA Bridges and Tunnels Capital Program have been completed.

**1992-2009 Transit Capital Programs Objectives**

Highlights of the investments funded in the 1992-2009 Transit Capital Programs include the purchase or remanufacture of 5,865 buses; the purchase of 1,387 new paratransit vehicles; the purchase of 1,025 subway cars; rehabilitation and upgrade of 122 subway stations and three subway station complexes, including the addition of elevators and escalators at several of these stations to make them accessible for the elderly and disabled; construction of a Rail Control Center; modernization of signal systems on six subway lines and the Williamsburg Bridge; development of CBTC; construction of two bus maintenance facilities and reconstruction and maintenance at several other facilities; new cranes at the 207th Street Overhaul Shop and rehabilitation of the 38th Street Yard Shop; and the completion of the 63rd Street connector project designed to significantly relieve overcrowding on the Queens Boulevard line. The 1992-2004 Transit Capital Programs also included investments to modernize MTA New York City Transit's electrical power system, reconstruct the Franklin Avenue shuttle, reconstruct a section of the Lenox Avenue Line, and replace signals and repair bridges on MTA Staten Island Railway.

The projects included in the 1992-1999 Transit Capital Program (budgeted at $12.698 billion) have been substantially completed. As of December 31, 2022, $10.412 billion of the $10.427 billion for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway projects included in the 2000-2004 Transit Capital Program have been committed, $10.355 billion have been expended and $10.373 billion of projects have been completed, and $11.474 billion of the $11.515 billion for MTA New York City Transit, MaBSTOA and MTA Staten Island Railway projects included in the 2005-2009 Transit Capital Program have been committed, $11.394 billion have been expended and $11.451 billion of projects have been completed.

**1992-2009 Commuter Capital Programs Objectives**

Highlights of key investments funded under the 1992-2009 Commuter Capital Programs for MTA Long Island Rail Road included replacement of MTA Long Island Rail Road's diesel fleet of coaches and locomotives, the purchase of electric cars to replace a portion of its electric fleet, completion of normal life cycle replacement of M-1 electric cars, conversion of diesel territory station platforms to high level platforms, extension of platform 11 at Penn Station, start of preliminary engineering for the Network Expansion project East Side Access, and rehabilitation of stations system-wide, including installation of additional ticket vending machines and elevator replacement and upgrades. MTA Metro-North Railroad's key investments included the purchase of diesel coaches and dual-mode locomotives for replacement of a portion of its electric fleet, purchase of new electric cars as part of its continued fleet modernization, extensive infrastructure renovations at Grand Central Terminal, station and platform improvements, installation of concrete ties, construction of a third track on the Mid-Harlem line, and the extension of service from Dover Plains to Wassaic.

The projects included in the 1992-1999 Commuter Capital Program, the 2000-2004 Commuter Capital Program and the 2005-2009 Commuter Program have been mostly substantially completed. The 2000-2004 Commuter Capital Program included a Commuter Rail Rolling Stock allocation separately budgeted from MTA Long Island Rail Road and MTA Metro-North Railroad.

**2005-2009 MTA Network Expansion Objectives**

MTA Network Expansion's 2005-2009 Capital Program included support for East Side Access, the Second Avenue Subway and the No. 7 subway line extension.

The total approved budget in the 2005-2009 MTA Capital Program for expansion projects was $7.671 billion. Included was the No. 7 subway line extension project was funded almost entirely by the City. A total of $53 million in preliminary design included in the 2000-2004 Capital Program was locally funded.

**1992-2009 MTA Bridges and Tunnels Capital Programs Objectives**

Highlights of key investments funded in the 1992-2009 MTA Bridges and Tunnels Capital Programs included rehabilitation of approaches, roadways and decks at the Bronx-Whitestone Bridge, the Robert F. Kennedy Bridge, the Henry Hudson Bridge, the Throgs Neck Bridge, Cross Bay Veterans' Memorial Bridge, the VNB and the Marine Parkway-Gil Hodges Memorial Bridge and rehabilitation of roadways and drainage systems at the Henry Hudson Bridge; rehabilitation of the Randall's Island Junction Structure, the Harlem River lift span, anchorages and suspension cables at the Robert F. Kennedy Bridge and walls and ceilings at the Queens Midtown Tunnel; replacement of exhaust fans at the

Hugh L. Carey Tunnel and rehabilitation of bridge electrical substations and power feeders at the Throgs Neck Bridge; expansion of the service building at the Bronx-Whitestone Bridge, structural rehabilitation and repairs at the ventilation building and overpasses of the Queens Midtown Tunnel; and rehabilitation of toll plazas, including electronic toll collection systems.

The projects included in the 1992-1999, 2000-2004 and 2005-2009 MTA Bridges and Tunnels Capital Program have been substantially completed.

**Oversight and Review of Administration of Capital Programs**

A committee on capital program oversight (which by charter consists of at least six members, including the Chair of the MTA Board and the Chairs of each of the MTA Board operating committees), monitors various capital program actions and activities, including:

- current and future funding availability;
- contract awards;
- program expenditures; and
- timely progress of projects within the programs.

The legislation establishing the committee also requires MTA to submit a five-year strategic operations plan to the Governor and to amend such plan at least annually. Such plan must include, among other things, planned service and performance standards and the projected fare levels for each year covered by the plan and an analysis of the relationship between planned capital elements and the achievement of planned service and performance standards. MTA communicates with the State officials responsible for monitoring the strategic operations plan in order to keep them informed of such matters.

**Non-Capital Program Projects - Hudson Yards Development and Financing**

*Hudson Yards Development and Financing*. MTA owns the land in Manhattan generally bounded by West 30th Street on the south, West 33rd Street on the north, 10th Avenue on the east and 12th Avenue on the west (and including rights to operate under 11th Avenue), on which MTA Long Island Rail Road operates its layup and maintenance yard (the "West Side Yard") for trains not in service pending travel from Penn Station, its Manhattan hub. The Eastern Rail Yard ("ERY") portion of the West Side Yard, located between 10th and 11th Avenues, was rezoned by the City in 2005 and the Western Rail Yard ("WRY") portion of the West Side Yard, located between 11th and 12th Avenues, was rezoned by the City in December 2009. The zoning on these sites permits extensive mixed-use development.

In July 2007, MTA issued two separate Requests for Proposals for the sale of and/or long-term leasing of air space and related real property interests for development at the ERY and the WRY, respectively. In 2010, the MTA Board adopted environmental findings with respect to the development and MTA entered into agreements to enter into leases for the WRY and ERY, respectively, with a joint venture of The Related Companies L.P. and its joint venture partner, Oxford Properties Group, Inc., a subsidiary of the Ontario Municipal Employees Retirement System (together, "Related-Oxford"). The closing with respect to the ERY lease occurred on April 10, 2013, with retroactive effect to December 3, 2012 and the closing with respect to the WRY occurred on April 10, 2014. As noted in the next succeeding paragraph, as Related-Oxford proceeded with the entire project, it was projected that the leases and related purchase options relating to the ERY and WRY would provide a net present value of approximately $1 billion to support the 2005-2009 and the 2010-2014 MTA Capital Programs.

On September 22, 2016, MTA successfully monetized its interest in the remaining leases and related purchase options by issuing $1,057,430,000 Hudson Rail Yards Trust Obligations, Series 2016A (the "Series 2016A HRY Trust Obligations"). The proceeds of the Series 2016A HRY Trust Obligations were used to finance and refinance approved capital program transit and commuter projects for the Related Entities.

For a detailed description of the Hudson Rail Yards Trust Obligations, (which include the Series 2016A HRY Trust Obligations), see "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – HUDSON RAIL YARDS TRUST OBLIGATIONS" and Part II – Tab 2 – "Details of Each Issue of Obligations – Hudson Rail Yards Trust Obligations (Schedule 1 to Financing Agreement)" of MTA's 2023 Combined Continuing Disclosure Filings.

## FUTURE CAPITAL NEEDS

MTA periodically updates its capital needs assessment which revisits its asset inventory, assesses the conditions of those assets and identifies the long-term investment schedules required to maintain a state of good repair. Long-term investments that improve and expand the system to meet operating goals and strategies are also identified. This long-term planning provides the basis for sizing and configuring the successive five-year Capital Programs and establishes the rationale for the funding levels that are requested to support the program. The MTA Act requires submission of its five-year capital programs (for transit and commuter systems) to the CPRB. The next submission will be the 2025-2029 Capital Program, which is anticipated to be proposed by October 1, 2024.

No assurances can be given that MTA will be able to identify and secure sufficient sources to fully pay for current and future capital needs or that, if identified, those funding sources will be received. Some of the prospective funding sources, such as federal, City and State funds, are not within the control of MTA and the receipt of such funding is contingent, among other things, upon the ability and willingness of such entities to provide such funding. If MTA does not receive sufficient moneys to fund current and future capital needs, the improvements to the Transit System, MTA Staten Island Railway, the Commuter Rail System, and the MTA Bus System, state of good repair achieved through implementation of previous capital programs could erode.

## INVESTMENT POLICY

MTA's Treasury Division is responsible for the investment management of the funds of the Related Entities. The investment activity covers all operating and capital funds, including bond proceeds, and the activity is governed by State statutes, bond resolutions and the MTA Board-adopted investment guidelines (the "Investment Guidelines"). The MTA Act currently permits the Related Entities to invest in the following general types of obligations:

- obligations of the State or the United States Government;
- obligations the principal and interest of which are guaranteed by the State or the United States Government;
- obligations issued or guaranteed by certain federal agencies;
- repurchase agreements fully collateralized by the obligations of the foregoing United States Government and federal agencies;
- certain certificates of deposit of banks or trust companies in the State;
- certain banker's acceptances with a maturity of 90 days or less;
- certain commercial paper;
- certain municipal obligations; and
- certain mutual funds up to $10 million in the aggregate.

Investment obligations and collateral are held by one of MTA's custodians or trustees.

As of December 31, 2022, $2.332 billion non-bond capital funds were invested in approximately 0.71% repurchase agreements, 0.91% commercial paper, 0.33% Agency and 98.05% United States Treasury obligations.

As of December 31, 2022, the operating and working capital of the Related Entities (including Payroll Mobility Tax receipts) amounted to $7.561 billion. Investments included 2.85% repurchase agreements, 3.68% commercial paper, 1.32% Agency and 92.15% United States Treasury obligations.

A copy of the current Investment Guidelines is posted, for informational purposes only, on MTA's website under "MTA Info – Investor Information".

See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – GENERAL – Swap Agreements Relating to Synthetic Fixed Rate Debt" for a discussion of current guidelines relating to the use of swap contracts.

# PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS

## GENERAL

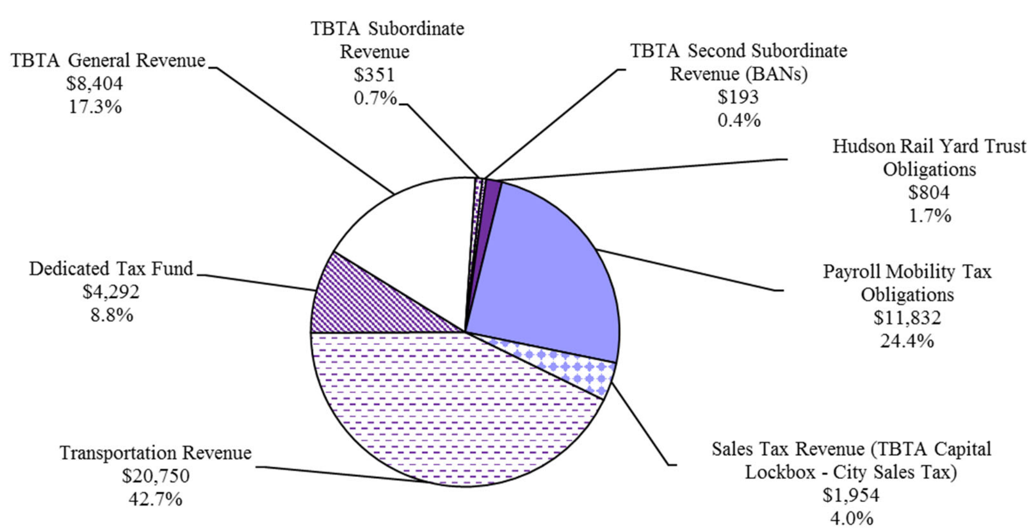
### Financing of Capital Projects and Statutory Ceiling

*Financing of Capital Projects*. Some of the Related Entities are authorized to issue bonds, notes and other obligations to finance capital projects as well as for other purposes. All bonds, notes and other obligations are expected to be issued through either MTA or MTA Bridges and Tunnels. Such obligations are secured by and payable from the revenues and other receipts specified in the bond resolution, indenture or other document authorizing the issuance of such obligations. Generally, bonds, notes and other obligations issued to finance capital projects included in MTA Capital Programs have in the past been, and are currently, subject to a statutory limitation on the principal amount of such obligations (referred to herein as the statutory ceiling). It is anticipated that obligations issued to finance future MTA Capital Programs will also be subject to a statutory ceiling imposed by the Legislature. Obligations issued by MTA Bridges and Tunnels to fund capital projects relating to its seven bridges and two tunnels, the MTA Bridges and Tunnels Facilities, and the CBD Tolling Program, and obligations issued by the Related Entities for purposes other than to finance projects in the MTA Capital Programs, including for working capital purposes, are not subject to the statutory ceiling. In addition, the Hudson Rail Yards ("HRY") Trust Obligations are not subject to the statutory ceiling.

Reflecting the statutory debt ceiling increase passed by the Legislature on April 3, 2020, for the MTA Capital Programs for the years 1992-2024, the MTA Act permits MTA, MTA Bridges and Tunnels and MTA New York City Transit, collectively, to issue on or after January 1, 1993 an aggregate of $90.1 billion of bonds, notes and other obligations (net of certain statutory exclusions, including refunding bonds). As of April 28, 2023, MTA and MTA Bridges and Tunnels have issued approximately $44.825 billion of bonds (not including $4.8 billion of bond anticipation notes ("BANs") net of such statutory exclusions under the current statutory ceiling. MTA expects that the current statutory ceiling will allow it to fulfill the bonding requirements of all MTA Capital Programs approved by the CPRB to date, including the 2010-2014 MTA Capital Program, as amended, the 2015-2019 MTA Capital Program, as amended, and the 2020-2024 MTA Capital Program, as amended. Set forth below under "MTA Capital Program Bonds" is a brief summary of the types of obligations issued by the Related Entities to finance or refinance the MTA Capital Programs that are governed by past and current statutory ceilings. Only a portion of the MTA Bridges and Tunnels General Revenue Bonds and MTA Bridges and Tunnels Subordinate Revenue Bonds (as each is described below) were issued to finance or refinance Transit and Commuter projects in such MTA Capital Programs and, consequently, were subject to the statutory ceiling; the remainder were issued to finance capital costs of the MTA Bridges and Tunnels Facilities that are not subject to the statutory ceiling.

The following pie chart shows, by percentages, the amount of all debt MTA and MTA Bridges and Tunnels have outstanding as of April 28, 2023, under the various bond resolutions of its core credits, inclusive of BANs, as well as HRY Trust Obligations (including HRY Refunding Trust Obligations), all as described below.

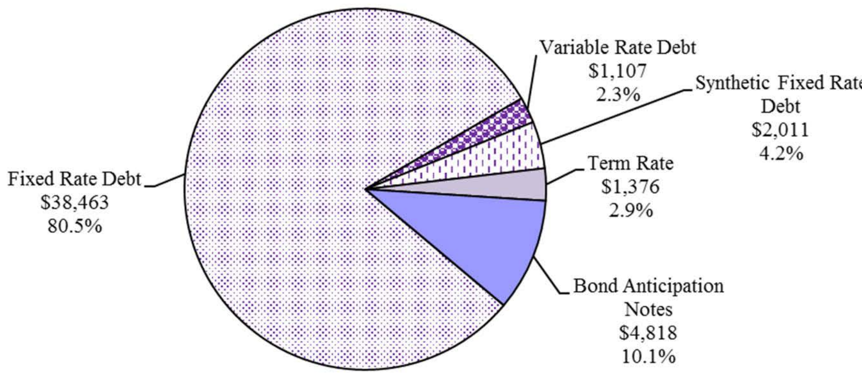
**All Debt by Resolution**
**($ in millions)**



## Types of Debt Outstanding

The following pie chart shows on an aggregate basis, by percentages, the types of debt MTA and MTA Bridges and Tunnels have outstanding under the resolutions relating to MTA's core credits, which include MTA Transportation Revenue Bonds, MTA Dedicated Tax Fund Bonds, MTA Bridges and Tunnels General Revenue Bonds, MTA Bridges and Tunnels Subordinate Revenue Bonds, MTA Bridges and Tunnels Second Subordinate Bond Anticipation Notes, MTA Bridges and Tunnels Payroll Mobility Tax Obligations and MTA Bridges and Tunnels Sales Tax Revenue (TBTA Capital Lockbox – City Sales Tax), but not the HRY Trust Obligations as of April 28, 2023.

**MTA Debt by Type on Core Credits**
**($ in millions)**




## MTA Capital Program Bonds

*MTA's Core Credits.*

*MTA Transportation Revenue Bonds*. Bonds referred to as "Transportation Revenue Bonds" are issued pursuant to the General Resolution Authorizing Transportation Revenue Obligations of MTA, adopted on March 26, 2002 (the "Transportation Resolution"), and are payable solely from and secured by a gross lien on the items pledged under such bond resolution, which include amounts derived from: fares received for the use of the subway and bus systems operated by MTA New York City Transit and MaBSTOA, the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad and buses operated by MTA Bus; certain concession revenues; and operating subsidies, including expense reimbursement payments, from the State, the City, and MTA Bridges and Tunnels surplus. The proceeds from the sale of such bonds are used solely to finance capital projects set forth in the MTA Capital Programs and certain additional MTA Bus capital projects. MTA is authorized to issue revenue anticipation notes for working capital purposes that are secured by a lien on a portion of the revenues that secure the Transportation Revenue Bonds (referred to as "Operating Subsidies" under the Transportation Resolution), which is senior to the lien on such Operating Subsidies in favor of the owners of the Transportation Revenue Bonds. See "-*Revolving Credit Agreements*" and "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below. For more information on the Transportation Revenue Bonds, see "TRANSPORTATION REVENUE BONDS" below.

*MTA Transportation Revenue Bond Anticipation Notes*. Bond anticipation notes referred to as "Transportation Revenue Bond Anticipation Notes" or "Transportation Revenue BANs" are issued pursuant to the Transportation Resolution and are payable solely from the proceeds of other Transportation Revenue Bond Anticipation Notes or Transportation Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments. As of April 28, 2023, there are no MTA Transportation Revenue BANs outstanding.

*Subordinated Contract Obligations*. On December 21, 2022, the MTA Board approved and provided authorization for the issuance of a Subordinated Contract Obligation under the Transportation Resolution to make funds available, in an amount not to exceed $350 million for the payment of the Capital Availability Payment under the ADA Project Agreement. See "Alternative Capital Program Financing – ADA Elevator Project – P3 Financing." The Subordinated Contract Obligation will be payable out of, and secured by a pledge and lien subordinate in all respects to, the lien on and pledge created by the Transportation Resolution for the payment of Transportation Revenue Bonds and Parity Debt issued thereunder, and on parity in all respects with any lien and pledge created by the Transportation Resolution for the payment of interest on obligation anticipation notes issued thereunder. Such lien and pledge will be on parity with or senior to the lien on any Subordinated Contract Obligations or Subordinated Indebtedness issued under the Transportation Resolution while the Subordinated Contract Obligation relating to the Capital Availability Payment is outstanding. As of April 28, 2023, there are no subordinated contract obligations outstanding; however, MTA expects to incur the Subordinated Contract Obligation in early May 2023. See "– TRANSPORTATION REVENUE BONDS – Pledge Affected by the Resolution".

*MTA Dedicated Tax Fund Bonds*. Bonds referred to as "Dedicated Tax Fund Bonds" are issued pursuant to the Dedicated Tax Fund Obligation Resolution of MTA, adopted on March 26, 2002 (the "DTF Resolution"), and are payable solely from and secured by the MTTF Receipts and the MMTOA Receipts described below under "DEDICATED TAX FUND BONDS – Sources of Payment – Revenues from Dedicated Taxes", subject to appropriation by the Legislature. The proceeds from the sale of such bonds are used solely to finance capital projects of the MTA Capital Programs. For more information on the Dedicated Tax Fund Bonds, see "DEDICATED TAX FUND BONDS" below.

*MTA Dedicated Tax Fund Bond Anticipation Notes.* Bond anticipation notes referred to as "Dedicated Tax Fund Bond Anticipation Notes" are issued pursuant to the Dedicated Tax Fund Resolution and are payable solely from the proceeds of other Dedicated Tax Fund Bond Anticipation Notes or Dedicated Tax Fund Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments. As of April 28, 2023, there are no outstanding DTF BANs.

*MTA Bridges and Tunnels General Revenue Bonds*. Bonds referred to as "General Revenue Bonds" are issued pursuant to the General Resolution Authorizing General Revenue Obligations of MTA Bridges and Tunnels, adopted on March 26, 2002 (the "MTA Bridges and Tunnels Senior Resolution"), and are payable from the net revenues collected on the MTA Bridges and Tunnels Facilities described under "PART 4. OPERATIONS – TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – MTA Bridges and Tunnels Facilities" after the payment of operating expenses. The proceeds from the sale of such bonds are used to finance capital projects relating to the MTA Bridges and Tunnels Facilities and the MTA Capital Programs (i.e., the Transit System, MTA Bus, MTA Staten Island Railway and the Commuter System), as described herein under "PART 4. OPERATIONS – TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels". Only that portion of any such bonds issued to finance capital projects of the MTA Capital Programs is subject to the current statutory ceiling. For more information on the MTA Bridges and Tunnels General Revenue Bonds, see "MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS" below.

*MTA Bridges and Tunnels General Revenue Bond Anticipation Notes*. Bond anticipation notes referred to as "General Revenue Bond Anticipation Notes" are issued pursuant to the MTA Bridges and Tunnels Senior Resolution and are payable solely from the proceeds of other General Revenue Bond Anticipation Notes or General Revenue Bonds, and though not pledged therefor, notes or other evidences of indebtedness or any other amounts, in each case if and to the extent such amounts may lawfully be used to make such payments. As of April 28, 2023, there are no outstanding MTA Bridges and Tunnels General Revenue BANs outstanding.

*MTA Bridges and Tunnels Subordinate Revenue Bonds*. Bonds referred to as "Subordinate Revenue Bonds" are issued pursuant to the 2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations of MTA Bridges and Tunnels, adopted on March 26, 2002 (the "MTA Bridges and Tunnels Subordinate Resolution"), and are payable from the net revenues collected on the MTA Bridges and Tunnels Facilities after the payment of operating expenses and debt service as required by the MTA Bridges and Tunnels Senior Resolution. The proceeds from the sale of such bonds are used to finance capital projects relating to the MTA Bridges and Tunnels Facilities and MTA Capital Programs. Only that portion of any such bonds issued to finance capital projects of the MTA Capital Programs is subject to the current statutory debt ceiling. For more information on the MTA Bridges and Tunnels Subordinate Revenue Bonds, see "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" below.

*MTA Bridges and Tunnels Second Subordinate Revenue Bond Anticipation Notes (CBDTP)*. Bond anticipation notes referred to as "CBDTP Second Subordinate Revenue Bond Anticipation Notes" are issued in accordance with the terms and provisions of the CBDTP Second Subordinate Revenue Resolution authorizing CBDTP Second Subordinate Revenue Obligations adopted on December 18, 2019 (the "CBDTP Second Subordinate Resolution"), as supplemented on February 18, 2021. Principal and interest on the Second Subordinate Revenue Bond Anticipation Notes is payable from the proceeds of other BANs or bonds, and interest is payable from amounts available after all payments required by the MTA Bridges and Tunnels Senior and Subordinate Resolutions. In addition, the CBDTP Second Subordinate Resolution permits, but does not obligate, MTA Bridges and Tunnels to pay principal and interest on the Second Subordinate Revenue BANs from revenues in the CBD Tolling Capital Lockbox Fund. The purpose of the issuance of BANs or bonds under the CBDTP Second Subordinate Revenue Resolution, in one or more series from time to time, is to provide funds in an amount not to exceed $506 million to finance costs of the CBD Tolling Program infrastructure, tolling systems and allowable implementation expenses or to retire any such BANs when due.

As of April 28, 2023, there are $192.835 million of Second Subordinate Revenue BANs outstanding, and as budgeted in the 2023 February Plan, these BANs are expected to be retired by the maturity date of November 1, 2025, with proceeds of bonds secured by, or available funds in, the CBD Tolling Capital Lockbox Fund.

| Bond Anticipation Notes Series | Principal Amount Outstanding ($ in millions) | Maturity Date |
|---|---|---|
| TBTA CBDTP Second Subordinate 2021A BAN | $192.835 | 11/1/2025 |

*TBTA Payroll Mobility Tax Senior Lien Obligations.* Bonds referred to as "TBTA Payroll Mobility Tax Senior Lien Bonds" are issued pursuant to the TBTA PMT Resolution, adopted by the Board on March 17, 2021. Each of the TBTA PMT Senior Lien Obligations and any MTA PMT Senior Lien Obligations issued pursuant to the MTA PMT Resolution, adopted by the Board on November 18, 2020, are secured by a first lien on, and parity pledge of, the PMT Receipts, consisting of two distinct revenue streams: Mobility Tax Receipts and MTA Aid Trust Account Receipts (also referred to as "ATA Receipts"). MTA and MTA Bridges and Tunnels have entered into the Financing Agreement, dated as of April 9, 2021, to provide the mechanism by which MTA and MTA Bridges and Tunnels share PMT Receipts on a parity basis (i) first with respect to the PMT Senior Lien and then (ii) with respect to the PMT Second Lien. For more information regarding the MTA and TBTA PMT Obligations see "PAYROLL MOBILITY TAX OBLIGATIONS" below.

*Payroll Mobility Tax Bond Anticipation Notes.* Bond anticipation notes referred to as "MTA Payroll Mobility Tax Bond Anticipation Notes" are issued pursuant to the MTA PMT Resolution. The Federal Reserve established the Federal Reserve Bank of New York's Municipal Liquidity Facility LLC ("MLF") in April 2020 to help state and local governments and certain public entities better manage cash flow pressures caused by the COVID-19 pandemic. The MLF facility was designed to purchase up to $500 billion of short-term notes from state and local governments and certain public entities to ensure they had access to credit and liquidity during the pandemic. MTA was able to utilize the MLF twice, including by directly placing with the MLF its $2.907 billion Payroll Mobility Tax BANs, Series 2020A (the "PMT MLF BAN") issued for working capital on December 17, 2020. The PMT MLF BANs have a maturity of December 15, 2023. Pursuant to the 2023 February Plan, the unspent proceeds are expected to repay the PMT MLF BANs on the maturity date Principal of and interest on the PMT MLF BAN may be paid from: (i) the proceeds of rollover bond anticipation notes issued under the MTA PMT Resolution, (ii) take-out bonds issued under the MTA PMT Resolution, and\or (iii) the proceeds of notes or other evidences of indebtedness or any other amounts (which other amounts are not otherwise pledged to the payment of the PMT MLF BAN), in each case if and to the extent such amounts may lawfully be used to make such payments. The payment of principal on the PMT MLF BAN is not secured by revenues under the MTA PMT Resolution. The payment of interest on the PMT MLF BAN, all of which is due at maturity, is payable on a subordinate basis to senior lien obligations and parity obligations that may be issued under the MTA PMT Resolution and the TBTA PMT Resolution (collectively, the "PMT Resolutions").

Bond anticipation notes referred to as "TBTA Payroll Mobility Tax Bond Anticipation Notes" are issued pursuant to the TBTA PMT Resolution. In 2022, two series of TBTA Payroll Mobility Tax BANs were issued. For more information regarding the MTA and TBTA PMT Obligations see "PAYROLL MOBILITY TAX OBLIGATIONS" below.

As of April 28, 2023, $2.907 billion of MTA Payroll Mobility Tax BANs and $1.718 billion of TBTA Payroll Mobility Tax BANs for an aggregate total of $4.625 billion of PMT BANs are outstanding:

| Bond Anticipation Notes Series | Principal Amount Outstanding ($ in millions) | Maturity Date |
|---|---|---|
| MTA PMT MLF BANs (Series 2020A) | $2,907.28 | 12/15/2023 |
| TBTA PMT 2022A BANs | 951.37 | 8/15/2024 |
| TBTA PMT 2022B BANs | 766.54 | 12/15/2024 |

*Sales Tax Revenue Bonds (TBTA Capital Lockbox – City Sales Tax).* Bonds referred to as "Sales Tax Revenue Bonds" are issued pursuant to the MTA Bridges and Tunnels Special Obligation Resolution Authorizing Sales Tax Revenue Obligations (TBTA Capital Lockbox – City Sales Tax) (the "TBTA Sales Tax Resolution"), adopted by the Board on September 15, 2021. The Sales Tax Revenue Bonds are secured by Sales Tax Receipts in the amount of $170 million in State Fiscal Year 2020-2021 and an amount equal to 101% of the Sales Tax Receipts in the previous State Fiscal Year every year thereafter (not subject to appropriation) deposited by the State Comptroller into the CBD Tolling Capital Lockbox Fund and transferred by the MTA Bridges and Tunnels into the Revenue Fund established under the TBTA Sales Tax Resolution. For more information regarding the Sales Tax Revenue Bonds see "SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)" below.

*Other Credits.*

*MTA Hudson Rail Yards Trust Obligations and Hudson Rail Yard Refunding Trust Obligations*. The Hudson Rail Yard Trust Obligations and Hudson Rail Yard Refunding Trust Obligations (together, the "HRY Trust Obligations") were issued pursuant to the MTA Hudson Rail Yards Trust Agreement, dated as of September 1, 2016 (the "Original HRY Trust Agreement"), as supplemented by the MTA Hudson Rail Yards First Supplemental Trust Agreement, dated as of March 1, 2020 (the "Supplemental HRY Trust Agreement" and, together with the Original HRY Trust Agreement, the "HRY Trust Agreement"), each by and between MTA and Wells Fargo Bank, National Association, as trustee (the "HRY Trustee"). The HRY Trust Obligations are payable solely from and secured by certain payments made by MTA under the Financing Agreement referred to in the HRY Trust Agreement. The proceeds from the sale of such obligations were used solely to finance capital projects of the MTA Capital Programs. Other than refunding bonds, MTA does not expect to issue additional bonds under the HRY Trust Agreement. For more information on the HRY Trust Obligations see "HUDSON RAIL YARDS TRUST OBLIGATIONS" below.

**Alternative Capital Program Financing**

*ADA Elevator Project – P3 Financing.* On November 30, 2022, the MTA Board approved the award contract for the design, construction, financing and maintenance, in compliance with the Americans with Disabilities Act ("ADA"), of accessibility upgrades at thirteen MTA New York City Transit subway stations throughout the City (the "ADA Elevator Project") to Elevated Accessibility Enhancements Operating Company, LLC ("EAE") in the amount of $965,257,102.

The ADA Elevator Project is one of a series of ADA projects in support of MTA's commitment to make stations accessible. The ADA Elevator Project includes designing, constructing, and installing the improvements for ADA compliance at thirteen stations throughout the City, including installation of 20 new elevators, path-of-travel improvements, and associated state of good repair work at eight MTA New York City Transit subway stations. The ADA Elevator Project also includes 14 elevator replacements, path-of-travel improvements and associated state of good repair work at five MTA New York City Transit subway stations. The ADA Elevator Project is the first of the ADA elevator projects to be awarded using the public-private partnership ("P3") delivery model, which among other things, incorporates into the underlying contract, the requirement for EAE to maintain the 34 new elevators and finance a portion of the ADA Elevator Project. The ADA Project Agreement between EAE and MTA Construction and Development (the "ADA Project Agreement"), was executed on December 28, 2022, and has a 15-year maintenance period, commencing with achievement of substantial completion of the project and two additional five-year option periods, exercisable at MTA's discretion.

Pursuant to the terms of the ADA Project Agreement, MTA Construction and Development is required to make certain payments to EAE for the design, construction and maintenance of the ADA Elevator Project. These payments are broadly structured as Capital Availability Payments, Maintenance Availability Payments (together, the "Availability Payments") and Progress Payments and have been pledged by EAE as part of a trust estate benefiting investors in bonds expected to be issued as a conduit bond issuance by the Transportation Development Corporation for the benefit of EAE. Notwithstanding EAE's pledge of the Availability Payments and Progress Payments as security for these bonds, the bonds are not a debt of MTA, however, pursuant to an MTA Board Authorization, MTA has secured some of the payments under the ADA Project Agreement, specifically the Capital Availability Payments, as Subordinated Contract Obligations under the Transportation Resolution.

On December 21, 2022, the MTA Board authorized a Subordinated Contract Obligation under the Transportation Resolution in an amount not to exceed $350 million to secure the payment of the Capital Availability Payments. The Subordinated Contract Obligation will be payable out of, and secured by, a pledge and lien subordinate in all respects to, the lien on and pledge created by the Transportation Resolution for the payment of Transportation Revenue Bonds and Parity Debt issued thereunder, and on parity in all respects with any lien and pledge created by the Transportation

Resolution for the payment of interest on obligation anticipation notes issued thereunder. Such lien and pledge will be on parity with or senior to the lien on any Subordinated Contract Obligations and Subordinated Indebtedness issued under the Transportation Resolution while the Subordinated Contract Obligation relating to the Capital Availability Payment is outstanding. As of April 28, 2023, there are no subordinated contract obligations outstanding; however, MTA expects to incur the Subordinated Contract Obligation in early May 2023. See "– TRANSPORTATION REVENUE BONDS – Pledge Affected by the Resolution".

**Non-Capital Program Securities**

The Related Entities have also issued other obligations that are not subject to the current or any prior statutory ceiling and that were issued for projects that are not part of the Capital Programs, as follows:

*Revenue Anticipation Notes*. MTA and MTA New York City Transit have in the past and may, from time to time in the future, issue revenue anticipation notes ("RANs") for their working capital needs and the needs of their respective affiliates and subsidiaries occasioned by delays in the receipt of subsidies or other irregularities in the timing of receipt of revenues.

RANs issued under the Transportation Resolution are secured by a lien on Operating Subsidies (as defined in the Transportation Resolution) prior to the lien in favor of the owners of Transportation Revenue Bonds, Subordinated Contract Obligations, and Subordinated Indebtedness issued under the Transportation Resolution. The maturity on such RANs may not exceed 18 months. While such notes can be rolled over, the final maturity cannot exceed five years from the date of their original issuance. See "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below.

*Revolving Credit Agreements*. As of April 28, 2023, MTA has two available commercial lines of credit totaling $1.2 billion, both of which are taxable revolving credit agreements. The agreements were entered into pursuant to the Transportation Revenue Anticipation Note Resolution, approved by the MTA Board on July 24, 2013, and amended and restated through April 27, 2022. Draws under the credit agreements will be evidenced by Revenue Anticipation Notes.

1. On August 2, 2022, MTA entered into an $800 million taxable revolving credit agreement with JPMorgan Chase Bank, National Association, which is active through August 1, 2025 (the "JP Morgan Chase Agreement").

2. On August 2, 2022, MTA entered into a $400 million taxable revolving credit agreement with Bank of America, National Association, which is active through August 1, 2025 (the "BANA Agreement").

Draws under the foregoing agreements are evidenced by Revenue Anticipation Notes issued under the Transportation Resolution. The Revenue Anticipation Notes evidencing draws under the JPMorgan Chase Agreement and the BANA Agreement are additionally secured by the MTA Aid Trust Account Receipts. For additional information regarding the pledge of security under the Transportation Resolution, see "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below. Funds may be used for operational or capital purposes. As of April 28, 2023, there are no outstanding draws on the lines of credit.

*Moynihan Station Development Project Financial Guarantee*. On May 22, 2017, the MTA Board approved entering into various agreements necessary to effectuate Phase Two of the Moynihan Station Development, which entailed the redevelopment of the James A. Farley Post Office Building adjacent to Penn Station to include a new train hall, to be shared by Amtrak, MTA Long Island Rail Road and MTA Metro-North Railroad (the "Train Hall"), as well as providing retail and commercial space.

On July 21, 2017, New York State Urban Development Corporation d/b/a Empire State Development ("ESD") executed a TIFIA Loan Agreement with the USDOT in an amount of up to $526 million (the "TIFIA Loan"), the proceeds of which were used to pay for costs of construction of the Train Hall. The TIFIA Loan was secured primarily by payments in lieu of taxes ("PILOTs") to be made by certain future retail and commercial tenants of the Train Hall, a debt service reserve account (the "TIFIA Debt Service Reserve Account") and a mortgage (the "Train Hall Mortgage") on the Train Hall property.

Simultaneously with the execution of the TIFIA Loan Agreement, a Joint Services Agreement (the "JSA") was entered into among MTA, the USDOT, ESD, and Manufacturers and Traders Trust Company (as PILOT trustee). Under the JSA, MTA is obligated to satisfy deficiencies, if any, in the TIFIA Debt Service Reserve Account. The JSA remains in effect until the earliest to occur of (i) the "MTA JSA Release Date" (as defined in the JSA and summarized below),

(ii) the date on which the TIFIA Loan has been paid in full, or (iii) foreclosure by the USDOT under the Train Hall Mortgage. Pursuant to the JSA, the MTA JSA Release Date is the date on which each of the following conditions have been satisfied: (a) substantial completion of (i) the Train Hall and initiation by MTA Long Island Rail Road and Amtrak of transportation service therein, and (ii) the occupancy rate on the retail and commercial units is at least 80%; (b) discharge or settlement of all material construction claims; (c) Debt Service Coverage ratios in three consecutive PILOT years meet levels as provided in the TIFIA Loan Agreement; (d) certain designated defaults or events of default under the TIFIA Loan Agreement have not occurred and are continuing; and (e) two rating agencies have assigned a public rating of at least "A- ". Upon execution of the JSA, MTA set aside $20 million in the event it is obligated to make deficiency payments into the TIFIA Debt Service Reserve Account. The MTA JSA Release Date is not expected to occur prior to June 30, 2033.

On June 12, 2017, MTA entered into a Memorandum of Understanding with ESD and DOB whereby DOB agreed that, subject to certain conditions, in the event in any given year during the term of the JSA MTA is required to make a deficiency payment to the TIFIA Debt Service Reserve Account, DOB will consider entering into an agreement with MTA that will provide for a reduction in the cost recovery assessment otherwise payable under State law to the State.

On November 18, 2021, ESD and the TIFIA Lender entered into an Amended and Restated TIFIA Loan Agreement (the "Amended and Restated Moynihan TIFIA Loan Agreement") in an amount of up to $607 million that, among other things, lowered the interest rate on the loan under the Original Moynihan TIFIA Loan Agreement and provided additional capital financing for the project. In connection therewith, MTA confirmed its agreements under the JSA with respect to the Amended and Restated Moynihan TIFIA Loan Agreement. It is not expected that the Amended and Restated Moynihan TIFIA Loan Agreement will result in a material increase, if any, in MTA's obligations under the JSA. ESD and New York State Department of the Budget also entered into a new Memorandum of Understanding similar to the one entered into in connection with the Original Moynihan TIFIA Loan Agreement. As of April 28, 2023, MTA has not been required to make any deficiency payments to the TIFIA Debt Service Reserve Account.

*MTA Liquidity Resources.* As of April 25, 2023, MTA had liquidity resources in the approximate amount of $8.123 billion, consisting of a current running cash balance of $665.3 million, internal available funds and reserves of $3.276 billion, related funds from MTA PMT MLF BANs, plus interest totaling $2.981 billion, and undrawn commercial bank lines or credit totaling $1.2 billion. ***These funds provide a temporary funding "bridge" to a permanent solution to lost revenues and higher expenses. Certain of these funds must be repaid or replaced. Use of these monies will leave MTA with a gap in funding for both the operating budget and capital plan over the longer term and could result in additional debt issuance and unfunded operating needs***.

**Interagency Loans**

The Related Entities are authorized to transfer their revenues, subsidies and other moneys or securities to another Related Entity for use by that other Related Entity, provided at the time of the transfer it is reasonably anticipated that the moneys and securities so transferred will be reimbursed, repaid or otherwise provided for by the end of the next succeeding calendar year.

**Leasing**

The Related Entities lease real property, facilities, equipment and other personal property in the normal course of business. In addition, the Related Entities had entered into sale-leaseback and lease-leaseback arrangements, pursuant to which existing assets were sold or leased to other parties and leased or subleased back by the Related Entities. Only four such transactions currently remain outstanding. The basic rent payment obligation of the Related Entities under such leases and subleases, together with a purchase option, was economically defeased by a pledge of financial obligations and/or securities of other entities, including, in certain cases, United States government obligations. The expected economic result of such transactions was the receipt by the Related Entities of a net up-front payment, while pursuant to the agreement, the relevant operating agency retained full use of the facility or equipment. If a defeasance obligor were to default on its financial obligations under its respective defeasance instrument, it is possible that the applicable Related Entity would be required to pay the related rent obligations or purchase option amounts from other sources. In addition, the event of loss, default, indemnification, and guaranty provisions of these transactions could create substantial undefeased financial obligations of the Related Entities in the unlikely event that they were triggered; if those financial obligations were, in turn, not timely met, the relevant operating agency could lose use of the leased facilities or equipment. For all of the lease transactions entered into after 1996, MTA has covenanted that all rent and supplemental rent obligations under such lease transactions which are not paid by defeasance obligors shall be paid from those "Revenues" (as defined in the Transportation Resolution) available for release from the lien of the Transportation

Resolution in accordance with Section 504(d) of the Transportation Resolution, immediately following all transfers pursuant to Section 504(a), (b) and (c) of the Transportation Resolution, on a pari passu basis among all such lease transactions and prior to the transfer or use of any such amounts for any other purpose, including the payment of operating and maintenance expenses. The payment obligations of the Related Entities under such leases and subleases are generally subordinate to the payment of debt service on the bonds of the agency obligated to make the payments, but to the extent the undefeased financial obligations were obligations (including guaranties) of MTA Bridges and Tunnels, a reduction in the amount of operating surplus transferred from MTA Bridges and Tunnels could result.

For more information with respect to certain of these leasing and other financial transactions, reference is made to the footnotes in the financial statements of the Related Entities which contain a summary of certain capital lease obligations. See, in particular, Footnote 8 to the audited Combined Financial Statements of MTA for the years ended December 31, 2022 and 2021, Footnote 5 to the audited Consolidated Financial Statements of MTA New York City Transit for the years ended December 31, 2022 and 2021, and Footnote 14 to the audited Financial Statements of MTA Bridges and Tunnels for the years ended December 31, 2022 and 2021.

**Swap Agreements Relating to Synthetic Fixed Rate Debt**

*Board-adopted Guidelines*. The Related Entities adopted guidelines governing the use of swap contracts on March 26, 2002. The guidelines were amended and approved by the MTA Board on March 13, 2013. The guidelines establish limits on the amount of interest rate derivatives that may be outstanding and specific requirements that must be satisfied for a Related Entity to enter into a swap contract, such as suggested swap terms and objectives, retention of a swap advisor or qualified independent representative, credit ratings of the counterparties, collateralization requirements and reporting requirements.

*Objectives of Synthetic Fixed Rate Debt*. To achieve cash flow savings through a synthetic fixed rate, MTA and MTA Bridges and Tunnels have entered into separate pay-fixed, receive-variable interest rate swaps at a cost anticipated to be less than what MTA and MTA Bridges and Tunnels would have paid to issue fixed-rate debt, and in some cases where federal tax law prohibits an advance refunding to synthetically refund debt on a forward basis.

*Fair Value and Mid-Market Value*. Fair value for the swaps is calculated in accordance with GASB Statement No. 72, utilizing the income approach and Level 2 inputs. It incorporates the mid-market valuation, nonperformance risk of either MTA/MTA Bridges and Tunnels or the counterparty, as well as bid/offer. The fair values were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swap.

A negative mid-market value means that MTA and/or MTA Bridges and Tunnels would have to pay the counterparty that approximate amount to terminate the swap. If a swap has a positive mid-market value, in the event of a termination, MTA and/or MTA Bridges and Tunnels would be entitled to receive a termination payment from the counterparty. Consequently, MTA and/or MTA Bridges and Tunnels would be exposed to the credit risk of the counterparty when a swap has a positive mid-market value.

*Terms and Fair Values*. The terms, fair values and counterparties of the outstanding swaps of MTA and MTA Bridges and Tunnels are reflected in the following tables (as of March 31, 2023).

| **Metropolitan Transportation Authority** | | | | | | |
|---|---|---|---|---|---|---|
| **Related Bonds** | **Notional Amount as of 3/31/23 ($ in millions)** | **Effective Date** | **Maturity Date** | **Terms** | **Counterparty and Ratings (S&P / Moody's / Fitch)** | **Fair Value as of 3/31/23 ($ in millions)** |
| TRB 2002D-2 | $200.000 | 01/01/07 | 11/01/32 | Pay 4.45%; receive 69% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | $(31.110) |
| TRB 2005D & 2005E | 225.225 | 11/02/05 | 11/01/35 | Pay 3.561%; receive 67% 1M LIBOR | UBS AG (A+ / Aa3 / AA-) | (17.019) |
| TRB 2005E | 75.075 | 11/02/05 | 11/01/35 | Pay 3.561%; receive 67% 1M LIBOR | AIG Financial Products* (BBB+ / Baa1 / BBB+) | (5.672) |
| TRB 2012G | 355.075 | 11/15/12 | 11/01/32 | Pay 3.563%; receive 67% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | (33.440) |
| DTF 2008A | 257.495 | 03/24/05 | 11/01/31 | Pay 3.3156%; receive 67% 1M LIBOR | Bank of New York Mellon (AA- / Aa2 / AA) | (11.048) |
| **Total** | **$1,112.870** | | | | | **$(98.289)** |

* Guarantor: American International Group, Inc., parent of AIG Financial Products.

| **MTA Bridges and Tunnels** | | | | | | |
|---|---|---|---|---|---|---|
| **Related Bonds** | **Notional Amount as of 3/31/23 ($ in millions)** | **Effective Date** | **Maturity Date** | **Terms** | **Counterparty and Ratings (S&P / Moody's / Fitch)** | **Fair Value as of 3/31/23 ($ in millions)** |
| TBTA 2018E & 2003B(1) | $185.000 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | Citibank, N.A. (A+ / Aa3 / A+) | $(9.227) |
| TBTA 2005B-2 | 185.000 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | (9.227) |
| TBTA 2005B-3 | 185.000 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | BNP Paribas US Wholesale Holdings, Corp. (A+ / Aa3 / AA-) | (9.227) |
| TBTA 2005B-4 | 185.000 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | UBS AG (A+ / Aa3 / AA-) | (9.228) |
| TRB 2002G-1 & 2022E(4), TBTA 2001C(2) & 2005A | 78.825 | 04/01/16 | 01/01/30 | Pay 3.52%; receive 67% 1M LIBOR | U.S. Bank N.A. (AA- / A1 / AA-) | (2.662)(3) |
| TRB 2002G-1 & PMT 2022E(4), TBTA 2001C(2) & 2005A | 78.825 | 04/01/16 | 01/01/30 | Pay 3.52%; receive 67% 1M LIBOR | Wells Fargo Bank, N.A. (A+ / Aa2 / AA-) | (2.663)(3) |
| **Total** | **$897.650** | | | | | **$ (42.234)** |

(1) On October 27, 2021, the 2002F bonds were changed to fixed-rate mode and a portion of the Citi swap was reassigned to the Series 2018E Bonds.

(2) Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C.

(3) MTA Bridges and Tunnels' obligation to make both its regularly scheduled and termination payments under these swap agreements is subordinate to its obligation to pay debt service on MTA Bridges and Tunnels Subordinate Revenue Bonds and from the same revenues that are available to pay termination payments on the other MTA Bridges and Tunnels swap agreements. Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and MTA Bridges and Tunnels is responsible for 10.3% of the transaction.

(4) On November 1, 2022 the TRB Series 2011B Bonds were refunded with PMT Series 2022E-2a Bonds. The portion of the U.S. Bank and Wells Fargo swap associated with TRB Series 2011B Bonds were allocated to the PMT Series 2022E-2a Bonds.

**Risks Associated with the Swap Agreements**

From MTA's and MTA Bridges and Tunnels' perspective, the following risks are generally associated with swap agreements:

- Credit Risk – The risk that a counterparty becomes insolvent or is otherwise not able to perform its financial obligations. To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings. Generally, MTA's and MTA Bridges and Tunnels' swap agreements contain netting provisions under which transactions executed with a single counterparty are netted to determine collateral amounts. Collateral may be posted with a third-party custodian in the form of cash, U.S. Treasury securities, or certain federal agency securities. MTA and MTA Bridges and Tunnels require their counterparties to fully collateralize if ratings fall below certain levels (in general, at the Baa1/BBB+ or Baa2/BBB levels), with partial posting requirements at higher rating levels (details on collateral posting discussed further under "*Collateralization/Contingencies*" below). As of March 31, 2023, all of the valuations were in liability positions to MTA and MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

  The following table shows, as of March 31, 2023, the diversification, by percentage of total notional amount, among the various counterparties that have entered into ISDA Master Agreements with MTA and/or MTA Bridges and Tunnels. The notional amount totals below include all swaps.

| Counterparty | S&P | Moody's | Fitch | Notional Amount (in millions) | % of Total Notional Amount |
|---|---|---|---|---|---|
| JPMorgan Chase Bank, NA | A+ | Aa2 | AA | $740.075 | 36.81% |
| UBS AG | A+ | Aa3 | AA- | 410.225 | 20.40 |
| The Bank of New York Mellon | AA- | Aa2 | AA | 257.495 | 12.81 |
| Citibank, N.A. | A+ | Aa3 | A+ | 185.000 | 9.20 |
| BNP US Wholesale Holdings, Corp. | A+ | Aa3 | AA- | 185.000 | 9.20 |
| U.S. Bank National Association | AA- | A1 | AA- | 78.825 | 3.92 |
| Wells Fargo Bank, N.A. | A+ | Aa2 | AA- | 78.825 | 3.92 |
| AIG Financial Products Corp. | BBB+ | Baa2 | BBB+ | 75.075 | 3.73 |
| **Total** | | | | **$2,010.520** | **100.00%** |

- Interest Rate Risk – MTA and MTA Bridges and Tunnels are exposed to interest rate risk on the interest rate swaps. On the pay-fixed, receive-variable interest rate swaps, as LIBOR, or any successor benchmark rate, decreases, MTA and MTA Bridges and Tunnels' net payments on the swaps increase. To address the LIBOR cessation occurring in 2023, MTA has adhered to the ISDA 2020 IBOR Fallback Protocol.

- Basis Risk – The risk that the variable rate of interest paid by the counterparty under the swap and the variable interest rate paid by MTA or MTA Bridges and Tunnels on the associated bonds may not be the same. If the counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under the swap agreement does not fully reimburse MTA or MTA Bridges and Tunnels for their interest payment on the associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there is a net benefit to MTA or MTA Bridges and Tunnels.

- Termination Risk – The risk that a swap agreement will be terminated and MTA or MTA Bridges and Tunnels will be required to make a swap termination payment to the counterparty and, in the case of a swap agreement which was entered into for the purpose of creating a synthetic fixed rate for an advance refunding transaction may also be required to take action to protect the tax-exempt status of the related refunding bonds.

  The ISDA Master Agreement sets forth certain termination events applicable to all swaps entered into by the parties to that ISDA Master Agreement. MTA and MTA Bridges and Tunnels have entered into separate ISDA Master Agreements with each counterparty that govern the terms of each swap with that counterparty, subject to individual terms negotiated in a confirmation. MTA and MTA Bridges and Tunnels are each subject to termination risk if its credit ratings fall below certain specified thresholds or if it commits a specified event of default or other specified event of termination. If, at the time of termination, a swap was in a liability position to MTA or MTA Bridges and Tunnels, a termination payment would be owed by MTA or MTA Bridges and Tunnels to the counterparty, subject to applicable netting arrangements.

The following tables set forth the Additional Termination Events for MTA/MTA Bridges and Tunnels and its counterparties.

| MTA Transportation Revenue | | |
|---|---|---|
| **Counterparty Name** | **MTA** | **Counterparty** |
| AIG Financial Products Corp.; JPMorgan Chase Bank, NA; UBS AG | Below Baa3 (Moody's) or BBB- (S&P)*† | Below Baa3 (Moody's) or BBB- (S&P)* †‡ |

* Equivalent Fitch rating is replacement for Moody's or S&P.

† The Additional Termination Event is also triggered if a relevant rating is withdrawn or no rating exists from Moody's and S&P.

‡ In all cases except JPMorgan Chase Bank, N.A. counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.

| MTA Dedicated Tax Fund | | |
|---|---|---|
| **Counterparty Name** | **MTA** | **Counterparty** |
| Bank of New York Mellon | Below BBB (S&P) or BBB (Fitch)* | Below A3 (Moody's) or A- (S&P) † |

* Equivalent Moody's rating is replacement for S&P or Fitch. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from S&P and Fitch.

† Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

| MTA Bridges and Tunnels Senior Lien | | |
|---|---|---|
| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
| BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG | Below Baa2 (Moody's) or BBB (S&P)* | Below Baa1 (Moody's) or BBB+ (S&P)* |

* Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn or no rating exists from Moody's and S&P.

| MTA Bridges and Tunnels Subordinate Lien | | |
|---|---|---|
| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
| U.S. Bank National Association; Wells Fargo Bank, N.A. | Below Baa2 (Moody's) or BBB (S&P)* | Below Baa2 (Moody's) or BBB (S&P) † |

* Equivalent Fitch rating is replacement for Moody's or S&P. If not below investment grade, MTA Bridges and Tunnels may cure such Termination Event by posting collateral at a zero threshold. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

† Equivalent Fitch rating is replacement for Moody's or S&P. The Additional Termination Event is also triggered if a relevant rating is withdrawn for credit-related reasons or no rating exists from Moody's and S&P.

- MTA and MTA Bridges and Tunnels' ISDA Master Agreements provide that the payments under one transaction will be netted against other transactions entered into under the same ISDA Master Agreement. Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.

- Rollover Risk – The risk that the swap agreement matures or may be terminated prior to the final maturity of the associated bonds on a variable rate bond issuance, and MTA or MTA Bridges and Tunnels may be exposed to then market rates and cease to receive the benefit of the synthetic fixed rate for the duration of the bond issue. The following debt is exposed to rollover risk:

| Associated Bond Issue | Bond Maturity Date | Swap Termination Date |
|---|---|---|
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells Fargo) | January 1, 2032 | January 1, 2030 |
| MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2018F (swap with Citibank, N.A.) | November 1, 2032 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.) | January 1, 2033 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.) | November 1, 2041 | January 1, 2030 (U.S. Bank/Wells Fargo)<br>January 1, 2032 (Citibank) |
| MTA Bridges and Tunnels Payroll Mobility Tax Senior Lien Variable Rate Refunding Green Bonds, Subseries 2022E-2a (swaps with U.S. Bank/Wells Fargo) | November 1, 2041 | January 1, 2030 |

*Collateralization/Contingencies*. Under the majority of the swap agreements, MTA and/or MTA Bridges and Tunnels is required to post collateral in the event its credit rating falls below certain specified levels. The collateral posted is to be in the form of cash, U.S. Treasury securities, or certain federal agency securities, based on the valuations of the swap agreements in liability positions and net of the effect of applicable netting arrangements. If MTA and/or MTA Bridges and Tunnels do not post collateral, the swap(s) may be terminated by the counterparty(ies).

As of March 31, 2023, the aggregate mid-market valuation of MTA's swaps subject to collateral posting agreements was ($93.434) million; as of this date, MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of March 31, 2023, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was ($42.654) million; as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

The following tables set forth the ratings criteria and threshold amounts applicable to MTA/MTA Bridges and Tunnels and its counterparties.

| MTA Transportation Revenue | | |
|---|---|---|
| **Counterparty** | **MTA Collateral Thresholds (based on highest rating)** | **Counterparty Collateral Thresholds (based on highest rating)** |
| AIG Financial Products Corp.;<br>JPMorgan Chase Bank, NA;<br>UBS AG | Baa1/BBB+: $10 million<br>Baa2/BBB & below: Zero | Baa1/BBB+: $10 million<br>Baa2/BBB & below: Zero |

Note: Based on Moody's and S&P ratings. In all cases except JPMorgan Chase Bank, NA counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.

| MTA Dedicated Tax Fund | | |
|---|---|---|
| **Counterparty** | **MTA Collateral Thresholds** | **Counterparty Collateral Thresholds (based on lowest rating)** |
| Bank of New York Mellon | N/A – MTA does not post collateral | Aa3/AA- & above: $10 million<br>A1/A+: $5 million<br>A2/A: $2 million<br>A3/A-: $1 million<br>Baa1/BBB+ & below: Zero |

Note: Counterparty thresholds based on Moody's and S&P ratings. Fitch rating is replacement for either Moody's or S&P.

| MTA Bridges and Tunnels Senior Lien | | |
|---|---|---|
| **Counterparty** | **MTA Bridges and Tunnels Collateral Thresholds (based on highest rating)** | **Counterparty Collateral Thresholds (based on highest rating)** |
| BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG | Baa1/BBB+: $30 million<br>Baa2/BBB: $15 million<br>Baa3/BBB- & below: Zero | A3/A-: $10 million<br>Baa1/BBB+ & below: Zero |

Note: MTA Bridges and Tunnels thresholds based on Moody's, S&P, and Fitch ratings. Counterparty thresholds based on Moody's and S&P ratings; Fitch rating is replacement for Moody's or S&P.

| MTA Bridges and Tunnels Subordinate Lien | | |
|---|---|---|
| **Counterparty** | **MTA Bridges and Tunnels Collateral Thresholds (based on lowest rating)** | **Counterparty Collateral Thresholds (based on lowest rating)** |
| U.S. Bank National Association; Wells Fargo Bank, N.A. | Baa3/BBB- & below: Zero<br>*(note: only applicable as cure for Termination Event)* | Aa3/AA- & above: $15 million<br>A1/A+ to A3/A-: $5 million<br>Baa1/BBB+ & below: Zero |

Note: Thresholds based on Moody's and S&P ratings. Fitch rating is replacement for Moody's or S&P.

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## TRANSPORTATION REVENUE BONDS

### General

There is $20,749,602,500 aggregate principal amount of outstanding Transportation Revenue Bonds as of April 28, 2023. The following **TRB Table 1** sets forth, on a cash basis, the debt service on outstanding MTA Transportation Revenue Bonds as of April 28, 2023.

**TRB Table 1 -- Aggregate Debt Service**
**($ in thousands)**

| Year Ending December 31 | Aggregate Debt Service(1)(2)(3)(4) |
|---|---|
| 2023 | $ 1,579,040 |
| 2024 | 1,557,367 |
| 2025 | 1,472,148 |
| 2026 | 1,535,496 |
| 2027 | 1,463,193 |
| 2028 | 1,430,968 |
| 2029 | 1,498,428 |
| 2030 | 1,545,432 |
| 2031 | 1,687,579 |
| 2032 | 1,713,642 |
| 2033 | 1,444,188 |
| 2034 | 1,435,617 |
| 2035 | 1,366,407 |
| 2036 | 1,212,858 |
| 2037 | 1,203,037 |
| 2038 | 1,229,107 |
| 2039 | 1,131,983 |
| 2040 | 1,129,739 |
| 2041 | 1,028,461 |
| 2042 | 998,345 |
| 2043 | 966,067 |
| 2044 | 979,440 |
| 2045 | 893,774 |
| 2046 | 869,549 |
| 2047 | 913,400 |
| 2048 | 889,478 |
| 2049 | 827,052 |
| 2050 | 564,263 |
| 2051 | 282,567 |
| 2052 | 282,812 |
| 2053 | 233,445 |
| 2054 | 233,687 |
| 2055 | 171,225 |
| 2056 | 63,684 |
| 2057 | 10,483 |
| **Total** | **$35,843,963** |

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread; Subseries 2002G-1 Bonds at an assumed rate of 4.0% plus the current fixed spread, except Subseries 2002G-1g Bonds at an assumed rate of 4.0%; fixed rate mandatory tender bonds at their respective fixed rates prior to the mandatory tender date; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months for variable rate bonds, floating rate notes and direct purchases.

(3) Excludes debt service on all outstanding Bond Anticipation Notes and Revenue Anticipation Notes.

(4) Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the Transportation Resolution.

Under State law, the Transportation Revenue Bonds are MTA's special obligations, which means that they are payable solely from a gross lien on the money pledged for payment under the Transportation Resolution. They are not MTA's general obligations.

The Transportation Resolution and the form of the Interagency Agreement relating thereto have been filed with the MSRB through EMMA, and are incorporated by specific cross-reference herein. In addition, for convenience, copies of the Transportation Resolution and the Interagency Agreement can be obtained at no cost on MTA's investor website under "Debt Portfolio Information – Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Capitalized terms used under this caption "TRANSPORTATION REVENUE BONDS" not otherwise defined herein have the meanings set forth in the Transportation Resolution.

**Pledged Transportation Revenues Gross Lien and Rate Covenant**

MTA receives "transportation revenues" directly and through certain subsidiaries (currently, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus) and affiliates (currently, MTA New York City Transit and MaBSTOA), and its receipts from many of these sources are pledged for the payment of Transportation Revenue Bonds. MTA and its subsidiaries and affiliates also receive operating subsidies from MTA Bridges and Tunnels and a number of other governmental sources. The Transportation Resolution provides that bondholders are to be paid from pledged revenues prior to the payment of operating or other expenses and as described in more detail below. The Transportation Resolution permits MTA to issue revenue anticipation notes that are secured by Operating Subsidies prior to the payment of debt service on the Transportation Revenue Bonds. See "TRANSPORTATION REVENUE BONDS – Revenue Anticipation Notes Authorized by the Resolution" below.

MTA has covenanted to impose fares and other charges so that pledged revenues, together with other available moneys, will be sufficient to cover all debt service and operating and capital costs of the systems. Debt service on Transportation Revenue Bonds issued for transit projects is payable from pledged revenues legally available to the respective transit operators, and debt service on Transportation Revenue Bonds issued for commuter projects is payable from pledged revenues legally available to the respective commuter operators. In the event there are insufficient revenues available therefor, MTA may avail itself of Interagency Loans to the extent available.

**TRB Table 2a** sets forth by general category the amount of pledged revenues, calculated in accordance with the Transportation Resolution, and the resulting debt service coverage for the five years ended December 31, 2022. A general description of the pledged revenues in the general categories referenced in **TRB Table 2a** follows the table, and a more detailed description is set forth under the heading "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES".

For the years 2018-2022, **TRB Table 2a** is based on the historical audited financial statements of MTA and its subsidiaries, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus, and MTA New York City Transit and its subsidiary MaBSTOA, on a cash basis. The audited financial statements for MTA and MTA New York City Transit covered by TRB Table 2a are included herein by specific cross-reference and should be read in connection with this information. The information in **TRB Table 2a** may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and the notes thereto.

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**TRB Table 2a**
**Summary of Pledged Revenues (Calculated in Accordance with the Transportation Resolution)**
**Historical Cash Basis ($ in millions)[1]**

| | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| **Revenues from Systems Operations** | | | | | |
| Fares from Transit System | $ 4,454 | $ 4,592 | $ 1,939 | $2,332 | $2,944 |
| Fares from Commuter System | 1,481 | 1,526 | 517 | 557 | 902 |
| Fares from MTA Bus | 242 | 245 | 100 | 144 | 185 |
| Other Income[2] | 280 | 278 | 207 | 197 | 215 |
| **Subtotal – Operating Revenues** | **$6,457** | **$6,641** | **$2,763** | **$3,230** | **$4,245** |
| **Non-Operating Revenues**[3] | | | | | |
| Revenues from MTA Bridges and Tunnels Surplus | $692 | $788 | $495 | $928 | $1,193 |
| State and Local General Operating Subsidies[4] | $375 | $340 | $365 | $408 | $368 |
| NYC Transportation Assistance Fund - General Transportation Account[5] | - | 0 | 2 | 2 | $2 |
| Special Tax-Supported Operating Subsidies | | | | | |
| DTF Excess[6] | 250 | 268 | 180 | 198 | 174 |
| MMTOA Receipts | 1,687 | 1,824 | 1,564 | 2,247 | 2,601 |
| Urban Tax | 656 | 668 | 377 | 429 | 729 |
| MRT-2 Distribution[7] | 25 | 12 | 12 | 12 | 12 |
| MTA Aid Trust Account Receipts[8] | 273 | 311 | 249 | 263 | 263 |
| Payroll Mobility Tax Receipts[8] | 1,483 | 1,561 | 1,561 | 1,668 | 1,596 |
| Payroll Mobility Revenue Offset Funds[9] | 244 | 244 | 195 | 293 | 244 |
| Subtotal Special Tax-Supported Operating Subsidies | $4,617 | $4,888 | $4,139 | $5,111 | $5,620 |
| Station Maintenance and Service Reimbursements | 530 | 647 | 637 | 795 | 797 |
| City Subsidy for MTA Bus | 464 | 669 | 355 | 456 | 522 |
| Income from Investments[10] | 55 | 50 | 22 | 4 | 17 |
| **Subtotal – Non-Operating Revenues** | **$6,734** | **$7,382** | **$6,015** | **$7,704** | **$8,519** |
| **Total Transportation Resolution Pledged Revenues** | **$13,190** | **$14,023** | **$8,778** | **$10,934** | **$12,763** |
| **Debt Service[11]** | **$1,457** | **$1,751** | **$1,989** | **$1,852** | **$1,780** |
| **Debt Service Coverage from Pledged Revenues** | **9.1x** | **8.0x** | **4.4x** | **5.9x** | **7.2x** |

(1) Totals may not add due to rounding

(2) Other income in the case of the Transit System includes advertising revenue, interest income on certain operating funds, station concessions, Transit Adjudication Bureau collections, rental income and miscellaneous. Other income in the case of the Commuter System includes advertising revenues, interest income on certain operating funds, concession revenues (excluding Grand Central Terminal and Penn Station concessions), rental income and miscellaneous. MTA Bus other incomes is also included.

(3) The Transportation Resolution permits MTA to issue revenue anticipation notes that are secured by operating subsidies prior to the payment of debt service on the Bonds. See discussion under "*Revenue Anticipation Notes Authorized by the Resolution*" later in this "TRANSPORTATION REVENUE BONDS" section.

(4) State and Local General Operating Subsidies are lower in 2019 due to delay in receipt of the City's December 18-b payment.

(5) The 2018-2019 State Enacted Budget included a new revenue stream for MTA to provide a source of funding for the Subway Action Plan, outer borough transit improvements, and other MTA needs. Such new revenues consist of certain statutory surcharges and fines, including a surcharge beginning January 1, 2019, on for-hire vehicle trips entirely within the State that start or terminate in, or traverse, Manhattan below 96th Street. Revenues from this surcharge will be deposited into a New York City Transportation Assistance Fund and disbursed to three sub-accounts established in such fund in the following order: a Subway Action Plan account, an Outer Borough Transportation account, and the General Transportation account. Additionally, beginning in 2020, the City began enforcing bus lane violations and pursuant to Chapter 59 of the Laws of 2018, the fines and penalties deposit into the General Transportation Account.

(6) Calculated by subtracting the debt service payments on the Dedicated Tax Fund Bonds from the MTTF Receipts described under the caption "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – DEDICATED TAX FUND BONDS".

(7) Funds are for MTA Bus portion of debt service, pursuant to Board authorization in December 2007.

(8) Calculated by subtracting the debt service payments on Payroll Mobility Tax Resolution Obligations from the combined Mobility Tax Receipts and ATA Receipts, which are pledged revenues for the Payroll Mobility Tax Resolution Obligations described under the caption "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – PAYROLL MOBILITY TAX OBLIGATIONS".

(9) In prior Annual Disclosure Statements, PMT Revenue Offset Receipts were included in the PMT Receipts. Beginning with the 2021 Annual Disclosure Statement, PMT Revenue Offset Receipts are presented separately because such revenues do not constitute pledged revenues under the PMT Resolutions.

(10) Consists of investment income on capital program funds held for the benefit of the Transit and Commuter Systems on an accrual basis, and also investment income earned on subsidy accounts.

(11) Debt service was reduced by approximately $54 million in each year of 2018 through 2020, $49 million in 2021 and $48 million in 2022 to reflect Build America Bonds interest credit payments relating to certain outstanding bonds. Such payments do not constitute Pledged Revenues under the Transportation Resolution. Debt service includes payments of interest on bond anticipation notes, including, $101.5 million in 2018, $188.6 million in 2019, $344.5 million in 2020, $253.4 million in 2021, and $133.8 million in 2022.

The following should be noted in **TRB Table 2a**:

- Overall, pledged operating revenues, excluding other income, in 2022 were approximately $1 billion, or 32.9% higher compared to 2021, but still lower than 2019 and prior years due to the decline in ridership during the COVID-19 pandemic. Total pledged revenues in 2022 were lower than 2019 by approximately $1.3 billion, but were $1.8 billion or 16.7% higher than 2021.
- Federal COVID relief receipts are included in *Other Revenue* under **Table 2b** for 2020 through 2022, and are not included in "Other Income" in **Table 2a** because they do not constitute pledged revenues under the Transportation Resolution. Additionally, while Internet Sales Tax and Mansion Tax receipts were made available as a resource for operating expenses for two years during the COVID-19 pandemic, they do not constitute pledged revenues under the Transportation Resolution and are not included in the table above.
- MTA receives monthly payments beginning in May of MMTOA Receipts, with the first quarter of the State's appropriation for the succeeding year advanced into the fourth quarter of MTA's calendar year. MTA continues to monitor the effect of not having MMTOA Receipts available during the first quarter of the calendar year to determine if working capital borrowings may be necessary for cash flow needs.
- "Urban Tax" collection reflects the activity level of certain commercial real estate transactions in the City. In 2018 and 2019, MTA saw an increase in Urban Tax revenues from the prior year, as a result of both an overall stronger commercial real estate economy and an uptick in the value of significantly large transactions (valued over $100 million). In 2020, Urban Tax revenues declined significantly due to lower value of commercial real estate transactions and mortgages during the COVID-19 pandemic. In 2021 and 2022, Urban Tax receipts increased, reflecting optimism in the current value of commercial real estate in the City. Comparing 2022 to 2021, Urban Tax receipts were favorable by $300.2 million, or 69.9%.
- Mortgage recording taxes consist of two separate taxes: the MRT-1 Tax, which is imposed on borrowers of recorded mortgages of real property; and the MRT-2 Tax, which is a tax imposed on the institutional lender. These taxes are collected by the City and the seven other counties within MTA's service area. Mortgage recording taxes are used for Transit and Commuter Systems purposes after the payment of MTA Headquarters' expenses and MTA Bus debt service. The MRT-2 Distribution to TRB Pledged Revenue is made before the funds are used for MTA Headquarters.
- Since 2018, City Subsidy for MTA Bus has increased or decreased primarily due to timing of payments. Since the COVID-19 pandemic, federal relief funds offset the loss of revenue and increase in expenses reflected in the deficits billed to the City for MTA Bus service.

**TRB Table 2b** is the MTA Consolidated Statement of Operations by Category. It sets forth, by major category, for the five years ended December 31, 2022, all of the system operating revenues, expenses, adjustments, prior-year carryover and net cash balance. The information in the table has been prepared by MTA management based on MTA financial plans. The amounts indicated in the "Actual" columns for 2018 to 2022 reflect actual information based on the historical audited financial statements of MTA and its subsidiaries. The information in **TRB Table 2b** may not be indicative of future results of operations and financial condition.

**TRB Table 2b**
**MTA Consolidated Statement of Operations by Category**
**($ in millions)**

| **Non-Reimbursable** | **Actual 2018** | **Actual 2019** | **Actual 2020** | **Actual 2021** | **Actual 2022** |
|---|---|---|---|---|---|
| ***Operating Revenue*** | | | | | |
| Farebox Revenue | $6,155 | $6,351 | $2,625 | $3,048 | $4,024 |
| Toll Revenue | 1,976 | 2,071 | 1,640 | 2,170 | 2,332 |
| Other Revenue | 643 | 706 | 4,571 | 4,706 | 7,657 |
| Capital and Other Reimbursements | 0 | 0 | 0 | 0 | 0 |
| **Total Operating Revenue** | **$8,774** | **$9,128** | **$8,836** | **$9,924** | **$14,014** |
| ***Operating Expense*** | | | | | |
| **Labor Expenses:** | | | | | |
| Payroll | $5,211 | $5,311 | $5,308 | $5,214 | $5,414 |
| Overtime | 1,066 | 974 | 910 | 965 | 1,127 |
| Health & Welfare | 1,230 | 1,339 | 1,298 | 1,405 | 1,423 |
| OPEB Current Payment | 604 | 666 | 633 | 722 | 752 |
| Pensions | 1,336 | 1,493 | 1,510 | 1,410 | 1,339 |
| Other-Fringe Benefits | 881 | 848 | 789 | 816 | 1,009 |
| Reimbursable Overhead | (528) | (470) | (380) | (372) | (400) |
| **Subtotal Labor Expenses** | **$9,799** | **$10,161** | **$10,068** | **$10,160** | **$10,666** |
| **Non-Labor Expenses:** | | | | | |
| Electric Power | $482 | $444 | $385 | $430 | $556 |
| Fuel | 185 | 174 | 103 | 163 | 283 |
| Insurance | (29) | 2 | (5) | 26 | 9 |
| Claims | 438 | 495 | 237 | 426 | 376 |
| Paratransit Service Contracts | 455 | 477 | 326 | 346 | 412 |
| Maintenance and Other Operating Contracts | 678 | 731 | 773 | 765 | 806 |
| Professional Service Contracts | 544 | 442 | 446 | 499 | 555 |
| Materials & Supplies | 637 | 647 | 543 | 486 | 561 |
| Other Business Expenses | 221 | 231 | 152 | 200 | 246 |
| **Subtotal Non-Labor Expenses** | **$3,611** | **$3,642** | **$2,961** | **$3,341** | **$3,804** |
| **Other Expense Adjustments:** | | | | | |
| Other | $129 | $149 | $80 | $21 | $100 |
| General Reserve | 0 | 0 | 335 | (335) | 0 |
| **Subtotal Other Expense Adjustments** | **$129** | **$149** | **$415** | **($314)** | **$100** |
| **Total Operating Expense before Non-Cash Liability Adj.** | **$13,539** | **$13,952** | **$13,443** | **$13,187** | **$14,570** |
| Depreciation | $2,805 | $2,869 | $3,010 | $3,159 | $3,286 |
| OPEB Liability Adjustment | 1,048 | | | | |
| GASB 68 Pension Expense Adjustment | (373) | 13 | (77) | (917) | (393) |
| GASB 75 OPEB Expense Adjustment | | 895 | 978 | 1,075 | 1,084 |
| GASB 87 Lease Adjustment | 1 | 0 | 0 | 0 | 21 |
| Environmental Remediation | 105 | 42 | 123 | 37 | 26 |
| **Total Operating Expense after Non-Cash Liability Adj.** | **$17,124** | **$17,771** | **$17,477** | **$16,541** | **$18,594** |
| Conversion to Cash Basis: Non-Cash Liability Adjs. | ($3,585) | ($3,801) | ($4,034) | ($3,354) | ($4,024) |
| Debt Service | 2,541 | 2,630 | 2,703 | 2,787 | 3,121 |
| **Total Operating Expense with Debt Service** | **$16,079** | **$16,582** | **$16,146** | **$15,974** | **$17,691** |
| Dedicated Taxes and State/Local Subsidies | $7,177 | $7,376 | $6,678 | $7,679 | $8,560 |
| **Net Surplus/(Deficit) After Subsidies and Debt Service** | **($128)** | **($79)** | **($632)** | **$1,628** | **$4,883** |
| Conversion to Cash Basis: GASB Account | 0 | 0 | 0 | 0 | 0 |
| Conversion to Cash Basis: All Other | 379 | 192 | 646 | (961) | (6,049) |
| **CASH BALANCE BEFORE PRIOR-YEAR CARRYOVER** | **$251** | **$113** | **$14** | **$668** | **$(1,166)** |
| **ADJUSTMENTS** | **0** | **0** | **0** | **0** | **0** |
| **PRIOR-YEAR CARRYOVER** | **121** | **372** | **485** | **499** | **1,166** |
| **NET CASH BALANCE** | **$372** | **$485** | **$499** | **$1,166** | **$0** |

## Description of Pledged Revenues

Each of the following pledged revenues is described in more detail under the caption “PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES”:

| Pledged Revenue | Caption in PART 2 |
|---|---|
| Revenues from Systems Operations | |
| Fares from Transit System | "Fares and Tolls – *Transit System Fares"*<br>"Fares and Tolls – *Transit System Fare Reimbursements from the City and the State"* |
| Fares from Commuter System | "Fares and Tolls – *Commuter System Fares"* |
| Fares from MTA Bus | "Fares and Tolls – *MTA Bus Fares"* |
| Other Income | "Miscellaneous Revenues" |
| | |
| Non-Operating Revenues | |
| Revenues from MTA Bridges and Tunnels Surplus | "MTA Bridges and Tunnels Surplus" |
| State and Local General Operating Subsidies | "State and Local General Operating Subsidies" |
| NYC Transportation Assistance Fund – General Transportation Account – including ABLE fines | "Congestion Zone Charges" |
| State and Local General Operating Subsidies | |
| DTF Excess (MTTF) and MMTOA Receipts | "State Special Tax Supported Operating Subsidies" |
| Urban Tax | "Urban Taxes for Transit System" |
| MRT-2 Distribution | "Mortgage Recording Taxes" |
| MTA Aid Trust Account Receipts | "Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts" |
| Payroll Mobility Tax Receipts and Payroll Mobility Revenue Offset Funds | "Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts" |
| Station Maintenance and Service Reimbursements | "Financial Assistance and Service Reimbursements from Local Municipalities" (other than *"MTA Bus Reimbursements from the City"* and *"Paratransit"*) |
| City Subsidy for MTA Bus | "Financial Assistance and Service Reimbursements from Local Municipalities – *MTA Bus Reimbursements from the City"* |

Pledged revenues also include payments made by the City under its agreement with MTA Bus to reimburse MTA Bus the difference between the actual cost of operation of the MTA Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the MTA Bus Routes, as further described under the caption "PART 4. OPERATIONS – MTA BUS COMPANY".

**Factors Affecting Revenues**

The following is a general discussion of factors affecting MTA's revenues. In addition to the factors listed below, the COVID-19 pandemic has had and continues to have an impact on MTA's operations and revenues, the full extent of which is still being evaluated. For further information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis".

*Ridership*. The level of fare revenues depends to a large extent on MTA's ability to maintain and/or increase ridership levels on the Transit, Commuter and MTA Bus Systems. Those ridership levels are affected by safety and the quality and efficiency of systems operations as well as by financial and economic conditions in the New York City metropolitan area. Since the COVID-19 pandemic, primary factors affecting ridership include changes to in-person work patterns and an increase in remote work, decreased non-work related travel, and overall customer sentiment.

*Fare Policy*. MTA, with approval by its Board, determines rate or rates of the fares charged to users of the MTA Transportation System. After adopting operating expense budgets and assessing the availability of governmental subsidies, each makes a determination of fares necessary to operate on a self-sustaining cash basis in compliance with State law and covenants in the Transportation Resolution. Considering the impact of increased fares on riders and on the regional economy, MTA may attempt to reduce costs or obtain additional revenues from other sources, mainly governmental sources, before increasing fares. As a result, even though MTA does not generally need other governmental approvals before setting fares, the amount and timing of fare increases may be affected by federal, State and local government financial conditions, as well as by their respective budgetary and legislative processes. MTA's obligation to obtain approval of fare increases on the New Haven line from CDOT can also affect the amount and timing of fare increases on MTA Metro-North Railroad.

*Ability to Comply with Rate Covenant and Pay Operating and Maintenance Expenses*. The Transit, Commuter and MTA Bus Systems have depended, and are expected to continue to depend, upon government subsidies to meet capital and operating needs. Thus, although MTA is legally obligated by the Transportation Resolution's rate covenant to raise fares sufficient to cover all capital and operating costs together with other available monies, there can be no assurance that there is any level at which Transit, Commuter and MTA Bus Systems fares alone would produce revenues sufficient to comply with the rate covenant, particularly if the current level (or the assumed level in the budget prepared in connection with 2023 and the forecasts prepared in connection with 2024, 2025 and 2026) of collection of dedicated taxes, operating subsidies, and expense reimbursements were to be discontinued or substantially reduced.

*Operating Results and Projections*. Based upon, and at the time of, the adoption of the 2023 February Plan, the budgets of the Related Entities were projected to be in balance for 2023, assuming State assistance of $600 million, with deficits of $1.2 billion projected in 2024 and 2025, and $1.6 billion in 2026.

*2023-2026 Financial Plans*. The 2023 February Plan, 2020-2024 Capital Program and prior and future Capital Programs are interrelated, and any failure to fully achieve the various components of these plans could have an adverse impact on one or more of the other proposals contained in the Financial Plans and Capital Programs, as well as on pledged revenues. See "PART 2. FINANCIAL PLANS AND CAPITAL PROGRAMS".

*MTA Bridges and Tunnels Operating Surplus*. The amount of MTA Bridges and Tunnels operating surplus to be used for the Transit and Commuter Systems is affected by a number of factors, including traffic volume, the timing and amount of toll increases, the operating and capital costs of MTA Bridges and Tunnels Facilities, and the amount of debt service payable from its operating revenues, including debt service on obligations issued for the benefit of MTA's affiliates and subsidiaries and for MTA Bridges and Tunnels' own capital needs, including its bridges and tunnels, and debt service on its CBDTP Second Subordinate Revenue Bond Anticipation Notes for capital costs of the CBD Tolling Program (issued until Capital Lockbox revenues are available for that purpose).

*Government Assistance*. The level and timing of government assistance to MTA may be affected by several different factors, such as:

- Certain subsidy payments by the State may be made only if and to the extent that appropriations have been made by the Legislature and money is available to fund those appropriations.
- The Legislature may not bind or obligate itself to appropriate revenues during a future legislative session, and appropriations approved during a particular legislative session generally have no force or effect after the close of the State fiscal year for which the appropriations are made.
- The State is not bound or obligated to continue to pay operating subsidies to the Transit System and Commuter System or to continue to impose any of the taxes currently funding those subsidies.
- The financial condition of the State, Connecticut, and the City and counties in the MTA Commuter Transportation District, could affect the ability or willingness of the States and local governments to continue to provide general operating subsidies, the City and local governments to continue to provide reimbursements and station maintenance payments, the City to provide subsidies for MTA Bus, SIRTOA, and Paratransit, and the State to continue to make special appropriations.
- Court challenges to the State taxes, tolls, fees, surcharges, fines and other charges that are the sources of various State and City operating subsidies to MTA, if successful, could adversely affect the amount of pledged revenues generated by such State taxes, tolls, fees, surcharges, fines and other charges.

**Security**

Transportation Revenue Bonds are MTA's special obligations payable as to principal (including sinking fund installments), redemption premium, if any, and interest from the security, sources of payment, and funds specified in the Transportation Resolution.

The payment of principal (including sinking fund installments, if any), redemption premium, if any, and interest on the Transportation Revenue Bonds is secured by, among other sources described below, the transportation revenues discussed in the preceding section which are, together with certain other revenues, referred to as "pledged revenues".

The Transportation Resolution has been filed with the MSRB through EMMA and is incorporated by specific cross-reference herein. In addition, for convenience, a copy of the Transportation Resolution can be obtained at no cost on MTA's investor website under "Debt Portfolio Information –Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Holders of Transportation Revenue Bonds are to be paid from pledged revenues after the payment of debt service on revenue anticipation notes and prior to the payment of operating or other expenses of MTA, MTA New York City Transit, MaBSTOA, MTA Long Island Rail Road, MTA Metro-North Railroad and MTA Bus, but subordinate to the payment of Revenue Anticipation Notes. However, MTA's ability to generate major portions of the pledged revenues depends upon its payment of operating and other expenses.

MTA Transportation Revenue Bonds are not a debt of the State or the City, or any other local governmental unit. MTA has no taxing power.

**Revenue Anticipation Notes Authorized by the Resolution**

MTA and MTA New York City Transit have in the past and may, from time to time, in the future issue RANs for their working capital needs and the needs of their respective affiliates and subsidiaries occasioned by delays in the receipt of subsidies or other irregularities in the timing of receipt of revenues. RANs issued under the Transportation Resolution are secured by a lien on Operating Subsidies prior to the lien in favor of the owners of Transportation Revenue Bonds.

Owners of MTA Transportation Revenue Bonds retain a first lien on the other Pledged Revenues, including fares. The maturity date for such RANs may not exceed 18 months. While such RANs can be rolled, the final maturity of the RANs cannot exceed five years from the date of their original issuance.

Operating Subsidies include general operating subsidies from the State and local governments under the State's Section 18-b program; special tax-supported operating subsidies (the MTTF revenues and MMTOA taxes) after the payment of debt service and certain other obligations relating to MTA's Dedicated Tax Fund senior and subordinated bonds; Mobility Tax Receipts after the payment of debt service and certain other obligations relating to senior and subordinated bonds issued under the PMT Resolutions; MTA Bridges and Tunnels operating surplus; Commuter System station maintenance payments; the Urban Taxes; City contributions for MTA Bus; and Congestion Zone Surcharges and Rapid Transit Lane Fines deposited into the General Transportation Account. MTA has additionally secured the RANs with the ATA Receipts after payment of PMT debt service (senior and subordinate).

For a detailed discussion on outstanding RANs see "Non-Capital Program Securities" above.

**Pledge Effected by the Resolution**

The Transportation Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the Transportation Revenue Bonds and Parity Debt, in accordance with their terms and the provisions of the Transportation Resolution the following, referred to as the "trust estate":

- all pledged revenues as described above;
- the net proceeds of certain agreements pledged by MTA to the payment of Transit and Commuter capital projects;
- the proceeds from the sale of Transportation Revenue Bonds, until those proceeds are paid out for an authorized purpose;

- all funds, accounts and subaccounts established by the Transportation Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all Transportation Revenue Bonds, in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt); and
- the Interagency Agreement dated as of April 1, 2006, among MTA, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Bus, MTA New York City Transit and MaBSTOA.

The Trustee may directly enforce an undertaking to operate the Transit System, the Commuter System or the MTA Bus System to ensure compliance with the Transportation Resolution.

Under the Transportation Resolution, the operators of the Transit System, Commuter System and MTA Bus System are obligated to transfer to the Trustee for deposit into the Revenue Fund virtually all pledged revenues as soon as practicable following receipt or, with respect to revenues in the form of cash and coin, immediately after being counted and verified. The pledge of money located in Connecticut may not be effective until that money is deposited under the Transportation Resolution.

**Flow of Revenues**

The Transportation Resolution creates the following funds and accounts:

- Revenue Fund (held by the Trustee);
- Debt Service Fund (held by the Trustee); and
- Proceeds Fund (held by MTA).

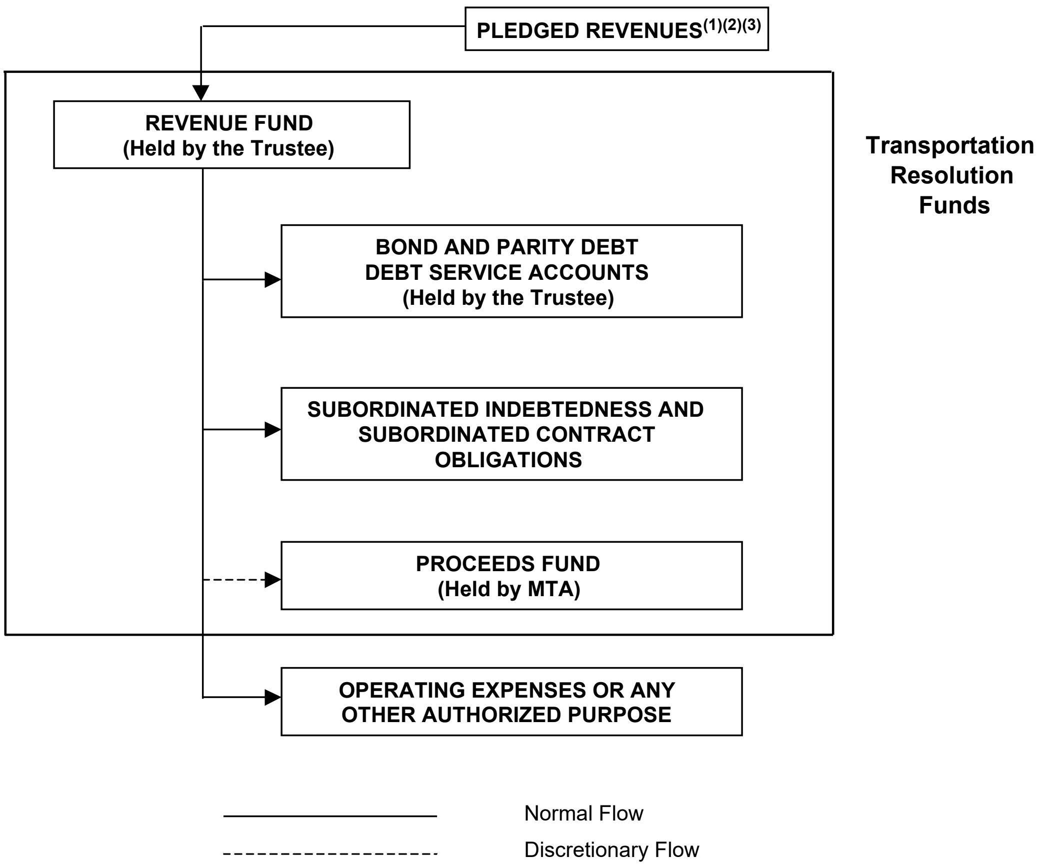
Subject to the payment from the operating subsidies of debt service on RANs, the Transportation Resolution requires the Trustee, promptly upon receipt of the pledged revenues in the Revenue Fund, to deposit the revenues into the following funds and accounts, in the amounts and in the order of priority, as follows:

- to the debt service accounts, the net amount, if any, required to make the amount in the debt service accounts equal to the accrued debt service for Transportation Revenue Bonds and Parity Debt to the last day of the current calendar month;
- to pay, or accrue to pay, principal of and interest on any Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligation;
- to MTA for deposit in the Proceeds Fund, as directed by one of MTA's authorized officers, to fund Capital Costs of the Transit System, Commuter System and MTA Bus System; and
- to accounts held by MTA or any of the other Related Entities for payment of operating expenses or any other authorized purpose.

All amounts paid out by MTA or the Trustee either for an authorized purpose (excluding transfers to any other pledged fund or account) or under the last bullet point above are free and clear of the lien and pledge created by the Transportation Resolution.

The following chart illustrates the basic elements of the flow of revenues described above:

**TRANSPORTATION REVENUE OBLIGATIONS - FLOW OF PLEDGED REVENUES**

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(1) Includes "Operating Subsidies" pledged to the payment of RANs prior to the payment of principal and interest on Transportation Revenue Bonds.

(2) MTA has issued the PMT BAN under the MTA PMT Bond Resolution, and MTA Bridges and Tunnels has issued multiple series of Payroll Mobility Tax Senior Lien Bonds under the TBTA PMT Bond Resolution and expects that it may continue to issue additional obligations secured by the Mobility Tax Receipts (but not the PMT Revenue Offset) and the ATA Receipts. See "*MTA Capital Program Bonds – MTA's Core Credits – Payroll Mobility Tax Senior Lien Obligations*" and "*MTA Capital Program Bonds – MTA's Core Credits – Payroll Mobility Tax Bond Anticipation Notes*".

(3) While MTA's authorization to issue deficit bonds payable from numerous sources, including Mobility Tax Receipts and ATA Receipts, expires on December 31, 2022, MTA is authorized to issue other working capital obligations under the MTA PMT Resolution.

## Covenants

*Rate Covenants.* MTA must fix the Transit and Commuter and MTA Bus fares and other charges and fees to be sufficient, together with other money legally available or expected to be available, including from government subsidies:

- to pay the debt service on all the Transportation Revenue Bonds;
- to pay any Parity Debt;
- to pay any Subordinated Indebtedness and amounts due on any Subordinated Contract Obligations; and
- to pay, when due, all operating and maintenance expenses and other obligations of its transit and commuter affiliates and subsidiaries.

*Operating and Maintenance Covenants.*

- MTA, MaBSTOA, MTA New York City Transit, MTA Bus, MTA Metro-North Railroad and MTA Long Island Rail Road are required at all times to operate, or cause to be operated, the systems properly and in a sound and economical manner and maintain, preserve, reconstruct and keep the same or cause the same to be maintained, preserved, reconstructed and kept in good repair, working order and condition.

- Nothing in the Transportation Resolution prevents MTA from ceasing to operate or maintain, or from leasing or disposing of, all or any portion of the systems if, in MTA's judgment it is advisable to do so, but only if the operation is not essential to the maintenance and continued operation of the rest of the systems and this arrangement does not materially interfere with MTA's ability to comply with MTA's rate covenants.

*Additional Bonds*. The Transportation Resolution permits MTA to issue additional Transportation Revenue Bonds and to issue or enter into Parity Debt, from time to time, to pay or provide for the payment of qualifying costs, without meeting any specific debt-service-coverage level, as long as MTA certifies to meeting the rate covenant described above for the year in which the additional debt is being issued. Under the Transportation Resolution, MTA may only issue additional Transportation Revenue Bonds if those bonds are issued to fund projects pursuant to a CPRB-approved MTA Capital Program, if an approved Capital Program is then required.

There is no covenant with bondholders limiting the aggregate principal amount of Revenue Anticipation Notes or additional Transportation Revenue Bonds or Parity Debt that MTA may issue. There is a limit under current State law that covers the Transportation Revenue Bonds and certain other securities. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS—GENERAL—Financing of Capital Projects and Statutory Ceiling" above for a description of the current statutory cap.

*Refunding Bonds*. MTA may issue Transportation Revenue Bonds to refund all or any portion of the Transportation Revenue Bonds or Parity Debt. Transportation Revenue Bonds may also be issued to refund any pre-existing indebtedness of any Related Entity issued to fund transit and commuter projects. The MTA Board has adopted a refunding policy which must be complied with prior to the issuance of any refunding Bonds.

*Non-Impairment*. Under State law, the State has pledged to MTA that it will not limit or change MTA's powers or rights in such a way that would impair the fulfillment of MTA's promises to holders of the Transportation Revenue Bonds.

*No Bankruptcy*. State law specifically prohibits MTA or the other Related Entities from filing a voluntary bankruptcy petition under Chapter 9 of the Federal Bankruptcy Code, so long as any Transportation Revenue Bonds are outstanding. The State has covenanted not to change the law to permit MTA or its affiliates or subsidiaries to file such a petition. Chapter 9 does not provide authority for creditors to file involuntary bankruptcy proceedings against MTA or other Related Entities.

**Parity Debt**

MTA may incur Parity Debt pursuant to the terms of the Transportation Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the Transportation Resolution with respect to Transportation Revenue Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

**Subordinated Obligations**

*Subordinated Contract Obligations*. On December 21, 2022, the MTA Board approved and provided authorization for the issuance of a Subordinated Contract Obligation under the Transportation Resolution to make funds available, in an amount not to exceed $350 million for the payment of the Capital Availability Payment under the ADA Project Agreement. See "Alternative Capital Program Financing – ADA Elevator Project – P3 Financing." The Subordinated Contract obligation will be payable out of, and secured by a pledge and lien subordinate in all respects to, the lien on and pledge created by the Transportation Resolution for the payment of Transportation Revenue Bonds and Parity Debt issued thereunder, and on parity in all respects with any lien and pledge created by the Transportation Resolution for the payment of interest on obligation anticipation notes issued thereunder. Such lien and pledge will be on parity with or senior to the lien on any Subordinated Contract Obligations issued under the Transportation Resolution while the Subordinated Contract Obligation relating to the Capital Availability Payment is outstanding. As of April 28, 2023, there are no subordinated contract obligations outstanding; however, MTA expects to incur the Subordinated Contract Obligation in early May 2023. See "– TRANSPORTATION REVENUE BONDS – Pledge Affected by the Resolution".

**MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS**

There is $8,404,330,000 aggregate principal amount of outstanding MTA Bridges and Tunnels General Revenue Bonds as of April 28, 2023. The following **MTA Bridges and Tunnels Senior Lien Table 1** sets forth, on a cash basis, the debt service on the outstanding MTA Bridges and Tunnels General Revenue Bonds as of April 28, 2023.

**MTA Bridges and Tunnels Senior Lien Table 1**
**Aggregate Senior Lien Debt Service**
**($ in thousands)**

| Year Ending December 31 | Aggregate Debt Service[(1)(2)(3)] |
|---|---|
| 2023 | $ 506,470 |
| 2024 | 654,777 |
| 2025 | 727,290 |
| 2026 | 742,145 |
| 2027 | 741,389 |
| 2028 | 748,957 |
| 2029 | 691,763 |
| 2030 | 684,737 |
| 2031 | 689,705 |
| 2032 | 693,878 |
| 2033 | 435,753 |
| 2034 | 434,128 |
| 2035 | 441,707 |
| 2036 | 448,694 |
| 2037 | 448,879 |
| 2038 | 448,481 |
| 2039 | 315,937 |
| 2040 | 320,158 |
| 2041 | 411,331 |
| 2042 | 304,518 |
| 2043 | 256,214 |
| 2044 | 329,336 |
| 2045 | 293,470 |
| 2046 | 316,616 |
| 2047 | 296,571 |
| 2048 | 276,572 |
| 2049 | 182,678 |
| 2050 | 161,655 |
| 2051 | 147,928 |
| 2052 | 147,925 |
| 2053 | 148,201 |
| 2054 | 148,400 |
| 2055 | 81,986 |
| 2056 | 82,192 |
| 2057 | 34,261 |
| Total | $13,794,700 |

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread. Series 2001C Bonds and a portion of Series 2005A Bonds at an assumed rate of 4.0%, interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

(3) Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the MTA Bridges and Tunnels Senior Resolution.

**Sources of Payment**

MTA Bridges and Tunnels generates its revenues from all tolls, revenues, rates, fees, charges, rents, and proceeds of use and occupancy insurance on any portion of its tunnels, bridges and other facilities, including the net revenues of the Battery Parking Garage, and of any other insurance which insures against loss of revenues therefrom payable to or for the account of MTA Bridges and Tunnels, and MTA Bridges and Tunnels' receipts from those sources, after payment of MTA Bridges and Tunnels' operating expenses, are pledged to the holders of the MTA Bridges and Tunnels General Revenue Bonds for payment, as described below.

MTA Bridges and Tunnels is required to fix and collect tolls for the MTA Bridges and Tunnels Facilities, and MTA Bridges and Tunnels' power to establish toll rates is not subject to the approval of any governmental entity. For more information relating to MTA Bridges and Tunnels' power to establish tolls, see "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Toll Rates".

**MTA Bridges and Tunnels Senior Lien Table 2** sets forth, by MTA Bridges and Tunnels facility, the amount of revenues for each of the last five years, as well as operating expenses. The audited financial statements for MTA and MTA Bridges and Tunnels for the years 2022 and 2021 covered by **MTA Bridges and Tunnels Senior Lien Table 2** are included herein by specific cross-reference and should be read in connection with this information. The information in **MTA Bridges and Tunnels Senior Lien Table 2** may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and notes.

**MTA Bridges and Tunnels Senior Lien Table 2**
**Historical Revenues, Operating Expenses and Senior Lien Debt Service**
**($ in thousands)[1]**

| Bridge and Tunnel Revenues: | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Robert F. Kennedy Bridge | $449,086 | $463,134 | $355,004 | $466,908 | $503,541 |
| Verrazzano-Narrows Bridge | 434,963 | 453,343 | 386,978 | 515,132 | 544,527 |
| Bronx Whitestone Bridge | 334,325 | 352,093 | 282,204 | 379,286 | 401,877 |
| Throgs Neck Bridge | 345,992 | 356,078 | 293,274 | 348,927 | 368,082 |
| Henry Hudson Bridge | 84,422 | 88,568 | 59,958 | 91,874 | 97,581 |
| Marine Parkway Gil Hodges Memorial Bridge | 17,526 | 18,507 | 16,560 | 20,381 | 21,208 |
| Cross Bay Veterans' Memorial Bridge | 18,647 | 19,543 | 17,741 | 21,392 | 21,626 |
| Queens Midtown Tunnel | 175,919 | 198,866 | 134,251 | 192,306 | 221,532 |
| Hugh L. Carey Tunnel | 114,783 | 121,279 | 93,783 | 133,671 | 152,410 |
| Total Bridge and Tunnel Revenues: | $1,975,663 | $2,071,411 | $1,639,753 | $2,169,877 | $2,332,384 |
| Investment Income and Other[2] | 30,106 | 31,921 | 22,716 | 24,726 | 31,251 |
| **Total Revenues** | **$2,005,769** | **$2,103,332** | **$1,662,469** | **$2,194,603** | **$2,363,636** |
| Operating Expenses[3] | | | | | |
| Personnel Costs[4] | $275,410 | $286,792 | $254,547 | $234,823 | $225,071 |
| Maintenance and Other Operating Expenses | 256,210 | 257,028 | 212,188 | 227,203 | 247,772 |
| **Total Operating Expenses** | **$531,620** | **$543,820** | **$466,735** | **$462,026** | **$472,843** |
| **Net Revenues Available for Debt Service** | **$1,474,149** | **$1,559,512** | **$1,195,734** | **$1,732,577** | **$1,890,793** |
| **MTA Bridges and Tunnels Senior Lien Debt Service[5]** | **$551,552** | **$558,253** | **$564,261** | **$586,373** | **$581,186** |
| **Senior Lien Coverage** | **2.67x** | **2.79x** | **2.12x** | **2.95x** | **3.25x** |

(1) Numbers may not add due to rounding.

(2) Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service funds that were applied to the payment of debt service as follows for the years 2018 through 2022, respectively (in thousands); $3,582, $4,793, $970, $116, and $3,167. The amounts set forth in this footnote are derived from MTA Bridges and Tunnels audited financial statements for the years 2018 through 2022.

(3) Excludes depreciation, includes GASB 75 OPEB Expense Adjustment, GASB 68 Pension Expense Adjustment, beginning as of 2021, GASB 87 Lease Adjustment.

(4) Includes regular and overtime salaries and fringe annual benefits, less capitalized personnel reimbursements.

(5) Net of Build America Bond interest subsidies of $8.5 million in 2018, $8.4 million in 2019, $8.6 million in 2020 and $8.5 million in each of 2021 and 2022.

The following should be noted in **MTA Bridges and Tunnels Senior Lien Table 2**:

- Bridge and Tunnel Revenues – In 2020, traffic and revenues were negatively affected during the height of the COVID-19 pandemic. In 2021, paid vehicle crossings rebounded to 307.3 million, an increase of 21.4% from 2020. There were 326.3 million paid vehicle crossings in 2022, an increase of 6.2% compared to 2021, and less than 1% lower than the 329.4 million paid vehicle crossings in 2019. In addition a toll increase was implemented in April 2021.

- Operating Expenses - Personnel Costs – The increase in 2019 was primarily due to an increase in retirement and other employee benefits. The decrease in 2020 was primarily due to a decrease in salaries and benefits and other post-employment benefits. The decreases in 2021 and 2022 were primarily due to a decrease in salaries and benefits and other post-employment benefits as a result of lower headcount.

- Operating Expenses - Maintenance and Other Operating Expenses – In 2019, there was a slight increase in non-labor expenses due to higher credit card fees associated with the toll increase implemented on March 31, 2019, and general inflationary adjustments across a variety of areas. The decrease in 2020 was primarily due to lower major maintenance and bridge painting costs, lower legal expenses, and lower credit card fees. The increase in 2021 was due to higher legal expenses, credit card fees and insurance, offset by lower major maintenance and bridge painting costs. The increase in 2022 is primarily due to higher major maintenance and bridge painting costs, credit card fees and insurance.

**Security**

MTA Bridges and Tunnels General Revenue Bonds are general obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the MTA Bridges and Tunnels General Revenue Bonds and Parity Debt pursuant to the terms of the MTA Bridges and Tunnels Senior Resolution, after the payment of Operating Expenses.

The MTA Bridges and Tunnels Senior Resolution has been filed with the MSRB through EMMA, and is incorporated by specific cross-reference herein. In addition, for convenience, a copy of the MTA Bridges and Tunnels Senior Resolution can be obtained at no cost on MTA's investor website under "Debt Portfolio Information –Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Capitalized terms used under this caption "MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS" not otherwise defined herein have the meanings set forth in the MTA Bridges and Tunnels Senior Resolution, except that the term "MTA Bridges and Tunnels" is used herein in place of the defined term "TBTA". So, for example, the term "MTA Bridges and Tunnels Facilities" as used herein is referred to in the MTA Bridges and Tunnels Senior Resolution as "TBTA Facilities".

MTA Bridges and Tunnels General Revenue Bonds are not a debt of the State or the City, or any other local governmental unit. MTA Bridges and Tunnels has no taxing power.

**Pledge Effected by the MTA Bridges and Tunnels Senior Resolution**

The Bonds and Parity Debt issued in accordance with the MTA Bridges and Tunnels Senior Resolution are secured by a net pledge of Revenues after the payment of Operating Expenses.

Pursuant to, and in accordance with, the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels has pledged to the holders of the MTA Bridges and Tunnels General Revenue Bonds a "trust estate", which consists of:

- Revenues;
- the proceeds from the sale of the MTA Bridges and Tunnels General Revenue Bonds; and
- all funds, accounts and subaccounts established by the MTA Bridges and Tunnels Senior Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all MTA Bridges and Tunnels General Revenue Bonds in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

**Revenues and Additional MTA Bridges and Tunnels Projects**

*Revenues from MTA Bridges and Tunnels Facilities*. For purposes of the pledge under the MTA Bridges and Tunnels Senior Resolution, Revenues of MTA Bridges and Tunnels generally include all tolls, revenues, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of the MTA Bridges and Tunnels Facilities (including net revenues derived from the Battery Parking Garage) and of any other insurance which insures against loss of revenues therefrom payable to or for the account of MTA Bridges and Tunnels, and other income and receipts, as received by MTA Bridges and Tunnels directly or indirectly from any of MTA Bridges and Tunnels' operations, including the ownership or operation of any MTA Bridges and Tunnels Facilities, subject to certain exceptions.

MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels are pledged to the payment of debt service on the MTA Bridges and Tunnels General Revenue Bonds.

*CBD Tolling Capital Lockbox Fund*. Moneys deposited into the CBD Tolling Capital Lockbox Fund include tolls from the CBD Tolling Program (anticipated beginning in the fourth quarter of 2024), certain State and City sales taxes and the Mansion Tax. Such moneys are not pledged to the MTA Bridges and Tunnels General Revenue or Subordinate Revenue Bonds, and are statutorily required to be applied to CBD Tolling Program operating and infrastructure costs and transit and commuter capital projects in the 2020-2024 and later MTA Capital Programs. The CBD Tolling Program is an MTA Bridges and Tunnel project for which revenues generated by the MTA Bridges and Tunnels Facilities may be spent (see discussion under "– MTA Capital Program Bonds – *Additional MTA Bridges and Tunnels Projects That Can Become MTA Bridges and Tunnels Facilities*"*)*, but it is not currently a TBTA Facility for which proceeds of bonds issued under the MTA Bridges and Tunnels Senior or Subordinate Resolution may be spent.

*Additional MTA Bridges and Tunnels Projects That Can Become MTA Bridges and Tunnels Facilities*. If MTA Bridges and Tunnels is authorized to undertake another project, whether a bridge or tunnel or the CBD Tolling Program, that project can become an MTA Bridges and Tunnels Facility for purposes of the MTA Bridges and Tunnels Senior Resolution if it is designated as such by MTA Bridges and Tunnels and it satisfies certain conditions more fully described in the MTA Bridges and Tunnels Senior Resolution included by specific cross-reference herein.

**Flow of Revenues**

The MTA Bridges and Tunnels Senior Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Revenue Fund;
- Proceeds Fund;
- Debt Service Fund; and
- General Fund.

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required to pay into the Revenue Fund all Revenues as and when received and available for deposit.

MTA Bridges and Tunnels is required to pay out from the Revenue Fund, on or before the 25th day of each calendar month, the following amounts in the following order of priority:

- payment of reasonable and necessary Operating Expenses or accumulation in the Revenue Fund as a reserve (1) for working capital, (2) for such Operating Expenses the payment of which is not immediately required, including amounts determined by MTA Bridges and Tunnels to be required as an operating reserve, or (3) deemed necessary or desirable by MTA Bridges and Tunnels to comply with orders or rulings of an agency or regulatory body having lawful jurisdiction;
- transfer to the Debt Service Fund, the amount, if any, required so that the balance in the fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month;

- transfer to another person for payment of, or accrual for payment of, principal of and interest on any Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligations; and
- transfer to the General Fund any remaining amount.

All amounts paid out by MTA Bridges and Tunnels for an authorized purpose (excluding transfers to any other pledged Fund or Account), or withdrawn from the General Fund in accordance with the MTA Bridges and Tunnels Senior Resolution, are free and clear of the lien and pledge created by the MTA Bridges and Tunnels Senior Resolution.

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required to use amounts in the General Fund to make up deficiencies in the Debt Service Fund and the Revenue Fund, in that order. Subject to the preceding sentence and any lien or pledge securing Subordinated Indebtedness, the MTA Bridges and Tunnels Senior Resolution authorizes MTA Bridges and Tunnels to release amounts in the General Fund to be paid to MTA Bridges and Tunnels free and clear of the lien and pledge created by the MTA Bridges and Tunnels Senior Resolution.

MTA Bridges and Tunnels is required by law to transfer amounts released from the General Fund to MTA as operating surplus, and a statutory formula determines how MTA allocates that money between the Transit and Commuter Systems.

**Rate Covenant**

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of the sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of Obligations issued in anticipation of such receipt, *but not including* any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year *the greater of*:

- an amount equal to the sum of amounts necessary in such calendar year:
  - to pay all Operating Expenses of MTA Bridges and Tunnels, plus
  - to pay Calculated Debt Service, as well as the debt service on all Subordinated Indebtedness and all Subordinated Contract Obligations, plus
  - to maintain any reserve established by MTA Bridges and Tunnels pursuant to the MTA Bridges and Tunnels Senior Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or
- an amount such that Revenues less Operating Expenses shall equal at least 1.25 times Calculated Debt Service on all MTA Bridges and Tunnels General Revenue Bonds for such calendar year.

For a more complete description of the rate covenant and a description of the minimum tolls that can be charged at the MTA Bridges and Tunnels Facilities, see the MTA Bridges and Tunnels Senior Resolution included by specific cross-reference herein.

**Additional Bonds**

Under the provisions of the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Bonds on a parity with the outstanding MTA Bridges and Tunnels General Revenue Bonds to provide for Capital Costs.

*Certain Additional Bonds for MTA Bridges and Tunnels Facilities*. MTA Bridges and Tunnels may issue Additional Bonds without satisfying any earnings or coverage test for the purpose of providing for Capital Costs relating to MTA Bridges and Tunnels Facilities for the purpose of keeping such MTA Bridges and Tunnels Facilities in good operating condition or preventing a loss of Revenues or Revenues after payment of Operating Expenses derived from such MTA Bridges and Tunnels Facilities.

*Additional Bonds for Other Purposes*. MTA Bridges and Tunnels may issue Additional Bonds to pay or provide for the payment of all or part of Capital Costs (including payment when due on any obligation of MTA Bridges and Tunnels or any other Related Entity) relating to any of the following purposes:

- capital projects of the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway;
- any Additional MTA Bridges and Tunnels Project (that does not become an MTA Bridges and Tunnels Facility); or
- any MTA Bridges and Tunnels Facilities other than for the purposes set forth in the preceding paragraph.

In the case of Additional Bonds issued other than for the improvement, reconstruction or rehabilitation of MTA Bridges and Tunnels Facilities as described under the preceding heading, in addition to meeting certain other conditions set forth in the MTA Bridges and Tunnels Senior Resolution, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.40 times the Maximum Annual Calculated Debt Service on all MTA Bridges and Tunnels General Revenue Bonds, including debt service on the MTA Bridges and Tunnels General Revenue Bonds to be issued.

**Refunding Bonds**

MTA Bridges and Tunnels General Revenue Bonds may be issued for the purpose of refunding MTA Bridges and Tunnels General Revenue Bonds or Parity Debt if (a) the Maximum Annual Calculated Debt Service (including the refunding MTA Bridges and Tunnels General Revenue Bonds then proposed to be issued but not including the MTA Bridges and Tunnels General Revenue Bonds to be refunded) is equal to or less than the Maximum Annual Calculated Debt Service on the MTA Bridges and Tunnels General Revenue Bonds as calculated immediately prior to the refunding (including the refunded MTA Bridges and Tunnels General Revenue Bonds but not including the refunding MTA Bridges and Tunnels General Revenue Bonds) or (b) the conditions referred to above under Additional Bonds for the category of MTA Bridges and Tunnels General Revenue Bonds being refunded are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding Bonds, see the MTA Bridges and Tunnels Senior Resolution included by specific cross-reference herein.

**Parity Debt**

MTA Bridges and Tunnels may incur Parity Debt pursuant to the terms of the MTA Bridges and Tunnels Senior Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the MTA Bridges and Tunnels Senior Resolution with respect to MTA Bridges and Tunnels General Revenue Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

**Subordinate Obligations**

The MTA Bridges and Tunnels Senior Resolution authorizes the issuance or incurrence of subordinate obligations. See "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" below.

## MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS

There is $350,780,000 aggregate principal amount of outstanding MTA Bridges and Tunnels Subordinate Revenue Bonds as of April 28, 2023. The following **MTA Bridges and Tunnels Subordinate Table 1** sets forth, on a cash basis, the debt service thereon and on the MTA Bridges and Tunnels General Revenue Bonds as of April 28, 2023.

**MTA Bridges and Tunnels Subordinate Table 1**
**Aggregate Senior and Subordinate Debt Service[(1)]**
**($ in thousands)**

| Year Ending December 31 | MTA Bridges and Tunnels General Revenue Bonds Debt Service[(2)(3)] | MTA Bridges and Tunnels Subordinate Revenue Bonds Debt Service | MTA Bridges and Tunnels Aggregate Debt Service[(2)(3)] |
|---|---|---|---|
| 2023 | $506,470 | $86,848 | $593,318 |
| 2024 | 654,777 | 28,790 | 683,567 |
| 2025 | 727,290 | 18,386 | 745,675 |
| 2026 | 742,145 | - | 742,145 |
| 2027 | 741,389 | - | 741,389 |
| 2028 | 748,957 | - | 748,957 |
| 2029 | 691,763 | 58,760 | 750,523 |
| 2030 | 684,737 | 59,720 | 744,457 |
| 2031 | 689,705 | 59,775 | 749,480 |
| 2032 | 693,878 | 47,015 | 740,893 |
| 2033 | 435,753 | - | 435,753 |
| 2034 | 434,128 | - | 434,128 |
| 2035 | 441,707 | - | 441,707 |
| 2036 | 448,694 | - | 448,694 |
| 2037 | 448,879 | - | 448,879 |
| 2038 | 448,481 | - | 448,481 |
| 2039 | 315,937 | - | 315,937 |
| 2040 | 320,158 | - | 320,158 |
| 2041 | 411,331 | - | 411,331 |
| 2042 | 304,518 | - | 304,518 |
| 2043 | 256,214 | - | 256,214 |
| 2044 | 329,336 | - | 329,336 |
| 2045 | 293,470 | - | 293,470 |
| 2046 | 316,616 | - | 316,616 |
| 2047 | 296,571 | - | 296,571 |
| 2048 | 276,572 | - | 276,572 |
| 2049 | 182,678 | - | 182,678 |
| 2050 | 161,655 | - | 161,655 |
| 2051 | 147,928 | - | 147,928 |
| 2052 | 147,925 | - | 147,925 |
| 2053 | 148,201 | - | 148,201 |
| 2054 | 148,400 | - | 148,400 |
| 2055 | 81,986 | - | 81,986 |
| 2056 | 82,192 | - | 82,192 |
| 2057 | 34,261 | - | 34,261 |
| Total | $13,794,700 | $359,294 | $14,153,994 |

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread, MTA Bridges and Tunnels General Revenue Bonds, Series 2001C and a portion of MTA Bridges and Tunnels General Revenue Bonds, Series 2005A at an assumed rate of 4.0%; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

(3) Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the MTA Bridges and Tunnels Senior Resolution.

**Sources of Payment**

The revenues that are pledged to pay the MTA Bridges and Tunnels Subordinate Revenue Bonds are the same as the revenues that are pledged to pay the MTA Bridges and Tunnels General Revenue Bonds. See "MTA BRIDGES AND TUNNELS GENERAL REVENUE BONDS – Sources of Payment" above.

**MTA Bridges and Tunnels Subordinate Table 2** sets forth, by MTA Bridges and Tunnels facility, the amount of revenues for each of the last five years, as well as operating expenses. The audited financial statements for MTA and MTA Bridges and Tunnels for 2022 and 2021 covered by **MTA Bridges and Tunnels Subordinate Table 2** are included herein by specific cross-reference and should be read in connection with this information. This information in **MTA Bridges and Tunnels Subordinate Table 2** may not be indicative of future results of operations and financial condition. The information contained in the table has been prepared by MTA management based upon the historical financial statements and notes.

**MTA Bridges and Tunnels Subordinate Table 2**
**Historical Revenues, Operating Expenses and Senior and Subordinate Debt Service**
**(in thousands)**[1]

| Bridge and Tunnel Revenues: | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Robert F. Kennedy Bridge | $ 449,086 | $ 463,134 | $ 355,004 | $ 466,908 | $ 503,541 |
| Verrazzano-Narrows Bridge | 434,963 | 453,434 | 386,978 | 515,132 | 544,527 |
| Bronx-Whitestone Bridge | 334,325 | 352,093 | 282,204 | 379,286 | 401,877 |
| Throgs Neck Bridge | 345,992 | 356,078 | 293,274 | 348,927 | 368,082 |
| Henry Hudson Bridge | 84,422 | 88,568 | 59,958 | 91,874 | 97,581 |
| Marine Parkway Gil Hodges Memorial Bridge | 17,526 | 18,507 | 16,560 | 20,381 | 21,208 |
| Cross Bay Veterans' Memorial Bridge | 18,647 | 19,543 | 17,741 | 21,392 | 21,626 |
| Queens Midtown Tunnel | 175,919 | 198,866 | 134,251 | 192,306 | 221,532 |
| Hugh L. Carey Tunnel | 114,783 | 121,279 | 93,783 | 133,671 | 152,410 |
| Total Bridge and Tunnel Revenues: | $ 1,975,663 | $ 2,071,411 | $ 1,639,753 | $ 2,169,877 | $ 2,332,384 |
| Investment Income and Other[2] | 30,106 | 31,921 | 22,716 | 24,726 | 31,251 |
| **Total Revenues** | **$ 2,005,769** | **$ 2,103,332** | **$ 1,662,469** | **$ 2,194,603** | **$ 2,363,636** |
| Operating Expenses[3] | | | | | |
| Personnel Costs[4] | $ 275,410 | $ 286,792 | $ 254,547 | $ 234,823 | $ 225,071 |
| Maintenance and Other Operating Expenses | 256,210 | 257,028 | 212,188 | 227,203 | 247,771 |
| **Total Operating Expenses** | **$ 531,620** | **$ 543,820** | **$ 466,735** | **$ 462,026** | **$ 472,842** |
| **Net Revenues Available for Debt Service** | **$ 1,474,149** | **$ 1,559,512** | **$ 1,195,734** | **$ 1,732,577** | **$ 1,890,793** |
| **MTA Bridges and Tunnels Senior Lien Debt Service**[5] | **$ 551,552** | **$ 558,253** | **$ 564,261** | **$ 586,373** | **$ 581,186** |
| **Subordinate Bond Fund Investment Earnings** | **$ 819** | **$ 938** | **$ 165** | **$ 14** | **$ 615** |
| **Net Revenues Available for Subordinate Debt Service** | **$ 923,416** | **$ 1,002,197** | **$ 631,638** | **$ 1,146,204** | **$ 1,310,222** |
| **Debt Service on Subordinate Revenue Bonds** | **$ 120,076** | **$ 102,721** | **$ 102,234** | **$ 102,115** | **$ 103,300** |
| **Total Debt Service (Senior and Subordinate)** | **$ 671,628** | **$ 660,974** | **$ 666,495** | **$ 688,488** | **$ 684,486** |
| **Combined Debt Service Coverage Ratio** | **2.19x** | **2.36x** | **1.79x** | **2.52x** | **2.76x** |

(1) Number may not add due to rounding.
(2) Includes the net revenues from the Battery Parking Garage, as well as E-ZPass administrative fees and miscellaneous other revenues. Investment earnings include interest earned on bond funds, including debt service funds that were applied to the payment of debt service as follows for the years 2018 through 2022, respectively (in thousands); $3,582, $4,793, $970, $116, and $3,167. The amounts set forth in this footnote are derived from MTA Bridges and Tunnels audited financial statements for the years 2018 through 2022.
(3) Excludes depreciation, includes GASB 75 OPEB Expense Adjustment, GASB 68 Pension Expense Adjustment, beginning as of 2021, GASB 87 Lease Adjustment.
(4) Includes regular and overtime salaries and fringe annual benefits, less capitalized personnel reimbursements.
(5) Net of Build America Bond interest subsidies of $8.5 million in 2018, $8.4 million in 2019, $8.6 million in 2020 and $8.5 million in 2021 and 2022.

The following should be noted in **MTA Bridges and Tunnels Subordinate Table 2**:

- Bridge and Tunnel Revenues – In 2020, traffic and revenues were negatively affected during the height of the COVID-19 pandemic. In 2021, paid vehicle crossings rebounded to 307.3 million, an increase of 21.4% from 2020. There were 326.3 million paid vehicle crossings in 2022, an increase of 6.2% compared to 2021, and less than 1% lower than the 329.4 million paid vehicle crossings in 2019. In addition a toll increase was implemented in April 2021.

- Operating Expenses - Personnel Costs – The increase in 2019 was primarily due to an increase in retirement and other employee benefits. The decrease in 2020 was primarily due to a decrease in salaries and benefits and other post-employment benefits. The decreases in 2021 and 2022 were also primarily due to a decrease in salaries and benefits and other post-employment benefits as a result of lower headcount.

- Operating Expenses - Maintenance and Other Operating Expenses – In 2019, there was a slight increase in non-labor expenses due to higher credit card fees associated with the toll increase implemented on March 31, 2019, and general inflationary adjustments across a variety of areas. The decrease in 2020 was primarily due to lower major maintenance and bridge painting costs, lower legal expense, and lower credit card fees. The increase in 2021 was due to higher legal expenses, credit card fees and insurance, offset by lower major maintenance and bridge painting costs. The increase in 2022 is primarily due to higher major maintenance and bridge painting costs, credit card fees and insurance.

**Security**

MTA Bridges and Tunnels Subordinate Revenue Bonds are special obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the MTA Bridges and Tunnels Subordinate Revenue Bonds and subordinate parity debt pursuant to the terms of the MTA Bridges and Tunnels Subordinate Resolution, after the payment of Operating Expenses and after payment of debt service as required by the MTA Bridges and Tunnels Senior Resolution.

The MTA Bridges and Tunnels Subordinate Resolution has been filed with the MSRB through EMMA, and is incorporated by specific cross-reference herein. In addition, for convenience, a copy of the MTA Bridges and Tunnels Subordinate Resolution can be obtained at no cost on MTA's investor website under "Debt Portfolio Information –Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Capitalized terms used under this caption "MTA BRIDGES AND TUNNELS SUBORDINATE REVENUE BONDS" not otherwise defined herein have the meanings set forth in the MTA Bridges and Tunnels Subordinate Resolution, except that the term "MTA Bridges and Tunnels" is used herein in place of the defined term "TBTA". So, for example, the term "MTA Bridges and Tunnels Facilities" as used herein is referred to in the MTA Bridges and Tunnels Subordinate Resolution as "TBTA Facilities".

MTA Bridges and Tunnels Subordinate Revenue Bonds are not a debt of the State or the City or any local governmental unit. MTA Bridges and Tunnels has no taxing power.

**Pledge Effected by the MTA Bridges and Tunnels Subordinate Resolution**

The lien on the trust estate described below created by the MTA Bridges and Tunnels Subordinate Resolution is subordinate to the lien created by the MTA Bridges and Tunnels Senior Resolution.

Pursuant to, and in accordance with, the MTA Bridges and Tunnels Subordinate Resolution, MTA Bridges and Tunnels has pledged to the holders of the MTA Bridges and Tunnels Subordinate Revenue Bonds a "trust estate", which consists of:

- Revenues (after the application of those Revenues as required by the MTA Bridges and Tunnels Senior Resolution, including the payment of Operating Expenses and MTA Bridges and Tunnels Senior Resolution debt service);
- the proceeds from the sale of the MTA Bridges and Tunnels Subordinate Revenue Bonds; and
- all funds, accounts and subaccounts established by the MTA Bridges and Tunnels Subordinate Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all MTA Bridges and Tunnels Subordinate Revenue Bonds in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

**Revenues and Additional Subordinate MTA Bridges and Tunnels Projects**

*Revenues from MTA Bridges and Tunnels Facilities*. MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels are pledged to the payment of debt service on the MTA Bridges and Tunnels Subordinate Revenue Bonds.

For a discussion of other projects that MTA Bridges and Tunnels is authorized to undertake, see "TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels".

*Additional Subordinate MTA Bridges and Tunnels Projects*. One or more projects owned or to be owned by MTA Bridges and Tunnels or another Related Entity may become an Additional Subordinate MTA Bridges and Tunnels Project without satisfying any earnings or coverage test if MTA Bridges and Tunnels is authorized to undertake that project, including the CBD Tolling Program, and the project is designated by MTA Bridges and Tunnels to be an Additional Subordinate MTA Bridges and Tunnels Project.

Upon satisfaction of certain conditions, MTA Bridges and Tunnels is authorized to issue Subordinate Revenue Bonds to fund the Capital Costs of Additional Subordinate MTA Bridges and Tunnels Projects. See "—Additional Subordinate Revenue Bonds" below.

**Flow of Revenues**

The MTA Bridges and Tunnels Subordinate Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Proceeds Fund; and
- Debt Service Fund.

MTA Bridges and Tunnels is required to transfer to the Debt Service Fund under the MTA Bridges and Tunnels Subordinate Resolution, from time to time, but no less frequently than on or before the 25th day of each calendar month, from amounts as shall from time to time be available for transfer from the Revenue Fund under the MTA Bridges and Tunnels Senior Resolution, free and clear of the lien of the MTA Bridges and Tunnels Senior Resolution, the amount, if any, required so that the balance in the fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month.

**Rate Covenant**

MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of the sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year the greater of:

- an amount equal to the sum of amounts necessary in that calendar year:
  - to pay all Operating Expenses of MTA Bridges and Tunnels, plus
  - to pay Calculated Debt Service on all senior lien and subordinate lien bonds and parity debt, plus
  - to maintain any reserve established by MTA Bridges and Tunnels pursuant to the MTA Bridges and Tunnels Senior Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or
- an amount such that Revenues less Operating Expenses shall equal at least 1.10 times Calculated Debt Service on all senior lien and subordinate lien bonds and parity debt for such calendar year.

For a more complete description of the rate covenant and a description of the minimum tolls that can be charged at the MTA Bridges and Tunnels Facilities, see the MTA Bridges and Tunnels Subordinate Resolution included by specific cross-reference herein.

**Additional Subordinate Revenue Bonds**

Under the provisions of the MTA Bridges and Tunnels Subordinate Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Subordinate Revenue Bonds to pay or provide for the payment of all or part of Capital Costs relating to any of the following purposes:

- MTA Bridges and Tunnels Facilities;
- capital projects of the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway; or
- any Additional Subordinate MTA Bridges and Tunnels Project.

In addition to meeting certain other conditions set forth in the MTA Bridges and Tunnels Subordinate Resolution, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all MTA Bridges and Tunnels Subordinate Revenue Obligations, subordinate parity debt, MTA Bridges and Tunnels Senior Obligations and senior parity debt.

In addition, MTA Bridges and Tunnels covenants that, prior to the issuance of MTA Bridges and Tunnels General Revenue Bonds, an Authorized Officer must certify that the historical Twelve Month Period Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all MTA Bridges and Tunnels Subordinate Revenue Obligations, subordinate parity debt, MTA Bridges and Tunnels Senior Obligations and senior parity debt. See the MTA Bridges and Tunnels Subordinate Resolution included by specific cross-reference herein.

**Refunding Subordinate Revenue Bonds**

MTA Bridges and Tunnels Subordinate Revenue Bonds may be issued for the purpose of refunding MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels General Revenue Bonds or senior parity debt if:

- the Combined Maximum Annual Calculated Debt Service (including the refunding MTA Bridges and Tunnels Subordinate Revenue Bonds then proposed to be issued, but not including the MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels General Revenue Bonds or senior parity debt to be refunded) is equal to or less than the Combined Maximum Annual Calculated Debt Service as calculated immediately prior to the refunding (including the refunded MTA Bridges and Tunnels Subordinate Revenue Bonds, subordinate parity debt, MTA Bridges and Tunnels General Revenue Bonds or senior parity debt, but not including the refunding MTA Bridges and Tunnels Subordinate Revenue Bonds), or
- the conditions referred to above under "— Additional Subordinate Revenue Bonds" are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding MTA Bridges and Tunnels Subordinate Revenue Bonds, see the MTA Bridges and Tunnels Subordinate Resolution included by specific cross-reference herein.

**Subordinate Parity Debt**

MTA Bridges and Tunnels may incur subordinate parity debt pursuant to the terms of the MTA Bridges and Tunnels Subordinate Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the MTA Bridges and Tunnels Subordinate Resolution with respect to MTA Bridges and Tunnels Subordinate Revenue Bonds. Such subordinate parity debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" under the MTA Bridges and Tunnels Subordinate Resolution in a certificate of an Authorized Officer delivered to the Trustee.

**SECOND SUBORDINATE REVENUE BOND ANTICIPATION NOTES (CBDTP)**

The Central Business District Tolling Program ("CBD Tolling Program" or "CBDTP") was established pursuant to legislation, known as the MTA Reform and Traffic Mobility Act (the "Traffic Mobility Act"), as part of the State budget for Fiscal Year 2019-2020, adopted on April 1, 2019. Pursuant to Public Authorities Law section 553-J that was created by the Traffic Mobility Act, monies in the Central Business District Tolling Capital Lockbox Fund (the "CBD Tolling Capital Lockbox Fund") can be used to pay expenses of MTA Bridges and Tunnels "including the planning, designing, constructing, installing or maintaining of the central business district tolling program, including, without limitation, the central business district tolling infrastructure, the central business district tolling collection system and the central business district tolling customer service center". See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program". MTA Bridges and Tunnels expects that capital costs associated with the planning, design, installation, and construction of the CBD Tolling Program will be paid or reimbursed from funds available in the CBD Tolling Capital Lockbox Fund, which includes certain City and State Sales Taxes and the Mansion Tax, and will also include all revenues received by MTA Bridges and Tunnels from the CBD Tolling Program.

On February 18, 2021, the MTA Bridges and Tunnels Board authorized the Second Subordinate Revenue Resolution and related documents to fund costs in an amount not to exceed $506 million related to the design, build, and installation of infrastructure, tolling systems and allowable implementation expenses necessary for the operation of CBDTP plus an amount necessary to fund certain financing costs. In June 2021, MTA Bridges and Tunnels issued an initial amount of $192.84 million of Second Subordinate Revenue BANs, Series 2021A (the "Series 2021A BANs") for such purposes.

The Series 2021A BANs are payable upon maturity on November 1, 2025. MTA Bridges and Tunnels expects to reimburse itself from the CBD Tolling Capital Lockbox Fund in amounts sufficient to repay or refinance the Second Subordinate Revenue BANs. As of April 28, 2023, there are $192.835 million of Second Subordinate Revenue BANs outstanding, and as budgeted in the 2023 February Plan, these BANs are expected to be retired by the maturity date of November 1, 2025, with proceeds of bonds secured by, or available funds, in the CBD Tolling Capital Lockbox Fund. MTA Bridges and Tunnels Second Subordinate Revenue Bonds, issued under the CBDTP Second Subordinate Resolution will, when and if issued, be payable after the payment of debt service on obligations issued under the existing MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution. The financing of CBDTP costs is not currently authorized under MTA Bridges and Tunnel's Senior Resolution or under the MTA Bridges and Tunnels Subordinate Resolution. The Series 2021A BANs constitute CBDTP Second Subordinate Obligation Anticipation Notes under the CBDTP Second Subordinate Resolution, and unlike the Bridges and Tunnels Second Subordinate Revenue Bonds, are not secured or payable from the trust estate described below. See " – MTA Capital Program Bonds – *MTA Bridges and Tunnels Second Subordinate Revenue Bond Anticipation Notes ("CBDTP")"*.

MTA Bridges and Tunnels Second Subordinate Revenue Bonds are special obligations of MTA Bridges and Tunnels payable solely from the trust estate (described below) pledged for the payment of the Second Subordinate Revenue Bonds, after the payment of Operating Expenses, and payment of debt service as required by the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution. The payment of principal of and interest on the Second Subordinate Revenue Bonds is prior to the payment of termination payments on certain derivatives entered into by MTA Bridges and Tunnels in connection with obligations issued under the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution.

Any Second Subordinate Revenue BANs, including the Series 2021A BANs, and any Second Subordinate Revenue Bonds, when and if issued, are not a debt of the State or the City or any local governmental unit. MTA Bridges and Tunnels has no taxing power.

**Pledge Effected by the CBDTP Second Subordinate Resolution**

The lien on the trust estate described below created by the CBTDP Second Subordinate Resolution is subordinate to the lien created by the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution.

Pursuant to, and in accordance with, the CBDTP Second Subordinate Resolution, MTA Bridges and Tunnels has pledged to the holders of the MTA Bridges and Tunnels Second Subordinate Revenue Bonds a "trust estate", which consists of:

- Revenues (after the application of those Revenues as required by the MTA Bridges and Tunnels Senior Resolution, first to the payment of Operating Expenses, and secondly to MTA Bridges and Tunnels Senior Resolution debt service and MTA Bridges and Tunnels Subordinate Resolution debt service);
- the proceeds from the sale of the Second Subordinate Revenue Bonds; and
- all funds, accounts and subaccounts established by the CBDTP Second Subordinate Resolution (except those established pursuant to a related supplemental resolution, and excluded by such supplemental resolution from the Trust Estate as security for all Second Subordinate Revenue Bonds in connection with variable interest rate obligations, put obligations, parity debt, subordinated contract obligations or subordinated debt).

**Revenues and Additional Subordinate MTA Bridges and Tunnels Projects**

*Revenues from MTA Bridges and Tunnels Facilities*. For purposes of the pledge under the MTA Bridges and Tunnels Senior Resolution, the MTA Bridges and Tunnels Subordinate Resolution and CBDTP Second Subordinate Resolution, Revenues of MTA Bridges and Tunnels generally include all tolls, revenues, rates, fees, charges, rents, proceeds of use and occupancy insurance on any portion of the MTA Bridges and Tunnels Facilities (including net revenues derived from the Battery Parking Garage) and of any other insurance which insures against loss of revenues therefrom payable to or for the account of MTA Bridges and Tunnels, and other income and receipts, as received by MTA Bridges and Tunnels directly or indirectly from any of MTA Bridges and Tunnels' operations, including the ownership or operation of any MTA Bridges and Tunnels Facilities, subject to certain exceptions.

MTA Bridges and Tunnels does not currently derive any significant recurring Revenues from any sources other than the MTA Bridges and Tunnels Facilities and investment income. Income from capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels is not derived by or for the account of MTA Bridges and Tunnels; consequently, no revenues from any portion of the capital projects for the Transit and Commuter Systems, MTA Bus and MTA Staten Island Railway financed by MTA Bridges and Tunnels are pledged to the payment of debt service on the Second Subordinate Revenue Bonds.

For a discussion of other projects that MTA Bridges and Tunnels is authorized to undertake, see "Part 4. OPERATIONS – TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY – Authorized Projects of MTA Bridges and Tunnels."

**Flow of Revenues**

The CBDTP Second Subordinate Resolution establishes the following funds and accounts, each held by MTA Bridges and Tunnels:

- Proceeds Fund; and
- Debt Service Fund.

Under the CBDTP Second Subordinate Resolution, MTA Bridges and Tunnels is required to transfer to the Debt Service Fund, from time to time, but no less frequently than on or before the 25th day of each calendar month, from amounts as shall from time to time be available for transfer from the Revenue Fund under the MTA Bridges and Tunnels Senior Resolution, free and clear of the lien of the MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution, the amount, if any, required so that the balance in the Debt Service Fund is equal to Accrued Debt Service to the last day of the current calendar month; provided, however, that in no event shall the amount to be so transferred be less than the amount required for all payment dates occurring prior to the 25th day of the next succeeding calendar month.

**Rate Covenant**

The rate covenant contained in the MTA Bridges and Tunnels Senior Resolution is incorporated by reference in the CBDTP Second Subordinate Resolution, such that MTA Bridges and Tunnels is required at all times to establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the MTA Bridges and Tunnels Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of the sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of MTA Bridges and Tunnels that will be used to pay the principal of

Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of MTA Bridges and Tunnels Facilities), to equal or exceed in each calendar year the greater of:

- an amount equal to the sum of amounts necessary in that calendar year
  - o to pay all Operating Expenses of MTA Bridges and Tunnels, plus
  - o to pay Calculated Debt Service on all senior lien, subordinate lien and second subordinate lien bonds and related parity debt, plus
  - o to maintain any reserve established by MTA Bridges and Tunnels pursuant to the MTA Bridges and Tunnels Senior Resolution, in such amount as may be determined from time to time by MTA Bridges and Tunnels in its judgment, or
- an amount such that Revenues less Operating Expenses shall equal at least 1.10 times Calculated Debt Service on all senior lien and subordinate lien bonds and parity debt for such calendar year.

**Additional Second Subordinate Revenue Bonds**

Under the provisions of the CBDTP Second Subordinate Resolution, MTA Bridges and Tunnels may issue one or more series of Additional Second Subordinate Revenue Bonds to pay or provide for the payment of all or part of Capital Costs relating to the CBDTP.

In addition to meeting certain other conditions, all as more fully described under the section "Special Provisions for Issuance of Capital Cost CBDTP Second Subordinate Revenue Obligations" in the CBDTP Second Subordinate Resolution included by specific cross-reference herein, an Authorized Officer must certify that the aggregate principal amount of all Second Subordinate Revenue Bonds and second subordinate parity debt of all series to be outstanding immediately after such authentication and delivery shall not exceed $506 million.

**Refunding Second Subordinate Revenue Bonds**

MTA Bridges and Tunnels Second Subordinate Revenue Bonds may be issued for the purpose of refunding MTA Bridges and Tunnels Second Subordinate Revenue Bonds if:

- Calculated Debt Service (including the refunding Second Subordinate Revenue Bonds then proposed to be issued but not including the Second Subordinate Revenue Bonds or second subordinate parity debt to be refunded) in each year that the Second Subordinate Revenue Bonds or second subordinate parity debt to be refunded were Outstanding following the refunding is less than before the refunding, or
- the conditions referred to above under "— Additional Second Subordinate Revenue Bonds" are satisfied.

For a more complete description of the conditions that must be satisfied before issuing refunding MTA Bridges and Tunnels Second Subordinate Revenue Bonds, see the section "Refunding CBDTP Second Subordinate Revenue Obligations" in the CBDTP Second Subordinate Resolution included by specific cross-reference herein.

**Second Subordinate Parity Debt**

MTA Bridges and Tunnels may incur second subordinate parity debt pursuant to the terms of the CBDTP Second Subordinate Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the CBDTP Second Subordinate Resolution with respect to MTA Bridges and Tunnels Second Subordinate Revenue Bonds. Such second subordinate parity debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" under the CBDTP Second Subordinate Resolution in a certificate of an Authorized Officer delivered to the Trustee.

## DEDICATED TAX FUND BONDS

There is $4,291,685,000 aggregate principal amount of outstanding Dedicated Tax Fund Bonds as of April 28, 2023. The following **DTF Table 1** sets forth, on a cash basis, the debt service thereon as of April 28, 2023.

**DTF Table 1 – Aggregate Debt Service**
**($ in thousands)**

| Year Ending December 31 | Aggregate Debt Service[(1)(2)(3)] |
|---|---|
| 2023 | $312,474 |
| 2024 | 342,080 |
| 2025 | 339,082 |
| 2026 | 329,305 |
| 2027 | 337,316 |
| 2028 | 383,940 |
| 2029 | 343,982 |
| 2030 | 432,595 |
| 2031 | 328,504 |
| 2032 | 402,436 |
| 2033 | 411,117 |
| 2034 | 328,143 |
| 2035 | 328,161 |
| 2036 | 399,681 |
| 2037 | 422,477 |
| 2038 | 404,144 |
| 2039 | 385,803 |
| 2040 | 102,369 |
| 2041 | 66,320 |
| 2042 | 66,319 |
| 2043 | 66,319 |
| 2044 | 66,314 |
| 2045 | 66,324 |
| 2046 | 66,319 |
| 2047 | 66,320 |
| 2048 | 49,610 |
| 2049 | 49,608 |
| 2050 | 49,607 |
| 2051 | 49,609 |
| 2052 | 49,607 |
| 2053 | 21,448 |
| 2054 | 21,447 |
| 2055 | 21,451 |
| 2056 | 21,448 |
| 2057 | 13,425 |
| Total | $7,145,103 |

(1) Totals may not add due to rounding.

(2) Includes the following assumptions for debt service: variable rate bonds at an assumed rate of 4.0%; variable rate bonds swapped to fixed at the applicable fixed rate on the swap; floating rate notes at an assumed rate of 4.0% plus the current fixed spread; floating rate notes swapped to fixed at the applicable fixed rate on the swap plus the current fixed spread; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months.

(3) Debt service has not been reduced to reflect expected receipt of Build America Bond interest subsidies relating to certain Outstanding Bonds; such subsidies do not constitute pledged revenues under the DTF Resolution.

### Sources of Payment – Revenues from Dedicated Taxes

Under State law, MTA receives money from certain dedicated taxes and fees described in this section (the "Dedicated Taxes"). This money is deposited into MTA's Dedicated Tax Fund and is pledged by MTA for the payment of its Dedicated Tax Fund Bonds.

*MTA Revenues from PBT, Motor Fuel Tax and Motor Vehicle Fees (MTTF Receipts).* In 1991, as part of a program to address the need for continued capital investment in the State's transportation infrastructure, the Legislature established a State fund, called the Dedicated Tax Funds Pool, from which money is apportioned by statutory allocation under current Tax Law to a State fund, called the Dedicated Mass Transportation Trust Fund ("MTTF"). Currently, portions of the following taxes and fees are deposited into the Dedicated Tax Funds Pool, of which 34% is allocated to the MTTF for the benefit of MTA:

- A business privilege tax imposed on petroleum businesses operating in the State ("PBT"), consisting of: a basic tax that varies based on product type; a supplemental tax on gasoline and highway diesel; and a petroleum business carrier tax. Currently, 80.3% of net PBT receipts from the basic tax (excluding receipts from aviation fuel, which are deposited in an aviation purpose account from which no receipts are directed to MTTF) and all of the supplemental tax and the carrier tax are required by current law to be deposited in the Dedicated Tax Funds Pool.
- Motor fuel taxes on gasoline and diesel fuel.
- Certain motor vehicle fees administered by the State Department of Motor Vehicles ("DMV"), including both registration and non-registration fees.

34% of the Dedicated Tax Funds Pool is currently deposited in the MTTF for MTA's benefit. Subject to appropriation by the Legislature, money in the MTTF is required by law to be transferred to MTA's Dedicated Tax Fund, held by MTA. Amounts transferred from the MTTF to MTA's Dedicated Tax Fund constitute MTTF Receipts.

A more detailed description of the MTTF Receipts is set forth below under the following headings below:

- MTTF Receipts – Dedicated Petroleum Business Tax;
- MTTF Receipts – Motor Fuel Tax; and
- MTTF Receipts – Motor Vehicle Fees.

*MTA Revenues from Special Tax-Supported Operating Subsidies (MMTOA Receipts).* Starting in 1980, in response to anticipated operating deficits of State mass transportation systems, the Legislature enacted a series of taxes, portions of the proceeds of which have been and are to be deposited in a special State fund – the Mass Transportation Operating Assistance Fund – to fund the operations of mass transportation systems. The Metropolitan Mass Transportation Operating Assistance Account, or "MMTOA Account", was established in that State fund to support operating expenses of transportation systems in the MCTD, including MTA New York City Transit, MaBSTOA and the commuter railroads operated by MTA's subsidiaries, MTA Long Island Rail Road and MTA Metro-North Railroad. After payment of Section 18-b general operating assistance to the various transportation systems, MTA receives 84.9% of the moneys deposited into the MMTOA Account, with the remaining 15.1% available to other transportation properties within the MTA Commuter Transportation District, such as MTA Bus, which currently operates the routes formerly operated by the City private franchise bus lines.

Since the creation of the MMTOA Account, MTA has requested and received in each year significant payments from that account in order to meet operating expenses of the Transit and Commuter Systems. It is expected that payments from the MMTOA Account will continue to be essential to the operations of the Transit and Commuter Systems. Although a variety of taxes have been used to fund the special tax-supported operating subsidies, the taxes levied for this purpose, which MTA refers to collectively as the "MMTOA Taxes", currently include:

- *MMTOA PBT*. The products that are subject to the tax, the tax rates, and the transactions excluded from the tax are identical to those of the basic PBT dedicated to the Dedicated Tax Funds Pool and the MTTF Account in that Pool. Pursuant to State law, 10.835% of the PBT basic tax collections is deposited in the MMTOA Account (excluding receipts from aviation fuel, which are deposited in an aviation purpose account from which no receipts are directed to MMTOA).
- *District Sales Tax*. The District Sales Tax consists of a 0.375% sales and compensating use tax imposed on sales and uses of certain tangible personal property and services applicable only within the MTA Commuter Transportation District.
- *Franchise Taxes*. Also deposited in the MMTOA Account is a legislatively-allocated portion of the following three taxes imposed on certain transportation and transmission companies (such as trucking, telegraph and local telephone companies and mobile communication services):
    - an annual franchise tax based on the amount of the taxpayer's issued capital stock (Section 183);
    - an annual franchise tax on the taxpayer's gross earnings (Section 184) from all sources calculated to have been generated statewide pursuant to statutory formulae; and

- an additional excise tax (Section 186-e) on the sale of mobile communication services.

- *Franchise Surcharges*. The Franchise Surcharges are imposed on the portion of the franchise and other taxes of certain corporations, insurance, transportation and transmission companies attributable (according to various complex formulae) to business activity carried on within the MTA Commuter Transportation District. In accordance with the Tax Law, the tax revenue generated under these provisions, after the deduction of administrative costs, is to be deposited to the MMTOA Account, as taxes are received.

MTA receives the equivalent of four quarters of MMTOA Receipts each year, with the first quarter of each succeeding calendar year's receipts advanced into the fourth quarter of the preceding year. This results in little or no MMTOA Receipts being received during the first quarter of each calendar year; MTA is required to make other provisions to provide for cash liquidity during this period.

A more detailed description of the MMTOA Taxes is set forth below under the heading "– MMTOA Account – Special Tax Supported Operating Subsidies".

*Five-Year Summary of MTTF Receipts and MMTOA Receipts*. **DTF Table 2** sets forth a five-year summary (based on the State's fiscal year ending March 31) of the following:

- actual collections by the State of receipts for each of the sources of revenues that, subject to appropriation and allocation among MTA and other non-MTA transportation agencies, could become receipts of MTA's Dedicated Tax Fund;
- amount of MTTF Receipts and MMTOA Receipts; and
- debt service coverage ratio based upon MTTF Receipts, and MTTF Receipts plus MMTOA Receipts.

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The information in the following **DTF Table 2** relating to MTTF Receipts and MMTOA Receipts was provided by the New York State Division of the Budget and the remaining information was provided by MTA.

**DTF Table 2**
**Summary of MTTF Receipts and MMTOA Receipts[1]**
**State Fiscal Year ending March 31 ($ millions)**

| **Dedicated Taxes ($ millions)** | **Actual 2020** | **Actual 2021** | **Actual 2022** | **Actual 2023** | **Projection [10] 2024** |
|---|---|---|---|---|---|
| **MTTF[2]** | | | | | |
| PBT | $ 343.9 | $ 281.6 | $ 306.9 | $ 325.5 | $ 329.1 |
| Motor Fuel Tax | 99.4 | 83.4 | 97.0 | 34.9[8] | 96.2 |
| Motor Vehicle Fees[3] | 131.9 | 119.1 | 128.9 | 121.9 | 121.4 |
| **Total Available** | $ 575.2 | $ 484.1 | $ 532.8 | $ 482.3 | $ 546.7 |
| | | | | | |
| **MMTOA[2]** | | | | | |
| PBT | $ 74.1 | $ 60.4 | $ 66.0 | $ 69.3 | $ 70.4 |
| District Sales Tax | 1,049.1 | 873.0 | 1,089.0 | 1,217.0[8] | 1,280.0 |
| Franchise Taxes[4] | 39.3 | 27.5 | 25.3 | 27.3 | 27.0 |
| Franchise Surcharges | 1,392.4 | 1,379.1 | 1,733.6 | 2,143.1 | 2,021.0 |
| **Total Available** | $ 2,554.9 | $ 2,340.0 | $ 2,913.9 | $ 3,456.7 | $ 3,398.4 |
| | | | | | |
| **Disbursements** | | | | | |
| **MTTF[3][5]** | $ 642.5 | $ 527.9 | $ 624.3 | $ 575.2 | $ 611.3 |
| **MMTOA[6]** | $ 1,829.7 | $ 1,895.2 | $ 1,922.8 | $ 2,607.0 | $ 2,838.5 |
| **Total Disbursed** | $ 2,472.2 | $ 2,423.1 | $ 2,547.1 | $ 3,182.2 | $ 3,449.8 |
| | | | | | |
| **Debt Service[7]** | $ 382.8 | $ 385.8 | $ 394.8 | $ 385.2[9] | $ 357.4[9] |
| **Debt Service Coverage Ratio – MTTF Receipts Only** | 1.68x | 1.37x | 1.58x | 1.49x | 1.71x |
| **Debt Service Coverage Ratio – MTTF and MMTOA Receipts** | 6.46x | 6.28x | 6.45x | 8.25x | 9.65x |

(1) Totals may not add due to rounding.

(2) As used in this Table, MTTF Receipts and MMTOA Receipts have the meaning given such terms in the DTF Resolution.

(3) Pursuant to legislation enacted in 2014, beginning with State Fiscal Year 2014-2015 and each year thereafter, a portion of the Fiscal Year 2013-2014 Motor Vehicle General Fund transfer of $169.4 million has been replaced with a direct transfer of $62.7 million from the State General Fund to the Dedicated Mass Transportation Trust Fund and $57.6 million of such amount flows to MTA's Dedicated Tax Fund as MTTF Receipts; the remainder flows to other transportation systems.

(4) Beginning with State Fiscal Year 2012-2013, the distribution to the MMTOA Account was changed from 80% to 54% of the taxes collected from Franchise Taxes. The remaining 26% is distributed to the Public Transportation Systems Operating Assistance Account.

(5) Represents the amount in the MTTF that was, subject to appropriation, paid to MTA by deposit into MTA's Dedicated Tax Fund, thereby becoming MTTF Receipts. The amount of MTTF Receipts in any State fiscal year may be greater than the amount collected for deposit into the MTTF due to, among other things, investment earnings or surplus amounts retained in the MTTF that were not paid out in prior years.

(6) Represents the amount in the MMTOA Account that was, subject to appropriation, paid to MTA by deposit into MTA's Dedicated Tax Fund, thereby becoming MMTOA Receipts. The difference between Total Available MMTOA Taxes and MMTOA Receipts generally represents the amount appropriated for operating expenses of the various non-MTA systems in the MTA Commuter Transportation District, as well as the amounts appropriated to MTA and other transportation agencies, primarily in accordance with the Section 18-b Program as described under the caption "PART 2. PUBLIC DEBT SECURITIES – REVENUES OF THE RELATED ENTITIES – State and Local General Operating Subsidies".

(7) Net of approximately $26.0 million of Build America Bond interest subsidies in each year. Actuals are budgeted actuals calculated for the State fiscal year. Projections for State Fiscal Year 2024 are based on projections in the 2023 February Financial Plan.

(8) The State Fiscal Year 2022-2023 Enacted Budget suspended the State and MCTD sales taxes imposed on gasoline and diesel motor fuel, as well as the motor fuel tax, from June 1, 2022, through December 31, 2022. Additionally, a "hold harmless" General Fund transfer provision was included to transfer the projected revenue amounts that would have been distributed to the MTTF component of the Motor Fuel Tax ($58.2 million) and the MMTOA component of the District Sales Tax ($15.0 million) as though the suspension of such taxes was not in effect. The referenced estimates in the table above do not reflect the noted "hold harmless" General Fund transfer amounts.

(9) Budgeted actual debt service for State Fiscal Year 2023 excludes a December 1, 2022 redemption of DTF Series 2012A Bonds that was paid with available moneys. The redemption of the DTF Series 2012A Bonds reduced projected debt service for State Fiscal Year 2024.

(10) The State Fiscal Year 2023-2024 projections are based on the State Fiscal Year 2023-2024 Enacted Budget Financial Plan.

**Factors Affecting Revenues from Dedicated Taxes**

*Legislative Changes.*

The State is not restricted in its right to amend, repeal, modify or otherwise alter statutes imposing or relating to the MTA Dedicated Tax Fund Revenues or the taxes or appropriations that are the source of such Revenues.

In connection with the financing of future capital programs, MTA may propose legislation affecting components of the taxes currently securing MTA Dedicated Tax Fund Bonds.

*Appropriation Risk*. The Legislature may not bind or obligate itself to appropriate revenues during a future legislative session, and appropriations approved during a particular legislative session generally have no force or effect after the close of the State fiscal year for which the appropriations are made. The requirement that the State pay the MTA Dedicated Tax Fund Revenues to MTA's Dedicated Tax Fund is subject to and dependent upon annual appropriations being made by the Legislature for such purpose and the availability of moneys to fund such appropriations. The Legislature is not obligated to make appropriations to fund MTA's Dedicated Tax Fund, and there can be no assurance that the Legislature will make any such appropriation. However, in the case of the PBT that is deposited as a portion of the MTTF Receipts, the Legislature has expressed its intent in the State Finance Law to enact for each State fiscal year an appropriation for the current and the next year.

*Fuel Tax Holiday in 2022*. In order to address the rising cost of fuel in the State, the Fiscal Year 2023 Enacted Budget included a suspension of the State sales tax imposed on fuel, the motor fuel tax and the MCTD sales tax imposed on the sale of gasoline and highway diesel fuel from June 1, 2022 through December 31, 2022 (the "Fuel Tax Holiday"). A portion of MTA's revenues, which are pledged first to secure its Dedicated Tax Fund Bonds with any residual amounts pledged to Transportation Revenue Bonds, consist of special tax-supported operating subsidies derived from the collection of such taxes, including MTTF revenues and MMTOA taxes. In order to hold MTA harmless and offset from any lost revenue resulting from the Fuel Tax Holiday, the State made monthly transfers from its General Fund to the MTTF and the MMTOA Account for subsequent transfer to MTA in amounts equal to the tax revenue that would have been distributed to such funds had the Fuel Tax Holiday not been implemented. No such suspension is expected during State Fiscal Year 2023-2024. See "Part 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – State Special Tax Supported Operating Subsidies".

*Litigation*. Aspects relating to the imposition and collection of the Dedicated Taxes have from time to time been and may continue to be the subject of administrative claims and litigation by taxpayers.

*Economic Conditions*. Many of the Dedicated Taxes are dependent upon economic and demographic conditions in the State and in the MTA Commuter Transportation District, and therefore there can be no assurance that historical data with respect to collections of the Dedicated Taxes will be indicative of future receipts.

*Government Assistance*. The level of government assistance to MTA through Dedicated Taxes may be affected by different factors, including the following:

- The State is not bound or obligated to continue to pay operating subsidies to the Transit or Commuter System or to continue to impose any of the taxes currently funding those subsidies.
- For information related to the impact of the COVID-19 pandemic on the finances and operations of MTA and its Related Entities, see "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis". See also "PART 1 – CERTAIN RISK FACTORS – *Respond to Developing Economic Environment*".

**Security**

The Dedicated Tax Fund Bonds are MTA's special obligations payable as to principal, redemption premium, if any, and interest solely from the security, sources of payment and funds specified in the DTF Resolution. Payment of principal of or interest on the Dedicated Tax Fund Bonds may not be accelerated in the event of a default.

Dedicated Tax Fund Bonds are secured primarily by the sources of payment described above, and are not secured by:

- the general fund or other funds and revenues of the State; or
- the other funds and revenues of MTA or any of its affiliates or subsidiaries.

The Dedicated Tax Fund Bonds are not a debt of the State or the City or any other local governmental unit. MTA has no taxing power.

The DTF Resolution has been filed with the MSRB through EMMA, and is incorporated by specific cross-reference herein. In addition, for convenience, a copy of the DTF Resolution can be obtained at no cost on MTA's investor website under "Debt Portfolio Information –Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Capitalized terms used under this caption "DEDICATED TAX FUND BONDS" not otherwise defined herein have the meanings set forth in the DTF Resolution.

**Pledge Effected by the DTF Resolution**

*Trust Estate*. The DTF Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the Dedicated Tax Fund Bonds and Parity Debt, in accordance with their terms and the provisions of the DTF Resolution, subject only to the provisions permitting the application of that money for the purposes and on the terms and conditions permitted in the DTF Resolution, the following, referred to as the "Trust Estate":

- the proceeds of the sale of the Dedicated Tax Fund Bonds, until those proceeds are paid out for an authorized purpose;
- the Pledged Amounts Account in MTA's Dedicated Tax Fund (which includes MTTF Receipts and MMTOA Receipts), any money on deposit in that Account and any money received and held by MTA and required to be deposited in that Account; and
- all funds, accounts and subaccounts established by the DTF Resolution (except funds, accounts and subaccounts established pursuant to Supplemental Resolution, and excluded by such Supplemental Resolution from the Trust Estate as security for all Dedicated Tax Fund Bonds, in connection with Variable Interest Rate Obligations, Put Obligations, Parity Debt, Subordinated Indebtedness or Subordinated Contract Obligations), including the investments, if any, thereof.

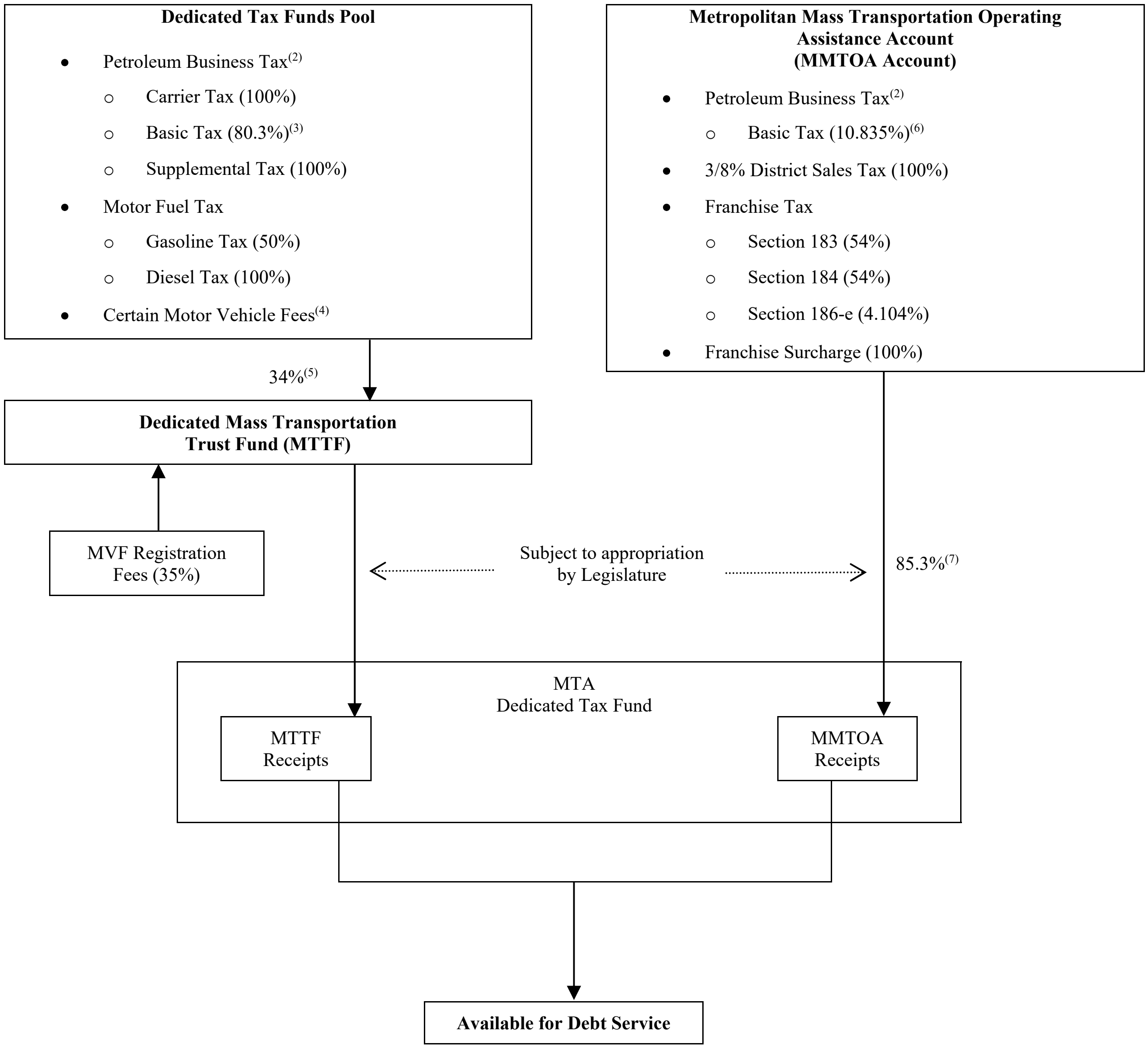
The DTF Resolution provides that the Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the DTF Resolution, and all corporate action on the part of MTA to that end has been duly and validly taken.

**Flow of Funds**

The DTF Resolution establishes a Proceeds Fund held by MTA and a Debt Service Fund held by the Trustee. See the DTF Resolution regarding the provisions of such resolution governing the deposits to and withdrawals from the Funds and Accounts. Amounts held by MTA or the Trustee in any of such Funds shall be held in trust separate and apart from all other funds and applied solely for the purposes specified in the DTF Resolution or any Supplemental Resolution thereto.

The following two charts summarize: (1) the flow of taxes into MTA's Dedicated Tax Fund, and (2) the flow of MTA Dedicated Tax Fund Revenues through MTA's Dedicated Tax Fund and the Funds and Accounts established under the DTF Resolution.

## MTA DEDICATED TAX FUND BONDS SOURCES OF REVENUE
## (Through March 31, 2024)[1]




**Notes**

(1) Parenthetical amounts and percentages, as well as flow of fund percentages, indicate the amount or percent of that tax or fund to be deposited for the year ending March 31, 2024 in the respective fund or account. The allocations shown may be changed at any time by the Legislature.

(2) Effective December 1, 2017, all receipts from aviation fuel are directed to an aviation purpose account, from which no revenue is directed to MTTF or MMTOA. However, beginning in Fiscal Year 2018-2019 the enacted statutory "hold-harmless" provision directs transfers from the State General Fund to MTTF and MMTOA. In 2022-2023, these transfers totaled $5.6 million of which $3.1 million flowed to MTA's Dedicated Tax Fund as MTTF Receipts and $1.2 million flowed to MMTOA for downstate transit systems including MTA.

(3) In addition, the first $7.5 million of the Basic Tax is appropriated to the Dedicated Tax Funds Pool prior to any percentage split of the Dedicated Tax Funds Pool.

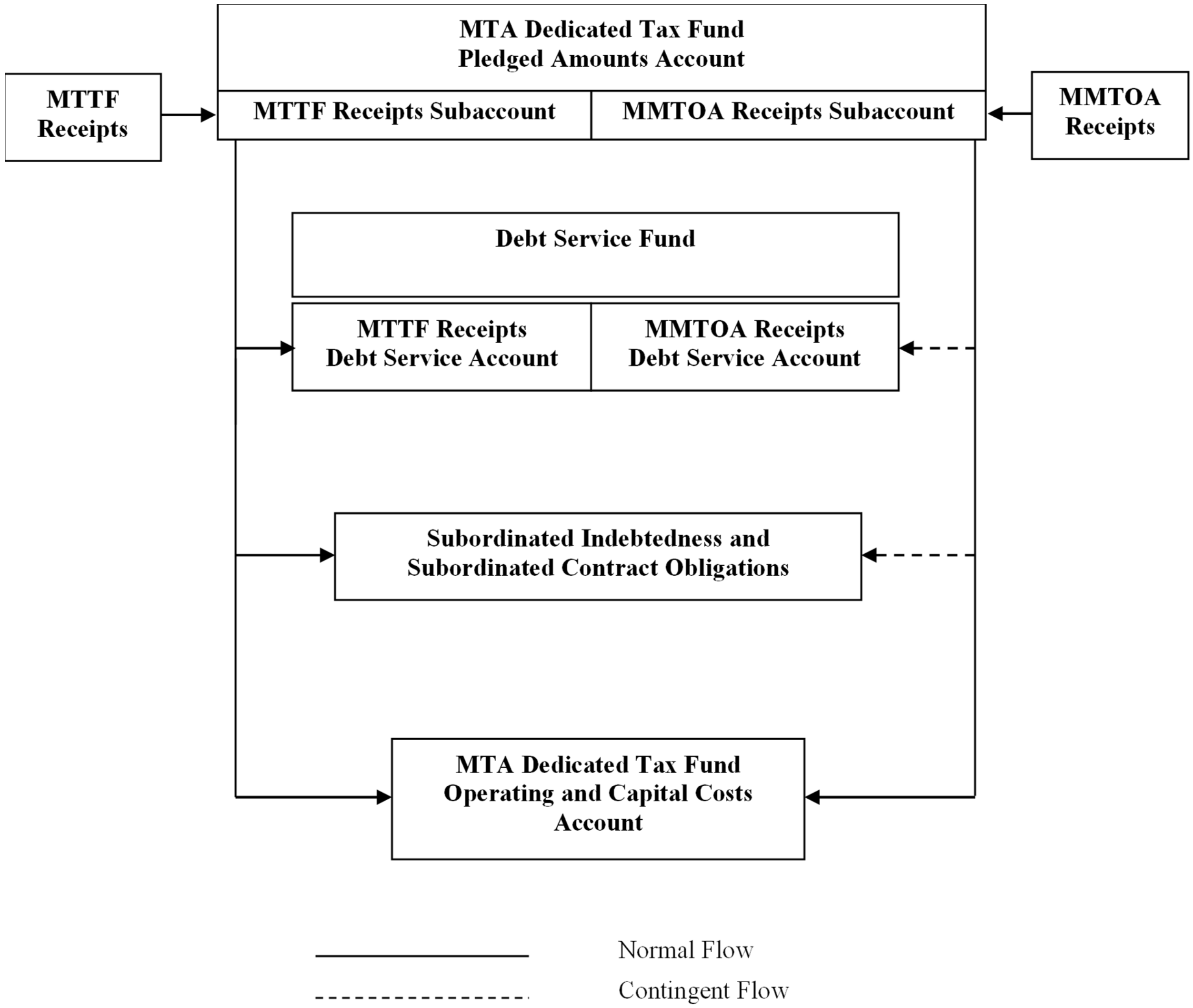
(4) Beginning with the State Fiscal Year 2014-2015, and each year thereafter, a portion of the State Fiscal Year 2013-2014 Motor Vehicle General Fund transfer of $169.4 million has been replaced with a direct transfer of $62.7 million from the State General Fund to the MTTF; $57.6 million of such amount flows to MTA's Dedicated Tax Fund as MTTF Receipts as defined in the DTF Resolution.

(5) Percentage of Dedicated Tax Funds Pool.

(6) The remaining 8.865% share of the Basic Tax is deposited in an account for certain upstate transportation entities.

(7) Percentage based upon Executive Budget appropriations for State Fiscal Year 2023-2024, including Section 18-b assistance.

**MTA DEDICATED TAX FUND BONDS – RESOLUTION FLOW OF FUNDS**




All amounts on deposit in the Pledged Amounts Account – MTTF Receipts Subaccount are paid out before any amounts on deposit in the Pledged Amounts Account – MMTOA Receipts Subaccount are paid out.

Amounts paid out from any fund or account for an authorized purpose (excluding transfers to any other pledged fund or account) are free and clear of the lien and pledge created by the DTF Resolution.

**Debt Service Fund**

Pursuant to the DTF Resolution, the Trustee holds the Debt Service Fund, consisting of the MTTF Receipts Debt Service Account and the MMTOA Receipts Debt Service Account. Moneys in the Debt Service Fund are applied by the Trustee to the payment of Debt Service on the Dedicated Tax Fund Bonds in the manner, and from the accounts and subaccounts, as set forth in the DTF Resolution included by specific cross-reference herein.

MTA is required to make monthly deposits to the appropriate account of the Debt Service Fund of interest ($1/5^{th}$ of the next semiannual payment) and principal ($1/10^{th}$ of the next annual payment), first from MTTF Receipts and then, to the extent of any deficiency, from MMTOA Receipts.

**Covenants**

*Additional Bonds*. The DTF Resolution permits MTA to issue additional Dedicated Tax Fund Bonds from time to time to pay or provide for the payment of Capital Costs and to refund outstanding Dedicated Tax Fund Bonds.

Under the DTF Resolution, MTA may issue one or more Series of Dedicated Tax Fund Bonds for the payment of Capital Costs, provided, in addition to satisfying certain other requirements, MTA delivers a certificate that evidences MTA's compliance with the additional bonds test set forth in the DTF Resolution.

Such certificate must set forth:

(A) for any 12 consecutive calendar months ended not more than six months prior to the date of such certificate: (i) MTTF Receipts, (ii) MMTOA Receipts, and (iii) investment income received during such period on amounts on deposit in the Pledged Amounts Account, the MTTF Receipts Subaccount, the MMTOA Receipts Subaccount and the Debt Service Fund; and

(B) the greatest amount for the then current or any future Debt Service Year of the sum of (a) Calculated Debt Service on all Outstanding Dedicated Tax Fund Obligations, including the proposed Capital Cost Obligations and any proposed Refunding Obligations being treated as Capital Cost Obligations, but excluding any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Obligations, plus (b) additional amounts, if any, payable with respect to Parity Debt; and then state:

(x) that the sum of the MTTF Receipts and investment income (other than investment income on the MMTOA Receipts Subaccount) set forth in clause (A) above is not less than 1.35 times the amount set forth in accordance with clause (B) above, and

(y) that the sum of the MTTF Receipts, MMTOA Receipts and investment income set forth in clause (A) above is not less than 2.5 times the amount set forth in clause (B) above.

See the DTF Resolution for a description of further provisions which apply to the additional bonds test if the percentage of available existing taxes deposited into MTA's Dedicated Tax Fund is increased or additional taxes are added to the amounts so deposited.

For a discussion of the requirements relating to the issuance of Refunding Dedicated Tax Fund Bonds, see the DTF Resolution, included by specific cross-reference herein.

**Parity Debt**

MTA may incur Parity Debt pursuant to the terms of the DTF Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by the DTF Resolution with respect to Dedicated Tax Fund Bonds. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee.

**Appropriation by the Legislature**

The State Constitution provides that the State may not disburse funds from the state treasury or any of the funds under its management without an appropriation, except for the payment of debt service on general obligation bonds or notes issued by the State. An appropriation is an authorization approved by the Legislature to expend money. The State Constitution requires all appropriations of State funds, including funds in the MTTF and the MMTOA Account, to be approved by the Legislature at least every two years. In addition, the State Finance Law provides that appropriations shall cease to have force and effect, except as to liabilities incurred thereunder, at the close of the State Fiscal Year for which they were enacted. To the extent liabilities are incurred thereunder, such appropriations shall lapse on the succeeding June 30th or September 15th, depending upon the nature of the appropriation. The Legislature may not be bound in advance to make any appropriation, and there can be no assurances that the Legislature will appropriate the necessary funds as anticipated. MTA expects that the Legislature will make appropriations from amounts on deposit in the MTTF and the MMTOA Account in order to make payments when due. Until such time as payments pursuant to such appropriation are made in full, revenues in the MTTF shall not be paid over to any entity other than MTA.

The Legislature has expressed its intent in the State Finance Law to enact for each State Fiscal Year in the future in an annual budget bill an appropriation from the MTTF (with respect to the PBT portion only) to MTA's Dedicated Tax Fund for the then current State Fiscal Year and an appropriation of the amounts projected by the Director of the Budget to be deposited in MTA's Dedicated Tax Fund from the MTTF (with respect to the PBT portion only) for the next succeeding State Fiscal Year. In any State Fiscal Year, if the Governor fails to submit or if the Legislature fails to enact a current year appropriation from the MTTF (with respect to the PBT portion) to MTA's Dedicated Tax Fund, or such appropriation has been delayed, MTA is required to notify the State of amounts required to be disbursed from the appropriation made during the preceding State Fiscal Year for payment in the current State Fiscal Year. The State Comptroller may not make any payments from the MTTF to MTA's Dedicated Tax Fund from such prior year appropriation prior to May 1st of the current State Fiscal Year.

The State Fiscal Year 2022-23 Enacted Budget included two appropriations from the MTTF to the MTA Dedicated Tax Fund. One such appropriation is for the State Fiscal Year that ends March 31, 2023, and the other such appropriation is for the succeeding State Fiscal Year that ends March 31, 2024. MTA may avail itself of the latter appropriation to meet operating costs in response to delays in the adoption of the State budget in such years.

A budgetary imbalance in the present or any future State Fiscal Year could affect the ability and willingness of the Legislature to appropriate and the availability of moneys to make the payments from the MTTF and the MMTOA Account. However, MTA believes that any failure by the Legislature to make appropriations as contemplated would have a serious impact on the ability of the State and its public benefit corporations to raise funds in the public credit markets.

For information related to the impact of the COVID-19 pandemic upon MTA revenues and operations. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis". See also "PART 1. – CERTAIN RISK FACTORS – *Respond to Developing Economic Environment*".

**Agreement of the State**

The MTA Act prohibits MTA from filing a voluntary petition in bankruptcy under Chapter 9 of the Federal Bankruptcy Code or such successor chapters or sections as may from time to time be in effect and the State has pledged that so long as any notes, bonds or lease obligations of MTA are outstanding, it will not limit or alter the denial of authority to MTA to so file.

Under the MTA Act, the State pledges to and agrees with the holders of any notes, bonds or lease obligations issued or incurred by MTA, including the Dedicated Tax Fund Bonds, that the State will not limit or alter the rights vested in MTA to fulfill the terms of any agreements made by MTA with the holders of its notes, bonds and lease obligations, including the Dedicated Tax Fund Bonds, or in any way impair the rights and remedies of such holders. Notwithstanding the foregoing, in accordance with State law, nothing in the DTF Resolution shall be deemed to restrict the right of the State to amend, repeal, modify or otherwise alter statutes imposing or relating to the MTA Dedicated Tax Fund Revenues or the taxes or appropriations which are the source of such Revenues. No default under the DTF Resolution would occur solely as a result of the State exercising its right to amend, repeal, modify or otherwise alter such taxes or appropriations.

**MTTF Receipts – Dedicated Petroleum Business Tax**

*General*. The PBT is the business privilege tax, which includes both a base tax and a supplemental tax, imposed on petroleum businesses operating in the State. The base of the PBT is the quantity of various petroleum products refined or sold in the State or imported into the State for sale or use therein.

Tax Rates. The basic and supplemental PBT tax rates are subject to separately computed annual adjustments on January 1 of each year, to reflect the change in the Producer Price Index ("PPI") for refined petroleum products for the 12 months ended August 31 of the immediately preceding year. The tax rates, therefore, increase as prices rise and decrease as prices fall. Current legislation provides that the PBT rates will be adjusted annually subject to a maximum change of plus or minus 5% of the current rate in any year. In addition to the 5% cap on rate changes, the statute also requires basic and supplemental rates to be rounded to the nearest tenth of one cent. Subsequent legislation provided that diesel rates be rounded to the nearest hundredth of one cent. As a result, the tax rates usually do not change by the full 5% allowed under the statutory formula.

The table below shows the changes in the PPI for refined petroleum products and the capped PBT index change over the last ten years.

**Petroleum Business Tax Index Change (percent)**

| Year for PPI Change (September 1 to August 31) | PPI for Refined Petroleum Products Change | Year for PBT Index | PBT Index Change (January 1) |
|---|---|---|---|
| 2012-13 | -0.8 | 2014 | -0.8 |
| 2013-14 | -3.2 | 2015 | -3.2 |
| 2014-15 | -29.1 | 2016 | -5.0 |
| 2015-16 | -30.4 | 2017 | -5.0 |
| 2016-17 | 13.3 | 2018 | 5.0 |
| 2017-18 | 26.1 | 2019 | 5.0 |
| 2018-19 | -2.0 | 2020 | -2.0 |
| 2019-20 | -21.8 | 2021 | -5.0 |
| 2020-21 | 27.8 | 2022 | 5.0 |
| 2021-22 | 67.1 | 2023 | 5.0 |

Source: New York State Division of the Budget.

The table below shows the rates per gallon for the PBT in effect for 2021, 2022, and 2023 respectively.

**PETROLEUM BUSINESS TAX RATES FOR 2021, 2022, and 2023***
**(cents per gallon)**

| | 2021 | | | 2022 | | | 2023 | | |
|---|---|---|---|---|---|---|---|---|---|
| **Petroleum Product** | Base | Supp | Total | Base | Supp | Total | Base | Supp | Total |
| Automotive fuel | | | | | | | | | |
| Gasoline & other non-diesel | 9.9 | 6.7 | **16.6** | 10.3 | 7.0 | **17.3** | 10.8 | 7.3 | **18.1** |
| Diesel | 9.9 | 4.95 | **14.85** | 10.3 | 5.25 | **15.55** | 10.8 | 5.55 | **16.35** |
| Aviation gasoline or Kero-Jet fuel | 6.7 | 0.0 | **6.7** | 7.0 | 0.0 | **7.0** | 7.3 | 0.0 | **7.3** |
| Non-automotive diesel fuels | | | | | | | | | |
| Commercial gallonage | 9.1 | 0.0 | **9.1** | 9.5 | 0.0 | **9.5** | 9.9 | 0.0 | **9.9** |
| Nonresidential heating | 4.9 | 0.0 | **4.9** | 5.1 | 0.0 | **5.1** | 5.3 | 0.0 | **5.3** |
| Residual petroleum products | | | | | | | | | |
| Commercial gallonage | 7.0 | 0.0 | **7.0** | 7.3 | 0.0 | **7.3** | 7.6 | 0.0 | **7.6** |
| Nonresidential heating | 3.8 | 0.0 | **3.8** | 3.9 | 0.0 | **3.9** | 4.1 | 0.0 | **4.1** |
| Railroad diesel fuel | 8.6 | 0.0 | **8.6** | 9.0 | 0.0 | **9.0** | 9.5 | 0.0 | **9.5** |

* The Tax Rates are the net tax rate after credits.

Tax Base. Generally, transactions that are excluded from the basic PBT base are also excluded from the supplemental tax base. Exemptions include sales for export from the State, sales of fuel oil for residential heating purposes and manufacturing use, and sales to government entities when such entities buy petroleum for their own use. Sales of kerosene (other than kero-jet fuel) and liquefied petroleum gas and sales of residual fuel oil used as bunker fuel also are exempted. Regulated electric utilities that use petroleum to generate electricity obtain credits or reimbursements to offset a portion of the basic tax. These utilities receive no credit or reimbursement with respect to the supplemental tax.

The State also imposes a petroleum business carrier tax under the PBT on fuel purchased by motor carriers outside the State but consumed within the State. The carrier tax rates are the same as the PBT automotive gasoline and diesel rates listed above.

Legislative Changes. The Legislature has, from time to time, changed the percentage of the PBT basic tax which is available for distribution to the Dedicated Tax Funds Pool. The percentage of the Dedicated Tax Funds Pool which is, subject to appropriation, deposited in MTA's Dedicated Tax Fund has remained constant at 34%. The changes in the percentage of the PBT basic tax which is available for distribution to the Dedicated Tax Funds Pool have been designed to be, and were, revenue neutral to the Dedicated Tax Funds Pool.

Legislation adopted with the State Fiscal Year 2016-2017 Enacted Budget extended the alternative fuels exemption for five years, conformed the State Tax Law to Federal Aviation Administration regulations regarding taxes on aviation fuel, and required motor fuel wholesalers to register and file informational returns with the State to increase the effectiveness of fuel tax evasion auditing.

Legislation adopted with the State Fiscal Year 2021-2022 Enacted Budget extended the alternative fuels exemption for five years.

Legislation adopted with the State Fiscal Year 2022-2023 Enacted Budget exempted tugboats and towboats from the Petroleum Business Tax.

Legislation adopted with the State Fiscal Year 2023-2024 Enacted Budget required distributors of motor fuel and diesel motor fuel to collect, report, and remit taxes on every gallon of fuel sold, including the additional gallons realized from temperature fluctuations.

Tax Imposition and Payment. Imposition of the tax occurs at different points in the distribution chain, depending upon the type of product. The tax is imposed on motor fuels at the same time as the eight-cent-per-gallon motor fuel tax. Gasoline, which represents the preponderance of automotive fuel sales in the State, is taxed upon importation into the State for sale or upon manufacture in the State. Other non-diesel automotive fuels such as compressed natural gas, methanol and ethanol become subject to the tax on their first sale as motor fuel in the State. Automotive diesel motor fuel is taxed when it leaves a fuel terminal below the rack. Nonautomotive diesel fuel (such as No. 2 fuel oil used for commercial heating) and residual fuel usually become taxable on the sale to the consumer or upon use of the product in the State.

Most petroleum businesses remit this tax on a monthly basis. Taxpayers with yearly motor fuel tax and PBT liability totaling more than $5 million now remit tax for the first 22 days of the month by electronic funds transfer by the third business day thereafter. Tax for the balance of the month is paid with the monthly returns filed by the 20th of the following month. The Department of Taxation and Finance advises that, in State Fiscal Year 2021-2022, 36 taxpayers, accounting for 93% of all PBT receipts, participated in the electronic funds transfer program.

*Historical Summary of PBT Revenue*. The following table provides historical information for the last ten years on the basic PBT and the supplemental PBT, the major funding source for the MTTF.

**Basic and Supplemental PBT Collections**
**(in millions)**

| State Fiscal Year | Basic PBT | Supplemental PBT |
|---|---|---|
| 2013-14 | $704.4 | $428.6 |
| 2014-15 | 700.4 | 435.9 |
| 2015-16 | 677.2 | 426.3 |
| 2016-17 | 682.3 | 423.1 |
| 2017-18 | 663.7 | 412.9 |
| 2018-19 | 705.3 | 443.5 |
| 2019-20 | 705.5 | 436.9 |
| 2020-21(1) | 568.8 | 358.0 |
| 2021-22 | 625.6 | 391.5 |
| 2022-23 | 658.5 | 418.0 |

(1)Decrease in receipts for State Fiscal Year 2020-21 reflect the impact of the COVID-19 pandemic.
Source: Department of Taxation and Finance.

Receipts for State Fiscal Year 2013-2014 reflect the 5% increases in PBT rates effective January 1, 2013 and a 0.8% decrease effective January 1, 2014. In addition to basic tax and supplemental tax receipts, total PBT collections also include $21.0 million from the carrier tax.

Receipts for State Fiscal Year 2014-2015 reflect the 0.8% decrease in PBT rates effective January 1, 2014 and a 3.2% decrease effective January 1, 2015, offset by slight growth in taxable gallonage. In addition to basic tax and supplemental tax receipts, total PBT collections also include $21.0 million from the carrier tax.

Receipts for State Fiscal Year 2015-2016 reflect the 3.2% decrease in PBT rates effective January 1, 2015 and a 5.0% decrease effective January 1, 2016. In addition to basic tax and supplemental tax receipts, total PBT collections also include $20.3 million from the carrier tax.

Receipts for State Fiscal Year 2016-2017 reflect the 5.0% decrease in PBT rates effective January 1, 2016 and a 5.0% decrease effective January 1, 2017. In addition to basic tax and supplemental tax receipts, total PBT collections also include $18.3 million from the carrier tax.

Receipts for State Fiscal Year 2017-2018 reflect the 5.0% decrease in PBT rates effective January 1, 2017 and a 5.0% increase effective January 1, 2018. In addition to basic tax and supplemental tax receipts, total PBT collections also include $15.5 million from the carrier tax.

Receipts for State Fiscal Year 2018-2019 reflect the 5.0% increase in PBT rates effective January 1, 2018 and a 5.0% increase effective January 1, 2019. In addition to the basic tax and supplemental tax receipts, total PBT collections also include $16.3 million from the carrier tax.

Receipts for State Fiscal Year 2019-2020 reflect the 5.0% increase in PBT rates effective January 1, 2019 and a 2.0% decrease effective January 1, 2020. In addition to the basic tax and supplemental tax receipts, total PBT collections also include $18.3 million from the carrier tax.

Receipts for State Fiscal Year 2020-2021 reflect the 2.0% decrease in PBT rates effective January 1, 2020 and a 5.0% decrease effective January 1, 2021. In addition to the basic tax and supplemental tax receipts, total PBT collections also include $15.2 million from the carrier tax.

Receipts for State Fiscal Year 2021-2022 reflect the 5.0% decrease in PBT rates effective January 1, 2021 and a 5.0% increase effective January 1, 2022. In addition to the basic tax and supplemental tax receipts, total PBT collections also include $14.5 million from the carrier tax.

Receipts for State Fiscal Year 2022-2023 reflect the 5.0% increase in PBT rates effective January 1, 2022 and a 5.0% increase effective January 1, 2023. In addition to the basic tax and supplemental tax receipts, total PBT collections also include $18.3 million from the carrier tax.

*Historical Summary of Dedicated PBT*. The following table provides historical information relating to PBT receipts for the last ten years.

**MTTF Revenues from Petroleum Business Taxes**
**(in millions)**

| State Fiscal Year | Dedicated Tax Funds Pool | MTTF Total(1) | MTA's Share of MTTF(2) |
|---|---|---|---|
| 2013-14 | $1,017.3 | $376.4 | $345.8 |
| 2014-15 | 1,021.9 | 378.1 | 347.4 |
| 2015-16 | 991.9 | 367.0 | 337.2 |
| 2016-17 | 990.8 | 366.6 | 336.9 |
| 2017-18 | 960.3 | 355.3 | 326.5 |
| 2018-19 | 1,016.4 | 376.1 | 345.6 |
| 2019-20 | 1,011.5 | 374.3 | 343.9 |
| 2020-21 | 828.3 | 306.5 | 281.6 |
| 2021-22 | 902.7 | 334.0 | 306.9 |
| 2022-23 | 957.4 | 354.2 | 325.5 |

(1) Represents 37% of the Dedicated Tax Funds Pool.
(2) Represents 34% of the Dedicated Tax Funds Pool.
Source: New York State Division of the Budget.

**MTTF Receipts – Motor Fuel Tax**

*General*. Motor fuel and diesel motor fuel taxes ("MFT") are derived from an eight-cent-per-gallon excise tax levied with respect to gasoline and diesel motor fuels, generally for highway use. The aggregate rate of tax on gasoline was last changed on February 1, 1972, when it was increased from seven cents to eight cents per gallon. The aggregate rate of tax on diesel motor fuel was last changed on January 1, 1996, when it decreased from ten cents per gallon to eight cents per gallon.

Effective April 1, 2003, 4 cents of the gasoline MFT and 8 cents of the diesel MFT are deposited to the Dedicated Tax Funds Pool, of which 34% is deposited in MTA's Dedicated Tax Fund.

Tax Imposition and Payment. The tax on motor fuel is payable by distributors registered with the State. The gasoline motor fuel tax is imposed when gasoline is imported (or caused to be imported) into the State for sale or use in the State, or manufactured in the State. Generally, the tax on other nondiesel motor fuels earmarked to the Dedicated Tax Funds Pool (such as compressed natural gas, propane, methanol and ethanol) is remitted by the dealer selling them as motor fuels. The tax on diesel motor fuel is imposed on the first non-exempt sale of diesel in the State.

Most petroleum businesses remit these taxes on a monthly basis. Businesses with yearly MFT and PBT liability totaling more than $5 million remit the PBT and MFT for the first 22 days of the month by electronic funds transfer by the third business day thereafter. Tax for the balance of the month is paid with the monthly returns filed by the 20th of the following month. In State Fiscal Year 2021-2022, 35 taxpayers, accounting for 94% of all motor fuel tax receipts, participated in the electronic funds transfer program.

Although the tax is remitted by distributors, the incidence of the tax falls primarily on final users of the fuel on the highways and waterways of the State. Governmental purchases are exempt from the tax. Fuel purchased for certain road vehicles (such as fire trucks, buses used in local transit, taxicabs and ambulances), upon which the tax has been paid, may be eligible for full or partial reimbursement of the MFT. Reimbursement of the tax is also available for fuel not used on the highways (e.g., fuel used in farming).

*Historical Summary of Dedicated Motor Fuel Tax*. The following table provides historical information relating to Motor Fuel Tax receipts for the last ten years.

**MTTF Revenues from Motor Fuel Tax**
**(in millions)**

| State Fiscal Year | MTTF Portion of Gasoline MFT | MTTF portion of Diesel MFT | MTTF Total(1) | MTA's Share of MTTF(2) |
|---|---|---|---|---|
| 2013-14 | $76.4 | $22.3 | $98.7 | $90.7 |
| 2014-15 | 79.3 | 21.6 | 100.9 | 92.7 |
| 2015-16 | 81.1 | 23.9 | 105.0 | 96.5 |
| 2016-17 | 82.7 | 26.7 | 109.4 | 100.5 |
| 2017-18 | 80.2 | 29.1 | 109.3 | 100.4 |
| 2018-19 | 84.4 | 26.6 | 111.0 | 102.0 |
| 2019-20 | 81.2 | 27.0 | 108.2 | 99.4 |
| 2020-21 | 66.5 | 24.2 | 90.7 | 83.4 |
| 2021-22 | 77.6 | 28.0 | 105.6 | 97.0 |
| 2022-23(3) | 28.2 | 9.9 | 38.0 | 34.9 |

(1) Represents 37% of the Dedicated Tax Funds Pool.
(2) Represents 34% of the Dedicated Tax Funds Pool.
(3) Receipts reflect the temporary motor fuel excise tax suspension between June 1, 2022 and December 31, 2022. Does not reflect or include $58.2 million in "hold harmless" transfers from the General Fund.
Source: New York State Division of the Budget.

**MTTF Receipts – Motor Vehicle Fees**

*General*. Motor vehicle fees are derived from a variety of sources, but consist mainly of vehicle registration and driver license fees. A percentage of State motor vehicle registration fees is earmarked to MTA's Dedicated Tax Fund. These motor vehicle fees derive from the registration of passenger vehicles, trucks, vans, motorcycles, trailers, semitrailers, buses and other types of vehicles operating on the public highways of the State.

The DMV administers motor vehicle registration provisions of the State Vehicle and Traffic Law. County clerks in most counties act as agents for the State in administering the issuance of most types of motor vehicle registration. Motor vehicle registration renewals generally are accomplished by mail.

With the exception of buses, which are charged according to seating capacity, and semitrailers, which are registered at a flat fee, motor vehicle registration fees in the State are based on vehicle weight.

Legislation enacted in 1989 mandated biennial registration of all motor vehicles weighing less than 18,000 pounds. Thus, most motor vehicle registrations are issued and renewed for two-year periods. Motor vehicle registrations are staggered evenly throughout the months to ensure an even workload for the DMV.

In the State Fiscal Year 2009-2010 Enacted Budget, fees for licenses and most registrations were increased by 25%. The revenues from this increase were directed to the Dedicated Highway and Bridge Trust Fund. In addition, the fee for plate issuance was increased from $15 to $25. The revenues from this increase were included as part of the non-dedicated fees, of which $169.4 million were transferred to the Dedicated Tax Funds.

Beginning with State Fiscal Year 2014-2015, and each year thereafter, a portion of the Fiscal Year 2013-2014 Motor Vehicle General Fund transfer of $169.4 million has been replaced with a direct transfer of $62.7 million from the State General Fund to the MTTF; $57.6 million of such amount flows to MTA's Dedicated Tax Fund as MTTF Receipts, and the remainder flows to other transportation systems.

To reduce the overall number of funds and improve programmatic efficiencies, legislation enacted in the State Fiscal Year 2016-2017 Enacted Budget dedicated several categories of motor vehicle fees to the Dedicated Highway and Bridge Trust Fund that had previously flowed to four Special Revenue Funds ("SROs"). The SROs include DMV Compulsory Insurance, DMV Seized Assets, Motorcycle Safety, and the Accident Prevention Course Program.

*Historical Summary of Dedicated Motor Vehicle Fees*. The following table provides historical information relating to Motor Vehicle Fee receipts for the last ten years.

**MTTF Revenues from Motor Vehicle Fees**
**(in millions)**

| State Fiscal Year | MTTF Total[1] | MTA's Share of MTTF[2] |
|---|---|---|
| 2013-14 | $197.7 | $181.6 |
| 2014-15 | 131.3 | 120.7 |
| 2015-16 | 138.7 | 127.4 |
| 2016-17 | 140.1 | 128.7 |
| 2017-18 | 144.2 | 132.5 |
| 2018-19 | 142.3 | 130.7 |
| 2019-20 | 143.6 | 131.9 |
| 2020-21 | 129.6 | 119.1 |
| 2021-22 | 140.2 | 128.9 |
| 2022-23 | 132.7 | 121.9 |

(1) Represents 37% of the Dedicated Tax Funds Pool. Does not include SRF Motor Vehicle Fees.
(2) Represents 34% of the Dedicated Tax Funds Pool. Does not include SRF Motor Vehicle Fees.
Source: New York State Division of the Budget

**MMTOA Account – Special Tax Supported Operating Subsidies**

*General*. Like other U.S. mass transit systems, the Transit System and Commuter System have historically operated at a deficit and have been dependent upon substantial amounts of general operating subsidies from the State as well as the City. Over time, the ongoing needs of State mass transportation systems led the State to supplement the general operating subsidies with additional operating subsidies supported by special State taxes.

Starting in 1980, in response to anticipated operating deficits of State mass transportation systems, the Legislature enacted a series of taxes, portions of the proceeds of which have been and are to be deposited in a special State fund, the MTOA Fund, to fund the operations of mass transportation systems. The MMTOA Account was established in the MTOA Fund to fund the operating expenses of transportation systems in the MTA Commuter Transportation District, including MTA New York City Transit, MaBSTOA and the commuter railroads operated by MTA Long Island Rail Road and MTA Metro-North Railroad. Payments from this Account are made to MTA and its affiliates periodically to the extent that: (1) appropriations are made by the Legislature, (2) the State Director of the Budget certifies that the MMTOA Account contains sufficient funds to make such payments, and (3) State officials determine that the funds are necessary to finance operations of MTA and its affiliates and subsidiaries. Such payments are allocated among the various public transportation systems within the MTA Commuter Transportation District in accordance with schedules as specified by such appropriations. Such payments to MTA are first deposited in the Pledged Amounts Account of MTA's Dedicated Tax Fund to meet the requirements of the DTF Resolution and then any remaining amounts are transferred to the Operating and Capital Costs Account to be used to meet operating costs of the Transit System and MTA Staten Island Railway and the Commuter System.

The table below summarizes the historical amounts appropriated and paid to MTA from the MMTOA Account (including investment income) for the last ten years.

**MMTOA Account**
**($ in millions)**

| State Fiscal Year | Appropriations to MTA[(1)] | Payments to MTA |
|---|---|---|
| 2013-14 | $1,518.2 | $1,518.2 |
| 2014-15 | 1,563.9 | 1,563.9 |
| 2015-16 | 1,563.9 | 1,563.9 |
| 2016-17 | 1,668.0 | 1,668.0 |
| 2017-18 | 1,668.0 | 1,668.0 |
| 2018-19 | 1,686.6 | 1,686.6 |
| 2019-20 | 1,823.7 | 1,829.7[(2)] |
| 2020-21 | 2,143.5 | 1,895.2[(3)] |
| 2021-22 | 1,856.5 | 1,922.8[(4)] |
| 2022-23 | 2,601.0 | 2,607.0[(5)] |

(1) Does not include $182.1 million in State Fiscal Years 2015-2016 through 2020-2021 through the Section 18-b program.

(2) MMTOA appropriations for MTA for State Fiscal Year 2019-2020 amounted to $1.834 billion, but an additional $6 million was paid to MTA utilizing existing supplemental MMTOA reappropriations. This payment brought the total MMTOA receipts to $1.830 billion.

(3) MMTOA appropriations for MTA for State Fiscal Year 2020-2021 amounted to $2.144.6 billion, but revenue loss in the fund due to the economic effects of COVID-19 reduced payments to $1.895 billion which includes an additional $1.5 million paid to MTA utilizing existing supplemental MMTOA reappropriations.

(4) MMTOA appropriations for MTA for State Fiscal Year 2021-2022 amounted to $1.857 billion, but spending of $1.923 billion included an additional $61.8 million of April payments related to the prior year's appropriations and $5 million paid to MTA utilizing existing supplemental MMTOA reappropriations.

(5) MMTOA appropriations for MTA for State Fiscal Year 2022-2023 amounted to $2.601 billion, but an additional $6 million was paid to MTA utilizing existing supplemental MMTOA reappropriations. This payment brought the total MMTOA receipts to $2.607 billion.

Source: New York State Division of the Budget.

Although a variety of taxes have been used to fund the special tax supported operating subsidies, the taxes levied for this purpose currently include the MMTOA PBT, the District Sales Tax, the Franchise Taxes and the Franchise Surcharge ("MMTOA Taxes"), all described in more detail below. State law gives State officials the authority to disburse funds to MTA from the MMTOA Account to the extent such officials determine that the funds are necessary to finance operations of the Transit System and MTA Staten Island Railway and the Commuter System. Fluctuations in the economic and demographic conditions of the MTA Commuter Transportation District are directly related to the growth of economically sensitive taxes, including the District Sales Tax and the Franchise Surcharge. Therefore, there can be no assurance that such taxes will generate tax receipts at current levels. If shortfalls are experienced in the collection of MMTOA Taxes, the Commissioner of Transportation is authorized to reduce each recipient's payment from the MTOA Fund proportionately. MTA has historically received approximately 85% of such amounts deposited in the MMTOA Account. However, starting in 2012 a split in the Franchise Taxes component of the MMTOA taxes between the upstate Public Transportation Systems Operating Assistance Account ("PTOA Account") and the MMTOA account diverted 26% of the transportation and transmission taxes that were allotted previously to MMTOA to the upstate PTOA Account.

*MMTOA PBT.*

*General*. The products that are subject to the tax, the tax rates and the transactions excluded from such tax are identical to the basic PBT as described above under "MTTF Receipts – Dedicated Petroleum Business Tax" which is dedicated to the MTTF.

As of April 1, 2001, the share of the PBT basic tax earmarked to the MMTOA Account is 10.835%.

As described above in "MTTF Receipts ─ Dedicated Petroleum Business Tax", aspects relating to the imposition and collection of the MMTOA PBT have from time to time been and may continue to be the subject of administrative claims and litigation by taxpayers.

*Historical Summary of MMTOA PBT*. The following table provides historical information relating to MMTOA PBT receipts deposited into the MMTOA Account for the last ten years.

**MMTOA Petroleum Business Taxes**

| State Fiscal Year | Net Receipts (in millions) |
|---|---|
| 2013-14 | $75.5 |
| 2014-15 | 75.1 |
| 2015-16 | 72.6 |
| 2016-17 | 73.1 |
| 2017-18 | 70.8 |
| 2018-19 | 74.1 |
| 2019-20 | 74.1 |
| 2020-21 | 60.4 |
| 2021-22 | 66.0 |
| 2022-23 | 69.3 |

Source: New York State Division of the Budget.

*District Sales Tax.*

*General*. The District Sales Tax consists of a 0.375% sales and compensating use tax imposed on sales and uses of certain tangible personal property and services applicable only within the MTA Commuter Transportation District.

District Sales Tax receipts have been a significant source of tax receipts deposited in the MMTOA Account. The level of District Sales Tax receipts is necessarily dependent upon economic and demographic conditions in the MTA Commuter Transportation District, and therefore there can be no assurance that historical data with respect to collections of the District Sales Tax will be indicative of future receipts.

The base of the District Sales Tax is identical to the base of the State's 4% sales and compensating use tax. The tax now applies to (1) sales and use of most tangible personal property; (2) certain utility service billings; and (3) charges for restaurant meals, hotel and motel occupancy, and for specified admissions and services. The base of the tax has been amended periodically by the Legislature to exempt various purchases.

Clothing and footwear costing less than $110 were permanently exempted from State sales tax on April 1, 2006. Localities have an option to also offer this exemption. Pursuant to Tax Law, localities opting to remove their tax must reimburse MTA for one-half of the foregone District Sales Tax revenue, while the State will provide the other half, but these reimbursements are paid to MTA and such reimbursements are not deposited into the MMTOA.

On June 1, 2006, the State placed a cap on the amount of State sales tax collected on motor fuel and diesel motor fuel at eight cents per gallon. Localities have an option to continue to use the percentage rate method or to change to a cents-per-gallon method of computing sales tax. Pursuant to the Tax Law, the State must reimburse MTA for the entire foregone District Sales Tax revenue, but these reimbursements are paid from the State General Fund to MTA and such reimbursements are not deposited into the MMTOA.

MTA is held harmless from the impact of the clothing and footwear exemption and the cap on motor fuel and diesel motor fuel. This entire held harmless amount is reflected in the following table, but such amounts are not deposited into the MMTOA.

In order to address the impact on consumers from the sharp increase in the cost of fuel in the State resulting from geopolitical events, the State Fiscal Year 2022-2023 Enacted Budget included a suspension of the State sales tax imposed on fuel, the motor fuel tax and the MCTD sales tax imposed in respect of the sale of gasoline and highway diesel fuel from June 1, 2022 through December 31, 2022 (the "Fuel Tax Holiday"). However, in order to hold MTA harmless and offset from any lost revenue resulting from the Fuel Tax Holiday, the State made monthly transfers from its General Fund to the MTTF and the MMTOA Account for subsequent transfer to MTA in amounts equal to the tax revenue that would have been distributed to such funds had the Fuel Tax Holiday not been implemented. No such suspension is expected during State Fiscal Year 2023-2024. See "Part 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – State Special Tax Supported Operating Subsidies – *Fuel Tax Holiday*".

*Historical Summary of District Sales Tax*. The following table provides historical information relating to District Sales Tax receipts deposited into the MMTOA Account for the last ten years.

**District Sales Tax**
**($ in millions)**

| State Fiscal Year | Net Receipts | Held Harmless Amount(1) | Total |
|---|---|---|---|
| 2013-14 | $801.7 | $52.6(2) | $854.3 |
| 2014-15 | 854.0 | 50.7(3) | 904.7 |
| 2015-16 | 874.2 | 39.2(4) | 913.4 |
| 2016-17 | 903.0 | 35.9(5) | $938.9 |
| 2017-18 | 942.0 | 38.4(6) | 980.4 |
| 2018-19 | 963.1 | 41.9(7) | 1,005.0 |
| 2019-20 | 1,049.1 | 38.4(8) | 1,087.5 |
| 2020-21 | 873.0 | 22.4(9) | 895.4 |
| 2021-22 | 1,089.0 | 40.8(10) | 1,129.8 |
| 2022-23 | 1,217.0 | 51.1(11) | 1,268.1 |

(1) This amount includes moneys paid by both the State and the localities. Such amounts are not deposited into the MMTOA.
(2) Includes $36.6 million from the State and localities for the clothing exemption and $16 million from the State for the cap on motor fuel and diesel fuel.
(3) Includes an estimated $34.7 million from the State and localities for the clothing exemption and $16 million from the State for the cap on motor fuel and diesel fuel.
(4) Includes an estimated $34.1 million from the State and localities for the clothing exemption and $5.1 million from the State for the cap on motor fuel and diesel fuel.
(5) Includes an estimated $34.4 million from the State and localities for the clothing exemption and $1.5 million from the State for the cap on motor fuel and diesel fuel.
(6) Includes an estimated $34.9 million from the State and localities for the clothing exemption and $3.5 million from the State for the cap on motor fuel and diesel fuel.
(7) Includes an estimated $35.6 million from the State and localities for the clothing exemption and $6.3 million from the State for the cap on motor fuel and diesel fuel.
(8) Includes an estimated $33.4 million from the State and localities for the clothing exemption and $5.0 million from the State for the cap on motor fuel and diesel fuel.
(9) Includes an estimated $22.3 million from the State and localities for the clothing exemption and $0.1 million from the State for the cap on motor fuel and diesel fuel.
(10) Includes an estimated $30.9 million from the State and localities for the clothing exemption and $9.9 million from the State for the cap on motor fuel and diesel fuel.
(11) Includes an estimated $31.3 million from the State and localities for the clothing exemption and $19.8 million from the State for the cap on motor fuel and diesel fuel. This does not reflect or include $15.0 million in "hold harmless" transfers from the General Fund related to the temporary suspension of the MCTD sales tax on gasoline and diesel motor fuel from June 1, 2022 to December 31, 2022.
Source: New York State Division of the Budget and Department of Taxation and Finance.

*Franchise Taxes.*

*General*. A legislatively allocated portion of two taxes imposed on certain transportation and transmission companies (such as trucking, telegraph and local telephone companies), consisting of (a) an annual franchise tax based on the amount of the taxpayer's issued capital stock, and (b) an annual franchise tax on the taxpayer's gross earnings from all sources calculated to be in the State pursuant to statutory formulae are deposited in the MMTOA Account.

In addition to the two taxes described in the previous paragraph, effective May 1, 2015, Section 186-e was amended to include an additional excise tax of 0.4% (2.9% vs. 2.5%) that is imposed on the sale of mobile communication services. The receipts from the additional excise tax are deposited in the MMTOA Account using the same statutory formulae as the two franchise taxes described in the previous paragraph. Previously, mobile communication providers were taxed under (b) above.

The percentage of franchise receipts required to be deposited in the MMTOA Account has been modified from time-to-time. At present, this percentage is 54%. These changes were made to preserve the dedicated funds revenue flow subsequent to changes enacted in prior years reducing the base of the gross earnings tax and/or reducing the tax rates.

*Historical Summary of the Franchise Taxes*. The following table provides historical information relating to the portion of Franchise Tax receipts deposited into the MMTOA Account for the last ten years. A one-time election to remain under the taxes imposed on trucking and railroad companies was enacted in 1996 for elections made before March

15, 1998. Companies not electing to remain under Sections 183 and 184 were taxed under the general corporate franchise tax. As part of the same legislation, the Section 184 rate was reduced from 0.75% to 0.6% on gross earnings. The MMTOA revenue distribution was held harmless. Additional rate reductions occurred beginning in 1998 that do not affect MMTOA. Effective State Fiscal Year 2012-2013, the distribution to MMTOA was changed from 80% to 54% of the Franchise Taxes. The remaining 26% is distributed to the Public Transportation Systems Operating Assistance PTOA Account.

The following table provides historical information relating to Franchise Tax receipts deposited into the MMTOA Account for the last ten years.

**Franchise Taxes**
**(in millions)**

| State Fiscal Year | Net Receipts |
|---|---|
| 2013-14 | $36.5 |
| 2014-15 | 25.7 |
| 2015-16 | 39.4 |
| 2016-17 | 41.4 |
| 2017-18 | 37.2 |
| 2018-19 | 41.3 |
| 2019-20 | 39.3 |
| 2020-21 | 27.5 |
| 2021-22 | 25.3 |
| 2022-23 | 27.3 |

Source: New York State Division of the Budget.

*Franchise Surcharge.*

*General.* This surcharge, originally imposed in 1982, was extended by the Legislature in March 2013 and was made permanent in the State Fiscal Year 2014-2015 Enacted Budget. The Franchise Surcharge is imposed on the portion of the franchise and other taxes of certain corporations, insurance, utility, and transportation and transmission companies attributable (according to various complex formulae) to business activity carried on within the MTA Commuter Transportation District. The MTA surcharge rate for Tax Year 2015 was 25.6%. Since 2015, the Tax Department has determined the surcharge tax rate needed to maintain revenue neutrality. Revenue neutrality is defined as the rate necessary to achieve the MTA surcharge revenue for the Article 9A franchise tax published in the State Fiscal Year 2014-2015 Enacted Budget. This calculation is repeated annually at a similar time. Determination of an annual rate is necessary because certain tax reform provisions took effect with tax year 2016 that lower State Article 9A receipts. These reforms will be fully implemented in tax year 2021.

For tax year 2023, the surcharge rate for corporate franchise taxpayers is 30.0%. Insurance (Article 33) and corporate and utility (Article 9) taxpayers continue to pay a 17% surcharge rate and be subject to the 1997 Tax Law calculation since they were not part of corporate tax reform. Insurance (Article 33) and corporate and utility (Article 9) taxpayers continue to pay a 17% surcharge rate and be subject to the 1997 Tax Law calculation since they were not part of corporate tax reform. Effective May 1, 2015, an additional surcharge rate of 0.721% (17.721% vs. 17.0%) is imposed on the sale of mobile communication services (this corresponds to the higher excise tax rate described in the Franchise Taxes section). In accordance with Section 171-a of the Tax Law, the tax revenue generated under these provisions, after the deduction of administrative costs, is to be deposited to the MMTOA Account, as such taxes are received.

Starting on January 1, 2024, the Corporate Franchise Tax Surcharge is fixed at a rate of 30%, rather than being determined annually by the State Department of Taxation and Finance as had been the case since 2015.

Aspects relating to the imposition and collection of the Franchise Surcharge have from time to time been, are currently and may continue to be, the subject of administrative claims and litigation by taxpayers. The financial impact of such challenges commenced to date has not been and is not expected to be material.

*Historical Summary of the Franchise Surcharge.* The following table provides historical information relating to the Franchise Surcharge receipts deposited into the MMTOA Account for the last ten years.

**Franchise Surcharges**
**($ in millions)**

| State Fiscal Year | Net Receipts |
|---|---|
| 2013-14 | $989.9 |
| 2014-15 | 1,032.0 |
| 2015-16 | 1,039.7 |
| 2016-17 | 1,017.1 |
| 2017-18 | 1,087.4 |
| 2018-19 | 1,169.1 |
| 2019-20 | 1,392.4 |
| 2020-21 | 1,379.1 |
| 2021-22 | 1,733.6 |
| 2022-23 | 2,143.1 |

Source: New York State Division of the Budget.

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## PAYROLL MOBILITY TAX OBLIGATIONS

### General

There is $7,207,115,000 aggregate principal amount of outstanding MTA Bridges and Tunnels Payroll Mobility Tax Senior Lien Bonds as of April 28, 2023. In addition, and not included in the above amount, MTA has outstanding $2,907,280,000 aggregate principal amount of BANs issued under the MTA Payroll Mobility Tax Obligation Resolution and $1,717,910,000 aggregate principal of BANs issued under the TBTA PMT Resolution.

Under State law, the MTA PMT Senior Lien Indebtedness and the MTA Bridges and Tunnels PMT Senior Lien Indebtedness are special obligations of MTA and MTA Bridges and Tunnels, respectively, which means that they are payable solely from a gross lien on the money pledged for payment under the MTA Payroll Mobility Tax Obligation Resolution (the "MTA PMT Resolution") and the MTA Bridges and Tunnels Payroll Mobility Tax Obligation Resolution (the "TBTA PMT Resolution"). Such bonds are not general obligations of MTA or MTA Bridges and Tunnels.

The MTA PMT Bonds are special obligations of MTA payable from and secured by the revenues described below (1) on a parity basis with the obligation of MTA Bridges and Tunnels to pay debt service on senior lien bonds, other obligations and parity debt ("TBTA PMT Senior Lien Indebtedness") issued under the TBTA PMT Resolution, and (2) senior to the obligations of MTA or MTA Bridges and Tunnels to pay debt service on second lien bonds and second lien parity debt ("MTA PMT Second Lien Indebtedness" or "TBTA PMT Second Lien Indebtedness" and, collectively, "PMT Second Lien Indebtedness") issued under the MTA PMT Resolution or the TBTA PMT Resolution, respectively. The TBTA PMT Bonds are special obligations of MTA Bridges and Tunnels payable from and secured by the revenues described below (1) on a parity basis with the obligation of MTA to pay debt service on senior lien bonds, other obligations and parity debt ("MTA PMT Senior Lien Indebtedness") issued under the MTA PMT Resolution, and (2) senior to PMT Second Lien Indebtedness issued under the TBTA PMT Resolution or the MTA PMT Resolution.

Copies of the TBTA PMT Resolution, the MTA PMT Resolution and the executed Financing Agreement have each been filed with the MSRB through EMMA, all of which are incorporated by specific cross-reference herein. In addition, for convenience, copies of the TBTA PMT Resolution, the MTA PMT Resolution and the Financing Agreement can be obtained at no cost on MTA's investor website under "Bond Resolutions and Interagency Agreements" at https://new.mta.info/investor-info/bond-resolutions-interagency-agreements.

Capitalized terms used under this caption "PAYROLL MOBILITY TAX OBLIGATIONS" not otherwise defined herein have the meanings set forth in the MTA PMT Resolution or the TBTA PMT Resolution, as applicable.

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The following **PMT Senior Lien Table 1** sets forth, on a cash basis, the debt service on the outstanding PMT Senior Lien Obligations as of April 28, 2023.

**PMT Senior Lien Table 1**
**Aggregate Debt Service**
**($ in thousands)[1]**

| Year Ending December 31 | Aggregate Debt Service [2][3][4] |
|---|---|
| 2023 | $ 351,678 |
| 2024 | 523,969 |
| 2025 | 406,184 |
| 2026 | 554,805 |
| 2027 | 507,096 |
| 2028 | 533,949 |
| 2029 | 545,946 |
| 2030 | 432,287 |
| 2031 | 462,073 |
| 2032 | 329,379 |
| 2033 | 359,855 |
| 2034 | 338,061 |
| 2035 | 356,239 |
| 2036 | 352,236 |
| 2037 | 387,729 |
| 2038 | 362,905 |
| 2039 | 317,529 |
| 2040 | 494,460 |
| 2041 | 480,551 |
| 2042 | 457,780 |
| 2043 | 455,308 |
| 2044 | 381,351 |
| 2045 | 396,377 |
| 2046 | 396,328 |
| 2047 | 448,849 |
| 2048 | 456,577 |
| 2049 | 456,272 |
| 2050 | 456,077 |
| 2051 | 454,409 |
| 2052 | 345,363 |
| 2053 | 108,451 |
| 2054 | 108,384 |
| 2055 | 108,305 |
| 2056 | 108,237 |
| 2057 | 76,608 |
| Total | $13,311,606 |

(1) Totals may not add due to rounding.
(2) Includes the following assumption for debt service: floating rate notes at an assumed rate of 4.0% plus the current fixed spread; fixed rate mandatory tender bonds bear interest at their respective fixed interest rates prior to the mandatory tender date, until the final maturity date; interest paid monthly, calculated on the basis of a 360-day year consisting of twelve 30-day months for floating rate notes.
(3) Excludes debt service on all outstanding Bond Anticipation Notes, which constitute PMT Obligation Anticipation Notes, including the PMT MLF BANs, the principal of which is not secured by PMT Receipts and interest on which is secured by PMT Receipts on a subordinate basis to PMT Senior Lien Indebtedness.
(4) For the Series TBTA PMT 2022E Bonds, which were designated as "Balloon Obligations" under the TBTA PMT Resolution, figures assume interest only on the aggregate principal amount of the Series TBTA PMT 2022E Bonds at their respective fixed interest rates or assumed interest rate, as applicable, through their respective maturity dates, and thereafter, estimated debt service on the refinancing of the Series TBTA PMT 2022E Bonds.

### PMT Receipts

Under State law, TBTA PMT Bonds are MTA Bridges and Tunnels' special obligations, which means that they are payable solely from monies pledged therefor ("PMT Receipts") in the Obligations Trust Estate under the TBTA PMT Resolution. TBTA PMT Bonds are not MTA Bridges and Tunnels' general obligations. PMT Receipts are comprised of Mobility Tax Receipts and ATA Receipts.

*Mobility Tax Receipts*

*The Payroll Mobility Tax*. The Payroll Mobility Tax ("PMT") is a tax imposed on certain employers and individuals engaging in business in the Metropolitan Commuter Transportation District ("MCTD"). The MCTD, which is subject to the imposition of the PMT, includes New York City (the counties of New York (Manhattan), Bronx, Kings (Brooklyn), Queens, Richmond (Staten Island)) and the counties of Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester. The PMT is administered by the Department of Taxation and Finance and collected by the Commissioner of Taxation and Finance. The proceeds from the PMT are distributed, without appropriation, to MTA.

Legislation was enacted in the State in 2009 (the "May 2009 Legislation"), providing additional sources of revenues, in the form of taxes, fees and surcharges, to address the financial needs of MTA. The PMT on payroll expenses and net earnings from self-employment within the MCTD initially imposed a 0.34% tax collected from private (for-profit and not-for-profit) and public sector employers in the MCTD.

The PMT was modified in 2011 to exempt certain taxpayers from paying the PMT and decrease rates paid by others. The PMT currently excludes federal, international, interstate agencies, certain eligible educational institutions, and certain small businesses. Additional amendments made in 2011 to the May 2009 Legislation further provided that any reductions in aid to MTA attributable to the 2011 statutory reductions in the PMT "shall be offset through alternative sources that will be included in the state budget" ("PMT Revenue Offset Receipts"). The PMT Revenue Offset Receipts are not pledged to the payment of TBTA PMT Indebtedness or MTA PMT Indebtedness.

MTA, along with the State and various officials of the State, successfully defended several actions challenging the constitutionality of the legislation that enacted the Payroll Mobility Tax (Chapter 25 of the Laws of 2009). These cases were conclusively resolved in 2014 when the New York Court of Appeals declined to hear an appeal of the appellate court decision, thereby confirming that the PMT is constitutional.

Legislation enacted in 2018 removed the legislative appropriation requirement for Mobility Tax Receipts and established that MTA receives Mobility Tax Receipts directly. See "Method of Payments of the PMT" below.

*PMT Legislation in the State Fiscal Year 2023-2024 Enacted Budget.* The State Fiscal Year 2023-2024 Enacted Budget included legislation which increases the maximum rate of the PMT for employers with payroll expense of over $437,500 in any calendar quarter engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond (the counties which comprise New York City) from 0.34% to 0.60%, such increase to become effective on July 1, 2023. The legislation also increases the rate of the PMT imposed on self-employed individuals with net earnings allocated to the MCTD of over $50,000 for the tax year engaging in business in the MCTD in the counties of Bronx, Kings, New York, Queens and Richmond from 0.34% to 0.47%, such increase effective at the start of the tax year beginning on or after January 1, 2023, and from 0.47% to 0.60%, such increase to become effective at the start of the tax year beginning on or after January 1, 2024. No change was made to the existing rates of the PMT on employers and self-employed individuals engaging in business in the MCTD in the counties of Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester.

*Current Payroll Mobility Tax Rates.* The PMT is imposed on the total payroll expense for all covered employees for each calendar quarter at the following rates:

| Payroll Expense for Calendar Quarter | Tax Rate on Payroll Expense | Employers Engage in Business in |
|---|---|---|
| Under $312,500 | Not subject to PMT | -- |
| Over $312,500 but not over $375,000 | 0.11% | All counties in MCTD |
| Over $375,000 but not over $437,500 | 0.23% | All counties in MCTD |
| Over $437,500 | 0.34%(1) | Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk and Westchester |
| Over $437,500 | 0.60%(2) | Bronx, Kings, New York, Queens and Richmond |

(1) No change to the current rate.
(2) Current rate is 0.34%, with increase to become effective on July 1, 2023.

Payroll expenses subject to the PMT includes all wages or compensation (as defined under sections 3121 or 3231 of the Internal Revenue Code), including back pay, sick pay, deferred compensation, and bonuses if the payroll payment is attributable to services performed while the employee is or was a covered employee (described below). Section 3121 of the Internal Revenue Code defines wages and compensation as those subject to federal social security taxes and section

3231 of the Internal Revenue Code defines wages and compensation as those subject to the federal railroad retirement tax. However, in computing payroll expense subject to the PMT, the caps on wages subject to either social security taxes or railroad retirement taxes do not apply. Accordingly, for most employers, payroll expense is the amount of the employee wages or other compensation that is subject to the Medicare portion of the federal social security taxes.

*Employers Subject to the Payroll Mobility Tax.* The PMT is imposed on certain employers within the MCTD, as described below. Subject to the exemptions described below, an employer engaging in business within the MCTD is subject to the PMT for each calendar quarter they are required to withhold New York State income tax from wages paid to employees and their payroll expense for all covered employees exceeds $312,500 for that calendar quarter. An employer whose payroll expense does not exceed $312,500 for that calendar quarter is not subject to the PMT for that calendar quarter.

*Employers Exempt from the Payroll Mobility Tax.* The following employers are exempt from the PMT: agencies and instrumentalities of the United States; the United Nations; interstate agencies and public corporations created pursuant to an agreement or compact with another state or Canada (such as the Port Authority). The following educational institutions are also exempt from the PMT: any public school district; a board of cooperative educational services; a public elementary or secondary school; schools which serve students with disabilities of school age; and nonpublic elementary or secondary school that provides instruction in grade one or above.

*Covered Employees Subject to Payroll Mobility Tax.* An employee is considered to be a covered employee (whose wages are then subject to the PMT) if the employee's services are allocated to the MCTD. An employee's services are allocated to the MCTD if <u>any one</u> of the following are true:

1) *Localization* - If an employee's services are either (a) performed entirely within the MCTD or (b) performed both inside and outside the MCTD, but the services performed outside the MCTD are incidental (i.e., temporary or transitory or consist of isolated transactions).

2) *Base of Operations* - If the employee's base of operations is in the MCTD. Base of operations generally means where the employee customarily starts out to perform his or her functions within or outside the MCTD or where the employee customarily returns to receive instruction, replenish stock and materials, repair equipment, or perform any other necessary function. This test is not applied if an employee has no base of operations or has more than one base of operations.

3) *Place of Direction and Control* – If the employee's direction and control emanates only from within the MCTD, and the employee performs some services within the MCTD.

4) *Residence* – If the employee resides in the MCTD and performs some services in the MCTD.

If an employee is considered, a covered employee based on any one of these tests, then all of the payroll expense for that employee is included in the payroll expense for purposes of the PMT.

*Individuals with Net Earnings from Self-Employment.* Individuals who have net earnings from self-employment allocated to the MCTD are also subject to the PMT. However, if total net earnings from self-employment allocated to the MCTD are $50,000 or less for the tax year, no PMT is due. Net earnings from self-employment subject to the PMT are taxed at a flat rate of 0.34% of total net earnings allocated to the MCTD (subject to the minimum $50,000 annual earnings threshold described in the preceding sentence). Self-employed individuals which may be subject to the PMT include sole proprietors, partners in partnerships, members of limited liability companies (LLCs) treated as partnerships for federal income tax purposes and certain single-member LLCs. Certain church employees, members of the clergy and Christian Science practitioners (those who are not subject to federal self-employment taxes) are also not subject to the PMT.

Net earnings from self-employment allocated to the MCTD means net earnings from self-employment that are attributable to a business carried on within the MCTD. Business activity is considered carried on in the MCTD for purposes of the PMT if an individual maintains, operates, or occupies desk space, an office, a shop, a store, a warehouse, a factory, an agency, or other place located in the MCTD where the individual's business matters are systematically and regularly carried on.

If a self-employed individual carries on business both in and outside the MCTD, only a portion of the individual's self-employed earnings are allocated to the MCTD, and thus subject to the PMT. Allocation for PMT purposes is required to be done using the same rules that apply for purposes of the allocation of business income in and out of New York State under the personal income tax rules.

*Method of Payments of the PMT.* The PMT is paid concurrently with regular periodic payroll by large employers required to use the State's prompt payment system (payrolls in excess of $100,000) and quarterly by sole proprietors and other smaller employers. The PMT is audited and enforced by the Department of Taxation and Finance and collected by the Commissioner of Taxation and Finance for the sole benefit of MTA and deposited to a segregated account held in trust by the State Comptroller for MTA.

*Certain MCTD Employment and Wage Base Information*

The PMT and the collection thereof are related to, among other things, employment and wages in the MCTD.

The following **Table 2** sets forth estimated employment in the MCTD and in New York State (by place of work) since 2013, the percentage change in employment from the preceding calendar year, and employment in the MCTD as a percent of New York statewide employment.

**Table 2**
**Historical MCTD and Statewide Full-Time and Part-Time Employment**

| Calendar Year | MCTD Employment[(1)] | % Change from Previous Year | NY Statewide Employment[(1)] | MCTD Employment as a % of NY Statewide Employment |
|---|---|---|---|---|
| 2013 | 8,122,572 | - | 11,619,137 | 69.9% |
| 2014 | 8,350,135 | 2.8% | 11,865,518 | 70.4 |
| 2015 | 8,561,903 | 2.5 | 12,099,185 | 70.8 |
| 2016 | 8,707,913 | 1.7 | 12,259,136 | 71.0 |
| 2017 | 8,827,314 | 1.4 | 12,391,366 | 71.2 |
| 2018 | 9,059,743 | 2.6 | 12,655,225 | 71.6 |
| 2019 | 9,159,727 | 1.1 | 12,746,559 | 71.9 |
| 2020 | 8,499,071 | -7.2 | 11,872,381 | 71.6 |
| 2021 | 8,735,920 | 2.8 | 12,186,762 | 71.7 |

______________________________________
Source: U.S. Bureau of Economic Analysis (U.S. BEA)
(1) Employment estimates based on data last updated by U.S. BEA on November 16, 2022.

The employment numbers in **Table 2** include all employment reported by the U.S. BEA and does not exclude any employees that may be exempt from the PMT and, therefore, is provided only as a proxy of the gross employment base which may be subject to the PMT.

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The following **Table 3** sets forth estimated wages, salaries and proprietors' income in the MCTD (by place of work) since 2013, the percentage change from the preceding calendar year, and the MCTD's wages, salaries and proprietors' income as a percent of New York statewide wages, salaries and proprietors' income.

**Table 3**
**Historical MCTD and Statewide Wages, Salaries and Proprietors' Income**

| Calendar Year | MCTD Wages, Salaries and Proprietors' Income ($ in millions) [1] | % Change from Previous Year | MCTD as a % of NY Statewide Wages and Salaries and Proprietors' Income |
|---|---|---|---|
| 2013 | $535,817 | - | 79.0% |
| 2014 | 561,187 | 4.7% | 79.4 |
| 2015 | 581,258 | 3.6 | 79.6 |
| 2016 | 607,251 | 4.5 | 80.0 |
| 2017 | 646,353 | 6.4 | 80.3 |
| 2018 | 679,675 | 5.2 | 80.6 |
| 2019 | 702,698 | 3.4 | 80.6 |
| 2020 | 693,300 | -1.3 | 80.3 |
| 2021 | 756,761 | 9.2 | 80.6 |

Source: U.S. BEA

(1) Wages, salaries and proprietor's income estimates: based on data last updated by U.S. BEA on November 16, 2022, Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

The wages, salaries and proprietors' income in **Table 3** include all wages, salaries and proprietors' income reported by the U.S. BEA and does not exclude any wages, salaries and proprietors' income that may be exempt from the PMT, and therefore, is provided only as a proxy of the gross wages, salaries and proprietors' income base, which may be subject to the PMT.

Statistical information and calculations contained in **Table 2** and **Table 3** are based on data obtained from the U.S. BEA. Neither MTA nor MTA Bridges and Tunnels can guarantee the accuracy of such information, assure its completeness or warrant that such information will not be changed, modified or otherwise revised subsequent to the date thereof. Neither MTA nor MTA Bridges and Tunnels has any obligation to update any or all of such information nor does MTA or MTA Bridges and Tunnels make any express or implied warranties or representations as to its accuracy or completeness.

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*Historical Mobility Tax Receipts*

The following **Table 4** sets forth, on a cash basis, MTA's total annual Mobility Tax Receipts since 2013, as well as the percentage change from the preceding calendar year.

**Table 4**
**Historical Annual Mobility Tax Receipts**

| Calendar Year | Mobility Tax Receipts ($ in millions) | % Change from Previous Year |
|---|---|---|
| 2013[(1)] | $1,215.3 | - |
| 2014 | 1,262.6 | 3.9% |
| 2015 | 1,316.9 | 4.3 |
| 2016 | 1,372.8 | 4.2 |
| 2017 | 1,435.6 | 4.6 |
| 2018 | 1,482.9 | 3.3 |
| 2019 | 1,560.5 | 5.2 |
| 2020 | 1,560.8 | 0.0 |
| 2021 | 1,713.2 | 9.8 |
| 2022 | 1,796.9 | 4.9 |

Source: MTA Management
(1) The decline in Mobility Tax Receipts was attributed to revisions to the PMT statute, effective April 1, 2012, which exempted certain taxpayers and lowered the rate paid by others, as described herein.

Mobility Tax Receipts received by MTA tend to be higher in the month of December, followed by lower Mobility Tax Receipts in the month of January, due to a statutory provision which requires the State Comptroller to transfer to MTA by the final business day in December all then collected Mobility Tax Receipts.

Additionally, MTA's total annual Mobility Tax Receipts for the past ten years, on a cash basis, as well as the percentage change from the preceding calendar year can be found under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts – *Mobility Tax Receipts*."

*ATA Receipts*

*The ATA Receipts.* The May 2009 Legislation also provided additional support for MTA in the form of revenues comprised of the supplemental fee on learner's permits and driver's licenses, supplemental fees on the registration and renewal of motor vehicles, the taxicab surcharge, and the supplemental tax on auto rentals, collectively referred to as the "ATA Receipts". The ATA Receipts are collected by the Commissioner of Taxation and Finance or the Commissioner of Motor Vehicles, as applicable, on behalf of MTA, and deposited to the segregated account held in trust by the State Comptroller for MTA. Revenue from the ATA Receipts is not subject to appropriation, and is payable quarterly directly to MTA.

ATA Receipts are derived from activities conducted in the MCTD at the collection rates listed in the following table. For a historical breakdown of ATA Receipts by category, see "Revenues of the Related Entities – Payroll Mobility Tax, PMT Offset, and MTA Aid Trust Account Receipts – *MTA Aid Trust Account Receipts*" in Part 2 of this ADS.

| Source | Collection Rate | Collection Area |
|---|---|---|
| Driver's License Fee | $1.00 per 6 months[(1)] | MCTD |
| Auto Registration Fee | $25 every year[(2)] | MCTD |
| Taxicab Surcharge | $0.50 per ride | Any taxi ride starting in NYC and ending within the MCTD |
| Auto Rental Tax | 6% of the cost of the rental[(3)] | MCTD |

Source: MTA, Department of Taxation and Finance, State Division of the Budget
(1) Collected as a $16 surcharge on an 8-year license.
(2) Collected as a $50 surcharge on a 2-year vehicle registration.
(3) Raised from 5% in 2019.

*Historical ATA Receipts*

The following **Table 5** sets forth, on a cash basis, MTA's total annual ATA Receipts since 2013, as well as the percentage change from the preceding calendar year.

**Table 5**
**Historical Annual ATA Receipts**

| Calendar Year | ATA Receipts ($ in millions) | % Change from Previous Year |
|---|---|---|
| 2013 | $302.9 | - |
| 2014 | 313.2 | 3.4% |
| 2015[1] | 284.8 | -9.1 |
| 2016 | 300.3 | 5.5 |
| 2017 | 306.2 | 2.0 |
| 2018[1] | 272.6 | -11.0 |
| 2019 | 311.0 | 14.1 |
| 2020[1] | 248.8 | -20.0 |
| 2021 | 263.3 | 5.8 |
| 2022 | 263.3 | 0.0 |

Source: MTA Management
(1) The decline in ATA Receipts from 2014-2015 reflected a decline in taxicab surcharge receipts due to a reduction in pickups by yellow and green-metered taxicabs, which are subject to the taxicab surcharge. This was a result of an increase in the market share of smartphone app-driven providers into the area, such as Uber and Lyft, which are not subject to the $0.50 taxicab surcharge. The change in 2017-2018 reflects an expansion of For-Hire Vehicle trips (from providers such as Uber and Lyft) taken as acceptance of these providers grew. The change from 2019 to 2020 reflects the impacts of the COVID-19 pandemic.

*Historical PMT Receipts*

The following **Table 6A** sets forth, on a cash basis, annual combined Mobility Tax Receipts and ATA Receipts (collectively, PMT Receipts) since 2013, and the percentage change in total PMT Receipts from the preceding calendar year.

**Table 6A**
**Historical Annual Combined Mobility Tax Receipts and ATA Receipts**
**(PMT Receipts)[1]**

| Calendar Year | Mobility Tax Receipts ($ in millions) | ATA Receipts ($ in millions) | PMT Receipts ($ in millions) | % Change PMT Receipts from Previous Year |
|---|---|---|---|---|
| 2013[2] | $1,215.3 | $302.9 | $1,518.1 | - |
| 2014 | 1,262.6 | 313.2 | 1,575.8 | 3.8% |
| 2015[3] | 1,316.9 | 284.8 | 1,601.7 | 1.6 |
| 2016 | 1,372.8 | 300.3 | 1,673.1 | 4.5 |
| 2017 | 1,435.6 | 306.2 | 1,741.8 | 4.1 |
| 2018[3] | 1,482.9 | 272.6 | 1,755.5 | 0.8 |
| 2019 | 1,560.5 | 311.0 | 1,871.5 | 6.6 |
| 2020[2][3] | 1,560.8 | 248.8 | 1,809.7 | -3.3 |
| 2021 | 1,713.2 | 263.3 | 1,976.6 | 9.2 |
| 2022 | 1,796.9 | 263.3 | 2,060.2 | 4.2 |

Source: MTA Management

(1) Numbers may not total due to rounding.

(2) The decline in Mobility Tax Receipts was attributed to revisions to the PMT statute, effective April 1, 2012, which exempted certain taxpayers and lowered the rate paid by others, as described herein. The change from 2019 to 2020 reflects the impacts of the COVID-19 pandemic.

(3) The decline in ATA Receipts from 2014 to 2015 reflected a decline in taxicab surcharge receipts due to a reduction in pickups by yellow- and green-metered taxicabs, which are subject to the taxicab surcharge. This was a result of an increase in the market share of smartphone app-driven providers into the area, such as Uber and Lyft, which are not subject to the $0.50 taxicab surcharge. The change from 2017 to 2018 reflects an expansion of For-Hire Vehicle trips taken (from providers such as Uber and Lyft) as acceptance of these providers grew. The change from 2019 to 2020 reflects the impacts of the COVID-19 pandemic.

*PMT Receipts Coverage of Debt Service*

The following **Table 6B** sets forth, on a cash basis, actual PMT Receipts in 2021 and 2022 and projected PMT Receipts in 2023, existing debt service on Payroll Mobility Tax Senior Lien Bonds, and debt service coverage from PMT Receipts. Projected PMT Receipts contained in **Table 6B** reflect $1,785.9 million in Mobility Tax Receipts and $282.7 million in ATA Receipts as budgeted in the 2023 February Plan.

**Table 6B**
**Historical and Projected PMT Receipts and Debt Service Coverage**
**Calendar Year**

| | **Actual 2021** | **Actual 2022** | **Projected 2023** |
|---|---|---|---|
| **PMT Receipts ($ in millions)** (1) | | | |
| Mobility Tax Receipts | $1,713.2 | $1,796.9 | $1,785.9 |
| ATA Receipts | 263.3 | 263.3 | 282.7 |
| **Total Available** | **$1,976.6** | **$2,060.2** | **$2,068.6** |
| | | | |
| **Debt Service ($ in millions)** (2) | **$31.2** | **$167.0** | **$351.7** |
| **Debt Service Coverage Ratio** | 63.35x | 12.34x | 5.88x |

Source: MTA Management

(1) Numbers may not total due to rounding. Actual PMT Receipts in 2022 include preliminary December 2022 results. Projected PMT Receipts in 2023 are from the 2023 February Plan.

(2) Debt service in 2023 as of April 28, 2023, and does not include debt service on any additional PMT Senior Lien Indebtedness which may be issued in the remainder of 2023. See footnotes under PMT Senior Lien Table 1 for certain assumptions used for debt service in 2023.

**Factors Affecting Revenues**

*The COVID-19 Pandemic***.** While the COVID-19 pandemic has, since its emergence in February 2020, and particularly since March 2020, had a substantially adverse impact on MTA revenues and operations, annual Mobility Tax Receipts and ATA Receipts shown in Tables 4, 5 and 6A demonstrate the relative resilience of the broad-based PMT Receipts. For further information related to the impact of the COVID-19 pandemic more generally on MTA and its Related Entities, see "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis".

*Legislative Changes*. The State is not restricted in its right to amend, repeal, modify or otherwise alter statutes imposing or relating to the sources of PMT Receipts or the taxes that are the source of such PMT Receipts. However, the State has authorized MTA and MTA Bridges and Tunnels to include in their respective PMT Resolutions, for the benefit of the holders of their respective bonds, its agreement that the State will not limit or alter the rights vested in MTA or MTA Bridges and Tunnels to fulfill the terms of any agreements made by MTA or MTA Bridges and Tunnels with the holders of its notes, bonds and lease obligations, including the MTA Bridges and Tunnels PMT Bonds and the MTA PMT Bonds, or in any way impair the rights and remedies of such holders. See "SECURITY - Agreements of the State" below.

*Economic Conditions*. Each of the sources of PMT Receipts are dependent upon economic and demographic conditions in the State and in the MCTD, and therefore, there can be no assurance that historical data with respect to collections of the PMT Receipts will be indicative of future receipts, either during the pendency of the COVID-19 pandemic or thereafter.

*Information Relating to the State***.** Information relating to the State, including the Annual Information Statement of the State, as amended or supplemented, is not a part of this ADS. Such information is on file with MSRB through EMMA with which the State was required to file, and the State has committed to update that information to the holders of its general obligation bonds and State-supported bonds, in the manner specified in Rule 15c2-12. Prospective purchasers of TBTA PMT Bonds wishing to obtain that information may refer to those filings regarding currently available information about the State. The State has not obligated itself to provide continuing disclosure in connection with the offering of TBTA PMT Bonds. MTA and MTA Bridges and Tunnels make no representations about State information or its continued availability.

**Pledge Effected by the MTA PMT Resolution and the TBTA PMT Resolution**

*Trust Estate*. The MTA PMT Resolution and the TBTA PMT Resolution each provide that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the PMT Senior Lien Obligations, in accordance with their terms and the provisions of the MTA PMT Resolution and the TBTA PMT Resolution, as applicable, subject only to the provisions permitting the application of that money for the purposes and on the terms and conditions permitted in the MTA PMT Resolution and the TBTA PMT Resolution, the following, referred to as the "Trust Estate":

(i) the proceeds of the sale of the MTA PMT Bonds and the TBTA PMT Bonds;

(ii) all right, title and interest of MTA and MTA Bridges and Tunnels in, to and under the Financing Agreement;

(iii) the ATA Receipts and the Mobility Tax Receipts and the funds and accounts established under the Financing Agreement into which the ATA Receipts and PMT Receipts are deposited;

(iv) the Obligations Proceeds Fund and the Senior Debt Service Fund, any money on deposit therein and any money received and held by MTA and MTA Bridges and Tunnels required to be deposited therein;

(v) all funds, accounts and subaccounts established by the MTA PMT Resolution and the TBTA PMT Resolution, as applicable (other than (a) the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund, and any accounts and subaccounts therein and (b) funds and any accounts and subaccounts therein established pursuant to a supplemental resolution in connection with Variable Interest Rate Obligations, Put Obligations or Parity Debt; provided, however, that, in the case of funds described in clause (b) hereof, such funds, accounts and subaccounts are specifically excepted from the Obligations Trust Estate by the Supplemental Resolution authorizing such Variable Interest Rate Obligations, Put Obligations or Parity Debt), including the investments, if any, thereof; and

(vi) all funds, moneys and securities and any and all other rights and interests in property, whether tangible or intangible, that may from time to time be conveyed, mortgaged, pledged, assigned or transferred as and for additional security under the MTA PMT Resolution and the TBTA PMT Resolution for the PMT Senior Obligations by MTA or MTA Bridges and Tunnels, or by anyone on their behalf, or with its written consent, to the applicable trustee.

The MTA PMT Resolution and the TBTA PMT Resolution each provide that the respective trust estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the MTA PMT Resolution and TBTA PMT Resolution, respectively, other than the PMT Senior Obligations, and all corporate action on the part of MTA and MTA Bridges and Tunnels to that end have been duly and validly taken.

**Flow of PMT Receipts**

MTA and MTA Bridges and Tunnels entered into the Financing Agreement to provide the mechanism by which MTA and MTA Bridges and Tunnels share PMT Receipts on a parity basis. As described below, the statutes providing for the imposition and collection of the PMT Receipts, together with the Financing Agreement and the PMT Resolutions provide the procedures for the deposit and transfer of amounts constituting PMT Receipts to ensure that sufficient amounts will be available for MTA to (i) provide MTA Bridges and Tunnels, or the Trustee on behalf of MTA Bridges and Tunnels, with the PMT Receipts necessary for MTA Bridges and Tunnels to timely perform its obligations under the TBTA PMT Resolution, and (ii) retain, or provide to the trustee under the MTA PMT Resolution on its own behalf, the PMT Receipts necessary for MTA to timely perform its obligations under the MTA PMT Resolution, in each case on the terms and conditions and in the priority set forth in the applicable statutes and financing documents.

*Deposit and Application of PMT Receipts Required by Statute*

*Mobility Tax Receipts.* The Mobility Tax Receipts collected or received by the Commissioner of Taxation and Finance on behalf of MTA are deposited daily into a segregated account held in trust by the State Comptroller for the credit of MTA. Mobility Tax Receipts are <u>not</u> subject to appropriation, and are payable twice a month (on the 15th and the final business day of each month) by the State Comptroller directly to MTA for deposit in the MTA Finance Fund held by MTA in accordance with each of Section 805(b) of the State Tax Law and Section 1270-h of the MTA Act.

Immediately upon their receipt, MTA transfers the Mobility Tax Receipts to the Mobility Tax Receipts Subaccount in accordance with the terms of the Financing Agreement described below.

*ATA Receipts.* The ATA Receipts are collected or received by the Commissioner of Taxation and Finance or the Commissioner of Motor Vehicles, as applicable, on behalf of MTA and are deposited daily into a segregated account held in trust by the State Comptroller for the credit of MTA. ATA Receipts are <u>not</u> subject to appropriation, and are payable quarterly (by the 15th day of the last month of each calendar quarter) by the State Comptroller directly to MTA for deposit in the Corporate Transportation Account within the Special Assistance Fund held by MTA for application in accordance with Section 1270-a of the MTA Act. Immediately upon their receipt, MTA transfers the ATA Receipts to the ATA Receipts Subaccount in accordance with the terms of the Financing Agreement described below.

*Deposit and Application of PMT Receipts Under Financing Agreement*

The statutory lien in favor of the holders of PMT Indebtedness is effective immediately upon receipt by MTA of the Mobility Tax Receipts and the ATA Receipts, prior to the deposit of such moneys into the Mobility Tax Receipts Subaccount and the ATA Receipts Subaccount, respectively. All PMT Receipts received by MTA are required to be immediately deposited into the applicable Subaccount established under the Financing Agreement. Such Subaccounts are separate bank accounts established for the purpose of segregating and investing the receipts deposited therein prior to transfer to the respective Trustee under the MTA PMT Resolution and the TBTA PMT Resolution, as described below. Amounts held at any time by MTA in the Mobility Tax Receipts Subaccount and the ATA Receipts Subaccount are held in trust separate and apart from all other funds of MTA for the benefit of holders of PMT Indebtedness.

MTA Bridges and Tunnels and MTA have entered into the Financing Agreement for the purposes of establishing the procedures pursuant to which MTA will deposit, allocate and transfer the PMT Receipts in order to ensure the parity allocation of such PMT Receipts between the TBTA PMT Resolution and the MTA PMT Resolution.

- In every month, at such time or times as MTA in its discretion shall determine (but in no event later than the last Business Day of every month), MTA shall transfer PMT Receipts from the Mobility Tax Receipts Subaccount or the ATA Receipts Subaccount or both (as determined by MTA) in the following order of priority and to the extent available for application, as follows:
- *first*, to the applicable Trustee for deposit in the applicable Senior Lien Debt Service Fund, an amount equal to the applicable Monthly Senior Lien Deposit Requirement (generally, one-fifth (1/5th) of the interest due and payable on the next interest payment date and one-tenth (1/10th) of the next Principal Installment) plus an amount equal to the amount required to cure any deficiency in prior transfers made; *provided, however*, if on the date of any such transfer the amount of PMT Receipts available for transfer is less than the amount required to be transferred, the amount actually available shall be transferred, first, on a *pro rata* basis (in proportion to the amount of any deficiencies relative to each other) to each applicable Trustee to cure any deficiencies in prior deposits or transfers, and then, on a *pro rata* basis to each applicable Trustee in proportion to the amount of the respective current applicable Monthly Senior Lien Debt Service Requirement; and
- *second*, to the applicable Trustee for deposit in the applicable Second Lien Debt Service Fund, an amount equal to the applicable Monthly Second Lien Deposit Requirement plus an amount equal to the amount required to cure any deficiency in prior transfers made; *provided, however*, if on the date of any such transfer the amount of PMT Receipts available for transfer is less than the amount required to be so transferred, the amount actually available shall be transferred, first, on a *pro rata* basis (in proportion to the amount of any deficiencies relative to each other) to each applicable Trustee to cure any deficiencies in prior deposits or transfers, and then, on a *pro rata* basis to each applicable Trustee in proportion to the amount of the respective current applicable Monthly Second Lien Deposit Requirement; and
- *third*, to the applicable Trustee or another Person, the amount necessary for the payment of Other Subordinated Obligations or obligations payable from PMT Receipts in the priority set forth in the applicable PMT Resolution or other authorizing document for such obligations; and
- *fourth*, to the applicable Trustee or another Person, for the payment of fees and expenses due and payable under the related PMT Indebtedness and PMT Resolutions, to the extent payable from PMT Receipts in the priority set forth in the applicable authorizing document; and
- *fifth*, after the amounts actually transferred under clauses *first* through *fourth* above equal the amounts required to have been so transferred on a cumulative basis as of the end of each month, to MTA or for expenditure by MTA, PMT Receipts and investment income, if any, on deposit in the PMT Receipts

Subaccount and the ATA Receipt Subaccount free and clear of any lien, pledge or claim of the TBTA PMT Resolution and the MTA PMT Resolution, to be applied by MTA as provided in the MTA Act.

If, after the date or dates of any transfers made by MTA in a particular month described above, there continues to be a deficiency in the cumulative amounts required to be transferred and MTA receives additional PMT Receipts later in such month, MTA will apply those additional PMT Receipts as soon as practicable (but no later than the last Business Day of such month) in the same priority as set forth above to cure such deficiencies to the greatest extent possible.

If on any Business Day no later than two Business Days preceding any Applicable Debt Service Payment Date, MTA receives notice from an applicable Trustee that there are insufficient funds on deposit to pay Debt Service on PMT Indebtedness on such payment date, MTA shall transfer, to the extent moneys are available, any or all PMT Receipts on deposit in the Subaccounts in the amount necessary to cure such deficiency. Amounts so transferred shall be applied in the same priority as set forth above; *provided, however*, that no transfers shall be made to an applicable Second Lien Trustee if there is a deficiency that has not been cured in the amounts transferred for the payment of Senior Lien Debt Service.

For a more detailed description of the flow of funds, see the Financing Agreement, a copy of which is available on MTA's website at https://new.mta.info/investor-info/bond-resolutions-interagency-agreements.

**Pledge Effected by the TBTA PMT Resolution**

*Application of PMT Receipts Under TBTA PMT Resolution*

The TBTA PMT Resolution establishes an Obligations Proceeds Fund held by MTA Bridges and Tunnels and a Senior Lien Debt Service Fund held by the Trustee. A copy of the TBTA PMT Resolution may be found on MTA's website (https://new.mta.info/investor-info/bond-resolutions-interagency-agreements) "TBTA Payroll Mobility Tax Obligation Resolution", included herein by specific cross-reference for TBTA PMT Resolution provisions governing the deposits to and withdrawals from the Funds and Accounts. Amounts held by MTA Bridges and Tunnels or the Trustee in any of such Funds shall be held in trust separate and apart from all other funds and applied solely for the purposes specified in the TBTA PMT Resolution or any Supplemental Resolution thereto.

*Obligations Trust Estate*. The TBTA PMT Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the TBTA PMT Bonds, and other Obligations and Parity Debt, in accordance with their terms and the provisions of the TBTA PMT Resolution, subject only to the provisions permitting the application of that money for the purposes and on the terms and conditions permitted in the TBTA PMT Resolution, and subject also to the right of the State to amend, repeal, modify or otherwise alter statutes imposing or relating to the PMT Receipts as described in "—Agreements of the State" below, the following, referred to as the "Obligations Trust Estate":

(i) the proceeds of the sale of the TBTA PMT Bonds, until those proceeds are paid out for an authorized purpose;

(ii) all right, title and interest of MTA Bridges and Tunnels in (x) the Financing Agreement, including the right of MTA Bridges and Tunnels to receive the PMT Receipts thereunder and (y) the funds and accounts established under the Financing Agreement into which the PMT Receipts are to be deposited; provided, however, that, all right, title and interest of MTA Bridges and Tunnels in and to the Financing Agreement and receipt of amounts payable thereunder for the benefit of TBTA PMT Bonds, other Obligations and Parity Debt is of equal rank with all right, title and interest of MTA in and to the Financing Agreement and receipt of amounts payable thereunder for the benefit of MTA PMT Bonds, other Obligations and Parity Debt;

(iii) the Obligations Proceeds Fund and the Senior Lien Debt Service Fund, any money on deposit therein and any money received and held by MTA Bridges and Tunnels which is required to be deposited therein;

(iv) all Funds, Accounts and Subaccounts established by the TBTA PMT Resolution (other than (a) the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund, and any accounts and subaccounts therein and (b) funds and any accounts and subaccounts therein established pursuant to a Supplemental Resolution in connection with Variable Interest Rate Obligations, Put Obligations or Parity Debt; provided, however, that, in the case of funds described in clause (b) hereof, such funds, accounts and subaccounts are specifically excepted from the Obligations Trust Estate by the Supplemental Resolution authorizing such Variable Interest Rate Obligations, Put Obligations or Parity Debt), including the investments, if any, thereof; and

(v) all funds, moneys and securities and any and all other rights and interests in property, whether tangible or intangible, from time to time hereafter by delivery or by writing of any kind conveyed, mortgaged, pledged, assigned or transferred as and for additional security under the TBTA PMT Resolution for the TBTA PMT Bonds by MTA Bridges and Tunnels, or by anyone on its behalf, or with its written consent, to the Trustee, which is authorized to receive any and all such property at any and all times, and to hold and apply the same subject to the terms of the TBTA PMT Resolution.

The TBTA PMT Resolution provides that the Obligations Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the TBTA PMT Resolution, other than the TBTA PMT Senior Lien Indebtedness, and all corporate action on the part of MTA Bridges and Tunnels to that end has been duly and validly taken.

The following chart summarizes (i) the flow of taxes, fees and surcharges into the MTA Finance Fund and the MTA Special Assistance Fund, and (ii) the flow of the PMT Receipts pursuant to the terms of the Financing Agreement through the Funds and Accounts established under the TBTA PMT Resolution and the MTA PMT Resolution.

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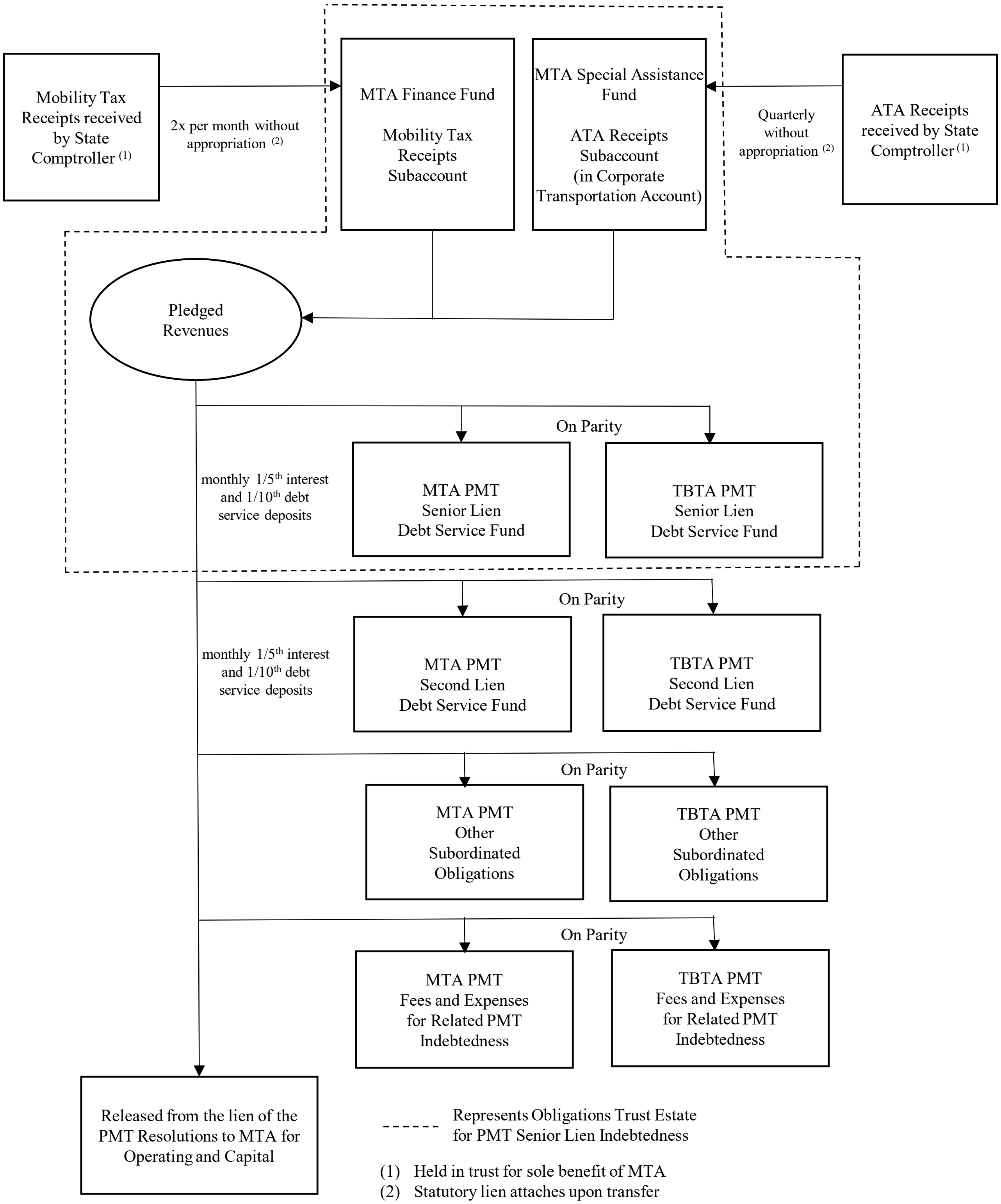
## SOURCES OF REVENUE AND FLOW OF FUNDS



**Debt Service Fund**

Pursuant to the TBTA PMT Resolution, the Trustee holds the Senior Lien Debt Service Fund. Moneys deposited in the Senior Lien Debt Service Fund are applied by the Trustee to the payment of Debt Service on the TBTA PMT Bonds in the manner, and from the accounts and subaccounts, more fully described under the heading "Senior Lien Debt Service Fund" in the TBTA PMT Resolution.

MTA is required under the Financing Agreement to make transfers no less frequently than monthly to the Trustee for deposit in the appropriate account of the Senior Lien Debt Service Fund of interest (1/5th of the next semiannual payment) and principal (1/10th of the next annual payment) from PMT Receipts. See "— Flow of PMT Receipts — *Deposit and Application of PMT Receipts Under Financing Agreement"* above.

**Covenants**

*Additional PMT Senior Lien Indebtedness including Parity Debt*. The TBTA PMT Resolution permits the issuance or incurrence of additional Senior Lien Indebtedness from time to time to pay or provide for payment of Capital Costs for any Transportation District Project that may be financed with obligations the payment of which may be secured by and paid from the PMT Receipts and to refund Outstanding TBTA PMT Bonds.

Additional PMT Senior Lien Indebtedness, including additional Series of TBTA PMT Bonds, may be issued provided that, in addition to satisfying certain other requirements, MTA Bridges and Tunnels delivers a certificate that evidences MTA Bridges and Tunnels' compliance with the additional bonds test set forth in the TBTA PMT Resolution. The additional bonds test for either the issuance of TBTA PMT Senior Lien Indebtedness or MTA PMT Senior Lien Indebtedness requires that the amount of PMT Receipts (Mobility Tax Receipts and ATA Receipts) for any 12 consecutive calendar months ended not more than six months prior to the date of such calculation, as set forth in a certificate of an Authorized Officer, is at least 2.25 times the combined maximum annual Calculated Debt Service (as defined in the TBTA PMT Resolution) on all Outstanding TBTA PMT Senior Lien Indebtedness and MTA PMT Senior Lien Indebtedness then outstanding (including the TBTA or MTA PMT Senior Lien Indebtedness then proposed to be issued).

With respect to any Obligations of a series designated as "Balloon Obligations" under the TBTA PMT Resolution, Calculated Debt Service will be determined based on (i) principal installments assumed to amortize over a 30-year period from their date of issuance based on substantially level debt service as estimated by MTA Bridges and Tunnels and (ii) interest based on the actual interest rate or the Estimated Average Interest Rate (as defined in the TBTA PMT Resolution), as applicable, or for both (i) and (ii) above as otherwise set forth in a supplemental resolution or certificate of determination with respect to such Obligations.

Each of the TBTA PMT Resolution and the MTA PMT Resolution also provides that additional PMT Senior Lien Indebtedness may be issued to refund Outstanding PMT Senior Lien Indebtedness, either by meeting the additional bonds test described above, or, in the alternative, by demonstrating that (1) combined maximum annual Calculated Debt Service on all PMT Senior Lien Indebtedness for any future debt service year, and (2) combined maximum annual (a) Calculated Debt Service on all PMT Senior Lien Indebtedness and (b) Calculated Second Lien Debt Service on all PMT Second Lien Indebtedness for any future debt service year, will not increase as a result of such refunding. If additional PMT Senior Lien Indebtedness is issued to refund or refinance indebtedness or obligations of MTA or MTA Bridges and Tunnels other than Outstanding PMT Senior Lien Indebtedness, then MTA or MTA Bridges and Tunnels, as the case may be, must satisfy the additional bonds test described above.

For the requirements relating to the issuance of Refunding Bonds under the TBTA PMT Resolution and under the MTA PMT Resolution, see "— Special Provisions for Refunding Obligations" in "ANNEX C" to the TBTA PMT Resolution.

**Parity Debt**

Subject to compliance with the additional bonds test for PMT Senior Lien Indebtedness described above, MTA Bridges and Tunnels and MTA may incur Parity Debt pursuant to the terms of the respective PMT Resolution. Such PMT Senior Lien Indebtedness would, subject to certain exceptions, be secured by a pledge of, and a lien on, the Obligations Trust Estate on a parity with the lien created by the applicable PMT Resolution. Parity Debt may be incurred in the form of a Parity Reimbursement Obligation, a Parity Swap Obligation or any other contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the applicable Trustee.

**Subordinate Obligations**

The TBTA PMT Resolution and the MTA PMT Resolution each authorize the issuance or incurrence of subordinate obligations, including PMT Second Lien Indebtedness and Obligation Anticipation Notes (PMT Obligation Anticipation Notes).

The payment of principal on PMT Obligation Anticipation Notes is not secured by revenues under the PMT Resolutions, and the payment of interest on the PMT Obligation Anticipation Notes is payable on a subordinate basis to PMT Senior Lien Indebtedness. MTA or MTA Bridges and Tunnels may issue take-out bonds under the PMT Resolutions to retire PMT Obligation Anticipation Notes.

**Agreements of the State**

The MTA Act provides that, so long as MTA has any outstanding bonds, notes or other obligations, none of MTA, MTA Bridges and Tunnels or any of the other Related Entities has the authority to file a voluntary petition under Chapter 9 of the United States Bankruptcy Code, and neither any public officer nor any organization, entity or other person shall authorize MTA, MTA Bridges and Tunnels or any of the other Related Entities to be or become a debtor under Chapter 9 during any such period. In addition, under the MTA Act, the State pledges and agrees that it will not limit or alter the denial of authority to file a voluntary petition under Chapter 9 as provided in the preceding sentence during any such period. The Financing Agreement is an MTA obligation that extends the protections of this provision through the final maturity of PMT Senior Lien Indebtedness.

Chapter 9 does not provide authority for creditors to file involuntary bankruptcy proceedings against MTA, MTA Bridges and Tunnels or the other Related Entities.

Under the MTA Act and the MTA Bridges and Tunnels Act, the State pledges to and agrees with the holders of any notes, bonds or lease obligations issued or incurred by MTA and MTA Bridges and Tunnels, including the MTA PMT Bonds and the TBTA PMT Bonds, that the State will not limit or alter the rights vested in MTA or MTA Bridges and Tunnels to fulfill the terms of any agreements made with the holders of their respective notes, bonds and lease obligations, or in any way impair the rights and remedies of such holders. Notwithstanding the foregoing, in accordance with State law and the MTA PMT Resolution and the TBTA PMT Resolution, nothing in the MTA PMT Resolution or the TBTA PMT Resolution restricts the right of the State to amend, repeal, modify or otherwise alter statutes imposing or relating to the taxes, fees or appropriations which are the source of PMT Receipts. No default under the MTA PMT Resolution or the TBTA PMT Resolution would occur solely as a result of the State exercising its right to amend, repeal, modify or otherwise alter such taxes, fees or appropriations.

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**SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)**

There is $1,953,750,000 aggregate principal amount of outstanding Sales Tax Revenue Bonds as of April 28, 2023. The following **Sales Tax Revenue Bonds Table 1** sets forth, on a cash basis, the debt service thereon as of April 28, 2023.

**Sales Tax Revenue Bonds Table 1**
**Aggregate Debt Service**
**($ in thousands)**

| Year Ending December 31 | Aggregate Debt Service[1] |
|---|---|
| 2023 | $ 72,040 |
| 2024 | 90,718 |
| 2025 | 92,683 |
| 2026 | 93,011 |
| 2027 | 93,347 |
| 2028 | 93,683 |
| 2029 | 94,024 |
| 2030 | 100,613 |
| 2031 | 101,379 |
| 2032 | 102,151 |
| 2033 | 102,935 |
| 2034 | 103,716 |
| 2035 | 104,507 |
| 2036 | 105,302 |
| 2037 | 106,106 |
| 2038 | 106,915 |
| 2039 | 107,733 |
| 2040 | 108,549 |
| 2041 | 109,379 |
| 2042 | 110,216 |
| 2043 | 100,236 |
| 2044 | 112,445 |
| 2045 | 125,247 |
| 2046 | 129,638 |
| 2047 | 133,889 |
| 2048 | 141,228 |
| 2049 | 122,840 |
| 2050 | 123,294 |
| 2051 | 123,756 |
| 2052 | 124,214 |
| 2053 | 124,742 |
| 2054 | 155,415 |
| 2055 | 155,863 |
| 2056 | 156,299 |
| 2057 | 156,746 |
| 2058 | 127,277 |
| 2059 | 97,251 |
| 2060 | 97,442 |
| 2061 | 97,624 |
| 2062 | 97,806 |
| 2063 | 69,277 |
| Total | $ 4,571,533 |

[1] Totals may not add due to rounding.

Sales Tax Revenue Bonds are MTA Bridges and Tunnels' special obligations, which means that they are payable solely from a gross lien on the money pledged for payment under the TBTA Sales Tax Resolution. They are not MTA Bridges and Tunnels' general obligations.

The TBTA Sales Tax Resolution has been filed with the MSRB through EMMA, and is incorporated by specific cross-reference herein. In addition, for convenience, a copy of the TBTA Sales Tax Resolution can be obtained at no cost on MTA's investor website under "Debt Portfolio Information – Bond Resolutions and Interagency Agreements" at https://new.mta.info/investors.

Capitalized terms used under this caption "SALES TAX REVENUE BONDS (TBTA CAPITAL LOCKBOX – CITY SALES TAX)" not otherwise defined herein have the meanings set forth in the TBTA Sales Tax Resolution.

**Sources of Payment**

In April 2019, legislation was enacted in the State to provide additional sources of revenue to address the capital needs of MTA (the "2019 Authorizing Legislation"), including a statutorily defined portion of sales and compensating use taxes authorized by the State and imposed by the City (such taxes referred to herein as the "City Sales Taxes") in the amount of $170 million in State Fiscal Year 2020-2021 and an amount equal to 101% of the amount authorized the previous State Fiscal Year every year thereafter. Such statutorily defined portions are referred to herein as the "Sales Tax Receipts". The City Sales Taxes are collected by the New York Commissioner of Taxation and Finance (the "Commissioner of Taxation and Finance") and deposited daily with banks as may be designated by the New York State Comptroller (the "State Comptroller"), to the credit of the State Comptroller, in trust for the intended beneficiaries. The 2019 Authorizing Legislation, among other things, provides that, after withholding certain administrative and other expenses, the State Comptroller monthly withhold in substantially equal amounts the Sales Tax Receipts for deposit in the Central Business District Tolling Capital Lockbox Fund ("CBD Tolling Capital Lockbox Fund") held by MTA Bridges and Tunnels, as established in Section 553-j of the New York Public Authorities Law, and applied to (i) the payment of operating, administration, and other necessary expenses allocable to the CBD Tolling Program and (ii) the costs of any transit and commuter capital projects included in MTA's 2020-2024 Capital Program, or its successor programs.

Pursuant to the 2019 Authorizing Legislation, the State Comptroller is required to transfer the Sales Tax Receipts to the CBD Tolling Capital Lockbox Fund, which by statute is held separate from and not commingled with any other monies of MTA Bridges and Tunnels, prior to the transfer to the City of any City Sales Taxes. Sales Tax Receipts are not subject to appropriation. The Sales Tax Receipts and actual amounts received are described below under "- *Revenues from Sales Tax Receipts*."

Promptly after receipt of the Sales Tax Receipts, MTA Bridges and Tunnels is required by the TBTA Sales Tax Resolution to transfer such Sales Tax Receipts from the CBD Tolling Capital Lockbox Fund to the Trustee for deposit into the Revenue Fund established under the TBTA Sales Tax Resolution, which Revenue Fund is pledged by MTA Bridges and Tunnels for the payment of its Sales Tax Revenue Bonds as further described in this section.

**Other than Sales Tax Receipts, monies in the CBD Tolling Capital Lockbox Fund, including, but not limited to, sales and compensating use taxes imposed by the State and deposited in the CBD Tolling Capital Lockbox Fund, are not pledged as security for the MTA Bridges and Tunnels Sales Tax Revenue Obligations.** Other than the Sales Tax Receipts, holders of MTA Bridges and Tunnels Sales Tax Revenue Obligations have no claim on any revenues of MTA Bridges and Tunnels, MTA or any of its affiliates or subsidiaries. See "SECURITY".

*Sources of Sales Tax Receipts*

*General.* Sales Tax Receipts are derived from the tax on the sale and use of tangible personal property and services in the City imposed by the City (the "City Sales Tax"). Sales Tax Receipts, collected by the State and payable by the State Comptroller to the CBD Tolling Capital Lockbox Fund are not subject to City or State appropriation.

*City Sales Tax*. Section 1210 of the New York Tax Law (the State Tax Law) authorizes certain cities and counties, including the City, to impose sales and compensating use taxes, up to certain maximum rates. Based on such authorization, the City has imposed the City Sales Tax, levied on a variety of economic activities including retail sales, utility and communication sales, services and manufacturing at a rate of 4.5%. The City Sales Tax includes a 6.0% tax on receipts from parking, garaging or storing motor vehicles in the City. As authorized by Section 1212-a of the State Tax Law, the City also imposes an additional parking tax of 8.0% in counties with a population density in excess of fifty thousand persons per square mile, currently only New York County (Manhattan). Residents of such county satisfying certain requirements are exempt from this additional tax. The 8% parking tax in Manhattan is also included in the Sales Tax Receipts derived from City Sales Taxes.

City Sales Taxes are collected from consumers by vendors and service providers doing business in the City, who pay the collected taxes to the Department of Taxation and Finance on a monthly, quarterly or annual basis, depending on volume of sales. The Department of Taxation and Finance deposits collected City Sales Taxes in banks designated by the State Comptroller, to the credit of the State Comptroller, in trust for the intended beneficiaries, subject to the payment of expenses and other claims generally set forth below.

Prior to remitting collected City Sales Taxes to the City, the State Tax Law directs the State Comptroller, after withholding certain administrative and other expenses, to withhold a portion of such taxes, penalties and interest sufficient to deposit (i) the Sales Tax Receipts into the CBD Tolling Capital Lockbox Fund on a monthly basis in substantially equal amounts, and (ii) $250 million in State Fiscal Year 2021 and $150 million for each of State Fiscal Years 2022 through 2025 on a quarterly basis into the New York State Agency Trust Fund, Distressed Provider Assistance Account. Such provisions of the State Tax Law further provide that, during the period that the State Comptroller is required to withhold amounts and make payments so described in clause (i) of the preceding sentence, the City has no right, title or interest in or to those taxes, penalties and interest required to be paid into the CBD Tolling Capital Lockbox Fund. In addition, as described below, under certain circumstances, the State Comptroller shall pay to the New York City Transitional Finance Authority ("TFA") from City Sales Taxes an amount necessary to provide debt service coverage.

The TFA has issued its Future Tax Secured Bonds ("TFA Bonds") that are primarily secured by personal income taxes imposed by the City. The TFA authorizing act requires that, in the event that personal income tax receipts are projected to be insufficient in the next City Fiscal Year to provide at least 150% of maximum annual debt service on the outstanding TFA Bonds, the State Comptroller shall pay to TFA from alternative revenues, as defined in the TFA authorizing act, an amount necessary to provide at least 150% of maximum annual debt service on the TFA Bonds. Alternative Revenues is defined to include sales and compensating use taxes that the City is authorized by the State to impose, primarily pursuant to Section 1210 of the State Tax Law. To date, a transfer of such Alternative Revenues has never been required.

For a discussion regarding the claims on City Sales Taxes, see "*Factors Affecting Sales Tax Receipts – Claims on City Sales Taxes*".

*Historical City Sales Taxes.* The following **Table 2** sets forth historical distribution of general retail sales and compensating use tax to the City, as reported by the Department of Taxation and Finance, for State Fiscal Years ending March 31, 2013 through 2022.

**Table 2**
**Historical City Sales Taxes**
**(State Fiscal Year Ending March 31)**

| State Fiscal Year | Amount Distributed ($ in millions)[(1)] | % Change |
|---|---|---|
| 2013 | 6,026 | - |
| 2014 | 6,394 | 6.1% |
| 2015 | 6,711 | 5.0 |
| 2016 | 7,153 | 6.6 |
| 2017 | 7,044 | -1.5 |
| 2018 | 7,527 | 6.9 |
| 2019 | 7,906 | 5.0 |
| 2020 | 8,344 | 5.5 |
| 2021 | 6,620 | -20.7[(2)] |
| 2022 | 8,069 | 21.9 |

Source: Department of Taxation and Finance dataset "State and Local Sales Tax Distributions"

(1) Last updated by the Department of Taxation and Finance on December 1, 2022.

(2) Decline from prior year due to the COVID-19 pandemic.

The level of City Sales Tax collections is necessarily dependent upon economic and demographic conditions including, but not limited to, the COVID-19 pandemic, inflation, and recessions, in the State and in the City, and therefore there can be no assurance that historical data with respect to collections of the City Sales Tax will be indicative of future receipts. See "*Factors Affecting Sales Tax Receipts*" below.

*Taxable Sales in the City.* The City is a major retail trade market. The City Sales Tax is levied on a variety of economic activities including retail sales, utility and communication sales, services and manufacturing.

The following **Table 3** sets forth the volume of sales and purchases subject to the City Sales Tax for 2013 through 2022. The yearly data presented in this paragraph and **Table 3** below covers the period from March 1 of the year prior to the listed year through the last day of February of the listed year. Between 2013 and 2022, the total taxable sales volume annual growth rate averaged 4.8%. In 2021, total taxable sales declined 23.2% from the prior year due to the COVID-19 pandemic. In 2022, total taxable sales rebounded and increased 30.8% from the prior year.

**Table 3**
**Taxable Sales and Purchases Subject to City Sales Tax**
**($ in billions)[(1)]**

| Year[(2)] | Retail[(3)(4)] | Utilities & Information[(3)(4)] | Services[(3)(4)] | Manufacturing[(3)(4)] | Other[(3)(4)] | Total |
|---|---|---|---|---|---|---|
| 2013 | 41.2 | 20.6 | 39.0 | 5.2 | 23.5 | 129.5 |
| 2014 | 46.1 | 22.8 | 43.9 | 5.6 | 20.7 | 139.1 |
| 2015 | 47.4 | 23.1 | 47.4 | 5.8 | 21.9 | 145.7 |
| 2016 | 47.8 | 22.1 | 51.0 | 5.7 | 23.3 | 149.9 |
| 2017 | 48.3 | 22.8 | 53.1 | 6.1 | 25.2 | 155.5 |
| 2018 | 49.8 | 23.2 | 55.3 | 6.7 | 27.5 | 162.4 |
| 2019 | 52.1 | 24.1 | 58.4 | 7.1 | 30.6 | 172.3 |
| 2020 | 55.4 | 25.5 | 61.0 | 7.6 | 33.1 | 182.6 |
| 2021[(5)] | 48.8 | 26.6 | 31.0 | 7.9 | 25.9 | 140.1 |
| 2022[(5)] | 62.3 | 29.4 | 50.2 | 8.1 | 33.3 | 183.3 |

Source: Department of Taxation and Finance; for 2013 "Taxable Sales and Purchases By County and Industry Data" and for 2014-2022 "Taxable Sales and Purchases Quarterly Data." Last updated by the State Department of Taxation and Finance on January 24, 2023.

(1) Totals may not add due to rounding.

(2) The yearly data is for the period from March 1 of the year prior to the listed year through the last day of February of the listed year.

(3) Data for 2013 is presented using the North American Industry Classification System (NAICS) industry groups. Retail includes all items under Retail Trade; Utilities & Information include Utilities (those with and without residential energy) and all items under Information; Services include Professional, Scientific and Technical Services, Administrative/Support Services, Accommodation and Food Services, and all items under Other Services; Manufacturing consists of Manufacturing sector; Other includes Construction, Wholesale Trade, Healthcare, Arts, Entertainment and Recreation, Agriculture, Mining, Transportation, Fire, Education, Government, Other NYC Services (municipal parking services, hotel room occupancy services, credit rating and reporting services, and miscellaneous personal services), and all other unclassified sectors otherwise not attributed to one of the aforementioned groups.

(4) Data for years 2014-2022 are presented using the NAICS industry group code. Retail includes sector with industry code beginning in 44 and 45 (Retail Trade); Utilities & Information include sector with industry code beginning in 22 (Utilities) and 51 (Information); Services include sector with industry code beginning in 54 (Professional, Scientific, and Technical Services), 56 (Administrative Support and Waste Management and Remediation Services), 61 (Educational Services), 72 (Accommodation and Food Services) and 81 (Other Services); Manufacturing includes sector with industry code beginning in 31-33 (Manufacturing); Other includes agriculture, mining, construction, wholesale trade, transportation and warehousing, finance and insurance, real estate and rental and leasing, management of companies, healthcare and social assistance, arts and entertainment, public administration, and others.

(5) Preliminary, subject to revision.

Statistical information and calculations contained in **Table 2** and **Table 3** are based on data obtained from the Department of Taxation and Finance. MTA Bridges and Tunnels cannot guarantee the accuracy of such information, assure its completeness or warrant that such information will not be changed, modified or otherwise revised subsequent to the date thereof. MTA Bridges and Tunnels has no obligation to update any or all of such information and does not make any express or implied warranties or representations as to its accuracy or completeness.

*Revenues from Sales Tax Receipts*

Under the provisions of the State Tax Law, the State Comptroller is directed, after withholding certain administrative and other expenses, to withhold, prior to the payment of receipts from City Sales Taxes to or at the direction of the City, a portion of such taxes, penalties and interest sufficient to deposit $170 million into the CBD Tolling Capital Lockbox Fund in State Fiscal Year 2020-2021 and in every succeeding State Fiscal Year thereafter, an amount equal to 101% of the amount deposited into the CBD Tolling Capital Lockbox Fund in the immediately preceding State Fiscal Year. Such funds (the "Sales Tax Receipts") are required to be deposited by the State Comptroller monthly in equal installments, without appropriation by the State or the City, in the CBD Tolling Capital Lockbox Fund.

The following **Table 4** sets forth, on a cash basis, monthly Sales Tax Receipts deposited into the CBD Tolling Capital Lockbox Fund in State Fiscal Years ending March 31, 2021, 2022, and 2023.

**Table 4**
**Monthly Sales Tax Receipts**
**(State Fiscal Year Ending March 31)**
**($ in millions)**

| Month | State Fiscal Year 2020-2021 | State Fiscal Year 2021-2022 | State Fiscal Year 2022-2023 |
|---|---|---|---|
| April | $14.17 | $14.31 | $14.45 |
| May | 14.17 | 14.31 | 14.45 |
| June | 14.17 | 14.31 | 14.45 |
| July | 14.17 | 14.31 | 14.45 |
| August | 14.17 | 14.31 | 14.45 |
| September | 14.17 | 14.31 | 14.45 |
| October | 14.17 | 14.31 | 14.45 |
| November | 14.17 | 14.31 | 14.45 |
| December | 14.17 | 14.31 | 14.45 |
| January | 14.17 | 14.31 | 14.45 |
| February | 14.17 | 14.31 | 14.45 |
| March | 14.17 | 14.31 | 14.45 |
| **Total[(1)]** | **$170.00** | **$171.70** | **$173.42** |

Source: MTA Management
(1) Totals may not add due to rounding.

The following **Table 5** sets forth coverage of Sales Tax Receipts deposited to the CBD Tolling Capital Lockbox Fund from City Sales Taxes for State Fiscal Year ending March 31, 2021 and 2022.

**Table 5**
**Coverage of Sales Tax Receipts**
**(State Fiscal Year ending March 31)**
**($ in millions)**

| | State Fiscal Year 2020-2021 | State Fiscal Year 2021-2022 |
|---|---|---|
| City Sales Taxes[(1)] | $6,620 | $8,069 |
| Sales Tax Receipts deposited to the CBD Tolling Capital Lockbox Fund | $170.0 | $171.7 |
| Coverage of Sales Tax Receipts | 38.9x | 47.0x |

(1) Amounts as reported by the State Department of Taxation and Finance (see **Table 2**).

*Factors Affecting Sales Tax Receipts*

*Legislative Changes*. The City is not restricted in its right to amend, repeal, modify or otherwise alter City statutes setting or relating to the City Sales Tax rates, subject to the provisions of the State Tax Law and the City's pledge and agreement with holders of the TFA Bonds (which pledge does not extend to holders of the Sales Tax Revenue Bonds). The City's right to exempt certain sales from the City Sales Tax is subject to applicable State Tax Law.

In addition, the State is not restricted in its right to amend, repeal, modify or otherwise alter statutes imposing or relating to the taxes that are the source of Sales Tax Receipts. Such amendments or modifications could include the creation of additional claims or contingent claims on the City Sales Taxes. However, the State has authorized MTA Bridges and Tunnels to include in the TBTA Sales Tax Resolution, for the benefit of the holders of Sales Tax Revenue Bonds, its agreement that the State will not limit or alter the rights vested in MTA Bridges and Tunnels to fulfill the terms of any agreements made by MTA Bridges and Tunnels with the holders of its notes, bonds and lease obligations, including the Sales Tax Revenue Bonds, or in any way impair the rights and remedies of such holders. See "– Security – *Agreements of the State*" below.

*Litigation*. Laws and regulations relating to the imposition and collection of the City Sales Tax may be the subject of administrative claims and litigation by taxpayers.

*Economic Conditions*. The levels of City Sales Taxes collections are dependent upon economic and demographic conditions including, but not limited to, the COVID-19 pandemic, inflation, and recessions, in the State and in the City, and therefore there can be no assurance that historical data with respect to collections of the City Sales Taxes will be indicative of future receipts.

*Claims on City Sales Taxes*. As described above under "Sources of Payment – *Revenues from Sales Tax Receipts*," under the provisions of the State Tax Law, the State Comptroller is directed, after withholding certain administrative and other expenses, to withhold, prior to the payment of receipts from City Sales Taxes to or at the direction of the City, a portion of such taxes, penalties and interest sufficient to deposit (i) the Sales Tax Receipts into the CBD Tolling Capital Lockbox Fund, and (ii) as described under "Sources of Payment – *Sources of Sales Tax Receipts – City Sales Tax*," the amount of $150 million for each of State Fiscal Years 2022 through 2025 into the New York State Agency Trust Fund, Distressed Provider Assistance Account. Such provisions of the State Tax Law further provide that, during the period that the State Comptroller is required to withhold amounts and make payments so described in clause (i) of the preceding sentence, the City has no right, title or interest in or to those taxes, penalties and interest required to be paid into the CBD Tolling Capital Lockbox Fund.

As described under "Sources of Payment – *Sources of Sales Tax Receipts – City Sales Tax*," TFA has issued its TFA Bonds that are primarily secured by personal income taxes imposed by the City. The TFA authorizing act requires that, in the event that personal income tax receipts are projected to be insufficient in the next City Fiscal Year to provide at least 150% of maximum annual debt service on the outstanding TFA Bonds, the State Comptroller shall pay to TFA from Alternative Revenues an amount necessary to provide at least 150% of maximum annual debt service on the TFA Bonds, whether or not such payments from Alternative Revenues are necessary to pay that year's principal and interest payments on such TFA Bonds. The State Tax Law authorizing the City to impose taxes and the City local laws imposing such taxes are complex and, with respect to certain provisions, can lead to alternative interpretations. For example, the TFA authorizing act does not establish a priority as to whether such City Sales Taxes are to be paid by the State Comptroller before, after or concurrently with the Sales Tax Receipts described in the preceding paragraph or determine how deficiencies in collections would be distributed among the intended recipients if they were entitled to payment at the same priority level.

Personal income tax receipts alone have historically been more than sufficient to provide payment of debt service on TFA Bonds; however, no assurances can be given that such debt service coverage will be maintained.

No assurances can be given that the City, TFA bondholders, MTA Bridges and Tunnels, holders of MTA Bridges and Tunnels' Sales Tax Revenue Bonds or others will not challenge the priority of payment of the City Sales Taxes, if required under the TFA Indenture (defined below), to provide for the payment from Alternative Revenues for the benefit of the TFA Bonds prior to the deposits into the CBD Tolling Capital Lockbox Fund and/or the New York State Agency Trust Fund, Distressed Provider Assistance Account, or challenge the scope of Alternative Revenues available to pay TFA Bonds, and MTA Bridges and Tunnels cannot predict how a court would rule in the event of any such challenge.

TFA's Amended and Restated Original Indenture, as restated and supplemented, (the "TFA Indenture"), pursuant to which the TFA Bonds were issued, provides that, after payment of debt service on the TFA Bonds and certain other expenses, monies deposited under such indenture are paid to the City. Given the State Tax Law's provision that the City has no right, title or interest in or to City Sales Taxes required to be deposited into the CBD Tolling Capital Lockbox Fund, it is unclear whether such monies should be paid by the State Comptroller to TFA prior to necessary deposits being paid into the CBD Tolling Capital Lockbox Fund, and MTA Bridges and Tunnels cannot predict how a court would rule in the event that City Sales Taxes paid to TFA were released from the TFA Indenture and paid to the City prior to such necessary deposits into the CBD Tolling Capital Lockbox Fund.

The TFA Indenture includes events of default, certain of which (relating to failure to pay debt service, insolvency, State actions impacting security for the bonds and failure to meet specified coverage levels) could result in acceleration of TFA Bonds if so directed by a majority in interest of senior lien TFA bondholders. If an acceleration of the TFA Bonds were to occur, no assurances can be given that the City, TFA bondholders, MTA Bridges and Tunnels, holders of MTA Bridges and Tunnels' Sales Tax Revenue Bonds or others will not challenge the applicability of the payment of City Sales Taxes to an increased maximum annual debt service due to such acceleration of the TFA Bonds.

As described herein under "Security – *Agreement of the State*," the State has entered into a pledge and agreement for the benefit of holders of MTA Bridges and Tunnels' Sales Tax Revenue Bonds. As authorized by the TFA authorizing act, TFA also has included for the benefit of the holders of TFA Bonds a similar pledge and agreement of the State that the State pledges and agrees with the holders of any issue of TFA Bonds and/or bond anticipation notes secured by such a pledge that the State will not limit or alter the rights vested in TFA to fulfill the terms of any agreements made with such holders, or in any way impair the rights and remedies of such holders or the security for such bonds and/or bond anticipation notes until such bonds and/or bond anticipation notes, together with the interest thereon and all costs and expenses in connection with any action or proceeding by or on behalf of such holders, are fully paid and discharged.

MTA Bridges and Tunnels cannot predict what actions the State legislature or State Comptroller might take or how any resulting litigation would be resolved.

*Information Relating to the City and TFA.* Prospective purchasers of MTA Bridges and Tunnels' Sales Tax Revenue Bonds wishing to obtain currently available information about the City or TFA may refer to information on file with the MSRB through EMMA. Neither the City nor TFA has obligated itself to provide continuing disclosure in connection with the offering of MTA Bridges and Tunnels' Sales Tax Revenue Bonds. MTA Bridges and Tunnels makes no representations about City or TFA information or its continued availability.

**Security**

The Sales Tax Revenue Bonds are MTA Bridges and Tunnels' special obligations payable as to principal, redemption premium, if any, and interest solely from the security, sources of payment and funds specified in the TBTA Sales Tax Resolution. Payment of principal of or interest on the Sales Tax Revenue Bonds may not be accelerated in the event of a default.

The Sales Tax Revenue Bonds are secured primarily by the sources of payment described under the caption "-Sources of Payment", and are not secured by:

- the general fund or other funds and revenues of the State, or
- the general fund or other funds and revenues of the City, or
- the other funds and revenues of MTA Bridges and Tunnels or MTA or any of their affiliates or subsidiaries.

The Sales Tax Revenue Bonds are not a debt of the State or the City, or any other local governmental unit. MTA Bridges and Tunnels has no taxing power.

*Pledge Effected by the TBTA Sales Tax Resolution*

*Obligations Trust Estate*. The TBTA Sales Tax Resolution provides that there are pledged to the payment of principal and redemption premium of, interest on, and sinking fund installments for, the Sales Tax Revenue Bonds and Parity Debt, in accordance with their terms and the provisions of the TBTA Sales Tax Resolution, subject only to the provisions permitting the application of that money for the purposes and on the terms and conditions permitted in the TBTA Sales Tax Resolution, the following, referred to as the "Obligations Trust Estate":

- the proceeds of the sale of the Sales Tax Revenue Bonds, until those proceeds are paid out for an authorized purpose,
- the Revenue Fund, any money on deposit therein and any money received and held by MTA Bridges and Tunnels and required to be deposited in such fund, including the Sales Tax Receipts deposited by the State Comptroller into the CBD Tolling Capital Lockbox Fund, and
- all funds, accounts and subaccounts established by the TBTA Sales Tax Resolution (except funds, accounts and subaccounts established pursuant to Supplemental Resolution, and excluded by such Supplemental Resolution from the Obligations Trust Estate as security for all Sales Tax Revenue Bonds, in connection with Parity Debt, Subordinated Indebtedness or Subordinated Contract Obligations), including the investments, if any, thereof.

The TBTA Sales Tax Resolution provides that the Obligations Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the TBTA Sales Tax Resolution, and all corporate action on the part of MTA Bridges and Tunnels to that end has been duly and validly taken.

*Flow of Funds*

Pursuant to the 2019 Authorizing Legislation, the State Comptroller is required to transfer the Sales Tax Receipts to the CBD Tolling Capital Lockbox Fund created by Section 553-J of the New York Public Authorities Law and required to be held separate from and not commingled with any other monies of MTA Bridges and Tunnels. The Sales Tax Receipts are not subject to appropriation and are required to be paid monthly in equal installments by the State Comptroller directly to the CBD Tolling Capital Lockbox Fund. The lien in favor of Sales Tax Revenue Bondholders is effective immediately upon receipt by MTA Bridges and Tunnels of the Sales Tax Receipts in the CBD Tolling Capital Lockbox Fund, prior to the deposit in the Revenue Fund.

Beginning on April 1 of each State Fiscal Year, promptly after receipt of the Sales Tax Receipts in the CBD Tolling Capital Lockbox Fund, MTA Bridges and Tunnels shall transfer all such Sales Tax Receipts to the Trustee for deposit into the Revenue Fund.

Sales Tax Receipts in the Revenue Fund, when received by the Trustee, will be promptly transferred for the following purposes and in the following order of priority:

(a) transfer to the Senior Lien Debt Service Fund the amount, if any, required so that the amount on deposit in said fund shall equal the Senior Lien Debt Service Fund Balance Requirement;

(b) transfer, free and clear of any lien, pledge or claim of the TBTA Sales Tax Resolution securing Obligations or Parity Debt, in accordance with any Supplemental Resolution or other authorizing document creating Obligation Anticipation Notes, Subordinated Indebtedness or Subordinated Contract Obligations the amount, if any, required for payment of or accrual for payment of principal of and interest on any Obligation Anticipation Notes, Subordinated Indebtedness or for payment of amounts due under any Subordinated Contract Obligation; and

(c) after the transfers made in (a) and (b) above, transfer all monies to the Excess Revenues Fund, which monies shall be released from the lien of the TBTA Sales Tax Resolution.

"Senior Lien Debt Service Fund Balance Requirement" means the remaining Annual Net Debt Service payable through the end of the Bond Year corresponding to the State Fiscal Year at the time of calculation, which shall include any Annual Net Debt Service yet unpaid in the current Bond Year.

"Annual Net Debt Service" means Annual Debt Service less the amount, if any, set aside in any account within the Senior Lien Debt Service Fund or the Obligations Proceeds Fund or otherwise in trust for the payment of Debt Service on Obligations or Parity Debt in the applicable Bond Year.

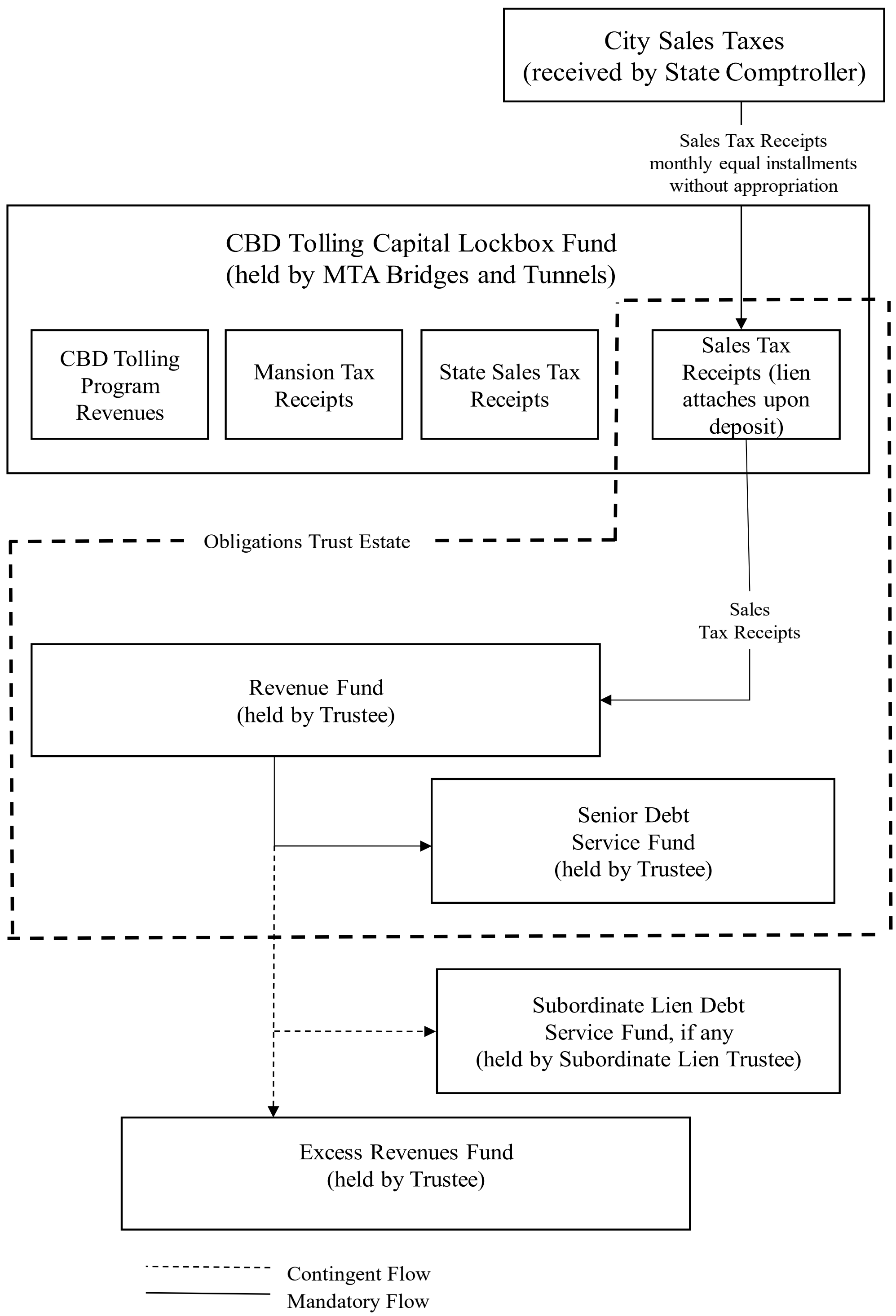
"Annual Debt Service" means the amount of Debt Service payable during each Bond Year.

"Bond Year" means the 12-month period beginning on May 16 through the following May 15 and a Bond Year shall correspond to the State Fiscal Year ending immediately prior to each May 15.

The TBTA Sales Tax Resolution establishes an Obligations Proceeds Fund held by MTA Bridges and Tunnels and a Senior Lien Debt Service Fund held by the Trustee. Amounts held by MTA Bridges and Tunnels or the Trustee in any of such Funds shall be held in trust separate and apart from all other funds and applied solely for the purposes specified in the TBTA Sales Tax Resolution or any Supplemental Resolution thereto.

The following chart summarizes (i) the flow of the Sales Tax Receipts into the CBD Tolling Capital Lockbox Fund, and (ii) the flow of amounts on deposit in the Revenue Fund and the Funds and Accounts established under the TBTA Sales Tax Resolution.

**SOURCES OF REVENUE AND FLOW OF FUNDS**



*Senior Lien Debt Service Fund*

Pursuant to the TBTA Sales Tax Resolution, the Trustee holds the Senior Lien Debt Service Fund, consisting of the Sales Tax Receipts transferred monthly from the CBD Tolling Capital Lockbox Fund to the Revenue Fund and then promptly transferred to the Senior Lien Debt Service Fund, as described above under "Flow of Funds." The Trustee is required to apply monies in the Senior Lien Debt Service Fund to the payment of Debt Service on the Sales Tax Revenue Bonds in the manner, and from the accounts and subaccounts, more fully described in the TBTA Sales Tax Resolution.

Covenants

*Additional Bonds*. The TBTA Sales Tax Resolution permits MTA Bridges and Tunnels to issue additional Sales Tax Revenue Bonds from time to time to pay or provide for the payment of Capital Costs for the CBD Tolling Program or transit and commuter projects in the 2020-2024 Capital Program or successor programs and to refund Outstanding Obligations.

Under the TBTA Sales Tax Resolution, in order to issue Sales Tax Revenue Bonds for purposes other than refunding Outstanding Sales Tax Revenue Bonds, MTA Bridges and Tunnels, in addition to satisfying certain other requirements, must deliver a certificate that evidences its compliance with the additional bonds test set forth in the TBTA Sales Tax Resolution.

Such certificate must set forth the following for the then current and each future Bond Year during which the Sales Tax Revenue Bonds to be authenticated and delivered will be Outstanding:

(A) the aggregate principal amount of all Obligations and Parity Debt of all Series to be Outstanding;

(B) the Annual Debt Service for such Obligations and Parity Debt for each Bond Year; and

(C) the Statutory Annual Deposit Amount corresponding to each Bond Year that the Obligations and Parity Debt being issued will be Outstanding.

In the case of (A) and (B) above, amounts attributable to the proposed Capital Cost Obligations and any proposed Refunding Obligations being treated as Capital Cost Obligations are included, but the calculation excludes any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Obligations.

The certificate is required to further state:

> the Statutory Annual Deposit Amounts set forth in (C) above (plus the amounts, if any, funded from the proceeds of Obligations to be issued or other available monies of MTA Bridges and Tunnels that will be applied to the payment of Annual Debt Service) are equal to or greater than the corresponding Annual Debt Service for such Obligations and Parity Debt set forth in (B) above for the then current and each future Bond Year.

If MTA Bridges and Tunnels determines to issue Refunding Obligations and does not deliver the certificate set forth above, then MTA Bridges and Tunnels must deliver a certificate that evidences its compliance with the Refunding Obligations additional bonds test set forth in the TBTA Sales Tax Resolution.

Such certificate must set forth the following for the then current and each future Bond Year during which the Sales Tax Revenue Bonds to be authenticated and delivered will be Outstanding:

(A) the Annual Debt Service on the Obligations and Parity Debt (including the Refunding Obligations then proposed to be issued, but not including the Obligations and Parity Debt to be refunded); and

(B) the Annual Debt Service on the Obligations and Parity Debt as calculated immediately prior to the issuance of the Refunding Obligations (including the Obligations and Parity Debt to be refunded but not including the Refunding Obligations).

The certificate shall further state that for the then current and each future Bond Year the Annual Debt Service set forth pursuant to (A) above is not greater than the Annual Debt Service set forth pursuant to (B) above.

All bonds issued under the TBTA Sales Tax Resolution shall bear interest at fixed rates.

See "Section 203. Special Provisions for Capital Cost Obligations" in the TBTA Sales Tax Resolution for a description of further provisions which apply to the additional bonds test. See "Section 204. Refunding Obligations" in the TBTA Sales Tax Resolution for a description of the requirements relating to the issuance of Refunding Bonds.

*Parity Debt*

MTA Bridges and Tunnels can incur Parity Debt pursuant to the terms of the TBTA Sales Tax Resolution that, subject to certain exceptions, would be secured by a pledge of, and a lien on, the Obligations Trust Estate on a parity with the lien created by the TBTA Sales Tax Resolution with respect to the Sales Tax Revenue Bonds. Parity Debt may be incurred in the form of a contract, agreement or other obligation of MTA Bridges and Tunnels designated as constituting Parity Debt in a certificate of an Authorized Officer delivered to the Trustee.

All Parity Debt incurred under the TBTA Sales Tax Resolution shall bear interest at fixed rates, thereby effectively eliminating the ability of MTA Bridges and Tunnels to incur variable rate obligations under the TBTA Sales Tax Resolution.

*Subordinate Obligations*

The TBTA Sales Tax Resolution authorizes the issuance or incurrence of subordinate obligations. No such subordinate obligations have been issued, and MTA Bridges and Tunnels has no current expectations of issuing subordinate obligations. Any references thereto in Annex A – Standard Resolution Provisions filed with EMMA and should be ignored until MTA Bridges and Tunnels establishes provisions relating thereto and posts them on EMMA.

*Agreement of the State*

Under the MTA Bridges and Tunnels Act, the State pledges to and agrees with the holders of any bonds, that the State will not limit or alter the rights vested in MTA Bridges and Tunnels to fulfill the terms of any agreements made by MTA Bridges and Tunnels with the holders of its bonds or in any way impair the rights and remedies of such holders.

In addition, the MTA Act provides that, so long as MTA has any outstanding bonds, notes or other obligations, none of MTA, MTA Bridges and Tunnels or any of the other Related Entities has the authority to file a voluntary petition under Chapter 9 of the United States Bankruptcy Code, and neither any public officer nor any organization, entity or other person shall authorize MTA, MTA Bridges and Tunnels or any of the other Related Entities to be or become a debtor under Chapter 9 during any such period. In addition, under the MTA Act, the State pledges and agrees that it will not limit or alter the denial of authority to file a voluntary petition under Chapter 9 as provided in the preceding sentence during any such period. MTA and MTA Bridges and Tunnels have entered into an agreement, which constitutes an "obligation" in accordance with the foregoing, that extends the bankruptcy protections of the MTA Act to MTA Bridges and Tunnels as long as any Sales Tax Revenue Bonds remain outstanding.

Chapter 9 does not provide authority for creditors to file involuntary bankruptcy proceedings against MTA, MTA Bridges and Tunnels or the other Related Entities.

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## HUDSON RAIL YARDS TRUST OBLIGATIONS

### Hudson Rail Yards Trust Obligations

On September 22, 2016, $1,057.43 million MTA Hudson Rail Yards Trust Obligations, Series 2016A were issued to finance and refinance approved capital program transit and commuter projects for the Related Entities. The HRY Trust Obligations are payable in part by amounts due under the Ground Leases described below. There are $804,285,000 aggregate principal amount of outstanding HRY Trust Obligations as of April 28, 2023. In 2020, MTA purchased the then outstanding principal amount of the 2046 maturity.

During 2019 and 2020, several early mandatory redemptions occurred in connection with Fee Purchase Payments on commercial units in 30 Hudson Yards (Tower A) and a portion of residential condominiums in 15 Hudson Yards (Tower D). The redemptions were on the earliest maturity of the Series 2016A Obligations, the 2046 maturity. A total of $212,340,000 was redeemed via early mandatory redemptions on the Series 2016A as follows:

- May 15, 2019, $105,500,000;
- July 15, 2019, $67,960,000;
- November 15, 2019, $12,225,000; and
- February 15, 2020, $26,655,000.

On March 27, 2020, the remaining principal amount of the 2046 maturity of the Series 2016A Obligations, $162,660,000, was redeemed via an optional redemption. In conjunction with the redemption, the Trustee (Wells Fargo Bank, N.A.) issued $162,660,000 principal amount of MTA Hudson Rail Yards Refunding Trust Obligations, Series 2020A, with the same maturity date and bearing the same interest rate as the Series 2016A Obligations maturing on November 15, 2046, and delivered the Series 2020A Obligations to MTA in return for MTA providing sufficient moneys to redeem the 2046 maturity of the Series 2016A Obligations.

Early mandatory redemptions continue on the earliest maturity of the aggregate HRY Obligations, therefore on HRY Refunding Trust Obligations, Series 2020A. The following early mandatory redemptions have been made on the Series 2020A as follows:

- February 16, 2021, $8,430,000;
- August 15, 2021, $6,830,000;
- February 15, 2022, $5,000,000;
- August 15, 2022, $14,340,000; and
- November 15, 2022, $6,205,000.

For additional information and a description of the parcels and ground leases related to MTA's HRY Trust Obligations see CCDF Part II – Tab 2 – "Details of Each Issue of Obligations – Hudson Rail Yards Trust Obligations (Schedule 1 to Financing Agreement)" of MTA's 2023 Combined Continuing Disclosure Filings.

### Security

The HRY Trust Obligations are MTA's special limited obligations, payable solely from the trust estate (the "HRY Trust Estate") established under the HRY Trust Agreement. The HRY Trust Estate consists principally of (i) monthly Ground Lease rent payments (the "Monthly Ground Rent") to be paid by any tenants of Ground Leases (the "Ground Lease Tenants") of certain parcels being developed on and above the Eastern Rail Yard and Western Rail Yard portions of the John D. Caemmerer West Side Yards ("Hudson Rail Yards") currently operated by MTA Long Island Rail Road, (ii) monthly scheduled transfers from the capitalized interest fund established by the HRY Trust Agreement (the "Capitalized Interest Fund") during the limited period that the Monthly Ground Rent is abated under the applicable Ground Lease, (iii) payments made by the Ground Lease Tenants if they elect to exercise their option to purchase the fee interest in such parcels ("Fee Purchase Payments"), (iv) certain Contingent Support Payments (as discussed below) made by MTA, (v) rights of MTA to exercise certain remedies under the Ground Leases and (vi) rights of the HRY Trustee to exercise certain remedies under the Ground Leases and the separate fee mortgages (the "Fee Mortgages") from MTA in favor of the HRY Trustee. Pursuant to the HRY Trust Agreement, MTA has unconditionally and irrevocably assigned and transferred to the HRY Trustee its rights in the HRY Trust Estate and the HRY Trustee has agreed to execute and deliver HRY Trust Obligations, each evidencing the interests of the Owners thereof in the MTA Financing Agreement Amount (consisting of the principal components (the "Principal Components") and the interest components (the "Interest Components") of the MTA Financing Agreement Amount payable by MTA pursuant to the Interagency Financing Agreement dated as of September 1, 2016 (the "Financing Agreement"), by and among MTA, MTA New York City Transit, MaBSTOA, MTA Long Island Rail Road, MTA Metro-North Railroad, and MTA Bus (collectively, the "HRY Related Transportation Entities") and the HRY Trustee.

*Overview of the Ground Leases*

Both the Eastern Rail Yard ("ERY") and Western Rail Yard ("WRY") are ground leased for 99 years by MTA to limited liability entities controlled by Related-Oxford (collectively, the "Ground Lease"). The property that is ground leased by MTA consists of the airspace above a limiting plane above the tracks (from 31st to 33rd Streets) and the area where there are no rail tracks (from 30th to 31st Streets) within the boundary of the Hudson Rail Yards (collectively, the "Ground Leased Property"). The commencement date of the ERY Original Ground Lease was December 3, 2012 and the expiration date is December 2, 2111[*]. The commencement date of the WRY Original Ground Lease was December 3, 2013 and the expiration date is December 2, 2112. Five of the eight individual ground-leased parcels (each, a "Severed Parcel Ground Lease") on the ERY (and on the WRY, when entered into) have the same commencement date, expiration date and rent adjustment dates as the respective ERY and WRY Original Ground Lease. Each Ground Lease Tenant has the option to purchase fee title to the Ground Leased Property at any time following completion of construction of the building on the Ground Leased Property.

The Ground Leases do not encumber the railroad tracks, which will continue to be used for transportation purposes. Related-Oxford, or a limited liability development entity created by them for developing an individual parcel, is responsible for constructing a platform over the railroad tracks and improvements on, in and under such platform, and for the development of buildings on the Ground Leased Property, including designing, financing, constructing, leasing, selling, and operating such buildings.

The primary sources of revenue available for the payment of the Principal Components and Interest Components represented by the HRY Trust Obligations will be the Monthly Ground Rent and any Fee Purchase Payments payable by the Ground Lease Tenants under the Ground Leases. These Ground Lease revenues are being pledged to the HRY Trustee by MTA under the Financing Agreement and the HRY Trust Agreement, and Ground Lease Tenants are directed to pay the revenues directly to the Depositary (as defined under "–Flow of Funds" below) for deposit into a deposit account with the HRY Trustee (the "Dedicated Deposit Account"). Such payments are then transferred daily from the Depositary to the HRY Trustee for deposit into the rent payment fund established under the HRY Trust Agreement (the "Rent Payment Fund").

*Monthly Ground Rent under the Ground Leases*

Monthly Ground Rent is due on the first day of each month from each of the Ground Lease Tenants. A failure to timely pay Monthly Ground Rent following the applicable notice and grace period is an event of default under the affected Ground Lease (a "Ground Lease Payment Event of Default"). The amount of Monthly Ground Rent due under each Ground Lease is a fixed dollar amount established in each Ground Lease, subject to a 10% escalation every five years, except for the 30th, 55th and 80th years when the escalations will be based on fair market value (but no less than a 0% increase and no greater than a 20% increase from the previous year's amount). The timing of each escalation is calculated from the commencement date for the Original Ground Lease.

*Fee Purchase Payments*

Under each Severed Parcel Ground Lease, following substantial completion of construction of the building on the Ground Leased Property, a Ground Lease Tenant has the option to (a) continue to pay Monthly Ground Rent due on a monthly basis or (b) at any time, purchase the fee interest in its Ground Leased Property (and thus terminate its Ground Lease) by exercising its option to purchase the fee interest in its Severed Parcel and related improvements upon substantial completion thereof (a "Fee Conversion Option") and making the required Fee Purchase Payment under its applicable Ground Lease. The required Fee Purchase Payment under each Ground Lease is equal to (a) the present value to the purchase date of all remaining Monthly Ground Rent due for the 99-year ground lease term, including escalations, plus (b) the present value to the purchase date of a pre-established reversionary value of the property after the 99th year. The calculation of the required Fee Purchase Payment is set forth in each Ground Lease. The required Fee Purchase

[*] The ERY Original Ground Lease has since been terminated and substituted with separate Severed Parcel Ground Leases.

Payments set forth by the terms of the Ground Leases increase approximately 2.2% per year for at least the first 30 years of each Ground Lease. The receipt of a Fee Purchase Payment will result in a redemption of the HRY Trust Obligations. In addition, upon MTA's receipt of a Fee Purchase Payment, the fee interest purchased by the Ground Lease Tenant will be released from the applicable Fee Mortgage.

Ground Lease Tenants are not obligated to exercise their Fee Conversion Options but can instead continue to pay Monthly Ground Rent for the full 99-year ground lease term.

All Fee Purchase Payments received are pledged by MTA and directed to be paid to the Depositary and are required to be applied by the HRY Trustee on a no less than quarterly basis to redeem Principal Components of HRY Trust Obligations at the then applicable redemption price plus accrued interest. The aggregate par amount of HRY Trust Obligations issued is limited such that at any time after issuance there is calculated to be sufficient funds (assuming Ground Lease Tenants meet all their obligations) to redeem prior to the scheduled maturity dates all outstanding Principal Components of HRY Trust Obligations at the applicable redemption price plus accrued interest in the event all Ground Lease Tenants decide to exercise their respective Fee Conversion Options and pay their required Fee Purchase Payments.

*Limitations on Related Entities' Obligations*

Neither MTA nor any of the other HRY Related Transportation Entities are obligated to make any payment with respect to the MTA Financing Agreement Amount or the HRY Trust Obligations (and the related Principal Components and Interest Components) from any source other than the HRY Trust Estate (which includes the Financing Agreement Payments) and Contingent Support Payments. Contingent Support Payments consist of Interest Reserve Advances and Direct Cost Rent Credit Payments. Under the Financing Agreement, MTA has an obligation to make advances to replenish the Interest Reserve Fund (an "Interest Reserve Advance") upon the occurrence of a Ground Lease Payment Event of Default, which obligation is generally limited to seven years after the Ground Lease Payment Event of Default. "Direct Cost Rent Credit Payments" are made upon determination that the Ground Lease Tenant is entitled to a Direct Cost Rent Credit (a partial credit against Monthly Ground Rent under certain limited circumstances as a result of an action or failure to take certain action by MTA or MTA Long Island Rail Road). Contingent Support Payments are subordinate to debt service on MTA's Transportation Revenue Bonds and payable from the same pool of revenues that are available to pay operating and maintenance expenses of the Related Entities.

**Flow of Funds**

MTA has established a deposit account with the HRY Trustee, as depositary (the "Depositary"), and MTA has directed all Ground Lease Tenants to make Monthly Ground Rent and Fee Purchase Payments directly to the Depositary, which deposits will be transferred daily to the Trustee.

The chart which follows describes the flow of funds from the payments by Ground Lease Tenants of Monthly Ground Rent and Fee Purchase Payments to the Depositary for deposit to the Dedicated Deposit Account to the account and fund flow under the HRY Trust Agreement for payment of the Principal Components and Interest Components relating to the HRY Trust Obligations.

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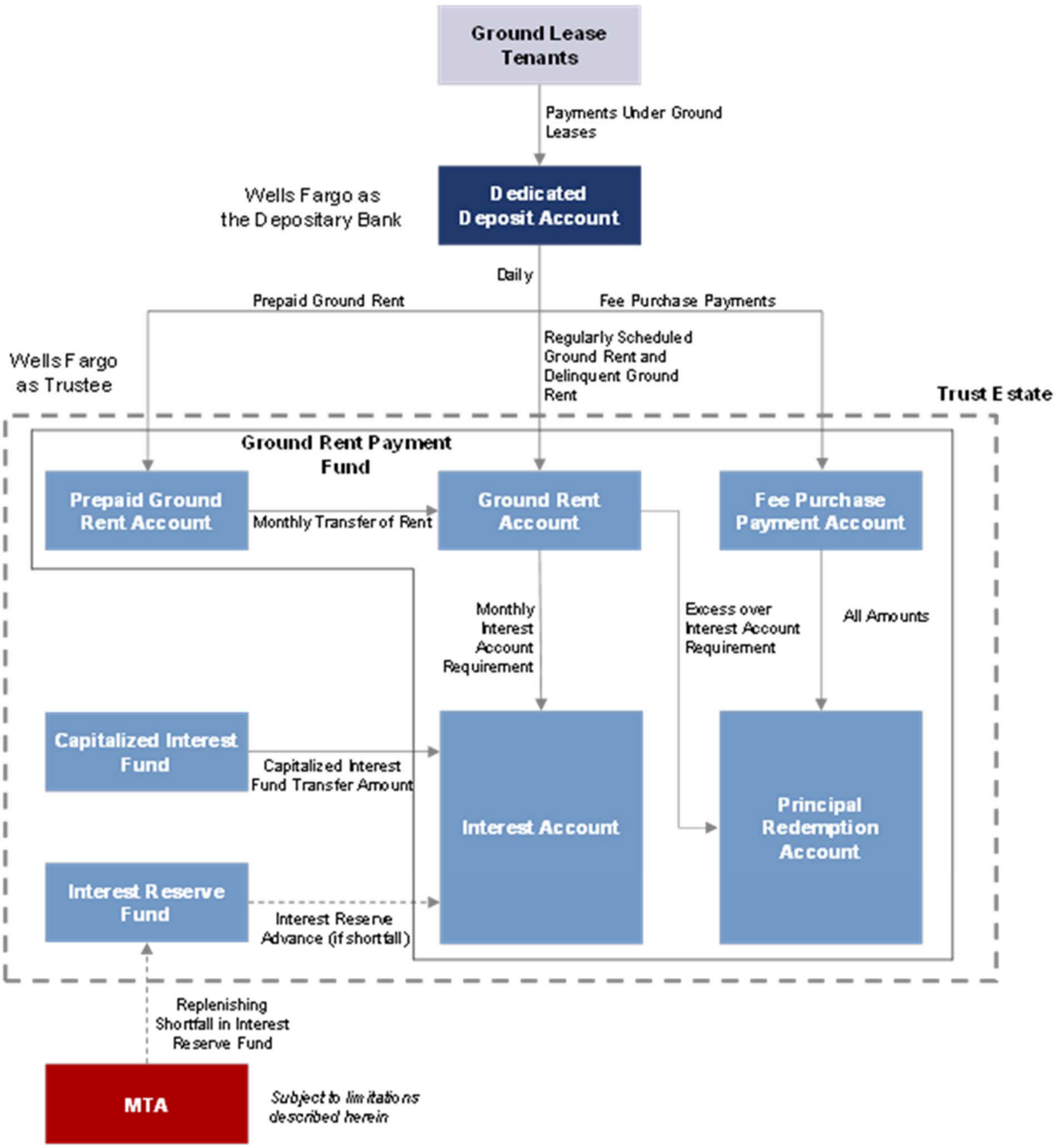
# MTA Hudson Rail Yards Trust Obligations

## Illustrative Flow of Funds



**Covenants of MTA with respect to the HRY Trust Obligations**

MTA has undertaken, among others, the following covenants and agreements in the HRY Trust Agreement:

- MTA covenants and agrees, on behalf of itself and the other HRY Related Transportation Entities, with the Owners of the HRY Trust Obligations to perform all obligations and duties imposed on them, as applicable, under the HRY Trust Agreement, the Financing Agreement, certain instructions requiring the Depositary to transfer the amounts deposited into the Dedicated Deposit Account to the HRY Trustee, the Fee Mortgages and the Ground Leases.
- MTA covenants and agrees that it shall use commercially reasonable efforts to timely pursue any and all actions to enforce its rights to collect (or to direct the payment to the Depositary of) all amounts due under the Ground Leases, the completion guaranties (the "Completion Guaranties") and the payment guaranties (the "Payment Guaranties") described in the Ground Leases.
- MTA covenants and agrees that it shall not take any action and will use its best efforts not to permit any action to be taken by others under the Ground Leases, the Completion Guaranties, the Payment Guaranties and the Fee Mortgages that would result in a Prohibited Modification.

Prohibited Modifications means (i) any modification to the Ground Leases or to the Severed Parcel Pro Forma Rent Schedule attached to a Ground Lease which reduces the annual base rent payable thereunder, (ii) any modification to the Ground Leases which reduces the Fee Purchase Payments and/or the Residential Unit Purchase Price payable in connection with a Fee Purchase Payment, (iii) any modification to the Ground Leases which increases or extends abatements set forth in the Ground Leases, (iv) any waiver of a Ground Lease Tenant's obligation to make payments of Annual Base Rent and/or the Fee Purchase Payments in the amounts and at the times due as set forth in the Ground Leases, (v) any acceleration of a Ground Lease Tenant's right to exercise the Fee Conversion Option earlier than the Fee Conversion Closing Date set forth in the Ground Leases, (vi) any modification of the Ground Leases which would grant a Ground Lease Tenant an express right to deduction, counterclaim, set-off or offset against the Annual Base Rent, or constitute a Ground Lease not to be a "triple net lease" as set forth in the Ground Leases, (vii) any modification to the application of funds to be used to restore the premises following a casualty pursuant to the Ground Leases, (viii) any modification to the apportionment or application of condemnation proceeds pursuant to the Ground Leases, and (ix) any modification to the Ground Leases with respect to Ground Lease Tenant Events of Default (as further described in the Ground Leases) and landlord remedies relating thereto.

# PART 4.   OPERATIONS

## TRANSIT SYSTEM

## (popular names – MTA New York City Transit and MaBSTOA)

### Legal Status and Public Purpose

MTA New York City Transit was created in 1953 pursuant to the MTA New York City Transit Act for the purposes of acquiring the transit facilities then operated by the City and operating them for the convenience and safety of the public.

MaBSTOA was created as a public benefit corporation in 1962 as a statutory subsidiary of MTA New York City Transit to operate the bus routes that had been operated by Surface Transit, Inc. and Fifth Avenue Coach Lines, Inc. prior to their acquisition by the City.

Pursuant to the MTA New York City Transit Act, MTA New York City Transit and the City entered into an agreement of lease, dated June 1, 1953, providing for the lease to MTA New York City Transit of the transit facilities then owned or thereafter to be acquired or constructed by the City for use in the fulfillment of MTA New York City Transit's corporate purposes. In connection with the creation of MaBSTOA, MTA New York City Transit agreed that bus lines acquired by the City would be leased to MaBSTOA by the City for operation and maintenance by MaBSTOA. Such lease with MaBSTOA was entered into on March 20, 1962.

MTA New York City Transit became an affiliate of MTA in 1968. The Chairman and Members of MTA, by statute, are also the Chairman and Members of MTA New York City Transit and Directors of MaBSTOA, and the CEO of MTA is, *ex officio*, CEO of MTA New York City Transit. The CEO is responsible for the discharge of the executive and administrative functions and powers of MTA New York City Transit. The President of MTA New York City Transit is primarily responsible for the general management and operation of MTA New York City Transit. The executive personnel of MTA New York City Transit and MaBSTOA report to the President of MTA New York City Transit.

### Management

The following is a brief biography of MTA New York City Transit's president, who also serves as MaBSTOA's president.

Richard Davey, President of MTA New York City Transit. As President of MTA New York City Transit, Mr. Davey is responsible for the general management and operation of North America's largest mass transit system. Previously, he served as a Partner and Director at the Boston Consulting Group. In 2015, Davey was CEO of Boston 2024, the organization that sought to bring the 2024 Summer Olympic and Paralympic Games to Boston. From 2011 to 2014, he served in the governor's cabinet as secretary and CEO of the Massachusetts Department of Transportation. He also served as the Chairman of the Massachusetts Port Authority. Davey also served in a variety of capacities, including as General Manager, for the Massachusetts Bay Commuter Railroad from 2003 to 2010 and as General Manager of the Massachusetts Bay Transportation Authority from 2010 to 2011. He holds a Bachelor of Arts degree from the College of Holy Cross and a Juris Doctor, *summa cum laude*, from Gonzaga University.

### History of the Transit System

*General*. Mass transit has played a vital role in the development of the City from its earliest days. It continues to be essential to the economic life of the metropolitan area and for a substantial portion of the population of the metropolitan area it represents the principal means of transportation within the City and to and from places of employment. The intense concentration of commercial, financial, cultural, industrial and residential development that exists in the 22 square miles comprising the Borough of Manhattan, particularly its central business district, would not be feasible without an extensive system of mass transit.

*Subway System*. Construction of the first subway in the City began in 1900 and was completed in 1904. Although built with City funds, it was leased to and operated by a private company, the IRT. A major expansion of the subway system was completed in various stages between 1918 and 1922. A portion of the expanded system was incorporated into the IRT and the remainder was leased to another private company, the BMT. In 1924, the City Board of Transportation was created to plan, construct and operate a third subway system, the IND. That system was completed in various stages between 1932 and 1940.

In 1940, the City acquired the franchise rights and properties of the IRT and BMT from the private companies that had operated those lines and that were then in reorganization. The entire subway system was placed under the control of the City Board of Transportation. In 1953, the subway system was leased to the then newly-formed New York City Transit Authority, which later became an affiliate of MTA in 1968.

Although a number of changes have been made to the fixed physical plant of the subway system since 1940, such as the closing of the oldest elevated lines and the integration of the several systems, there were no significant alterations of the basic physical configuration of the subway network since that time until MTA New York City Transit opened the Archer Avenue Line extension and the 63rd Street Tunnel in 1988 and 1989, respectively, along with three new subway stations along each of these routes.

More recently, MTA has developed new expansions and improvements to the Transit System. These include the extension of the No. 7 subway line from Times Square south to 34th Street and 11th Avenue in Manhattan and the opening of the Lower Manhattan Fulton Center. In December of 2016, installation of the first phase of the Second Avenue Subway was completed. The Second Avenue Subway began service on January 1, 2017, with Q train service running from 96th Street, 86th Street, 72nd Street, and 63rd Street, and continuing through Manhattan and into Brooklyn, to Coney Island. For more information about these projects, see "MTA CONSTRUCTION AND DEVELOPMENT COMPANY" below.

*Bus System*. During the 1940s and 1950s, the City acquired the properties and franchises of a number of private bus companies operating within the City, all of which were leased to MTA New York City Transit at the time of its creation. MaBSTOA was created in 1962 to operate the bus lines formerly operated by Fifth Avenue Coach Lines, Inc. and Surface Transit, Inc. Both MTA New York City Transit and MaBSTOA have since assumed the operation of additional franchises and routes.

Most bus service within the City is operated by MTA New York City Transit, MaBSTOA and MTA Bus. MTA Bus is currently operating the bus routes formerly operated by seven former franchise private bus companies, and only a very small number of private bus companies continue to operate local service within the City or between the outer boroughs and the Manhattan central business district. See "MTA BUS COMPANY" below.

**Description of the Transit System**

*Subway System*. The City's rapid transit system is by far the largest in the nation. Few cities in the world have a subway system comparable in physical size and ridership. The subway system has over 665 miles of mainline track extending 248 route miles. Prior to May 5, 2020, the subway system operated 24 hours a day, all year with certain lines not in service the entire day and frequency of service varying by route and time of day. Due to the COVID-19 pandemic, intensive cleaning and disinfecting efforts required the subway system to shut down between the hours of 1 AM to 4 AM daily from May 5, 2020 through February 22, 2021 when the shut-down was adjusted to 2 AM to 4 AM. On May 17, 2021 full overnight subway service was restored. In calendar year 2022, 1.01 billion revenue passengers used the subway. It currently has a fleet of 6,549 subway cars, two major subway car overhaul shops, 14 maintenance shops, 24 subway car storage yards and 472 active passenger stations. As of December 31, 2022, MTA New York City Transit employed 28,097 full-time workers in rapid transit.

*Bus System*. MTA New York City Transit and MaBSTOA presently operate bus service on 241 local, select bus service and express routes throughout the City. The majority of bus routes are designed to serve passengers traveling within a particular borough or to serve as feeders to the subway system. In calendar year 2022, 343 million revenue passengers used the bus system. The bus system operates on a continuous basis, although certain bus routes are not in service the entire day and frequency of service varies by route and time of day. As of December 31, 2022, the bus system employed 14,465 full-time persons and operated 4,519 buses, including 15 all-electric buses.

*Paratransit*. On July 1, 1993, MTA New York City Transit assumed responsibility from the City for the Access-A-Ride paratransit service, in order to increase the efficiency of providing such services by vesting responsibility in a single entity. Access-A-Ride service is provided by private vendors under contract with MTA New York City Transit. Paratransit fares are currently equivalent to the regular undiscounted passenger fare rate of $2.75. Paratransit operations are also supported by 6% of the revenue from the Urban Tax (a portion of a mortgage recording tax and a portion of a property transfer tax imposed upon commercial property in the City). Prior to July 1, 2020, the City contributed an operating subsidy to support paratransit, equal to the lesser of (1) one-third of the operating deficit, calculated after deducting paratransit passenger revenue, the above-described Urban Tax revenue, and MTA New York City Transit administrative expenses, or (2) an amount that is 20% greater than the amount required to be paid by the City for the preceding calendar year. After July 1, 2020, the City contributes an operating subsidy to support paratransit of 50% of eligible expenses. Any remaining operating deficit is funded by MTA New York City Transit.

**Relationships with the State, the City and the Federal Government**

*State and City*. MTA New York City Transit and MaBSTOA receive substantial amounts of funding for the operating costs of the Transit System from subsidies provided by the State and the City. In the calendar year 2020, State and City operating assistance, special tax supported subsidies and reimbursements for the Transit System constituted, on a cash basis, approximately 57.2% of the total pledged revenues of MTA New York City Transit and MaBSTOA; up from 45.8% in 2019, due to significant changes in farebox revenue between periods, which was largely offset by CARES Act in 2020 and CRRSAA federal subsidies in 2021. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Updated Assessment of Impacts of the COVID-19 Pandemic and Economic Study Analysis". To the extent that future operating assistance from the State and City are subject to their receipt of tax revenues, the level of such funding may be affected by the general economic conditions in, and the financial condition of, the State and City.

In addition to the operating and capital assistance received by MTA New York City Transit and MaBSTOA from the City, MTA New York City Transit and MaBSTOA are dependent upon the City for the maintenance and repair of City-maintained bridges, streets and other infrastructure necessary for the operation of the Transit System. Water main breaks and other infrastructure problems, including problems on bridges, have in the past and may in the future cause service disruptions.

City infrastructure problems that restrict or preclude service on the Transit System could decrease ridership and revenue levels of the Transit System. The materiality of any such decrease would depend on the nature, severity and duration of the service interruptions.

*Federal*. MTA New York City Transit and MaBSTOA also receive substantial amounts of funding for the capital costs of the Transit System from grants provided by the federal government. The federal government also supplied substantial capital funds for prior Transit Capital Programs. Federal operating assistance is not currently authorized by federal law for mass transit operations, including the Transit System, with pandemic exceptions being the series of federal COVID-19 relief acts beginning in 2020 with the CARES Act and continuing in 2021 with CRRSAA and ARPA federal aid.

*Other*. Officials of the State, City and federal governments and the Inspector General of MTA periodically conduct audits and reviews of the operations of MTA New York City Transit and MaBSTOA. Officers of MTA New York City Transit and MaBSTOA respond to these reports and adopt some of the recommendations made therein or take other appropriate remedial actions.

MTA New York City Transit and MaBSTOA are subject to regulation by federal and State agencies with responsibilities for safety. In general, they must maintain and equip their tracks and rolling stock in compliance with minimum standards, file reports with respect to certain accidents and incidents and respond to recommendations for improving transit system safety.

## MTA BUS COMPANY

**(popular name – MTA Bus)**

**Legal Status and Public Purpose**

MTA Bus was created as a public benefit corporation subsidiary of MTA in 2004. At its meeting in December 2004, the MTA Board approved a letter agreement with the City with respect to MTA Bus's establishment and operation of certain bus routes (the "MTA Bus Routes") in areas then served by seven private bus companies pursuant to franchises granted by the City. The letter agreement with the City provides for the following:

- A lease by the City to MTA Bus of the bus assets to operate the MTA Bus Routes;
- The City pays MTA Bus the difference between the actual cost of operation of the MTA Bus Routes (other than certain capital costs) and all revenues and subsidies received by MTA Bus and allocable to the operation of the MTA Bus Routes; and

- If the City fails to timely pay any of the subsidy amounts due for a period of 30 days, MTA Bus has the right, after an additional 10 days, to curtail, suspend or eliminate service and may elect to terminate the agreement. The City can terminate the agreement on one year's notice.

MTA Bus completed the consolidation of the seven bus lines in the first quarter of 2006. As discussed under "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS", the CPRB and MTA have included certain capital funding for MTA Bus in the 2000-2004 and subsequent MTA Capital Programs.

Effective as of April 1, 2006, MTA Bus pledged its operating revenues to the Trustee under the Transportation Resolution and became a signatory to the Interagency Agreement securing the Transportation Revenue Bonds. All or a portion of MTA Bus's capital needs may be financed from the proceeds of the Transportation Revenue Bonds. The City is not responsible for paying debt service on bonds issued by MTA for the benefit of MTA Bus in connection with the 2000-2004 and 2005-2009 MTA Capital Programs. However, the debt service expense associated with bonds issued by MTA for the benefit of MTA Bus in connection with the 2010-2014 and 2015-2019 Capital Programs is billable to the City. In addition, debt service expenses relating to the approved 2020-2024 Capital Program will be submitted to the City for reimbursement to MTA Bus and MTA.

**Description of the MTA Bus System**

MTA Bus presently operates bus service on 44 local routes in the Bronx, Brooklyn and Queens, 43 express routes between Manhattan and the Bronx, Brooklyn and Queens and three Select Bus Service routes in Queens. In calendar year 2022, over 83 million revenue passengers used the MTA Bus System. As of December 31, 2022, the MTA Bus System employed 3,738 persons and operated 1,300 buses. The MTA Bus System operates on a continuous basis, although certain bus routes are not in service the entire day and frequency of service varies by route and time of day.

**Management**

Richard Davey, the President of MTA New York City Transit, is also the President of MTA Bus Company. See "PART 4. OPERATIONS – Transit System – Management" above for a brief biography.

## STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY

### (popular name – MTA Staten Island Railway)

**Legal Status and Public Purpose**

MTA Staten Island Railway was created as a public benefit corporation subsidiary of MTA in 1970. MTA Staten Island Railway is responsible for the operation of a rapid transit railroad system on Staten Island pursuant to a lease and operating agreement with the City.

MTA Staten Island Railway service runs 24 hours daily between the St. George and Tottenville stations. At the St. George station, customers can make connections with Staten Island Ferry service. Fares are charged only to customers exiting at the St. George or Tompkinsville stations. Farebox revenue was $4,300,489 for 2019, $1,425,632 for 2020, $2,375,948 in 2021, and $3,169,122 in 2022. MTA Staten Island Railway's capital needs are funded as a part of the Transit Capital Program approved by the CPRB and its operating losses are funded by the City and/or MTA.

**Management**

Richard Davey, the President of MTA New York City Transit, is also the President of MTA Staten Island Railway. See "PART 4. OPERATIONS – Transit System – Management" above for a brief biography.

## COMMUTER SYSTEM

### (popular names – MTA Long Island Rail Road and MTA Metro-North Railroad)

**Legal Status and Public Purpose**

*MTA Long Island Rail Road*. Through MTA Long Island Rail Road, MTA operates commuter railroad service between the City and Long Island and within Long Island (the "MTA Long Island Rail Road Commuter Service").

MTA Long Island Rail Road was incorporated as a privately-held railroad company in 1834. In 1966, MTA acquired all of the capital stock of MTA Long Island Rail Road from its parent, the Pennsylvania Railroad Company. In February 1980, MTA Long Island Rail Road's Certificate of Incorporation was amended to convert it into a subsidiary public benefit corporation of MTA. MTA Long Island Rail Road owns, leases or has easements or other rights to the rolling stock, physical plant and equipment material to its operations. It is noted that the lease between the Atlantic Avenue Railroad Company of Brooklyn and MTA Long Island Rail Road, dated March 26, 1877 (the "Atlantic Avenue Lease") expired by its terms in 2000 and has not been renewed. MTA Long Island Rail Road continues to operate service on the tracks covered by the Atlantic Avenue Lease.

*MTA Metro-North Railroad*. Through MTA Metro-North Railroad, MTA operates the New Haven Line (pursuant to a service agreement with CDOT) and the Harlem and Hudson commuter rail services (collectively, the "MTA Metro-North Commuter Service") and subsidizes and performs certain other services relating to the State portion of the Port Jervis and Pascack Valley Lines operated, pursuant to a service agreement, by NJ Transit. The MTA Metro-North Commuter Service provides service between the City and the northern New York suburban counties of Westchester, Putnam and Dutchess and from the City through New Haven and Fairfield Counties in the southern portion of Connecticut to New Haven, Connecticut. The Port Jervis and Pascack Valley Lines provide service from the northern New York suburban counties of Orange and Rockland to northern New Jersey and the City (known as "West of Hudson" service). MTA Metro-North Railroad also contracts out ferry services connecting to Rockland County and Orange County.

MTA Metro-North Railroad was incorporated on September 22, 1982 as a subsidiary public benefit corporation of MTA. MTA or MTA Metro-North Railroad owns, leases or has easements or other rights to the rolling stock, physical plant and equipment material to the operation of the Harlem and Hudson Lines, and to the physical plant and equipment material to the operation of the State portion of the New Haven Line. On February 28, 2020, MTA closed on the purchase of Grand Central Terminal, and the Harlem and Hudson railroad lines for approximately $33 million. These properties were formerly held under a long-term lease. With respect to the New Haven Line, MTA or MTA Metro-North Railroad owns approximately 35% of the non-diesel rolling stock and CDOT owns the remainder.

The New Haven Line is operated by MTA Metro-North Railroad pursuant to the terms of an Amended and Restated Service Agreement dated as of June 21, 1985, among Connecticut (by CDOT), MTA and MTA Metro-North Railroad (the "ARSA"). Under the provisions of the ARSA, at the expiration of each term, it is automatically extended for five years, subject to the right of CDOT or MTA to terminate the ARSA on 18 months' written notice. The current term of the ARSA expires December 31, 2024.

The Port Jervis and Pascack Valley Lines are operated by NJ Transit pursuant to the terms of an Agreement for Operation dated as of July 27, 2006, and amended as of February 8, 2022, between NJ Transit and MTA Metro-North Railroad (the "AFO"), the initial term of which expired on June 30, 2012. Under the provisions of the AFO, at the expiration of each term, it is automatically extended for an additional year, subject to the right of NJ Transit or MTA Metro-North Railroad to terminate the AFO by no later than March 15, in which case the AFO will terminate on June 30 of that same year.

**Management**

Catherine A. Rinaldi currently serves as President of MTA Metro-North Railroad and Interim President of MTA Long Island Rail Road. Ms. Rinaldi was named President of MTA Metro-North Railroad in February 2018, after serving as Acting President following the retirement of Joseph J. Giulietti in 2017, and was named Interim President of the MTA Long Island Rail Road in February 2022. Ms. Rinaldi joined MTA Metro-North Railroad in 2015 as Executive Vice President, overseeing the railroad's Strategic Planning Initiatives as well as its Capital Programs, Customer Service and Stations, Planning, Corporate and Public Affairs, Procurement, and Human Resources departments. Prior to that, Ms. Rinaldi was named MTA's Chief of Staff in 2011. She has also served as Vice President and General Counsel at MTA Long Island Rail Road. She joined MTA as Deputy Executive Director and General Counsel in 2003. Ms. Rinaldi is a *summa cum laude* graduate of Yale College and received her law degree from the University of Virginia School of Law.

**Description of the Commuter System**

MTA Long Island Rail Road Commuter Service and MTA Metro-North Commuter Service are the two largest commuter railroad services in the nation. MTA Long Island Rail Road uses 19 yards, two major repair shops and one support facility. In providing the Metro-North Commuter Railroad Service, MTA Metro-North Railroad uses 10 yards, Grand Central Terminal, two major repair shops and four support facilities. The commuter services operate every day of the year, although frequency of service varies by route, day of the week and time of day. The following table further details the MTA Long Island Rail Road Commuter Service and the MTA Metro-North Commuter Service.

**MTA Long Island Rail Road and MTA Metro-North Commuter Service as of December 31, 2022[1]**

| | Revenue Passengers (in thousands)[2] | Stations | Actual Route Miles | Main Line Track Miles | Passenger Cars |
|---|---|---|---|---|---|
| MTA Long Island Rail Road | 52,540 | 125 | 336.1 | 702.0[3] | 1,216[4] |
| MTA Metro-North Railroad | 47,959 | 112 | 285.5 | 708.0[5] | 1,084 |
| Totals | 100,499 | 236 | 621.6 | 1,410.0 | 2,210 |

(1) Certain of the stations, track and passenger cars are not owned by MTA, MTA Long Island Rail Road or MTA Metro-North Railroad.

(2) The number of revenue passengers is determined in part by ascribing an assumed frequency of use to holders of weekly and monthly commutation tickets. MTA Metro-North Railroad's numbers do not include West of Hudson service.

(3) MTA Long Island Rail Road track miles total includes MTA Long Island Rail Road yards and sidings as well as track that is owned by Amtrak or maintained by New York and Atlantic Railway.

(4) The number of MTA Long Island Rail Road passenger cars includes 10 M-7s that are not usable and all 100 M3 cars available at the end of 2022.

(5) Includes 40.96 miles along the Beacon Line, which is not in regular revenue service.

## Relationships with the State, Certain Local Governments and the Federal Government

*State and Local Governments*. MTA receives substantial amounts of funding for the operating and capital costs of the Commuter System from appropriations and subsidies provided by the State and certain local governments; typically, that support provides between 45% – 49% of the Commuter System's revenues. To the extent that future operating assistance and the funding of the capital costs of subsequent capital programs projected to be funded by the State are subject to its receipt of tax revenues and the making of annual appropriations, the level of such funding may be affected by the current economic conditions in, and the financial condition of, the State.

*Federal*. MTA also receives substantial amounts of funding for the capital costs of the Commuter System from grants provided by the federal government.

*Other*. Officials of the State, City and federal governments and the Inspector General of MTA periodically conduct audits and reviews of the operations of MTA Long Island Rail Road and MTA Metro-North Railroad. Officers of MTA Long Island Rail Road and MTA Metro-North Railroad respond to these reports and adopt some of the recommendations made therein or take other appropriate remedial actions.

MTA Long Island Rail Road and MTA Metro-North Railroad are subject to regulation by federal and State agencies. In general, they must maintain and equip their roadbed and rolling stock in compliance with minimum standards, file reports with respect to certain accidents and incidents and respond to recommendations for improving Commuter System safety.

## Safety Initiatives

In 2022, MTA Metro-North Railroad continued to implement safety initiatives to enhance its efforts to ensure a safe work environment. MTA Metro-North Railroad's goal is a 100% incident-free operation, and it focuses on continuous safety improvement to achieve this through its System Safety Program Plan. Examples of safety initiatives at MTA Metro-North Railroad include:

- Cameras on Rolling Stock: On-board camera systems have capacity for 30 days of continuous recording. The on-board cameras assist MTA Metro-North Railroad in accident/incident investigation and are also used by management in carrying out efficiency testing and system-wide performance monitoring programs.

- Confidential Close Call Reporting System (C3RS): MTA Metro-North Railroad has fully implemented C3RS, an industry-leading initiative. It is designed to encourage employees to report any potential safety hazard or breach of procedures that they may observe by providing them with a convenient, non-confrontational and anonymous method to do so. It is a partnership between the National Aeronautics and Space Administration (NASA) and the FRA, in conjunction with MTA Metro-North Railroad and its labor organizations.

- Positive Train Control ("PTC"): PTC enhances train safety by eliminating the potential for human error to contribute to train-to-train collisions, injuries stemming from trains traveling into zones where MTA Metro-North Railroad employees are working on tracks, or derailments caused by a train traveling too fast into a curve or into a misaligned switch. PTC was fully implemented throughout MTA Metro-North Railroad's system by the federal deadline of December 31, 2020.

- Enhanced Employee Protection System: This in-house developed system provides protection for Maintenance of Way employees by placing a blocking device on the track that can be removed only after Rail Traffic Controllers are provided a unique release code by the protected worker.

- First Responder Training: The program teaches first responders how to respond to incidents involving MTA Metro-North Railroad and provides guidance on safe operations around railroad equipment and the right-of-way. In 2022, 1,900 first responders were trained in Passenger Train Emergency Response procedures.

- Obstructive Sleep Apnea : MTA Metro-North Railroad has continued its Obstructive Sleep Apnea (OSA) program, which began in 2015 with the screening of all of MTA Metro-North Railroad's locomotive engineers. Locomotive Engineers are screened for OSA as part of their pre-employment physical as well as their annual physical. OSA screening for conductors began in 2017. During 2022, 402 Locomotive Engineers were screened and 128 referred for testing. For Conductors, 860 were screened and 132 referred for testing.

- Public Safety Outreach: MTA Metro-North Railroad continued its ongoing public safety outreach efforts. TRACKS (Together Railroads and Communities Keeping Safe) is a community outreach program focused on educating people about safety on and near railroad grade crossings and tracks. It includes delivery of programs on-site (to schools, community groups, etc.), communications campaigns, and provision of materials/resources through the TRACKS website. During 2022, the program continued to deliver virtual as well as in-person outreach because of the COVID-19 pandemic, reaching over 52,000 individuals through in-person and virtual TRACKS events and making over 330,000 contacts via the TRACKS website and social media.

- Safety Focus Week: MTA Metro-North Railroad holds a quarterly Safety Focus Week at work locations throughout the railroad. These events provide opportunities for employees to discuss relevant safety topics with supervision and provide feedback and safety concerns. Safety concerns raised in the discussions are reported and tracked, and corrective actions are developed as necessary.

- Safety Leadership Structure: Safety Committees covering all six districts throughout MTA Metro-North Railroad's territory ensure continuity of communication from the district level to the local level. The overall goal is to ensure communication and safety awareness at all levels of MTA Metro-North Railroad, from the President to front-line employees.

- Safety Training: The New Employee Safety Orientation (NESO) introduces new and promoted employees to safe work practices on the railroad and includes a field visit to ensure all employees are safe while working on the railroad. Supervising for Safety (SFS) is an in-depth training program for all employees in a supervisory or management role. SFS is a full-day course that provides supervisors, foremen, and managers the tools needed to identify risks, mitigate hazards, and provide employees with a safe working environment.

- Suicide Prevention Programs: MTA Metro-North Railroad continued its suicide prevention programs in 2022, including the following:

  - Delivery of QPR (Question, Persuade, Refer) Gatekeeper Training: This training teaches frontline employees to recognize the warning signs of someone in a mental health crisis or who is contemplating suicide, as well as how to approach the individual, bring them to safety, and get them the help they need.

  - Partnerships with the National Suicide Prevention Lifeline and Crisis Text Line: Posters with the contact information for these resources are displayed in both Spanish and English on social media, the MTA Metro-North Railroad TRACKS website, and in rotation on electronic monitors located on station platforms, in terminals, and on train cars The Crisis Text Line partnership includes a unique keyword for MTA Metro-North Railroad, so that any commuter who is experiencing a mental health crisis can text NEXT2U to 741741 and instantly connect with a trained Crisis Counselor to get the help they need.

- Safety Enterprise System Application: MTA Metro-North Railroad utilizes a Safety Enterprise System Application to proactively manage compliance requirements, manage/track incidents, identify problem areas, and monitor performance.

- Incident Investigations: MTA Metro-North Railroad's Field Safety Operations and Investigations team conducts investigations of major incidents in an objective manner, making recommendations for corrective actions, ensuring their implementation, and monitoring for effectiveness.

- Rail Safety Week: MTA Metro-North Railroad participated in the 6th Annual U.S. Rail Safety Week (September 19-25, 2022), which promotes rail and grade-crossing safety. Events included outreach to the public at stations and grade crossings, as well as through virtual platforms and social media.

- Grade Crossing Safety: Through MTA Metro-North Railroad's partnership with the WAZE GPS application, drivers using the app are alerted to railroad crossings along their route with a real-time verbal alert and/or a hazard icon displayed on screen when the driver comes within 500 feet of the crossing.

The continuing goal of MTA Long Island Rail Road's corporate safety program is to work towards an accident-free workplace through the implementation of a comprehensive, sustainable, and measurable safety initiative designed to engage every level of the organization in promoting the value of safety. This initiative is a collaborative effort between the Corporate Safety Department ("CSD"); all MTA Long Island Rail Road operating, support, and administrative departments; and labor partners. Communication of safety as a core agency value begins at the highest executive levels and is constantly reinforced to all employees.

The Corporate Safety Department develops and oversees MTA Long Island Rail Road's comprehensive Safety Management System. MTA Long Island Rail Road's System Safety Program Plan ("SSPP") is in accordance with American Public Transportation Association standards and is a critical component of the Safety Management System approach. For more than a decade, MTA Long Island Rail Road had voluntarily participated in a triennial audit of its SSPP by the American Public Transportation Association, which has routinely recognized the strength of MTA Long Island Rail Road's safety program. In 2021, the focus of the Corporate Safety Department was revising the existing System Safety Program Plan to comply with the new Federal Railroad Administration ("FRA") System Safety Program Plan regulation (Title 49 CFR Part 270).

On March 4, 2021, MTA Long Island Rail Road's SSPP was concurred upon by Senior Staff and submitted to the FRA for approval as required by the regulation. The SSPP was approved by the FRA on January 31, 2022. This date now serves as the reference point for full implementation of SSPP.

Key 2022 safety initiatives included:

- Quarterly "Safety FOCUS Days" across MTA Long Island Rail Road, each attended by approximately 4,000 employees. The President and Vice President of Corporate Safety also meet with a small group of frontline supervisors from various departments to discuss how they are experiencing safety in the field. CSD also began issuing newsletters to help with promoting the awareness of rail incidents and the SSPP implementation.

- Continued participation in CRS, a collaborative effort between management, labor, and the FRA, that provides a mechanism for employees to confidentially report "close calls" that could have resulted in operating and safety incidents.

- Continued working with MTA Headquarters, NYSDOT, Nassau and Suffolk counties, local government authorities, and a third-party consultant to develop improved safety measures at railroad grade crossings.

- Continued implementation of a "Safety Management Systems" approach to MTA Long Island Rail Road's overall safety program. The Safety Management Systems approach, which has been endorsed by the FTA, the FRA, the U.S. Department of Transportation and other transportation authorities, supplements an engineering-centered process with increased attention to the "human element", data sharing, and measurements of safety performance.

- Continued screening of locomotive engineers for sleep disorders, including Obstructive Sleep Apnea.

- Continued Customer Safety Awareness Days in partnership with NJ Transit, Amtrak, and MTA New York City Transit at Penn Station. Messaging focused on "Let's Travel Safely Together" highlighting how customer behaviors can help reduce customer accidents and injuries. Launched social media campaign focused on customer safety.

- Continued support of the development of Employee Compliance Reporting SAFER II.
- A dedicated Roadway Worker Compliance Unit conducts field observations of employees in compliance with Title 49 Code of Federal Regulation Part 214 requirements to achieve safety and operational goals. All observations are recorded in the corporate Employee Compliance Reporting System.
- A dedicated Accident Investigation Unit conducts investigations of major accidents and incidents in an objective manner, making recommendations for corrective actions; ensuring their implementation; and monitoring for effectiveness.
- MTA Long Island Rail Road Safety program: T.R.A.C.K.S. (Together Railroads And Communities Keeping Safe) is a joint venture between MTA Long Island Rail Road's Corporate Safety Department and the MTA Police Department to reach out to schools, camps, day care and community groups. The programs stress the importance of safety at grade crossings and the dangers of being on or near the tracks. The T.R.A.C.K.S. program is a free program open to all schools, daycare centers, professional driver groups, civic, senior and fraternal organizations. Additionally, due to the COVID-19 pandemic, virtual social media technology was utilized to help keep the public informed of information pertaining to the T.R.A.C.K.S. program.
- Right of Way Task Force: The MTA Long Island Rail Road Corporate Safety department, in partnership with MTA Police Department combats trespassers, illegal debris dumping and encroachments along the right of way system wide. The Task Force conducts biannual inspections, performs trend analysis, and coordinates immediate responses to complaints along the tracks.
- LIRR has collaborated with the Long Island Suicide Coalition which includes NYS Office of Mental Health, Response Long Island and the Long Island Crisis Center. The group has worked together to engage customers at select stations throughout the years. Together the group designed a suicide awareness sign that has been installed at all 125 LIRR stations. In addition to the signage, the LIRR initiated a blue light strategy at select stations to deter suicide attempts at these locations.

## TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**(popular name – MTA Bridges and Tunnels)**

### Legal Status and Public Purpose

MTA Bridges and Tunnels, a public benefit corporation, became an affiliate of MTA effective March 1, 1968. MTA Bridges and Tunnels is empowered, among other things, to construct and operate certain vehicular bridges, tunnels and highways and other public facilities in the City. The following are the vehicular toll facilities operated by MTA Bridges and Tunnels:

**MTA Bridges and Tunnels Facilities**

| Seven Bridges | Two Tunnels |
|---|---|
| Robert F. Kennedy Bridge | Hugh L. Carey Tunnel |
| Verrazzano-Narrows Bridge | Queens Midtown Tunnel |
| Bronx-Whitestone Bridge | |
| Throgs Neck Bridge | |
| Henry Hudson Bridge | |
| Marine Parkway-Gil Hodges Memorial Bridge | |
| Cross Bay Veterans Memorial Bridge | |

A more detailed description of the MTA Bridges and Tunnels Facilities is set forth below.

MTA Bridges and Tunnels also operates, pursuant to a management agreement with a private contractor, the Battery Parking Garage located adjacent to the Manhattan portal of the Hugh L. Carey Tunnel. The garage opened in 1950, has since been renovated, and has space for 2,100 vehicles.

Title to the MTA Bridges and Tunnels Facilities and the Battery Parking Garage is vested in the City, but MTA Bridges and Tunnels has the use and occupancy of such facilities so long as its corporate existence continues.

As more fully described herein under "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program", MTA Bridges and Tunnels is also statutorily authorized to operate the CBD Tolling Program.

**Management**

Catherine T. Sheridan, P.E., Interim President since March 4, 2023. An engineer and transportation leader with extensive experience at MTA, the New York State Canal Corporation, and the New York State Thruway Authority, Sheridan joined MTA in 2019 and has served as Chief of Staff at MTA Construction and Development since October 2021. During her time at MTA, Sheridan has led day-to-day agency operations for MTA's historic $55 billion 2020-2024 capital program. Prior to MTA, Sheridan served as the Chief Engineer at the New York State Canal Corporation and Chief Engineer at the New York State Thruway Authority, where in addition to being responsible for its multi-billion-dollar capital program, she was an executive advisor for the $3.9 billion Governor Mario M. Cuomo Bridge project. Sheridan also served in the United States Army as a Combat Engineer from 1989 to 1997, reaching the rank of Captain.

**MTA Bridges and Tunnels Facilities***

The following is a brief description of the MTA Bridges and Tunnels Facilities, listed in order of revenue generation:

Robert F. Kennedy Bridge - Crosses the East River and the Harlem River and connects the Boroughs of Queens, The Bronx and Manhattan. Opened to traffic in 1936, it generally carries eight traffic lanes between Queens and The Bronx via Wards Island and Randall's Island except where the Wards Island Viaduct has been widened to nine lanes; the bridge also generally carries six traffic lanes between Randall's Island and Manhattan. These three major crossings are interconnected by viaducts.

Verrazzano-Narrows Bridge - Connects the Boroughs of Brooklyn and Staten Island. It is a double deck structure with the upper-level deck carrying seven traffic lanes including a reversible lane and the lower-level deck carrying six lanes. The upper deck was opened to traffic in 1964 and the lower deck in 1969. The fully reversible lane on the upper level was implemented in September 2017.

Throgs Neck Bridge - Crosses the upper East River between the Boroughs of Queens and The Bronx approximately two miles east of the Bronx-Whitestone Bridge. Opened in 1961, it carries six traffic lanes.

Bronx-Whitestone Bridge - Crosses the East River and connects the Boroughs of Queens and The Bronx. The roadways of the bridge, which was opened to traffic with four lanes in 1939, were widened so as to carry six traffic lanes commencing in 1946.

Queens Midtown Tunnel - Crosses under the East River and connects the Boroughs of Queens and Manhattan. Opened to traffic in 1940, it consists of twin tubes, carrying an aggregate of four traffic lanes.

Hugh L. Carey Tunnel - Crosses under the East River at its mouth and connects the Boroughs of Brooklyn and Manhattan. Opened to traffic in 1950, it consists of twin tubes, carrying an aggregate of four traffic lanes.

Henry Hudson Bridge - Crosses the Harlem River between the Spuyten Duyvil section of The Bronx and the northern end of Manhattan. It has two roadway levels, each level carrying three traffic lanes, the lower level having been opened to traffic in 1936 and the upper level in 1938. The operation of this bridge includes the maintenance of a small part of the Henry Hudson Parkway.

Cross Bay Veterans Memorial Bridge - Crosses Beach Channel in Jamaica Bay to Rockaway Peninsula, and is located in Queens. Reconstructed and opened to traffic in May 1970, this bridge carries three traffic lanes in each direction, dropping to two lanes in each direction just before the Cashless Tolling gantry. Its operation includes the maintenance of a small part of Cross Bay Boulevard.

Marine Parkway-Gil Hodges Memorial Bridge - Crosses Rockaway Inlet and connects Rockaway Peninsula in Queens, with Brooklyn. Opened in 1937, it carries four traffic lanes. The operation of this bridge includes the maintenance of the Marine Parkway from the Cashless Tolling gantries to Jacob Riis Park.

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* For purposes of the bond resolutions, the MTA Bridges and Tunnels Facilities are referred to as the "TBTA Facilities".

MTA Bridges and Tunnels also operates the Battery Parking Garage. Only the bridges and tunnels constitute MTA Bridges and Tunnels Facilities under the MTA Bridges and Tunnels bond resolutions, though the net revenues derived from the operation of the Battery Parking Garage are included as net revenues that are pledged to the payment of such bonds.

MTA Bridges and Tunnels is a founding member of the E-ZPass Interagency Group ("IAG"), which is a consortium of 34 agencies in 19 states that operate an interoperable electronic toll collection system.

**Authorized Projects of MTA Bridges and Tunnels**

MTA Bridges and Tunnels' powers have been broadened by the Legislature beyond its traditional role as a vehicular toll facility authority within the City. MTA Bridges and Tunnels is also authorized to participate in the financing of capital projects for the Transit and Commuter Systems, the MTA Bus System and MTA Staten Island Railway. The Central Business District ("CBD") Tolling Program is also an authorized project of MTA Bridges and Tunnels. See "PART 5. STATISTICAL INFORMATION – RIDERSHIP AND FACILITIES USE – Central Business District Tolling Program". Under the MTA Reform and Traffic Mobility Act, monies in the CBD Tolling Capital Lockbox Fund cannot be commingled with any other MTA Bridges and Tunnels monies. Currently, the proceeds of bonds issued under the MTA Bridges and Tunnels Senior and Subordinate Resolutions may not be used to finance capital costs associated with the CBD Tolling Program, although such CBD Tolling Program may in the future qualify as an additional project that can be financed thereunder. Notwithstanding the foregoing, on December 18, 2019, the MTA Bridges and Tunnels Board approved and adopted the CBDTP Second Subordinate Revenue Resolution (Central Business District Tolling Program) (the "CBDTP Second Subordinate Revenue Resolution"), which authorized the issuance of obligations to finance costs related to the design, build, and installation of infrastructure, tolling systems and allowable implementation expenses necessary for the operation of the Central Business District Tolling Program. Obligations issued under the CBDTP Second Subordinate Revenue Resolution will be payable from MTA Bridges and Tunnels revenues after the payment of debt service on obligations issued under the MTA Bridges and Tunnels Senior and Subordinate Resolutions, the proceeds of which bonds can only be used to finance bridge and tunnel and transit and commuter projects. On May 16, 2021, approximately $192.84 million of MTA Bridges and Tunnels CBDTP Second Subordinate Revenue Bond Anticipation Notes were issued with a maturity date of November 1, 2025. Note, however, that as budgeted in the 2022 February Plan, these bond anticipation notes are expected to be retired utilizing CBD Tolling Program Lockbox Revenues in 2025, so are not anticipated to have an impact on MTA Bridges and Tunnels revenues. See "PART 3. PUBLIC DEBT SECURITIES AND OTHER FINANCIAL INSTRUMENTS – SECOND SUBORDINATE REVENUE BOND ANTICIPATION NOTES (CBDTP)".

The capital assets constructed or acquired by MTA Bridges and Tunnels as part of the Transit and Commuter Systems, the MTA Bus System and MTA Staten Island Railway are to be transferred or leased for nominal consideration to MTA, MTA New York City Transit or a designated subsidiary of either of them, and neither such conveyance nor any capital grants made by MTA Bridges and Tunnels will produce revenues for MTA Bridges and Tunnels. Alternatively, such capital assets may be sold to parties other than a Related Entity and leased back by MTA Bridges and Tunnels for subleasing for a nominal consideration to MTA, MTA New York City Transit or a designated subsidiary or leased directly to such Related Entity at the expense of MTA Bridges and Tunnels.

Under existing law, MTA Bridges and Tunnels has no obligation with respect to the operation and maintenance of the equipment or facilities financed as part of the Transit and Commuter Systems, the MTA Bus System or MTA Staten Island Railway. The MTA Reform and Traffic Mobility Act, enacted in April 2019, authorized MTA Bridges and Tunnels' Bridge and Tunnel Officers ("Bridge and Tunnel Officers") to provide violation enforcement on facilities owned by MTA, MTA New York City Transit or a designated subsidiary. The first official deployment of the Bridge and Tunnel Officers to the New York City Transit Authority Buses was on August 5, 2019.

## MTA CONSTRUCTION AND DEVELOPMENT COMPANY
## (formerly known as MTA CAPITAL CONSTRUCTION COMPANY)

### (popular name – MTA Construction and Development)

**Legal Status and Public Purpose**

MTA Construction and Development was created as an MTA subsidiary in 2003, and is responsible for administration of the planning, design and construction of major MTA projects which span multiple Capital Programs. Those projects include East Side Access, Second Avenue Subway, Penn Station Access, the MTA Long Island Rail Road Expansion project, the Canarsie Tunnel Rehabilitation, the Grand Central Madison Concourse and East End Gateway project, and the Penn Station Reconstruction project. In 2020, as part of the Transformation Plan, MTA Construction and Development took on responsibility for additional capital funded construction and development work.

**Management**

Jamie Torres-Springer joined MTA in 2021 as President of MTA Construction and Development. He is responsible for overseeing MTA's $55 billion capital plan through innovative management of construction work for subways, buses, commuter railroads, bridges and tunnels. Prior to joining MTA, Mr. Torres-Springer served as Commissioner of New York City's Department of Design and Construction ("DDC"), the agency responsible for delivering infrastructure and facilities across New York City government. He led development and implementation of DDC's Strategic Blueprint for Construction Excellence, a comprehensive plan to streamline capital project delivery, and had a leading role in several programs related to the COVID-19 pandemic, the New York City's adaptation to climate change, and reform of the criminal justice system. Prior to DDC, Mr. Torres- Springer led a national planning practice working on urban infrastructure, open space, and citywide strategic plans for inclusive growth and sustainability.

**MTA Network Expansion**

The following project overviews represent MTA Network Expansion activity that, prior to the formation of MTA Construction and Development, were managed by the former MTA Capital Construction. The other projects in the MTA Capital Program are reported in "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Capital Programs – Background and Development".

**East Side Access**

The East Side Access project consists of construction of a 3.5-mile commuter rail connection between the MTA Long Island Rail Road's Main and Port Washington lines in Queens and a new terminal being constructed beneath Grand Central Terminal. The project also includes upgrades to the Harold Interlocking infrastructure. The new connection increases MTA Long Island Rail Road's capacity into Manhattan, dramatically shortening the travel time for Long Island and eastern Queens commuters traveling to the east side of Manhattan and improving the reliability and operational flexibility of the Harold Interlocking. MTA began construction of certain portions of the East Side Access project in 2001.

The estimated cost to complete the project is $11.133 billion, which excludes Rolling Stock Reserve of $463 million and project financing charges. Additional budget for the project, reflecting this estimate to complete, were approved and are part of the 2020-2024 Capital Program.

Federal funds for the project, primarily received through a Full Funding Grant Agreement with the FTA are $2.70 billion, all of which have been received. The State is contributing $450 million in direct funding for this project. MTA is financing the remaining portion of the cost of the East Side Access project using MTA bond proceeds.

MTA's Regional Investment program, which was to be progressed concurrently with the East Side Access program, includes improvements to Harold Interlocking that will benefit the regional transportation network by separating Amtrak and MTA Long Island Rail Road train operations and increase Amtrak train speeds between Penn Station and the New Haven line. The Regional Investment program is funded in the 2010-2014, 2015-2019 and 2020-2024 Capital Programs and is partially funded by the FRA's High Speed Intercity Passenger Rail Program. The balance of funding to complete Regional Investment scope will be requested in the 2025-2029 Capital Program.

The project achieved temporary allowance of occupancy and partial revenue service (shuttle service) on January 25, 2023. Full revenue service was achieved on February 27, 2023. Systems-related contracts, covering installation of traction power, signals and facility systems have all achieved substantial completion, as has the Mid-Day Storage Yard Facility contract. The Grand Central Madison Concourse and Facilities Fit-Out contract and the Passenger Experience & Retail Enhancements contract are expected to achieve substantial completion in 2023.

Work under the Harold Catenary Construction contract is ongoing with substantial completion forecasted in early 2024. That contract provides for the design and construction of catenary systems, power systems, civil structures, and trackwork in Harold Interlocking and Sunnyside Yards and will benefit both the East Side Access and the Harold Interlocking High Speed Rail projects. Additionally, work on the Eastbound Reroute contract is approximately 50% complete and is forecasted to achieve substantial completion in 2024. That contract provides for a grade separated track through the Harold Interlocking as part of the Harold Interlocking High Speed Rail project.

**Second Avenue Subway**

The Second Avenue Subway is a multi-phased project to provide MTA customers with a new subway service ultimately stretching approximately 8.5 miles under the East Side of Manhattan from 125th Street to Hanover Square.

Under the current plan, the project is expected to be built in four phases.

- *Phase One*: Construction includes tunnels from 105th Street and 2nd Avenue to 63rd Street and Third Avenue, with new stations along 2nd Avenue at 96th, 86th and 72nd Streets and new entrances to and newly opened portions of the existing Lexington Avenue/63rd Street Station. The service runs from 96th Street and 2nd Avenue to the existing Lexington Avenue/63rd Street Station, where it connects with the N/Q/R Line.
- *Phase Two*: The new subway line will be extended north from 96th Street to 125th Street. Subway service will run from 125th Street to the existing Lexington Avenue/63rd Street Station, where it will connect with the N/Q/R Line.
- *Phase Three*: The new subway line will be extended south to Houston Street. Subway service will run from 125th Street to Houston Street and 2nd Avenue.
- *Phase Four*: In this final phase the new subway line will be extended south to Hanover Square. Subway service will run from 125th Street to Hanover Square in Lower Manhattan.

Second Avenue Subway Phase One commenced revenue service on January 1, 2017. The capital cost for Phase One was $4.601 billion. As of December 2022, MTA received from the FTA approximately $1.54 billion, primarily through an FFGA. The State is contributing $450 million in direct funding for this project. The remainder of the necessary funding for this project has been achieved through the issuance of MTA bonds.

Second Avenue Subway Phase Two, which will complete the project's northern operational phase, commenced in December 2016 with the award of the environmental and design contracts. On January 6, 2022, FTA approved Phase Two for entry into the Engineering phase of the FTA New Starts Program. As of January 2023, $331.4 million has been committed for Phase Two. Initial funding for this project was $1.735 billion to address environmental work, design, real estate, project support, and preliminary construction work. Additional funding of $4.555 billion was included in the 2020-2024 Capital Program, bringing the total Phase Two budget to $6.290 billion. The FTA updated the New Starts Engineering FY 2024 profile and the FTA's Annual Report on Funding issued in March 2023 included an updated cost estimate of $7.699 billion. This reflects nearly $300 million in added inflation costs as well as $379 million in additional contingency that the FTA has required this project to carry. FTA has been requiring projects around the country to add contingency in light of global supply chain and other issues. It also includes $731 million in finance costs that are not part of the capital cost of the project and are paid out of MTA's Operating Budget. MTA continues to work with the FTA to take all remaining actions in anticipation of entering into a Full Funding Grant Agreement later this year.

**Penn Station Access**

The Penn Station Access project will allow MTA Metro-North Railroad to initiate service between its New Haven Line and Penn Station via Amtrak's Hell Gate Line through the East Bronx and Queens. The project includes construction of new intermediate stations in the East Bronx in the vicinity of Co-op City, Morris Park, Parkchester/Van Nest and Hunts Point.

As of January 2023, $2.43 billion has been committed for the project. The project budget totals $3.179 billion, including $430.5 million allocated in MTA's 2015-2019 Capital Program, and $2.749 billion in the amended 2020-2024 Capital Program, which represents an increase of $1.618 billion from pre-amended 2020-2024 Capital Program. The budget was increased to account for the extended project schedule due to limitations on track outages and Amtrak labor support, additional scope requirements and market price increases in labor and construction materials. In addition to MTA funding, MTA anticipates receiving federal and state funding for this project.

Design Build and Project Management Consultant contracts were awarded in December 2021 with substantial completion scheduled for mid-2027.

**MTA Long Island Rail Road Expansion Project**

In December 2017, the MTA Board granted approval to award two contracts for the MTA Long Island Rail Road Expansion project. The first contract, a design-build contract, calls for the awardee to design and construct approximately 10 miles of third track on the Main Line, remove eight street-level grade crossings, and provide grade-separated vehicular and pedestrian crossings at five locations. This contract contains options for various completion work and for up to five parking facilities. The second contract is a project management consulting services contract for a period of three years, with options to extend the contract period for two additional one-year terms.

The third track on the Main Line was completed and fully operational as of October 2022. All eight grade crossings have been eliminated and five have re-opened as undergrade crossings; bridge replacements and station improvement work at four stations is ongoing; and two new parking structures have been opened to the public. The design-build contract work is over 96% compete with substantial completion forecasted to be achieved in April 2023.

As of December 2022, the total budget for the design-build contract and the project management contract is $2.489 billion ($2.050 billion in the 2015-2019 Capital Program and $438 million in the 2020-2024 Capital Program). The $438 million represents a $100 million reduction from the $538 million in the 2020-24 Capital Program, reflecting cost savings achieved on the project.

**Penn Station Reconstruction**

The amended 2020-2024 Capital Program included $100 million to advance planning, environmental review and design for the Penn Station Reconstruction project, which will be coordinated with Amtrak and NJ Transit to increase concourse capacity and reduce crowding, improve safety, enhance the user experience, and improve station operations by unifying the multiple concourses in the existing Penn Station into a state-of-the-art public space. Funding for this project will be provided by the State with contributions expected from Amtrak and NJ Transit.

# PART 5. STATISTICAL INFORMATION

## RIDERSHIP AND FACILITIES USE

### Transit System (MTA New York City Transit and MaBSTOA) Ridership

*General*. Subway revenue passengers in 2022 totaled 1.01 billion, an increase of approximately 33.3% from 2021. Bus ridership in 2022 was 343 million, 10% higher than in 2021.

MTA New York City Transit expanded service from 1996 to 2009, adding new capacity on its subway lines and bus routes to meet the overall growth in demand. MetroCard fare incentives were introduced beginning in 1997. Due to financial circumstances in 2010, bus and subway service cuts were required along with other budget reduction programs in order to balance the 2011 budget. In more recent years, there have been expansions in service. In 2013 and 2014, MTA New York City Transit restored some of the bus service eliminated in 2010 and added four new bus routes. In 2015, service on the No. 7 line was extended to 34th Street-Hudson Yards and two new Select Bus Service routes were established. In 2016, an additional two Select Bus Service routes were added, followed by two additional routes added in 2017, one in 2018 and two in 2019. On January 1, 2017, Phase One of the Second Avenue Subway began service, with Q train service running from three newly opened stations (96th Street, 86th Street, 72nd Street) to 63rd Street, and continuing through Manhattan and into Brooklyn. In November 2018, the WTC Cortlandt Street station reopened for the first time since 2001.

While some of the Transit System changes in use in the past few years have been attributable to the changes in the economy and the COVID-19 pandemic, overall ridership changes are also attributable to other factors including efforts to reduce fare evasion and improve security. Significant factors which impact ridership, discussed more fully below, include fare increases and fare incentives, Transit System performance and levels of services, Transit System security and employment in the City generally as well as the relative level and cost of service provided by competing transportation modes such as taxis, competing taxi services such as Uber and Lyft, licensed and unlicensed vanpools, private car and bus services and charter operators. Interruptions to service or temporary closures of lines resulting from major capital improvement projects to the Transit System by MTA New York City Transit or service disruptions caused by City infrastructure problems not under the control of MTA New York City Transit and MaBSTOA or from repairs to or rehabilitation of City infrastructure by the City or its agencies could adversely impact ridership and revenues. The effect would depend on the nature, severity and duration of the service interruptions.

*Historical Ridership*. The following table sets forth annual ridership on the Transit System since 2013 and the percentage increase or decrease in each year. Relative to the 2013 levels, subway revenue passengers have decreased by 41%, bus revenue passengers have decreased by 49%, paratransit revenue passengers have decreased by 2%, and total revenue passengers have decreased by 43%. From 2013 to 2022, average weekday subway passengers decreased 42%, while average weekend subway passengers also decreased by 36%. As indicated below, annual subway ridership has declined from 2016 to 2018, including a 2.7% decrease in 2018, and a 1.7% decrease in 2017. Factors contributing to the 2017 and 2018 subway ridership declines include several major construction projects underway in 2017 and 2018, more maintenance work resulting in off-peak and weekend service changes, and increased competition from for-hire services (Uber, Lyft, etc.). In 2019, subway ridership increased by 1.1% reversing years of decline, before the 2020 COVID-19 pandemic sent ridership to an unprecedented low point with a 62.3% decline. Subway ridership rebounded somewhat in 2021 increasing 18.8% compared with 2021, however, full-year volumes reached only 45% of 2019 pre-pandemic levels. Subway ridership continued this recovery in 2022 with 33.3% increase over 2021 and was at 60% of 2019 pre-pandemic ridership. Annual bus ridership has declined since 2014, including a 2.2% decrease in 2019 and a 62.5% decrease in 2020 due to the COVID-19 pandemic. Bus ridership in 2021 saw a 49.3% increase from 2020 due to both steady recovery as well as the absence of paid rides recorded in local buses for more than five months of 2020 due to the suspension of fare collections. Like subway, bus ridership began to rebound in 2021 reaching 56% of 2019 full-year counts and the rebounding continued in 2022 by 10% increase over 2021 while reaching 62% of 2019 pre-pandemic level. Other than the COVID-19 pandemic, factors contributing to the recent bus ridership declines include fare evasion, increased congestion resulting in slow bus speeds, the availability of alternate travel options such as for-hire services and CitiBike, and fare increases in 2015, 2017 and 2019.

**Revenue Passengers**[(1)]
**(in thousands)**

| Years | Subway | Subway Increase/ (Decrease) | Bus | Bus Increase/ (Decrease) | Para-Transit[(2)] | Paratransit Increase/ (Decrease) | Total Revenue Passengers[(3)] | Total Increase/ (Decrease) |
|---|---|---|---|---|---|---|---|---|
| 2013 | 1,707,556 | 3.2 | 677,569 | 1.4 | 9,266 | (0.8) | 2,394,391 | 2.7 |
| 2014 | 1,751,288 | 2.6 | 667,051 | (1.6) | 8,884 | (4.1) | 2,427,223 | 1.4 |
| 2015 | 1,762,565 | 0.6 | 650,682 | (2.5) | 8,829 | (0.6) | 2,422,076 | (0.2) |
| 2016 | 1,756,815 | (0.3) | 638,413 | (1.9) | 8,938 | 1.2 | 2,404,166 | (0.7) |
| 2017 | 1,727,367 | (1.7) | 602,620 | (5.6) | 8,585 | (3.9) | 2,338,572 | (3.4) |
| 2018 | 1,680,060 | (2.7) | 569,361 | (5.5) | 9,867 | 14.9 | 2,259,288 | (3.4) |
| 2019 | 1,697,787 | 1.1 | 557,037 | (2.2) | 10,918 | 10.6 | 2,265,742 | 0.3 |
| 2020 | 639,541 | (62.3) | 208,847 | (62.5) | 7,117 | (34.8) | 855,505 | (62.2) |
| 2021 | 759,977 | 18.8 | 311,894 | 49.2 | 7,813 | 9.8 | 1,079,684 | 26.2 |
| 2022 | 1,013,425 | 33.3 | 343,093 | 10 | 9,100 | 16.5 | 1,365,618 | 26.5 |

(1) "Revenue Passengers" are defined as all passengers for whom revenue is received, either through direct fare payment (cash, MetroCards, OMNY) or fare reimbursements (senior citizens, school children and the physically disabled). "Revenue Passengers" statistics count passengers that use a free intermodal or bus-to-bus transfer as an additional passenger though they are not paying an additional fare.

(2) Paratransit ridership includes trips made by personal care attendants and guests.

(3) Includes subway, bus and paratransit.

*Fares*. Since September 1975 when the base fare was 50 cents, the base fare charged for use of the Transit System has been raised eleven times. The most recent fare increase, which became effective April 21, 2019, did not adjust the base fare.

| Date of Increase | New Base Fare | Amount of Increase | Percent Increase |
|---|---|---|---|
| 1980 – June | $0.60 | $0.10 | 20.0% |
| 1981 – July | 0.75 | 0.15 | 25.0 |
| 1984 – January | 0.90 | 0.15 | 20.0 |
| 1986 – January | 1.00 | 0.10 | 11.1 |
| 1990 – January | 1.15 | 0.15 | 15.0 |
| 1992 – January | 1.25 | 0.10 | 8.7 |
| 1995 – November | 1.50 | 0.25 | 20.0 |
| 2003 – May | 2.00 | 0.50 | 33.3 |
| 2009 – June | 2.25 | 0.25 | 12.5 |
| 2013 – March | 2.50 | 0.25 | 11.1 |
| 2015 – March | 2.75 | 0.25 | 10.0 |

Each fare increase listed in the chart above, except the 1986 increase, has been followed by an immediate decrease in ridership.

The above-referenced increases in the base fare have also been accompanied by other changes in the pricing of various products, including express bus fares and MetroCards of various durations. The following describes the pricing changes during the last decade.

In addition to the $0.25 increase in the base fare on March 3, 2013, MTA New York City Transit increased the cost of a 7-day unlimited-ride MetroCard from $29 to $30, and the cost of a 30-day unlimited-ride MetroCard from $104 to $112. In addition, the bonus on Pay-Per-Ride MetroCards was changed from 7% on purchases of $10 or more to 5% on purchases of $5 or more. The express bus fare increased from $5.50 to $6.00, while the cost of a 7-day Express Bus Plus MetroCard increased from $50 to $55.

In addition to the $0.25 increase in the base fare on March 22, 2015, MTA New York City Transit increased the cost of a 7-day unlimited-ride MetroCard from $30 to $31, and the cost of a 30-day unlimited-ride MetroCard from $112 to $116.50. In addition, the bonus on Pay-Per-Ride MetroCards was changed from 5% on purchases of $5 or more to 11% on purchases of $5.50 or more. The express bus fare increased from $6.00 to $6.50, while the cost of a 7-day Express Bus Plus MetroCard increased from $55 to $57.25.

On March 19, 2017, MTA New York City Transit increased the cost of a 7-day unlimited ride MetroCard from $31 to $32, the cost of 30-day unlimited ride MetroCard from $116.50 to $121, and the cost of 7-day Express Bus Plus

MetroCard from $57.25 to $59.50. The bonus on Pay-Per-Ride MetroCards was changed from 11% to 5% on purchases of $5.50 or more. The subway and local bus fare remain unchanged at $2.75 and the express bus fare remains at $6.50.

On April 21, 2019, MTA New York City Transit increased the cost of a 7-day unlimited ride MetroCard from $32 to $33, the cost of 30-day unlimited ride MetroCard from $121 to $127, and the cost of 7-day Express Bus Plus MetroCard from $59.50 to $62. The 5% bonus on Pay-Per-Ride MetroCard purchases of $5.50 or more has been eliminated. The subway and local bus fare remain unchanged at $2.75 and the express bus fare increased from $6.50 to $6.75.

The following chart shows historical fare information since 2013.

**Historical Fare Information**

| Year | CPI[(1)] | Base Fare | Base Fare Real Fare $[(2)] | Average Fares[(3)] | Non-Student Average Fares[(4)] |
|---|---|---|---|---|---|
| 2013[(5)] | 256.8 | 2.50 | 0.928 | 1.665 | 1.763 |
| 2014 | 260.2 | 2.50 | 0.916 | 1.704 | 1.799 |
| 2015[(6)] | 260.6 | 2.75 | 1.006 | 1.773 | 1.867 |
| 2016 | 263.4 | 2.75 | 0.995 | 1.803 | 1.896 |
| 2017[(7)] | 268.5 | 2.75 | 0.976 | 1.886 | 1.980 |
| 2018 | 273.6 | 2.75 | 0.958 | 1.936 | 2.026 |
| 2019[(8)] | 278.2 | 2.75 | 0.942 | 1.998 | 2.09 |
| 2020 | 282.9 | 2.75 | 0.927 | 2.259 | 2.338 |
| 2021 | 292.3 | 2.75 | 0.897 | 2.118 | 2.192 |
| 2022 | 310.1 | 2.75 | 0.845 | 2.130 | 2.244 |

(1) CPI All Urban Consumers, New York, N.Y. – Northeastern N.J.; 1982-84=100.0. The Consumer Price Index ("CPI") levels listed are the annual average for each year.
(2) Base fare after adjusting for inflation since 1982 (1982 CPI = 95.3).
(3) Total farebox revenue divided by revenue passenger trips (including students). Average fares in the table are for the full year.
(4) Non-student revenue divided by revenue passenger trips (excluding students).
(5) Effective March 3, 2013, the base fare increased from $2.25 to $2.50, the express bus fare increased from $5.50 to $6.00, the bonus on Pay-Per-Ride MetroCards was changed from 7% on purchases of $10.00 or more to 5% on purchases of $5.00 or more and 7-day and 30-day unlimited-ride MetroCard fares increased. Average fare shown in table is for full year.
(6) Effective March 22, 2015, the base fare increased from $2.50 to $2.75, the express fare increased from $6.00 to $6.50, the bonus on Pay-Per-Ride MetroCards was changed from 5% on purchases of $5.00 or more to 11% on purchases of $5.50 or more, and 7-day and 30-day unlimited-ride MetroCard fares increased. Average fare shown is for full year.
(7) Effective March 19, 2017, 7-day and 30-day unlimited-ride MetroCard fare increased, and the MetroCard bonus on purchases of $5.50 or more decreased from 11% to 5%.
(8) Effective April 21, 2019, 7-day and 30-day unlimited-ride MetroCard fares increased, and the 5% MetroCard bonus on purchases of $5.50 or more were eliminated.

MTA New York City Transit offers the following MetroCard discount programs as of April 21, 2019, which was the last day such discount programs were adjusted:

- free intermodal (subway-to-bus and bus-to-subway) transfers;
- unlimited-ride 7-day and 30-day passes;
- unlimited-ride 7-day combined express bus and regular bus and subway pass;
- free fare student program;
- half-fare programs for senior citizens and persons with disabilities; and
- free replacement of lost or stolen unlimited-ride 30-day and 7-day express passes (limit of two per calendar year per holder) if the holder paid by credit or debit card.

MTA New York City Transit currently offers the following OMNY discount program: a weekly fare cap which provides that, once a customer has used OMNY (with the same card or electronic device) to pay for 12 trips during one week (beginning from Monday), they ride free for the rest of the week (until Sunday).

*Subway System Performance and Level of Service*. A number of measures are used to quantify Transit System performance and the level of Transit System service, including total vehicle miles traveled ("VMT"), on-time performance and mean distance between failures ("MDBF"), which are discussed in further detail below.

Since implementation of the capital programs began in early 1982, Transit System performance, on the whole, has improved. MTA New York City Transit has replaced or overhauled its entire fleet since then. The entire fleet is now free of painted graffiti, and subway cars in 2022 ran an average of 139,969 miles between breakdowns, up from an average of 7,145 in 1982. Since the end of 1992, all the Transit System's 665 miles of mainline track have been maintained in a state of good repair, which has reduced track related mainline derailments and delays. Other aspects of the passenger environment have also experienced significant improvement. Almost all cars have adequate climate control and are displaying the correct signage.

Further improvements, as well as the maintenance of significant improvements since the inception of the capital programs in 1982 and the improvements in Transit System performance produced as a result thereof, are dependent upon the completion of final work of the 2010-2014 Transit Capital Program, the 2015-2019 Transit Capital Program, and subsequent capital programs.

In late July 2017, an MTA New York City Transit Subway Action Plan was set forth to address service disruptions, service delays, overcrowding and infrastructure disrepair. The initial phase of the Subway Action Plan focused on stabilizing the subway system and preparing it for modernization by addressing key factors which account for a large percentage of the major incidents causing delays on the system. The Subway Action Plan included focus on signal and track maintenance; car reliability; system safety and cleanliness; and customer communications. In 2017, MTA New York City Transit introduced new customer-focused performance measures, including Service Delivered, Additional Train Time, and Additional Platform Time. In 2022, MTA New York City Transit introduced expanded customer satisfaction metrics as well as customer satisfaction improvement goals. MTA New York City Transit has also created an online Subway Performance Metrics Dashboard.

Beginning in 2018, MTA New York City Transit reversed recent declines in system performance, and these improvements continued in 2021 and 2022. Some metrics that had retreated slightly in 2021 under the load of rebounding ridership combined with crew availability shortages due to a protracted hiring freeze and COVID variant impacts, improved in 2022. Although the COVID-19 pandemic created changes in the operating environment that make direct comparisons between prior years difficult, 2021 weekday terminal on-time performance was 84.5%, a dramatic improvement compared to 63.4% for the year 2017 and only slightly below 88.6% recorded in 2020. These improvements reflect many factors, including the COVID-19 pandemic, improved asset condition from the Subway Action Plan, faster emergency response when incidents do occur, and numerous strategies to speed service, and reduce delays.

The following table shows the VMT for subways since 2013.

**Vehicle Miles Traveled by Subways**

| Year | Subway VMT (in millions) | % Increase / (Decrease) |
|---|---|---|
| 2013 | 356 | 1.1 |
| 2014 | 356 | 0.0 |
| 2015 | 356 | 0.0 |
| 2016 | 358 | 0.6 |
| 2017 | 360 | 0.6 |
| 2018 | 359 | (0.3) |
| 2019 | 355 | (1.1) |
| 2020 | 325 | (8.5) |
| 2021 | 345 | 6.2 |
| 2022 | 349 | 1.1 |

Subway vehicle miles traveled ranged above 350 million vehicle miles in pre-pandemic years. The pronounced decrease observed in 2020 was primarily due to reduced service operated across the system between March and June due to the COVID-19 pandemic. The pandemic adversely impacted staff availability which resulted in lower VMT in 2022 compared to 2019. VMT increased in 2021 and again in 2022. In 2019, the decline in vehicle service miles was attributable to the Hurricane Sandy related repairs on the L line, which reduced evening and weekend service. In 2016, the increase in VMT was mostly due to the 7 Line Extension functioning on a full year basis, versus a partial year basis in 2015. VMT remained stable (at 356 million vehicle miles traveled) from 2013 through 2015.

The Transit Capital Program has necessitated and will continue to necessitate temporary service disruptions that adversely affect certain aspects of Transit System performance. These disruptions are required to facilitate work on certain capital projects. Such disruptions include the rerouting of subway trains, the closing of either part or all of certain passenger stations, cessation of either local or express service, train delays and reduction of train speeds.

Subway MDBF represents total revenue car miles divided by the number of car failures. A car failure is any incident, including delays, relating to equipment in revenue service that is attributable to that equipment and/or its maintenance.

The following table shows subway MDBF since 2013.

**Subway MDBF**

| Year | (in miles) | % Increase/ (Decrease) |
|---|---|---|
| 2013 | 153,382 | (5.4) |
| 2014 | 141,202 | (7.9) |
| 2015 | 131,325 | (7.0) |
| 2016 | 112,208 | (14.6) |
| 2017 | 121,220 | 8.0 |
| 2018 | 121,116 | (0.1) |
| 2019 | 127,743 | 5.5 |
| 2020 | 146,297 | 14.5 |
| 2021 | 150,363 | 2.8 |
| 2022 | 139,081 | (7.5) |

Subway MDBF improvements are attributable to many factors, including increased supervision and management control of the MTA New York City Transit work force, improved maintenance and inspection procedures, better training of employees, and the influx of replacement and overhauled subway cars funded through the capital program. The Scheduled Maintenance System (the "Scheduled Maintenance System") program is the agency's primary means of maintaining fleet reliability. Under the Scheduled Maintenance System, important car components and subsystems are overhauled or replaced at regular intervals – every six years for most subsystems.

In 2022, MDBF decreased after having increased in 2021 to its highest level since 2013. Some of the fluctuation in MDBF was due to the timing of car purchases, which led to an increase in the average age of the fleet between 2011 and 2016, prior to the introduction of new R179 and R188 cars. Improvements in MDBF are attributable to a variety of factors, including focus on replacing specific car components with high failure rates, and initiatives included in the Subway Action Plan such as more frequent Scheduled Maintenance System cycles. In 2020, the remaining R42 cars were retired and the R32 fleet ended regular service, removing the two oldest fleets with the lowest MDBF from service. By the end of 2020, all 318 R-179 rail cars were delivered and in service. In January 2018, a contract was awarded for the purchase of 535 new R-211 rail cars for both the subway and Staten Island Railway, with options for additional rail cars; delivery of these rail cars began in late 2022.

*Bus System Performance and Level of Service*. Bus MDBF measures the average rate of bus failure in terms of miles of operation. While declining bus MDBF affects the quality of bus service, it generally is not expected to have as significant an impact on bus ridership as subway MDBF has on subway ridership, since the breakdown of one bus generally does not affect the operations of other buses on the same route.

There was an overall increase in bus MDBF from the beginning of the capital program process through 2020, with MDBF reaching record levels before declining in 2021 and 2022. MDBF improved from an average of 4,618 miles in 2015 to 8,390 miles in 2020, a cumulative improvement of 81.7% during that period. The MDBF performance improvements since 2014 resulted from a variety of factors, including improved maintenance practices, a focus on data-driven solutions, and integrating new buses into the fleet. A large number of overage buses (i.e., older than their twelve-year expected useful life, resulting in lower reliability) were replaced in 2015 and 2016 under the 2010-2014 Capital Program, with additional buses delivered from 2017 to 2019. The new buses have improved reliability relative to the models they replaced, thanks to focused efforts by MTA New York City Transit to review new fleets and introduce new technologies. The MDBF performance declines in 2021 and 2022 were due to COVID-19 related quality issues with respect to new buses that had lower performance than expected when delivered. Also, the deliveries of new buses that had been anticipated to replace the remaining over-age fleet were delayed due to COVID-19.

The following table shows bus MDBF since 2013.

**Bus MDBF**

| Year | (in miles) | % Increase/ (Decrease) |
|---|---|---|
| 2013 | 4,941 | 8.7 |
| 2014 | 4,221 | (14.6) |
| 2015 | 4,618 | 9.4 |
| 2016 | 5,957 | 29.0 |
| 2017 | 6,225 | 4.5 |
| 2018 | 6,244 | 0.3 |
| 2019 | 7,967 | 27.6 |
| 2020 | 8,390 | 5.3 |
| 2021 | 7,647 | (8.9) |
| 2022 | 6,963 | (8.9) |

Numerous schedule and route adjustments have been and continue to be made to better match bus availability to passenger demand. The following table shows the VMT for buses since 2013.

**Vehicle Miles Traveled by Buses**

| Year | (in millions) | % Increase/ (Decrease) |
|---|---|---|
| 2013 | 117 | 2.6 |
| 2014 | 116 | (0.5) |
| 2015 | 117 | 0.9 |
| 2016 | 118 | 0.9 |
| 2017 | 118 | 0.0 |
| 2018 | 118 | 0.0 |
| 2019 | 120 | 1.7 |
| 2020 | 110 | (8.9) |
| 2021 | 112 | 1.8 |
| 2022 | 114 | 1.8 |

From 2013 to 2019 VMT was quite stable, with values within a range of 116 to 120 million vehicle miles traveled. The lower VMT in 2022 as compared to 2019 is due to less revenue operator availability resulting from the lingering impacts of the COVID-19 pandemic and a lengthy agency hiring freeze. After the significant decline in 2020, VMT increased in both 2021 and 2022.

*Transit System Security*. Ridership is also affected by the public's perception of security and order in the Transit System. Security around the Transit System has been increased since the terrorist attacks on the WTC. The public's perception of security and order is also affected by the presence of homeless people, beggars, illegal vendors and fare evaders in the Transit System. MTA New York City Transit and the NYPD have taken significant steps over the past three decades to address these problems. These include instituting an outreach program to transport the homeless from the Transit System to City shelters, increasing the uniformed police presence throughout the Transit System and reducing fare evasion and serious crimes. With the return of a significant number of subway commuters who are paid riders in 2021, the fare evasion rate fell to 9.6% in 2021, which was considerably lower than the 12.5% rate in the second half of 2020. The fare evasion survey had been suspended during most of 2020 and the first half of 2020. In 2022, the fare evasion rate rose to 12.9%. Police presence has been important to reductions in subway crime and fare evasion.

*Employment*. City employment levels generally have a significant impact on the level of subway ridership. The weak economy in 2009 adversely affected both employment and subway ridership, with both employment and subway ridership declining 2.7%. With the local economy recovering in 2010 and 2011, subway ridership again outpaced the local economy, increasing 3.8% from 2009 to 2011 compared with a 2.8% employment increase over the same period. However, employment has outpaced subway ridership since 2011, increasing 20.8% from 2011 to 2019, compared to a

3.5% subway ridership increase over the same period. From 2015 to 2019, City employment increased 8.2%, compared to a 3.5% subway ridership decrease over the same period. The 2016-2018 subway decline was due in part to major construction projects, off-peak and weekend service changes, increased competition from for-hire vehicles, and the trend was reversed in 2019 with less construction and service disruptions. 2020 employment decreased by 11% from 2019, largely due to the impacts on restaurants, retail stores, entertainment and recreation businesses caused by the COVID-19 pandemic, and the extensive adoption of remote working. The 2021 subway ridership increase over 2020 far exceeded the employment growth, which was up only 0.73% from 2020 as some workers gradually returned to the office in person. There was a 7% increase in regional employment from 2021 to 2022, which partly contributed to a 33% subway ridership increase. The ridership increase was mainly due to workers returning to their offices in the City.

*Automated Fare Collection*. MTA New York City Transit employs two fare collection systems, in all subway stations and on all MTA New York City Transit, MaBSTOA, and MTA Bus routes. The MetroCard system includes, among other elements, subway turnstiles and bus fare boxes that accept a magnetic farecard ("MetroCard") in payment. The MetroCard system provided the technical capability to eliminate two-fare zones as well as to implement flexible intermodal and interagency fare structures. MetroCard enables passengers to purchase multiple rides and use the MetroCard to enter the Transit System through automated fare collection turnstiles that automatically deduct the cost of each use. The subway turnstiles are designed to be tamper-resistant and to inhibit fare evasion by being more difficult to pass without payment. The bus fareboxes issue magnetically encoded transfers that are designed to reduce fare evasion resulting from the use of invalid transfers.

OMNY is an account-based system that accepts open payments made with contactless credit and debit bank cards and digital wallets in smartphones and watches (known as open loop media) at transit point-of-entry gates and that accepts MTA-issued OMNY cards (known as closed loop media). In May 2019, MTA began the roll out of OMNY and the installation of OMNY validators was complete for the subway system, buses and the Staten Island Railway by the end of 2020. The OMNY Card first became available for use in October 2021 for full fare payment. A network of retailers selling the OMNY Card was also launched in October 2021. In October 2022, the MTA began offering reduced fares through the OMNY open loop system. An OMNY Card for reduced fares is in a pilot phase. It was anticipated that OMNY, including an OMNY app for mobile ticketing, will be rolled out for MTA Long Island Rail Road and MTA Metro-North Railroad by 2025. It was also anticipated that MetroCard will be decommissioned in 2025. However, the schedule for the roll out of OMNY and the decommissioning of MetroCard is currently undergoing review and certain timelines may be extended. Additional features will continue to be added to the OMNY system, including, but not limited to, a Paratransit AAR ID Card and reduced fare cards for public school students and Fair Fares customers and other special programs. The development and roll out of OMNY is being performed by Cubic pursuant to a system integrator contract awarded by MTA in November 2017. Cubic delivered similar technology for London's public transit system and is currently delivering similar technology for other U.S. and Australian transit agencies.

In 2022, 64.9% of non-student trips were made with MetroCard, 35.1% of 2022 non-student trips were made with Pay-Per-Ride MetroCards, and 29.8% were made with unlimited-ride MetroCards (15.4% with 30-day cards and 14.5% with 7-day cards). Also, in 2022, 32.2% of trips were made using OMNY, an increase of 13.8% from 18.4% in 2021. The market share of all non-MetroCard and non-OMNY fare media (cash and single-ride tickets) was 2.9% in 2022.

Out-of-system sales outlets, including over 3,100 active retail locations, generated approximately $245 million in MetroCard sales in 2022, a 12% decrease from 2021. Market share for MetroCard out-of-system sales is approximately 12.1%. During 2022, sales of nearly 905,000 MetroCards valued at $96 million were made to transit benefit companies delivering tax-advantaged transportation benefits through MetroCard to their client employers/employees. Unlimited ride products accounted for approximately 77% of these sales in 2022, including total annual card sales of $56 million, with more than 37,000 employees enrolled in this annual card program at year's end. In 2022, the amount that mass transit commuters were permitted for monthly payroll deductions was $260.

MetroCard Vending Machines ("MVMs") allow riders to purchase MetroCards using cash, credit, debit or Electronic Benefits Transfer ("EBT") cards. The MetroCard Express Machine ("MEM") is a compact vending unit that accepts only credit, debit or EBT cards for payment. A total of 1,770 MVMs were servicing 472 active stations throughout MTA New York City Transit's subway system in 2022, as well as the MTA Staten Island Railway, Staten Island Ferry's St. George terminal, Orchard Beach in the Bronx, the NICE Bus Hempstead Terminal, Roosevelt Island Tramway, and Grand Central Terminal. In addition, 629 MEMs were in service in 281 active stations by the end of 2022. Vending machine sales totaled $1.69 billion in 2021, accounting for 100% of total in-system sales.

Purchasers of a 30-day or 7-day express unlimited ride MetroCard with a credit or debit card through the MVMs and MEMs are the beneficiaries of a free replacement if their MetroCards are lost or stolen, subject to a limit of two per holder per calendar year.

**Commuter System Ridership**

From 2013 to 2022, ridership on MTA Metro-North Railroad decreased by 41.0% and ridership on MTA Long Island Rail Road decreased by 37.0%. In 2022, MTA Metro-North Railroad ridership increased 59.3% from 2021, to 48.0 million and MTA Long Island Rail Road ridership increased 50.0% from 2021 to 52.5 million.

The following table details annual commuter services ridership over the last ten years and the percentage increase/(decrease) each year.

**Revenue Passengers[1]**
**(in thousands)**

| Year | MTA Long Island Rail Road | MTA Long Island Rail Road Percent Increase/(Decrease) | MTA Metro-North Railroad[2] | MTA Metro-North Railroad Percent Increase/(Decrease) |
|---|---|---|---|---|
| 2013 | 83,384 | 2.0 | 81,802 | 0.6 |
| 2014 | 85,868 | 3.0 | 82,975 | 1.4 |
| 2015 | 87,648 | 2.1 | 84,272 | 1.5 |
| 2016 | 89,352 | 1.9 | 84,808 | 0.6 |
| 2017 | 89,159 | (0.2) | 84,879 | 0.1 |
| 2018 | 89,773 | 0.7 | 84,911 | 0.0 |
| 2019 | 91,105 | 1.5 | 84,980 | 0.1 |
| 2020 | 30,310 | (66.7) | 26,577 | (68.7) |
| 2021 | 35,037 | 15.6 | 30,102 | 13.3 |
| 2022 | 52,540 | 50.00 | 47,959 | 59.3 |

(1) A single rider traveling to and from the same destination is counted as two revenue passengers. The number of revenue passengers is determined in part by ascribing an assumed frequency of use to holders of weekly and monthly commutation tickets.

(2) MTA Metro-North Railroad ridership totals do not include West of Hudson riders. In 2022, West of Hudson ridership on MTA Metro-North Railroad totaled 893,829 passengers.

A variety of factors affect ridership on the Commuter System. Among the most important are level of fares, Commuter System performance and regional employment discussed below. Other factors that may be important to Commuter System ridership include the amount and level of service provided and security.

In 2022, MTA Metro-North Railroad ridership increased by 17,857 million customers, or 59.3% more than 2021, due to the availability of vaccines and testing and the continuation of return-to-work policies through most of the year. Ridership on the Hudson, Harlem and New Haven lines was up 56.7%, 56.7%, and 61.9%, respectively, from 2021. MTA Metro-North Railroad's annual West of Hudson ridership increased by 43% with the Port Jervis line up 38.5% and the Pascack Valley line up 50.1%.

In 2022, MTA Long Island Rail Road total ridership increased by 50.0%, or 17.5 million ridership gain from 2021. Non-Commutation ridership was up 24.2% with 31.4 million customers, and commutation ridership increased 117.0% with 21.1 million customers.

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*Fares*. The chart below identifies the years in which the base fares charged for the use of the Commuter System within the State have been raised. The most recent increase became effective on April 21, 2019, following the MTA Board's approval of an increase in fares for travel on MTA Long Island Rail Road and the State portion of MTA Metro-North Railroad.

| Date of Increase | Approximate Increase in New York State Average Fares |
|---|---|
| 1984 – January | 20% |
| 1986 – January | 11 |
| 1990 – January | 15 |
| 1995 – November | 9 |
| 2003 – May | 25 |
| 2005 – March | 7.6/6.2* |
| 2008 – March | 3.85 |
| 2009 – June | 10 |
| 2010 – December | 9 |
| 2013 – March | 9 |
| 2015 – March | 4 |
| 2017 – March | 4 |
| 2019 – April | 4 |

* Effective March 1, 2005, the average fare increased by 7.6% on MTA Long Island Rail Road and by 6.2% on MTA Metro-North Railroad for service between points in the State.

In addition, CDOT, with the MTA Board's approval, has authorized implementation of increased fare levels for travel to and from Connecticut stations on a number of occasions. A cumulative increase of approximately 16.2% for New Haven Line fares for travel to or from stations located in Connecticut was phased in, beginning January 1, 2012 (5.3%), with additional increases on January 1, 2013 (5.04%) and January 1, 2014 (5.04%). Another cumulative fare increase was phased in, which commenced as of January 1, 2015 (1.0%), with an additional increase on January 1, 2016 (1.0%). On December 1, 2016, a 6% increase was implemented, which subsumed the previously planned 1.0% increase that was to have occurred on January 1, 2017. Another 1.0% was implemented on January 1, 2018.

MTA Long Island Rail Road and MTA Metro-North Railroad offer several discounts that enable customers to purchase transportation at fares below the cost of a one-way peak ticket. Discounted fares are available based on the ticket type (e.g., Monthly, Weekly, 20-Trip, 10-Trip Off Peak, One-Way Off-Peak, Group, Family, Child, CityTicket, Military and Atlantic Ticket (the last is MTA Long Island Rail Road only)) and the purchase option selected (e.g., Commuter Benefit Programs, Buy Before Boarding).

The following chart shows historical fare information from 2013.

| | | **MTA Long Island Rail Road** | | **Harlem** | | **MTA Metro-North Railroad Hudson** | | **New Haven** | |
|---|---|---|---|---|---|---|---|---|---|
| Year | CPI[1] | Average Nominal Fare[2] | Real Fare 1982$ | Average Nominal Fare | Real Fare 1982$ | Average Nominal Fare | Real Fare 1982$ | Average Nominal Fare | Real Fare 1982$ |
| 2013 | 256.8 | 7.58 | 2.81 | 7.00 | 2.60 | 8.57 | 3.18 | 7.57 | 2.81 |
| 2014 | 260.2 | 7.67 | 2.81 | 7.08 | 2.59 | 8.65 | 3.17 | 8.00 | 2.93 |
| 2015 | 260.6 | 7.93 | 2.90 | 7.34 | 2.68 | 8.94 | 3.27 | 8.14 | 2.98 |
| 2016 | 263.4 | 7.97 | 2.88 | 7.39 | 2.68 | 9.00 | 3.26 | 8.27 | 2.99 |
| 2017 | 268.5 | 8.16 | 2.90 | 7.63 | 2.71 | 9.31 | 3.31 | 8.70 | 3.09 |
| 2018 | 273.6 | 8.25 | 2.89 | 7.69 | 2.68 | 9.38 | 3.27 | 8.78 | 3.06 |
| 2019 | 278.2 | 8.44 | 2.89 | 7.93 | 2.71 | 9.64 | 3.30 | 8.89 | 3.04 |
| 2020 | 282.9 | 8.99 | 3.03 | 8.09 | 2.69 | 10.31 | 3.28 | 8.94 | 3.03 |
| 2021 | 294.6 | 8.44 | 2.75 | 7.58 | 2.45 | 9.91 | 3.21 | 8.53 | 2.76 |
| 2022 | 310.1 | 8.71 | 2.68 | 8.15 | 2.68 | 10.33 | 3.52 | 9.33 | 3.02 |

(1) CPI All Urban Consumers, New York-Northern New Jersey-Long Island, NY-NJ-CT-PA, 1982-84=100.0. The CPI levels listed are the annual average for each year. CPI is estimated by IHS Global Insight.
(2) Average Nominal Fare means the fare paid per ride, determined by dividing total passenger revenues by total revenue passengers.

*Characteristics of Commuter System Performance*. Characteristics of performance potentially affecting ridership include on-time performance, the fleet's mean distance between failures, the number of standees and platform waiting time. Since implementation of the capital program began in early 1982, Commuter System performance as measured by those indicia has, on the whole, improved, although some of those indicia have shown declines during certain periods. Implementation of certain capital projects that are part of the Commuter Capital Programs may involve temporary disruptions of service as various portions of the Commuter System are refurbished or replaced. MTA Long Island Rail Road and MTA Metro-North Railroad schedule capital project work so as to minimize disruption of operations. In addition, as the Commuter Capital Program for rolling stock replacement progresses from its normal system replacement and the rolling stock is retired at the end of its useful life, further fluctuations may appear in various measures of Commuter System performance.

The following table shows on-time performance for MTA Long Island Rail Road and MTA Metro-North Railroad for the last ten years.

**On-Time Performance (%)**

| Year | MTA Long Island Rail Road | MTA Metro-North Railroad |
|---|---|---|
| 2013 | 93.5 | 94.8 |
| 2014 | 92.0 | 91.5 |
| 2015 | 91.6 | 93.5 |
| 2016 | 92.7 | 93.7 |
| 2017 | 91.4 | 93.4 |
| 2018 | 90.4 | 90.1 |
| 2019 | 92.4 | 94.4 |
| 2020 | 95.9 | 97.9 |
| 2021 | 96.3 | 97.1 |
| 2022 | 95.8 | 97.1 |

For MTA Metro-North Railroad, on-time performance ("OTP") for 2022 was 97.1%, 3.1% higher than the goal of 94%.

MTA Long Island Rail Road's OTP in 2022 was 95.8%, 1.8% higher than the goal of 94%. 2022 saw a decrease of 0.5% from 2021, but was still the third highest OTP in MTA Long Island Rail Road history.

The following table shows the fleet's MDBF for MTA Long Island Rail Road and MTA Metro-North Railroad for the last ten years.

**MDBF**

| | MTA Long Island Rail Road | | MTA Metro-North Railroad | |
|---|---|---|---|---|
| Year | MDBF (in miles) | Increase/ (Decrease)% | MDBF (in miles) | Increase/ (Decrease)% |
| 2013 | 205,890 | 5.9 | 156,617 | (5.5) |
| 2014 | 206,226 | 0.2 | 147,063 | (6.1) |
| 2015 | 208,383 | 1.0 | 199,838 | 35.9 |
| 2016 | 211,975 | 1.7 | 216,772 | 8.0 |
| 2017 | 205,270 | (3.2) | 193,883 | (10.6) |
| 2018 | 185,217 | (9.8) | 144,017 | (25.7) |
| 2019 | 185,829 | 0.3 | 239,188 | 66 |
| 2020 | 241,175 | 29.8 | 278,951 | 17 |
| 2021 | 231,337 | (4.1) | 190,518 | (31.7) |
| 2022 | 229,824 | (0.7) | 233,617 | 22.6 |

In 2022, MTA Metro-North Railroad's fleet Mean Distance Between Failure ("MDBF") was 233,617 miles, 33.5 % higher than the goal of 175,000 miles. Car availability continued to be positive with a 99.9% "consist compliance rate", which is the percentage of cars required for service to provide customers with seats each day.

For MTA Long Island Rail Road, the MDBF for the entire fleet in 2022 was 229,824 miles, above the railroad's 2022 goal of 190,000 miles, and represents a 0.7% decrease from 2021.

*Regional Employment*. Regional employment levels, primarily in the City, have a significant impact on commuter railroad ridership. See “PART 5. RIDERSHIP AND FACILITIES USE – Transit System (MTA New York City Transit and MaBSTOA) Ridership – *Employment*” above.

**MTA Bus Ridership**

*General*. MTA Bus was created as a public benefit corporation subsidiary of MTA in 2004 to integrate 7 private bus companies into MTA. The final MTA Bus company merger was completed in February 2006.

Since MTA Bus launched operations, bus performance has improved significantly. MTA Bus has replaced most of its fleet and currently operates 527 express buses, 398 low-floor hybrid electric local buses, 219 low-floor compressed natural gas standard buses, 45 clean diesel standard buses and 141 articulated clean diesel local buses. The bus fleet age fluctuates based on the number of new buses being purchased and how many over-age buses remain in service. On February 20, 2006 (the first day of complete consolidated operations), the fleet age was 9.43 years; it was 10.77 years at the end of 2022. MTA Bus relies on the timely procurement and delivery of new buses to replace over-age buses in order to improve MDBF and equipment reliability. However, by the end of the 2020-2024 Capital Program, MTA Bus is expected to have ordered and, or replaced, all buses greater than 12 years of age.

*Historical Ridership*. MTA Bus has been enhancing service since 2006, incrementally increasing capacity on all of its bus routes. However the COVID-19 pandemic and the economic slowdown caused bus revenue ridership to plummet to unprecedented low levels in 2020. MTA Bus revenue passengers in 2022 totaled 82.6 million, an increase of 15.7% from 2021. Local bus revenue ridership similarly increased by 14.0%, and express revenue increased by 41.5%. In 2022, average weekday revenue ridership was 17.4% higher than in 2021, and average weekend combined revenue ridership also increased by 7.6% compared to 2021. Pre-COVID-19, MTA Bus ridership began a decline in 2014 following a national and international trend experienced by other transit agencies. Several factors contributed to the decline, including increased congestion and slower travel speeds. A portion of the ridership decline is also in areas where there is a high overlap with subways. Specifically, MTA Bus express bus riders are more sensitive to travel time issues as they have other options (local bus-to-subway or direct access to the subway). Biking has also become more popular over the years. The following table sets forth total annual revenue ridership and the year-over-year percentage increase/decrease for MTA Bus since 2013.

**Revenue Passengers**[1]
**(in thousands)**

| Years | Ridership | Bus Increase/ (Decrease) |
|---|---|---|
| 2013 | 124,951 | 3.4 |
| 2014 | 125,581 | 0.5 |
| 2015 | 125,400 | (0.01) |
| 2016 | 125,617 | 0.2 |
| 2017 | 122,214 | (2.7) |
| 2018 | 121,448 | (0.6) |
| 2019 | 120,552 | (0.8) |
| 2020 | 45,921 | (61.9) |
| 2021 | 71,431 | 55.6 |
| 2022 | 82,601 | 15.6 |

(1) “Revenue Passengers” are defined as all passengers for whom revenue is received, either through direct fare payment (cash, MetroCards, OMNY) or fare reimbursements (senior citizens, school children and the physically disabled). “Revenue Passengers” statistics count passengers that use a free intermodal or bus-to-bus transfer as an additional passenger though they are not paying an additional fare.

*Fares*. MTA Bus offers the same discount and bonus programs as MTA New York City Transit and adheres to the same fare structure, including pricing for passes, as MTA New York City Transit. See “RIDERSHIP AND FACILITIES USE — Transit System (MTA New York City Transit and MaBSTOA) — *Fares*” above.

*Performance and Level of Service*. Buses ran an average of 6,818 miles between mechanical breakdowns during 2022, a 2.6% decrease over a 7,001 average MDBF for 2021.

The following table shows MTA Bus MDBF for the past ten years.

**Bus MDBF**

| Year | (in miles) | Increase/ (Decrease) |
|---|---|---|
| 2013 | 5,548 | 4.7 |
| 2014 | 5,366 | (3.3) |
| 2015 | 5,741 | 7.0 |
| 2016 | 7,271 | 26.7 |
| 2017 | 7,479 | 2.9 |
| 2018 | 7,506 | 0.4 |
| 2019 | 7,117 | (5.2) |
| 2020 | 7,893 | 10.9 |
| 2021 | 7,001 | (11.3) |
| 2022 | 6,818 | (2.6) |

The following table shows total actual vehicle miles traveled by MTA Bus for the past ten years.

**Total Actual Vehicle Miles Traveled by MTA Bus**
**(in millions)**

| Year | VMT | Increase/ (Decrease) |
|---|---|---|
| 2013 | 36.4 | 2.8 |
| 2014 | 36.4 | 0.0 |
| 2015 | 36.8 | 1.1 |
| 2016 | 37.1 | 0.8 |
| 2017 | 36.9 | (0.5) |
| 2018 | 36.9 | 0.0 |
| 2019 | 37.0 | 0.3 |
| 2020 | 35.4 | (4.4) |
| 2021 | 35.9 | 1.4 |
| 2022 | 35.9 | 0.0 |

**MTA Bridges and Tunnels – Total Revenue Vehicles**

The following table shows the total number of revenue vehicles at the MTA Bridges and Tunnels Facilities for the past ten years.

**MTA Bridges and Tunnels Facilities**
**Total Revenue Vehicles**

| Year | Revenue Vehicles 000's | Increase/ (Decrease)% | Year | Revenue Vehicles 000's | Increase/ (Decrease)% |
|---|---|---|---|---|---|
| 2013(1) | 284,528 | 0.6 | 2018 | 322,290 | 4.0 |
| 2014 | 286,417 | 0.7 | 2019(4) | 329,397 | 2.2 |
| 2015(2) | 297,980 | 4.0 | 2020 | 253,184 | (23.1) |
| 2016 | 307,417 | 3.2 | 2021(5) | 307,296 | 21.4 |
| 2017(3) | 310,038 | 0.9 | 2022 | 326,304 | 6.2 |

(1) Toll increase implemented on March 3, 2013.
(2) Toll increase implemented on March 22, 2015.
(3) Toll increase implemented on March 19, 2017.
(4) Toll increase implemented on March 31, 2019.
(5) Toll increase implemented on April 11, 2021.

For further discussion of traffic volume and revenue vehicle crossings on MTA Bridges and Tunnels facilities as well as projections of traffic, revenues and expenses for the MTA Bridges and Tunnels Facilities, see the Stantec Report, which is attached to MTA's Combined Continued Disclosure Filings and, for convenience, has also been posted on the

MTA website under "About the MTA – Financial Information – Investor Information" at https://new.mta.info/investor-info. The Stantec Report is incorporated by specific cross-reference herein.

**Toll Rates**

*General Power to Establish Tolls.*

- MTA Bridges and Tunnels' power to establish toll rates is not subject to the approval of any governmental entity. However, MTA Bridges and Tunnels has reviewed proposed actions that would increase crossing charges at MTA Bridges and Tunnels Facilities prior to implementing them as if they were subject to the State Environmental Quality Review Act, which generally requires an assessment of environmental impacts of the proposed action, if any.
- Tolls on the Verrazzano-Narrows Bridge and the Throgs Neck Bridge, which were constructed pursuant to the General Bridge Act of 1946, 33 U.S.C. § 525 et seq., may be subject to the standard imposed by Section 135 of the Federal-Aid Highway Act of 1987, Pub. L. 100-17, that tolls on bridges constructed under the authority of certain Federal legislation,including the General Bridge Act of 1946, be "just and reasonable". MTA Bridges and Tunnels believes that the tolls on all of its vehicular toll facilities are just and reasonable.

*Resident E-Token, Discount and Rebate Programs.*

- The MTA Bridges and Tunnels Act was amended in 1981 to require that residents of Broad Channel and the Rockaway Peninsula be afforded the right to purchase tokens for the Cross Bay Veterans Memorial Bridge at a cost of 66 2/3% of the regular crossing fare.
- The MTA Bridges and Tunnels Act was further amended in 1983 to:
  - eliminate the residency requirement for the purchase of reduced rate tokens for the Cross Bay Veterans Memorial Bridge,
  - require the offering of tokens for the Marine Parkway-Gil Hodges Memorial Bridge at a cost of 66 2/3% of the regular crossing fare, and
  - require the offering of tokens to residents of Richmond County (Staten Island) for the Verrazzano-Narrows Bridge at a cost of 80% of the regular crossing fare.
- The MTA Bridges and Tunnels Act was amended in 1993 to provide that surcharges, in addition to the regular toll, imposed by MTA Bridges and Tunnels on the Verrazzano-Narrows, Marine Parkway-Gil Hodges Memorial and Cross Bay Veterans Memorial Bridges shall not be treated as part of the regular crossing fare for the purpose of computing the reduced token cost. The 1993 amendment also provided that residents of Staten Island, Broad Channel and the Rockaway Peninsula are entitled to a permanent exemption from any applicable surcharge imposed in 1993 on such bridges.
- MTA has a program to rebate the tolls for E-ZPass customers who are residents of Broad Channel and the Rockaway Peninsula using the Cross Bay Veterans Memorial Bridge. Between July 23, 2010 and March 31, 2012, the E-ZPass resident discount applied to the first two trips across the Cross Bay Veterans Memorial Bridge, and all subsequent trips during a calendar day using the same E-ZPass tag were eligible for a toll rebate funded by MTA. Since April 1, 2012, all trips are rebated and funded by MTA. In February 2022, MTA reimbursed MTA Bridges and Tunnels in the amount of $4.0 million in toll rebates relating to the Cross Bay Veterans Memorial Bridge rebate. See "- Additional Outer Borough Transportation Account-Funded Toll Rebate Programs" below for a discussion of a toll rebate for Queens residents for use of the Cross Bay Veterans Memorial Bridge.

Since 2014, MTA has had two toll rebate programs at the Verrazzano-Narrows Bridge: the Staten Island Resident ("SIR") Rebate Program, available for residents of Staten Island participating in the SIR E-ZPass toll discount plan, and the Commercial Rebate Program ("VNB Commercial Rebate Program"), initially available for trucks and other commercial vehicles making more than ten trips per month across the Verrazzano-Narrows Bridge using the same New York Customer Service Center ("NYCSC") E-ZPass account. Because these Verrazzano-Narrows Bridge Rebate Programs ("VNB Rebate Programs") are partially funded by the State, they follow the State Fiscal Year.

As discussed below, in December 2019, the federal Further Consolidated Appropriations Act 2020, was enacted. It eliminated the one-way tolling requirement at the Verrazzano-Narrows Bridge and restored the requirement that tolls be collected in both the Staten Island-bound and Brooklyn-bound directions (split tolling). This was implemented on

December 1, 2020. Changes were made to the MTA VNB Rebate Programs to accommodate the implementation of split tolling at the Verrazzano-Narrows Bridge, to wit: the SIR Rebate Program was changed so that the effective, post-rebate toll for Staten Island residents became $2.75 in each direction (from $5.50 in the Staten Island-bound direction) and the VNB Commercial Rebate Program's eligibility threshold was changed to more than 20 trips per month in either direction for trucks and other commercial vehicles using the same NYCSC E-ZPass account (from more than ten trips per month, collected Staten-Island bound). In February 2021, the Board adopted increases in the SIR E-ZPass toll discount plan and eliminated that plan's two-tier minimum trip threshold so that the SIR E-ZPass discount plan toll would increase to $3.68 (from $3.44), while simultaneously increasing the MTA rebate for residents to $0.73 (from $0.69), which would have resulted in an effective SIR toll after rebate of $2.95. The effective SIR toll at the Verrazzano-Narrows Bridge after rebate remained at $2.75 due to an appropriation in the New York State fiscal year 2021-22 enacted budget.

As a result of the change to the SIR toll and MTA rebate program, the projected annualized cost of the 2022-2023 VNB Rebate Programs is approximately $30 million, consisting of $7 million for the 2022-2023 VNB Commercial Rebate Program and $23 million for the 2022-2023 SIR Rebate Program. MTA's annual contribution is $7 million ($3.5 million for the resident rebate and $3.5 million for the commercial rebate), with the balance provided by the State via appropriations to MTA.

The money to fund a year's estimated costs for the VNB Rebate Programs is transferred by MTA to MTA Bridges and Tunnels during the State fiscal year. The 2022-2023 VNB Rebate Programs will be implemented as specified herein only for such periods during which both (a) MTA's total financial responsibility, net of State actions or available offsets, does not exceed $7 million for the 2022-2023 SIR Rebate and VNB Commercial Rebate Programs and (b) the State provides (i) at least $7 million for the 2022-2023 SIR Rebate Program and VNB Commercial Rebate Program, and (ii) the State provides such additional funds as are necessary to keep the effective post-rebate SIR E-ZPass toll at $2.75 under the 2022-2023 SIR Rebate Program. If, as a result of unexpected toll transaction activity, MTA Bridges and Tunnels estimates that such MTA and State funds allocated to MTA for the 2022-2023 VNB Rebate Programs, net of offsets, will be insufficient to fund the 2022-2023 VNB Commercial Rebate Program for the full program year, MTA Bridges and Tunnels may reduce the rebate amount under such program to a percentage that is forecast to be payable in full for the remainder of the program year with the available funds, as allowed by the February 2021 Board resolution. However, in the event that such State funds allocated to MTA for the 2022-2023 VNB Rebate Programs are fully depleted at any time during the 2022-2023 Rebate Programs' annual period, the 2022-2023 VNB Rebate Programs will cease and Staten Island residents will be charged the applicable resident discount toll and trucks and other commercial vehicles will be charged the applicable NYCSC E-ZPass toll for the Verrazzano-Narrows Bridge.

The VNB Rebate Programs will continue into future years provided that (a) MTA's annual period contribution does not exceed $7 million, (b) the MTA Board approves a budget that includes MTA's contribution to such program, and (c) the State provides to MTA funds sufficient for at least half the expenses of each continuing annual period.

Under the 2020-2021 VNB Commercial Rebate Program, the rebate was 16.25% of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month (after implementation of split tolling) across the Verrazzano-Narrows Bridge using the same NYCSC E-ZPass Account, and the $7 million allocation was sufficient in covering the cost of the rebate.

Under the 2021-2022 VNB Commercial Rebate Program, the rebate was 15.00% of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month across the Verrazzano-Narrows Bridge using the same NYCSC E-ZPass Tag, and the $7 million allocation for the VNB Rebate Programs was sufficient to provide funding from April 1, 2021 through March 31, 2022.

Under the 2022-2023 VNB Commercial Rebate Program, the rebate was 15.00% of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month across the Verrazzano-Narrows Bridge using the same NYCSC E-ZPass Tag, and the $7 million allocation for the VNB Rebate Programs was sufficient to provide funding from April 1, 2022 through March 31, 2023.

Under the 2023-2024 VNB Commercial Rebate Program, the rebate is 15.00% of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month across the Verrazzano-Narrows Bridge using the same NYCSC E-ZPass Tag. Implementing a 15.00% rebate of the E-ZPass toll for trucks and other eligible commercial vehicles is expected to ensure that the $7 million allocation for the VNB Rebate Programs is sufficient to provide funding from April 1, 2023 through March 31, 2024.

*Additional Outer Borough Transportation Account-Funded Toll Rebate Programs*. As noted above under "PART 2. FINANCIAL INFORMATION – REVENUES OF THE RELATED ENTITIES – Congestion Zone

Surcharges", moneys in the Outer Borough Transportation Account ("OBTA") may be applied to fund a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels. Two new MTA toll rebate programs relating to MTA Bridges and Tunnels' crossings were approved by the MTA Board in December 2019. They are (i) a Queens resident rebate for passenger vehicles with E-ZPass tags using the Cross Bay Veterans Memorial Bridge, and (ii) a Bronx resident rebate for passenger vehicles with E-ZPass tags using the Henry Hudson Bridge. In each case, the E-ZPass toll will be charged to the customer's NYCSC resident E-ZPass account, and then an immediate credit will be issued by MTA for the amount of the toll using funds in the OBTA established under Section 1270-i (3) of the Public Authorities Law. Due to the impacts of the COVID-19 pandemic on traffic, the funding for these rebate programs was not available for 2020-2022 and implementation of the two rebate programs is delayed until a future date when OBTA funds may become available.

*Split Tolling at the Verrazzano-Narrows Bridge*. On March 20, 1986, in accordance with federal law, MTA Bridges and Tunnels instituted one-way toll collection on the Verrazzano-Narrows Bridge for all vehicles. In December 2019, the Further Consolidated Appropriations Act of 2020 was enacted to eliminate the one-way tolling requirement at the Verrazzano-Narrows Bridge and restored the requirement that tolls be collected in both the Staten Island-bound and Brooklyn-bound directions. In March 2020, the MTA Board approved changing the method of toll collection at the Verrazzano-Narrows Bridge to split tolling and authorized MTA Bridges and Tunnels to make the required revisions to the toll schedule regulation under the State Administrative Procedure Act. That process was completed on September 1, 2020 and split tolling at the Verrazzano-Narrows Bridge was implemented on December 1, 2020.

*Current Toll Rates*. An increase was implemented on April 11, 2021. For all the major crossings (Bronx-Whitestone, Robert F. Kennedy, Throgs Neck, and Verrazzano-Narrows Bridges and the Hugh L. Carey and Queens Midtown Tunnels), the two-axle passenger vehicle crossing charge for Tolls by Mail customers was increased from $9.50 to $10.17, with a $3.62 reduction for E-ZPass customers with accounts at the NYCSC; the E-ZPass reductions do not apply to E-ZPass customers who do not have accounts at the NYCSC. For the Henry Hudson Bridge, the two-axle passenger vehicle crossing charge for Tolls by Mail customers was increased from $7.00 to $7.50, with a $4.50 reduction for E-ZPass NYCSC customers. For the Marine Parkway-Gil Hodges Memorial Bridge and the Cross Bay Veterans Memorial Bridge, the two-axle passenger vehicle crossing charge for Tolls by Mail customers was increased from $4.75 to $5.09, with a $2.64 reduction for E-ZPass NYCSC customers. Additional charges apply for additional axles and/or weight. Certain resident discounts and rebates apply to the Verrazzano-Narrows Bridge, the Marine Parkway-Gil Hodges Memorial Bridge and the Cross Bay Veterans Memorial Bridge.

A Mid-Tier Toll Rate was adopted for E-ZPass NYCSC customers when not using their properly mounted NYCSC E-ZPass tag for tolls posted to their NYCSC E-ZPass accounts based on license plate images and for NYCSC third-party account providers. The Mid-Tier Toll Rate is higher than the E-ZPass toll rate that is charged to NYCSC customers, when using their properly mounted E-ZPass tags, but lower than the toll charged to customers using fare media other than a NYCSC E-ZPass tag or account.

A more complete description of the current toll structure is set forth in the Stantec Report under the caption "TOLL COLLECTION ON THE TBTA FACILITIES".

*Minimum Toll Covenants in MTA Bridges and Tunnels Bond Resolutions*. The MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution provide that:

- the minimum undiscounted toll rate for automobiles carrying not more than two persons is at least $3.00 for each crossing over or through the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge, the Throgs Neck Bridge, the Hugh L. Carey Tunnel or the Queens Midtown Tunnel, $2.50 for each crossing over the Verrazzano-Narrows Bridge, at least $1.50 for each crossing over the Henry Hudson Bridge, and at least $1.25 for each crossing over the Marine Parkway-Gil Hodges Memorial Bridge or the Cross Bay Veterans Memorial Bridge;
- in the event MTA Bridges and Tunnels shall impose a surcharge in addition to the regular toll rate, such surcharge shall not constitute part of the toll rate for purposes of computing the maximum discount described in the first bullet point above and MTA Bridges and Tunnels may provide exemptions from such surcharges without regard to the limits on maximum discounts;
- in the event MTA Bridges and Tunnels imposes different undiscounted toll rates for vehicles utilizing an electronic toll collection system and based upon time of day, day of week or period of the year mode of pricing, the limits on the maximum discounts shall be measured against the undiscounted toll rate applicable to the particular crossing; and

- the minimum crossing charge, however denominated, and after giving effect to any exemption, exclusion or discount, for automobiles carrying not more than two persons shall be at least $3.20 for each westbound crossing over the Verrazzano-Narrows Bridge, at least $1.60 for each crossing over the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge or the Throgs Neck Bridge or through the Hugh L. Carey Tunnel or the Queens Midtown Tunnel and at least 66.7 cents for each crossing over the Henry Hudson Bridge, the Marine Parkway-Gil Hodges Memorial Bridge or the Cross Bay Veterans Memorial Bridge.

*Board Policy Regarding Senior Lien Coverage*. In addition to the requirements of the minimum rate covenant and the requirements for the issuance of additional bonds, the MTA Bridges and Tunnels Board has established a policy that it will "endeavor to maintain a ratio" of Net Revenues to Senior Lien Debt Service (each as defined in the MTA Bridges and Tunnels Senior Resolution) of at least 1.75 times. MTA Bridges and Tunnels has been in compliance with this policy since its adoption in March 2002.

The policy does not constitute a covenant or agreement by MTA Bridges and Tunnels enforceable under the MTA Bridges and Tunnels Senior Resolution or any of MTA Bridges and Tunnels' other bond resolutions. While this policy has been in effect without change since 2002, the MTA Bridges and Tunnels Board retains the right to amend, modify or repeal such policy and may do so at any time in its sole discretion without the consent or approval of the trustee or any bondholder under the MTA Bridges and Tunnels Senior Resolution or any of MTA Bridges and Tunnels' other bond resolutions.

*Limitations on Free Crossings*. The MTA Bridges and Tunnels Senior Resolution and the MTA Bridges and Tunnels Subordinate Resolution limit toll free crossings with respect to the MTA Bridges and Tunnels Facilities to (1) the vehicles of present and former MTA Bridges and Tunnels members, officers and employees, (2) military, police, fire, ambulance and other emergency, service and maintenance vehicles, (3) vehicles of persons employed on Wards Island or Randall's Island traveling to and from such Islands over the Robert F. Kennedy Bridge and (4) other vehicles by passes or permits, provided that there shall not be more than 500 passes or permits outstanding at any one time.

*Legislative Proposals*. From time to time bills have been introduced by various State legislators seeking, among other things, to restrict the level of tolls on certain MTA Bridges and Tunnels Facilities, to require approval of future toll increases by the Governor, to eliminate minimum tolls, or to require discounts or free passage to be accorded to certain users of MTA Bridges and Tunnels Facilities. Under the MTA Bridges and Tunnels Act, however, the State has covenanted to holders of MTA Bridges and Tunnels' bonds that it will not limit or alter the rights vested in MTA Bridges and Tunnels to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to fulfill the terms of any agreements made with the holders of such bonds or in any way to impair their rights and remedies.

Legislation enacted in connection with the State's Fiscal Year 2006-2007 budget prohibits all public authorities, including MTA Bridges and Tunnels, from imposing, on and after June 1, 2006, a periodic administrative or other charge on electronic payment accounts, such as the E-ZPass toll collection system described below, for the privilege of using such electronic method of payment. The legislation does not prevent the authorities from making any charge for extra services requested by a holder of such electronic method of payment, any charge for lost or damaged equipment, or for defaults, such as charges for dishonored checks.

**Competing Facilities and Other Matters**

In addition to the Robert F. Kennedy, Bronx-Whitestone and Throgs Neck Bridges and Hugh L. Carey and Queens Midtown Tunnels, there are four vehicular bridges operated by the City crossing the East River which are toll-free at the present time, namely: the Ed Koch Queensboro, Williamsburg, Manhattan and Brooklyn Bridges. In addition to the Robert F. Kennedy and Henry Hudson Bridges, there are nine vehicular bridges crossing the Harlem River, which are toll-free at the present time. The City and the State have explored, from time to time, the possibility of tolling some or all of these bridges to raise revenue for the City and/or MTA; however, MTA Bridges and Tunnels cannot predict the effect that the tolling of such bridges will have on its revenues if it occurs.

The State agrees in the MTA Bridges and Tunnels Act that while any bonds of MTA Bridges and Tunnels are outstanding, there will not be constructed any vehicular connection competitive with the MTA Bridges and Tunnels Facilities and crossing (a) the East River north of 73rd Street or south of 59th Street in Manhattan, (b) New York Bay, or (c) Jamaica Bay or Rockaway Inlet to Rockaway Peninsula within a specified distance (approximately 2.5 miles) east of the Cross Bay Veterans Memorial Bridge. There is no provision in the MTA Bridges and Tunnels Act regarding competitive vehicular crossings over the Harlem River.

Under the MTA Bridges and Tunnels Senior Resolution, MTA Bridges and Tunnels Subordinate Resolution and MTA Bridges and Tunnels Second Subordinate Resolution, the owners of MTA Bridges and Tunnels bonds waive the foregoing agreement of the State with respect to the construction of any East River vehicular toll crossing to be operated by MTA Bridges and Tunnels.

A significant reduction in the availability of fuel to motorists would, or significant increases in the cost thereof could, have an adverse effect on the revenues derived from the MTA Bridges and Tunnels Facilities. The use of automobiles in the New York City metropolitan area is subject to increased governmental concern and promulgation of governmental regulations relating to environmental and other concerns restricting the use of vehicles, which could also adversely affect revenues from the MTA Bridges and Tunnels Facilities. The Clean Air Act Amendments of 1990 (the "Clean Air Amendments") require the State to adopt transportation control strategies and measures to control emissions, and establish among other matters, specific measures the State may adopt to reduce air pollution. The impact on MTA Bridges and Tunnels and revenues from the MTA Bridges and Tunnels Facilities of the Clean Air Amendments and the State implementation plan that must be developed thereunder cannot be assessed at this time.

Revenues derived from the MTA Bridges and Tunnels Facilities could also be adversely affected by the condition of arteries feeding -- and approach and access roads leading to and from -- such facilities which are not owned by MTA Bridges and Tunnels. A number of those arteries and approach and access roads are in need of significant repairs. MTA Bridges and Tunnels is currently partnering with the NYSDOT and the NYCDOT at the Verrazzano-Narrows Bridge and Robert F. Kennedy Bridge, to address some of these conditions in a joint agency approach to improving these connecting corridors. Revenues have been and may hereafter be affected by access to, and conditions and restrictions on use of, the toll-free facilities over which MTA Bridges and Tunnels has no control and which compete with MTA Bridges and Tunnels' facilities. The Stantec Report referenced in this ADS under the caption "MTA Bridges and Tunnels – Total Revenue Vehicles" above also lists current and proposed construction projects that could adversely affect bridge and tunnel use.

**Central Business District Tolling Program**

In April 2019, New York State enacted the MTA Reform and Traffic Mobility Act, which established the Central Business District Tolling Program (the "CBD Tolling Program"), the goals of which are to reduce traffic congestion in the Manhattan central business district and provide a stable and reliable funding source for the repair and revitalization of MTA's public transportation systems. MTA Bridges and Tunnels is directed to establish the CBD Tolling Program. The program will operate in the CBD, defined as Manhattan south of and inclusive of 60th Street, not including the FDR Drive or the West Side Highway (which includes the Battery Park underpass and any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street). MTA Bridges and Tunnels has entered into an MOU with NYCDOT to coordinate the planning, design, installation, construction and maintenance of the CBD Tolling Program infrastructure.

MTA Bridges and Tunnels is empowered (i) to establish and charge variable tolls, fees and other charges for vehicles entering or remaining in the CBD and (ii) to make rules and regulations for the establishment and collection of CBD tolls, fees, and other charges. Subject to agreements with bondholders and applicable federal law, tolls, fees and other revenues derived from the CBD Tolling Program will be deposited into a lockbox fund pursuant to Public Authorities Law Section 553-j and applied first to the payment of operating, administration, and other necessary expenses of MTA Bridges and Tunnels properly allocable to the program, including the capital costs of the program, and to the payment of interest or principal of bonds, notes or other obligations of MTA Bridges and Tunnels or MTA issued for transit and commuter projects as provided pursuant to existing law, and shall not be subject to distribution of MTA Bridges and Tunnels' surplus under existing law. Any such tolls and other charges may be established and changed only if approved by resolution of the Board of MTA Bridges and Tunnels after a public hearing.

The Board of MTA Bridges and Tunnels is directed to ensure at a minimum that annual revenue (after addressing the costs of the program), are sufficient to fund $15 billion (through the issuance of bonds secured by such revenues) for MTA capital projects in the 2020-2024 Capital Program or any successor capital program. See "PART 2. FINANCIAL INFORMATION -- FINANCIAL PLANS AND CAPITAL PROGRAMS – Capital Programs–Background and Development".

The MTA Traffic Mobility Act requires the Board of MTA Bridges and Tunnels to establish a traffic mobility review board (the "TMRB") composed of a chair and five members with specific requirements for regional representation and professional expertise.

The TMRB is required to make recommendations regarding the CBD toll amounts to be established, which shall include a variable-pricing structure, no later than thirty days before a CBD Tolling Program is initiated. Such recommendation shall be submitted by the TMRB to the Board of MTA Bridges and Tunnels for consideration before the Board of MTA Bridges and Tunnels may approve the CBD toll amounts.

For purposes of recommending a CBD toll structure, in addition to the goal of reducing traffic within the CBD, the TMRB shall, at minimum, ensure that annual revenues and fees collected under the CBD Tolling Program, less costs of the program, provide revenues to be deposited into the CBD Tolling Capital Lockbox Fund sufficient to fund $15 billion for MTA capital projects for the 2020-2024 Capital Program. Any additional revenues above that amount are to be made available for any successor Capital Program. The TMRB will consider for purposes of its recommendations, factors including but not limited to: traffic patterns, traffic mitigation measures, operating costs, public impact, public safety, hardships, vehicle type, discounts for motorcycles, peak and off-peak rates and environmental impacts, including but not limited to air quality and emissions trends. The TMRB will recommend a plan for credits, discounts, and/or exemptions for tolls paid on bridges and crossings, which plan shall be informed by a traffic study associated with the impact of any such credits, discounts and/or exemptions on the recommended toll. The TMRB will recommend a plan for credits, discounts, and/or exemptions for for-hire vehicles subject to the For-Hire Transportation Surcharge described under "PART 2. FINANCIAL INFORMATION REVENUES OF THE RELATED ENTITIES – Congestion Zone Surcharges", based on factors, including, but not limited to, initial market entry costs associated with licensing and regulation, comparative contribution to congestion in the CBD, and general industry impact. The TMRB will produce a detailed report that provides information regarding the TMRB's review and analysis for purposes of establishing its recommendations. The TMRB will not recommend a toll that provides for charging passenger vehicles more than once per day.

In addition, the MTA Capital Program will be reviewed by the TMRB.

*Status of CBD Tolling Program*. All capital and operating costs for the CBD Tolling Program are expected to be funded by revenues generated from the program. The construction and implementation costs for the CBDTP are initially being funded through a variety of distinct financing sources all of which will eventually be reimbursed through net operating revenues generated through the program after it goes live.

In October 2019, MTA Bridges and Tunnels awarded to TransCore LLP ("TransCore") a contract to design, build, operate and maintain the toll system equipment and infrastructure required to implement the CBD Tolling Program ("DBOM Contract").

Authorization is required from the Federal Highway Administration ("FHWA") under its Value Pricing Pilot Program ("VPPP") to implement the CBD Tolling Program on federal-aid roadways within the CBD. FHWA approval to participate in the VPPP makes this project subject to National Environmental Policy Act ("NEPA") review. On March 30, 2021, FHWA determined that an Environmental Assessment ("EA") is the appropriate level of environmental review required under NEPA.

An EA for the CBD Tolling Program was made available to the public on August 10, 2022. The comment period, which included six public hearings between August 25 and August 31, 2022, was extended for an additional two weeks and ended on September 23, 2022. Comments received are being reviewed, categorized, and responded to and will be made available to the public.

The TMRB was established by the MTA Bridges and Tunnels Board on July 27, 2022, and Carl Weisbrod was appointed Chair. TMRB members listened to and read comments received during the public comment period. As the EA process is still ongoing, it is too early for the TMRB to issue recommendations at this time.

Because FHWA regulations provide that final design and construction cannot proceed before FHWA issues an environmental finding, the project is proceeding in two phases – preliminary design and final design, the latter of which is subject to receipt of FHWA approval.

Should the CBD Tolling Program receive FHWA approval, upon issuance of the second notice to proceed, TransCore will complete final design and build the infrastructure and install the toll system equipment. Once operational, TransCore will be responsible for operating and maintaining the infrastructure and toll system for an additional six years under the DBOM Contract. The total cost of this DBOM Contract is $507 million, which includes incentive payments to encourage on-time delivery.

The revenues and transactions related to the CBD Tolling Program will be tracked and reported on separately from MTA Bridges and Tunnels' bridge and tunnel facilities.

**E-ZPass**

MTA Bridges and Tunnels employs an electronic toll collection system, E-ZPass, at all of its bridges and tunnels. MTA Bridges and Tunnels' E-ZPass program generally requires prepayment on behalf of the customers. Substantially all of the E-ZPass users prepay with credit cards or checks.

MTA Bridges and Tunnels is a founding member of the E-ZPass IAG, which has grown to include toll authorities in Delaware, Pennsylvania, New Jersey, New York, Maryland, Massachusetts, Virginia, West Virginia, New Hampshire, Illinois, Indiana, Maine, Kentucky, Rhode Island, Ohio, North Carolina, Florida, Georgia and Minnesota, and the Peace Bridge and Thousand Islands Bridge between New York State and Canada. Payments are settled among all such entities after use of the facilities. MTA Bridges and Tunnels transfers significantly more cash to IAG members than it receives from them, which at times could adversely affect MTA Bridges and Tunnels' cash position.

The following chart shows the amount of annual transfers to and from other IAG members by MTA Bridges and Tunnels during the period from 2013 through 2022.

| Year | Transfers to IAG Members (in millions) | Transfers from IAG Members (in millions) |
|---|---|---|
| 2013 | $ 740.9 | $408.2 |
| 2014 | 797.1 | 417.1 |
| 2015 | 891.2 | 455.6 |
| 2016 | 973.1 | 475.1 |
| 2017 | 1,015.7 | 514.8 |
| 2018 | 1,042.8 | 565.2 |
| 2019 | 1,077.8 | 625.1 |
| 2020 | 939.0 | 503.8 |
| 2021 | 1,211.7 | 656.1 |
| 2022 | 1,292.5 | 723.6 |

MTA Bridges and Tunnels participates in E-ZPass Plus agreements that have been negotiated by IAG members with commercial entities (such as parking facility operators) whereby the electronic media can be used to purchase goods and services. E-ZPass Plus is currently available to customers for use at Albany International Airport, Syracuse Hancock International Airport, John F. Kennedy International Airport, LaGuardia Airport, Newark Liberty International Airport and Atlantic City International Airport. MTA Bridges and Tunnels may participate in IAG expansion of the use of agreements with commercial entities.

For 2022, E-ZPass market share on MTA Bridges and Tunnels Facilities averaged:

- overall: 95.1%;
- weekday: 95.6%; and
- weekend: 94.2%.

**Cashless Open Road Tolling**

In October 2016, then-Governor Cuomo announced the New York Crossings Project. This project included an aggressive one-year schedule for all MTA Bridges and Tunnels crossings to migrate from cash and gated E-ZPass toll plazas to Cashless Tolling. MTA Bridges and Tunnels completed full implementation of Cashless Tolling on September 30, 2017. Cashless Tolling eliminates traditional toll plazas by allowing tolls to be collected in a free-flow environment through E-ZPass sensors and license-plate cameras mounted on overhead gantries. Drivers without E-ZPass receive a "Tolls by Mail" invoice mailed to the vehicle's registered owner.

In spring 2016, MTA Bridges and Tunnels began asking the DMV to suspend the vehicle registrations of violators who failed to pay their tolls and violation fees or have them dismissed or transferred in response to violation notices for five toll violations within eighteen months, in accordance with the new DMV regulation for persistent or habitual toll violators. In January 2017, the DMV changed its regulation for persistent or habitual violators so that vehicle registrations can be suspended for three toll violations within five years and commercial vehicle registrations can be suspended for $200.00 or more in unpaid tolls within five years.

MTA Bridges and Tunnels employs and develops measures to enhance collection and enforcement of tolls under the Cashless Tolling system. License plate recognition technology on gantries and in patrol vehicles is being used for the detection of persistent toll violators and toll violation enforcement. Additionally, MTA Bridges and Tunnels continues to issue exclusion orders barring the vehicles of out-of-state toll violation scofflaws from MTA Bridges and Tunnels facilities and for those persistent violators, engages in summonsing vehicle operators and towing those vehicles from MTA Bridges and Tunnels' facilities.

In April 2017, the New York State DMV received legislative authorization to enter into reciprocal compacts with other states to suspend the vehicle registrations of persistent or habitual toll violators, which will allow MTA Bridges and Tunnels to have the home states of out-of-state violators suspend or place holds on vehicle registrations for toll violations committed on MTA Bridges and Tunnels' facilities. MTA Bridges and Tunnels has entered into such an agreement with Massachusetts and began submitting registration hold packages to the Massachusetts Registry of Motor Vehicles in February 2020 so that holds could be placed on the registrations of toll-evading Massachusetts vehicle owners.

# PART 6. REGULATORY, EMPLOYMENT, INSURANCE AND LITIGATION MATTERS

## FEDERAL AND STATE LAWS

### General

Federal and State laws concerning, among other things, protection of the environment and access to transportation and non-transportation facilities by the physically disabled will require future operating and capital expenditures by the Related Entities. Those expenditures are material. Many of the projects undertaken in connection with such legal requirements are being funded through MTA Capital Programs.

Future federal and State laws and regulations concerning matters such as the environment and access by the physically disabled could subject the Related Entities to additional operating and capital costs, which costs may be material.

### Transit System

*Environmental*. MTA New York City Transit is currently the subject of an environmental consent order with the New York State Department of Environmental Conservation ("NYSDEC") pursuant to which underground storage tanks have been replaced or upgraded. Capital expenditures will continue for site remediations in accordance with the order.

*Access for Persons with Disabilities*. It is MTA New York City Transit's position that it is in substantial compliance with the statutory requirements of the ADA related to buses. Additionally, MTA New York City Transit is currently rolling out an automated audio-visual announcements system on board buses. After a successful pilot, MTA New York City Transit is including this system on new buses and retrofitting buses in the current fleet. As of the end of 2022, more than 60% of the bus fleet included this system.

MTA New York City Transit is nearing completion of the implementation of the Key Station Plan that was established under State and federal law for 100 designated stations to be made fully accessible to people with disabilities. As of April 2022, MTA New York City Transit had completed 99 of these Key Stations. MTA New York City Transit also has made vertically accessible an additional 40 stations that are not part of the Key Station Plan (9 of which are accessible in a single direction). Investments in accessibility are continuing, with accessibility projects underway at 30 stations and over ten ADA station projects awarded in 2022. In 2022, MTA and MTA New York City Transit entered into a proposed settlement agreement with plaintiffs in two class action lawsuits relating to the accessibility of the subways for those with mobility disabilities. Pursuant and subject to the terms and conditions of the settlement agreement, which has received federal court and state court approval, MTA New York City Transit would add elevators or ramps to stations so that by 2055, at least 95% of MTA's inaccessible stations as identified in the settlement agreement will provide stair-free paths of travel.

### Commuter System

*Environmental*. MTA Long Island Rail Road and MTA Metro-North Railroad are required to file annual reports with the NYSDEC identifying areas of environmental concern. MTA Long Island Rail Road and MTA Metro-North Railroad have each incurred and will continue to incur costs of asbestos abatement and lead paint removal on their respective properties. The Commuter Capital Programs allocate funds for, among other matters, asbestos abatement, costs of fuel handling and storage, and wastewater treatment and environmental remediation. MTA Long Island Rail Road and MTA Metro-North Railroad each are required to clean up various conditions on properties they own or operate, and each has established reserves for the clean-up costs.

MTA Long Island Rail Road has completed interim remediation on substations for mercury contamination due to the utilization of mercury rectifiers that were removed during the 1970s. Nineteen substations have been fully remediated as per NYSDEC regulations, with eight having received official NYSDEC closure letters. Remediation on the remaining substation under NYSDEC process oversight is planned for 2024. Work continues to progress on all MTA Long Island Rail Road substation remediation projects. State environmental agencies are monitoring the remediation of pollutants at certain MTA Long Island Rail Road and MTA Metro-North Railroad facilities. The extent of pollution, the cost of clean-up and MTA Long Island Rail Road's and MTA Metro-North Railroad's liability, if any, which may be material, cannot be determined at this time.

*Access for Persons with Disabilities*. MTA Long Island Rail Road and MTA Metro-North Railroad are in substantial compliance with ADA requirements.

### MTA Bridges and Tunnels

*General*. MTA Bridges and Tunnels regularly reviews its facility maintenance programs, both remedial and preventive, and believes the same to be of high quality. MTA Bridges and Tunnels intends to continue its comprehensive inspection and maintenance programs for the MTA Bridges and Tunnels Facilities and to continue to engage independent engineering firms to provide virtually all biennial inspections of its bridge and tunnel facilities. Stantec has reviewed the inspection reports of the bridges and tunnels undertaken by MTA Bridges and Tunnels' engineering consultants.

*Environmental*. MTA Bridges and Tunnels' Capital Programs incorporate the removal and clean-up of lead paint on its bridges and tunnels in compliance with Federal, State and local laws, codes and regulations.

*Bridge and Tunnel Inspections*. NYSDOT maintains a program of comprehensive bridge and tunnel management, maintenance and inspection applicable to MTA Bridges and Tunnels' facilities. That program includes the application of the uniform code for bridge inspection and tunnel inspection, which:

- meets or exceeds applicable federal law;
- requires that bridges and tunnels be inspected at least every two years in accordance with the provisions of that code;
- prescribes qualifications for licensed professional engineers who inspect bridges and tunnels; and
- requires that all bridge and tunnel inspections be performed or supervised by such persons.

Bridge and tunnel inspection reports must be filed with NYSDOT and NYSDOT may close bridges or tunnels found unsafe for public use. MTA Bridges and Tunnels is in compliance with the NYSDOT program.

## EMPLOYEES, LABOR RELATIONS AND PENSION AND OTHER POST-EMPLOYMENT OBLIGATIONS

### General

The transportation services provided by the Related Entities, as well as related maintenance and support services, are labor intensive. Consequently, the major portion of the Related Entities' expenses consists of the costs of salaries, wages and fringe benefits for employees and retirees.

The employees of MTA and its affiliates and subsidiaries, other than MTA Long Island Rail Road and MTA Metro-North Railroad, are prohibited by the State's Taylor Law from striking. Nevertheless, represented employees of MTA New York City Transit and MaBSTOA engaged in an illegal three-day strike in December 2005. There have been no labor stoppages at MTA Bridges and Tunnels since 1976. The Taylor Law also requires that the TWU Local 100 and MTA New York City Transit and MaBSTOA submit a dispute preventing the voluntary resolution of contract negotiations to binding arbitration before a three-member public arbitration panel upon the occurrence of certain events. The three-member panel would be chosen as follows: one member appointed by MTA, one member appointed by the affected union, and one member appointed jointly by the parties. Almost all the unions covered by the Taylor Law have elected to be bound by the Taylor Law's binding arbitration provisions.

The employees of MTA Long Island Rail Road and MTA Metro-North Railroad are not subject to the same State prohibition, but are governed by federal railroad employment statutes.

### MTA Headquarters

The 2023 February Plan assumes 3,594 full time employees for MTA Headquarters as of year-end 2023. As of December 31, 2022, MTA Headquarters had 2,834[1] full time employees.

- *Police*: At the end of the first quarter 2023, MTA Headquarters staff include 1,125 Police Officers represented by the Police Benevolent Association ("PBA"), 26 Commanding Officers, represented by the Commanding Officers Association ("COA"), and 66 clerical/administrative employees represented by the International Brotherhood of Teamsters ("IBT"). In October 22, the MTA Board approved a labor agreement – covering the 66-month period from October 15, 2018 through April 14, 2024 – between MTA

[1] This number does not include employees on other agency payrolls who work at MTA Headquarters.

Headquarters and the PBA. The collective bargaining agreement with the COA expired October 14, 2018, while the agreement between MTA Headquarters and the IBT expired on September 30, 2021. Negotiations for successor agreements with both unions are now underway.

- *Clerical/Administrative*: On March 27, 2019, the tentative labor contract previously reached with IBT 808 was approved by the MTA Board. The agreement at the time covering 50 MTA Police Department and 29 other MTA Headquarters clerical and administrative employees ran from September 1, 2016 through September 30, 2021. With their agreement now expired, these employees are seeking new terms going forward.
- *Business Service Center*: As a result of the recent MTA transformation many of the BSC employees represented by clerical/administrative unions have been shifted to new roles in the Department of Human Resources and Analytics and to other departments within MTA Headquarters. The largest such union is the Transportation Communications Union ("TCU"), Local 643 whose most recent agreement was approved by the MTA Board in October 2022. This 50-month agreement, negotiated also with employees in Procurement titles, will cover the period from April 1, 2020 through May 31, 2024.
- *Information Technology (IT)*: The Information Technology Department consolidated all agency IT functions and positions under MTA Headquarters as of January 1, 2015. The two predominant unions representing IT titles are the TCU, Local 982 with 203 members[2], and TWU Local 100 with 136 members. In February 2023, MTA ratified an agreement with TCU, Local 982. The new agreement covers the 50-month period from January 1, 2020 through February 29, 2024. A labor agreement with TWU Local 100 employees working in IT positions at MTA Headquarters was also recently reached and is currently in effect: passed by the MTA Board in September 2022, the new agreement runs from July 14, 2019 to September 30, 2023.

Most MTA Headquarters employees, other than MTA police officers and the aforementioned BSC and IT represented employees, are members of the New York State and Local Employees' Retirement System ("NYSLERS"). MTA police officers are members of the MTA Defined Benefit Pension Plan, which has a substantial Net Pension Liability. MTA's policy is to contribute at least the actuarially determined contributions ("ADC") on an annual basis to the plan. ADC contributions for the fiscal year ending December 31, 2022 are set forth in the table below. See also Footnote 4 to the audited Combined Financial Statements of MTA for more information relating to the MTA Defined Benefit Pension Plan, as well as the Required Supplementary Information attached.

| Plan | ADC Contribution for the Fiscal Year Ending December 31, 2022 |
|---|---|
| MTA Long Island Rail Road Additional Plan | $ 70,763,569 |
| | |
| MTA Defined Benefit Pension Plan: | |
| MTA Long Island Rail Road | $ 151,551,527 |
| MTA Metro-North Railroad | $ 135,462,567 |
| MTA Police Department | $ 48,549,849 |
| MTA Staten Island Railway | $ 7,801,932 |
| MTA Bus | $ 60,879,328 |
| | |
| Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA) Pension Plan | $ 158,618,427 |

The 2023 February Plan assumes 96 full time employees for the MTA Inspector General as of year-end 2023. As of December 31, 2022, the MTA Inspector General's office had 69 employees, none of whom are union represented.

**MTA Construction and Development**

The 2023 February Plan assumes approximately 212 full and part-time employees for MTA Construction and Development as of year-end 2023. As of December 31, 2022, MTA Construction and Development had 311 full-time employees. All such employees are employees of MTA or other Related Entities.

[2] This number does not include non-represented employees who are covered by the economic provisions of the TCU-IT agreements.

**MTA New York City Transit and MaBSTOA**

The 2023 February Plan assumes approximately 49,532 full and part-time employees on full-time equivalency basis ("FTE") for MTA New York City Transit including MaBSTOA, as of year-end 2023. MTA New York City Transit is comprised of the New York City Transit Authority and its subsidiary, MaBSTOA. As of December 31, 2022, New York City Transit Authority including MaBSTOA had 46,823 employees (full and part-time FTE). Of these, 44,644 employees (37,575 at MTA New York City Transit Authority and 7,069 at MaBSTOA) are represented by 14 unions in 23 bargaining units.

In January 2020, the MTA Board approved a labor agreement in which the MTA New York City Transit/MaBSTOA, together with MTA Bus, settled new terms with TWU Local 100. The 48-month agreement, which spans the period May 16, 2019 to May 15, 2023, covers approximately 33,286 active employees in total for MTA New York City Transit/MaBSTOA and approximately 2,239 active employees at MTA Bus. With this development, MTA was poised to begin a new round of collective bargaining with nearly all its represented employees. While the TWU Local 100 agreement would normally have been considered a pattern-setting agreement that established parameters for future agreements with all other bargaining units, the severe economic impact resulting from the emergence of COVID-19 at the end of the first quarter of 2020 created numerous logistical and financial challenges to the normal functioning of MTA. MTA's financial status and uncertain external economic conditions exerted a strong influence on subsequent collective bargaining, and efforts towards new agreements were significantly delayed. In December 2021, an Impasse Arbitrator issued an award resulting in the subsequent Memorandum of Understandings for Amalgamated Transit Union, Locals 726, 1056 and 1179. The award mirrored the TWU, Local 100 48-month pattern agreement. See "PART 2. FINANCIAL INFORMATION – FINANCIAL PLANS AND CAPITAL PROGRAMS – Subsequent Developments".

The Subway Surface Supervisors Association ("SSSA") represents 3,887 employees whose most recent agreement expired on July 31, 2020. The Transit Supervisors Organization ("TSO") TWU Local 106 Operating Supervisory, Queens Supervisory, and Coin Retriever Technician units, represent 666 employees whose agreements expired on December 31, 2020. The TSO Maintenance Supervisors II division represents 341 employees, whose most recent agreement expired on July 31, 2020. Successor agreements for each of these units are currently in negotiations. New agreements with other units of the TSO have recently gone into effect. In December 2022, the MTA Board approved an agreement with the TSO Station Supervisor II division, representing 8 employees and covering the period August 16, 2020 through October 25, 2024. The Board also approved an agreement with TSO Transit Support Coordinators, Levels I and II, which runs from July 14, 2019 through September 30, 2023.

The United Transit Leadership Organization ("UTLO") represents employees in the Managerial titles of Assistant General Superintendent and Superintendent in the Department of Buses, Deputy Superintendent, Superintendent and General Superintendent in the Department of Subways and supporting departments, and Group Station Superintendent in the Department of Stations whose most recent agreement expired on December 31, 2021.

MTA New York City Transit has budgeted 2.0% wage increases in the February Adopted Budget and 2023-2026 Financial Plan for its represented employees who typically follow the economic pattern established in New York City's agreement with its Municipal employees. That City-wide agreement expired May 25, 2021.

Most employees of MTA New York City Transit are members of the New York City Employees' Retirement System ("NYCERS"). MTA New York City Transit makes contributions to NYCERS based on assessments calculated by the New York City Actuary. Most employees of MaBSTOA participate in a separately funded pension plan sponsored by MaBSTOA that provides benefits similar to NYCERS. As of January 1, 2022, 8,203 active employees and 6,192 retirees participated in the MaBSTOA Pension Plan. As of January 1, 2022 the plan's Net Pension Liability was $684 million and the funding ratio was 84.4%. MTA New York City Transit and MaBSTOA's policy is to contribute at least the ADC on an annual basis to the MaBSTOA Pension Plan. See Footnote 7 to the audited Consolidated Financial Statements of MTA New York City Transit for more information. See also the Required Supplementary Information attached to the audited Combined Financial Statements.

**MTA Bus**

The 2023 February Plan assumes approximately 3,906 full and part-time employees for MTA Bus, as of year-end 2023. As of December 31, 2022, MTA Bus had 3,738 employees, 3,639 of whom are represented by three unions in five bargaining units. MTA Bus has an effective agreement with TWU Local 100 covering the period from May 16, 2019 through May 15, 2023.

In December 2021, an Impasse Arbitrator issued an award resolving the 2019 – 2023 round of bargaining for Amalgamated Transit Union, Locals 726, 1056, and 1179. In the case of ATU 1179, who represents employees at MTA Bus, the agreement covers the period from November 1, 2019 – October 31, 2023. Meanwhile, MTA Bus Company has reached an agreement with ATU Local 1181, covering approximately 239 hourly employees. The deal, approved by the Board in October 2022, spans the four-year period from November 1, 2019 through October 31, 2023.

MTA Bus's other collective bargaining units, TWU Local 106 and the UTLO have expired labor agreements.

**MTA Staten Island Railway**

The 2023 February Plan assumes 409 full and part-time employees for MTA Staten Island Railway as of year-end 2023. As of December 31, 2022, MTA Staten Island Railway had approximately 349 employees, 332 of whom are represented by four different unions in five bargaining units. MTA Staten Island Railway has an effective agreement with the Sheet Metal, Air, Rail and Transportation Workers International Association, Local 1440 covering the large majority of its represented population for the period February 16, 2017 to August 15, 2023. In February 2023, the MTA Board approved an agreement between the railway and the American Train Dispatchers Association for the period April 17, 2019 through August 31, 2023. The railway also has an effective agreement with its clerical employees, represented by the Transportation Communications Union and covering the period April 17, 2021 through June 16, 2023; and with the Subway Surface Supervisors Association over the period February 16, 2017 through July 15, 2023. A separate group of Analysts recognized by PERB as represented by the SSSA effective March 6, 2019, is currently seeking new agreement terms.

Employees of MTA Staten Island Railway are members of the MTA Defined Benefit Pension Plan. MTA Staten Island Railway's policy is to contribute at least the ADC on an annual basis to the plan. See Footnote 4 to the audited Combined Financial Statements of MTA for more information relating to the MTA Defined Benefit Pension Plan, as well as the Required Supplementary Information attached.

**Commuter System**

*MTA Long Island Rail Road.*

The 2023 February Plan assumes approximately 7,987 full-time employees for MTA Long Island Rail Road as of year-end 2023. As of February 1, 2023, MTA Long Island Rail Road had approximately 7,397 employees. Approximately 6,518 of the MTA Long Island Rail Road employees are represented by 10 different unions in 18 bargaining units. Since June 2021, the MTA Long Island Rail Road has reached collective bargaining agreements covering the period 2019 to 2023 with the vast majority of its represented population. Initially the return to collective bargaining after the long pause interposed by the emergence of COVID-19 brought new labor agreements at both MTA's commuter railroads that were two-year deals covering varying periods from 2019-2021. These provided the first two general wage increases that were present in MTA New York City Transit's agreement with TWU Local 100, MTA's largest labor union. However, because these railroad agreements expired upon Board ratification or shortly thereafter, the MTA advanced successor deals that mirror the remaining two years of the pattern-setting TWU agreement. In July 2022, seven 2-year, 2-month agreements were ratified by the MTA Board. These were, as follows: (1) an agreement with the Sheet Metal, Air, Rail and Transportation Workers International Association-Transportation Division ("SMART-TD"); (2) an agreement with the Transportation Communications Union ("TCU"); (3) an agreement with the Independent Railway Supervisors Association ("IRSA"); (4) an agreement with the Brotherhood of Railroad Signalmen ("BRS"); (5) an agreement with the Sheet Metal, Air, Rail and Transportation Workers International Association, Local 1978 (SMART-Yardmasters); (6) an agreement with Sheet Metal, Air, Rail and Transportation Workers International Association, Local 149 ("SMART-SMW"); (7) and an agreement with the International Association of Machinists ("IAM"). The aforementioned agreements all span the period from April 16, 2021 through June 15, 2023. They all provide general wage increases of 2.5% and 2.75% for 2021 and 2022, respectively, and include a two-month contract extension. Employees represented by the BLE&T reached an identical agreement for the same period, approved by the MTA Board in December 2022. At present, only the International Brotherhood of Electrical Workers ("IBEW"), representing approximately 707 employees, remains without a successor agreement to the now lapsed 2019-2021 deal with MTA Long Island Rail Road; and a small group of supervisors of approximately 34 employees who are represented by the Independent Railway Supervisors Association has yet to reach agreement for the 2019-2023 period. However, this latter group of employees is under a management salary plan and will follow all policies and protocols for non-represented employees.

*MTA Metro-North Railroad.*

The 2023 February Plan assumes 7,144 full and part-time employees for MTA Metro-North Railroad as of year-end 2022. As of December 31, 2022, the MTA Metro-North Railroad had approximately 6,018 employees. Approximately 5,216 of the MTA Metro-North Railroad employees were represented by 10 different unions in 25 bargaining units. Like MTA Long Island Rail Road, in 2021 Metro-North Railroad returned to collective bargaining and successfully reached 2-year labor agreements with its represented population. The terms of these agreements, typically running from 2019-2021, were identical to those with unions at the Long Island Rail Road—namely, they provided the first two general wage increases present in MTA New York City Transit's 2019-2023 agreement with TWU Local 100, with no other financially impactful elements. Since these 2-year agreements expired shortly after ratification, MTA Metro-North Railroad sought either successors, or deals covering the full four-year period corresponding to the 2019-2023 TWU agreement. Currently, MTA Metro-North Railroad has effective agreements with the American Railway and Airway Supervisors Association, Maintenance of Equipment Division, through September 30, 2023; the American Railway and Airway Supervisors Association, Maintenance of Way Division, through January 31, 2024; the International Brotherhood of Teamsters Local 808, through January 15, 2024; the National Conference of Firemen and Oilers, through July 30, 2023; and the Transportation Communications Union, through July 30, 2023. Most of Metro-North's other bargaining units, including all units of the Association of Commuter Rail Employees (representing Conductors, Engineers, Power Directors, Signalmen, Yardmasters, Rail Traffic Controllers, and other titles) were signatories of the 2019-2021 agreements and are now seeking new terms for the subsequent period. Members of the International Brotherhood of Electrical Workers and the Transport Workers Union (Locals 2001 and 2055) are seeking new terms for the period subsequent to 2019.

Both MTA Long Island Rail Road and MTA Metro-North Railroad supplement benefits provided under the Federal Railroad Retirement Act through other pension plans. The post-1987 employees of MTA Long Island Rail Road and almost all of the employees of MTA Metro-North Railroad participate in the MTA Defined Benefit Pension Plan.

As of January 1, 2022, pre-1988 MTA Long Island Rail Road retired employees numbering 5,122 and current employees numbering 15 participated in The Long Island Rail Road Company Pension Plan and The Long Island Rail Road Company Plan for Additional Pensions. The Long Island Rail Road Company Pension Plan was merged into the MTA Defined Benefit Pension Plan in 2006 and consequently the Unfunded Actuarial Accrued Liability for that Plan is now reported under the MTA Defined Benefit Pension Plan. As of January 1, 2022, the total Net Pension Liability for the Long Island Rail Road Company Plan for Additional Pensions was $533.0 million and the funded ratio was 59.7%. Starting in 2004, MTA Long Island Rail Road has been amortizing these costs over 29 years.

As of January 1, 2022 the Net Pension Liability for the MTA Defined Benefit Pension Plan was $1,691.0 million with a funded ratio of 77.5%. The cost of this Net Pension Liability is allocated to all participating Related Entities, including MTA Long Island Rail Road and MTA Metro-North Railroad.

See Footnote 4 to the audited Combined Financial Statements of MTA for more information on the pension plans, as well as the Required Supplementary Information attached.

**MTA Bridges and Tunnels**

The 2023 February Plan assumes approximately 1,375 full and part-time employees for MTA Bridges and Tunnels as of year-end 2023. As of December 31, 2022 MTA Bridges and Tunnels had approximately 1,068 employees, 742 of whom were represented by three different unions in four bargaining units.

As of December 31, 2022, all represented employees of MTA Bridges and Tunnels had expired labor agreements.

In June 2019, after extensive and deliberative collective bargaining, MTA Bridges and Tunnels reached a Memorandum of Understanding with members of the Bridge and Tunnel Officers Benevolent Association ("BTOBA") that provided TWU pattern wage increases retroactive to 2012, as well as a separate and discrete wage adjustment of $6,033, a portion of which recognized that Bridge and Tunnel Officers are now principally performing law enforcement duties. The remainder of the wage adjustment was to be paid for by the union through significant savings resulting from a pending agreement on work rule changes. The failure to reach agreement on the value of these changes led to impasse arbitration which is still pending and is awaiting decision by the panel. The Memorandum of Understanding expired in September 2019 and BTOBA members will be seeking new terms going forward.

In July 2022, the MTA Board approved a labor agreement with the Superior Officers Benevolent Association ("SOBA"). The agreement covers the 126-month (ten and a half year) period from March 15, 2012 through September 14, 2022. During this timeframe, New York City Transit has enacted three agreements with MTA's largest, pattern-setting union, TWU Local 100. The SOBA agreement includes the same schedule of wage increases that were present in these TWU deals. Members' wages will increase by a compounded 21.6%, relative to 2012 levels, but because the three TWU agreements reached since 2012 have covered 136 months, whereas the proposed SOBA agreement covers 126 months, the SOBA deal does not include the final TWU wage increase of 2.75%.

In recognition that such officers will now principally perform Law Enforcement duties, the new agreement also includes the $6,033 wage adjustment that was provided in the agreement between the Authority and BTOBA, whose members are supervised by the SOBA constituents. Accordingly, the parties have agreed on the functional and geographic expansion of law enforcement duties, including whatever enforcement duties are assumed by the employer as part of the imposition of a congestion zone. The agreement provides management with new deployment flexibilities designed to introduce efficiency savings. Other savings measures include the requirement that new entrants to the bargaining unit make contributions to health care coverage and include the introduction of a newly structured wage progression for all new bargaining unit entrants.

MTA Bridges and Tunnels' most recent contract with DC 37 Local 1931, representing 306 Maintenance employees, expired on July 14, 2020. Negotiations for a successor agreement have been ongoing and such an agreement is expected to conform to the TWU pattern. The most recent agreement with DC 37 Local 1655, which represents approximately 22 clerical and administrative employees has also expired, with collective bargaining in progress.

Substantially all of MTA Bridges and Tunnels' employees are eligible to participate in NYCERS and MTA Bridges and Tunnels is required to make significant annual contributions as calculated by the New York City Actuary. See Footnote 7 to MTA Bridges and Tunnels' audited financial statements for more information.

**Interrelationship of Various Pension Plans**

The Related Entities sponsor and participate in a number of pension plans for their employees. The pension plans have separately issued financial statements that are publicly available and contain descriptions and supplemental information regarding their respective employee benefit plan. These statements may be obtained by contacting the administrative office listed for such pension plan in MTA's audited financial statements annexed hereto.

The following is a brief summary of the pension plans. More detailed information is set forth in Footnote 4 to, and the required supplementary information – schedules of pension funding progress attached to, MTA's audited financial statements annexed hereto:

- Single-Employer Pension Plans
  - MTA Long Island Rail Road Plan for Additional Pensions – provides retirement, disability and death benefits to plan members and beneficiaries for employees hired prior to January 1, 1988. The plan is closed to new participants. As of January 1, 2022, this plan was 59.7% funded.
  - The Metro-North Commuter Railroad Company Cash Balance Plan – covers non-collectively bargained employees, formerly employed by Conrail, who joined MTA Metro-North Railroad as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these management employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees and the Cash Balance Plan was closed to new participants. As of January 1, 2022, this plan was 98.8% funded.
  - Manhattan and Bronx Surface Transit Operating Authority Plan – provides retirement, disability, cost-of-living adjustments and death benefits to plan members and beneficiaries that are similar to those benefits provided by NYCERS to similarly situated MTA New York City Transit employees. As of January 1, 2022, this plan was 84.4% funded.
- Cost-Sharing Multiple-Employer Plans
  - MTA Defined Benefit Pension Plan – covers certain MTA Long Island Rail Road non-represented employees hired after December 31, 1987, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 23, 1983, MTA Police, MTA Long-Island Rail Road represented employee's hired after December 1, 1987, certain MTA Metro-North Railroad represented employees, MTA Staten Island Railway

represented and non-represented employees and certain employees of MTA Bus Company. Non-represented employees of MTA Bus participate in a final average salary program. As of January 1, 2022, this plan was 77.5% funded.

- NYCERS – MTA New York City Transit and MTA Bridges and Tunnels contribute to NYCERS, a cost-sharing multiple-employer retirement system for employees of the City and certain other governmental units which provides pension, disability and death benefits to eligible members based on title, salary and length of service. MTA New York City Transit and MTA Bridges and Tunnels are current in their actuarially determined contributions.
- NYSLERS – a cost-sharing multiple-employer plan for employees of New York State and certain other governmental units that covers certain employees of MTA Headquarters who were hired after January 23, 1983. MTA is current in its actuarially determined contribution.
- New York State Voluntary Defined Contribution Program – Certain employees may choose to participate in this multi-employer plan sponsored by the State University of New York instead of participating in NYCERS or NYSLERS. As of December 31, 2022, 207 employees elected to participate. Participating employers make annual contributions of 8% of eligible compensation and the employee is vested after one year of service.
- Deferred Compensation Plans - the Related Entities offer employees the ability to contribute to one or both of two defined contribution plans (an Internal Revenue Code Section 457 Plan and an Internal Revenue Code Section 401(k) Plan) that provide benefits based on the amount contributed to each participant's account, plus or minus any income, expenses and investment gains/losses. MTA Metro-North Railroad, on behalf of certain MTA Metro-North Railroad employees who opted-out of participation in the MTA Defined Benefit Pension Plan and MTA, on behalf of certain represented MTA Business Services, Procurement and IT employees and on behalf of certain MTA Police Officers and MTA Commanding Officers, make contributions to the 401(k) Plan. The rate for the employer contribution varies.
    - MTA Metro-North Railroad – Employees represented by certain unions who elected to opt-out of participation in the MTA Defined Benefit Pension Plan receive an annual employer contribution equal to 4% of such employee's compensation. Effective on the first full pay period following the nineteenth anniversary date of an eligible MTA Metro-North Railroad member's continuous employment, MTA Metro-North Railroad contributes an amount equal to 7% of such member's compensation. MTA Metro-North Railroad members vested in these employer contributions upon the completion of five years of service.
    - MTA Headquarters – Police – For each plan year, MTA makes contributions to the account of each eligible MTA Police Benevolent Association and Commanding Officers Association member in the amounts required by the relevant collective bargaining agreement and subject to the contribution limits set forth in such agreement. These monthly contributions shall be considered MTA Police Department contributions. Members are immediately 100% vested in these employer contributions.
    - MTA Headquarters – Business Services, Procurement and IT Department – Effective January 1, 2011, all newly hired MTA Business Services Center employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 3% of the participant's compensation through March 30, 2017. Effective March 31, 2017, employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 4% of the participant's compensation. Effective March 31, 2018, employees represented by the TCU are eligible to receive a matching contribution, up to a maximum of 5% of the participant's compensation. A participant's right to the balance of his or her matching contributions will vest upon the first of the following to occur: (1) completing five years of service, (2) attaining the retirement age of 62 while in continuous employment, or (3) death while in continuous employment.

**OPEB**

In addition to pensions, the MTA Retiree Welfare Benefits Plan (the "OPEB Plan") and the related Trust Fund were established effective January 1, 2009 for the exclusive benefit of the retirees of the Related Entities and certain retirees of the former Metropolitan Suburban Bus Authority ("MTA LI Bus") to fund some of the OPEB benefits provided in accordance with MTA's various collective bargaining agreements and MTA policies. The OPEB Plan adopted GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* ("GASB 74"). GASB 74 establishes financial reporting standards of State and Local governmental OPEB plans. This statement replaces GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. MTA's audited financial statements are in compliance with GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which replaced GASB Statement No. 45, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. GASB 75 applies to state and local government employers that sponsor OPEB. Information relating to OPEB disclosure is set forth in Footnote 5 to the audited Combined Financial Statements of MTA.

As of December 31, 2022, the OPEB trust held $11.7 million in net assets.

## INSURANCE

### General

MTA's Department of Risk and Insurance Management ("MTA RIM") is responsible for administering the insurance programs for the Related Entities, including obtaining insurance. Marsh, USA serves as MTA's master insurance broker and Marsh Management Services, Inc. acts as the captive manager for FMTAC.

The insurance needs of the Related Entities vary. One of the biggest differences relates to how employees are covered for injuries on the job. The recovery by employees of the Related Entities other than the commuter railroads and the MTA Police Department who get injured on the job is limited by the State workers' compensation law. Recoveries by employees of the commuter railroads and the MTA Police Department are governed by federal law, and are not limited by State law, and, consequently, they can sue for damages under the Federal Employers Liability Act if they are injured on the job.

The Related Entities maintain insurance coverage through MTA's captive insurance company subsidiary, FMTAC, and through the commercial marketplace. MTA RIM, which also serves as the staff of FMTAC, sets the insurance premiums for the Related Entities at levels that are expected to be sufficient to purchase the commercial insurance or reinsurance, or permit FMTAC to pay the claims and costs for claims administration. Since its creation, FMTAC, with funding from the Related Entities, has assumed greater responsibility for the direct insurance and reinsurance risk of the Related Entities.

FMTAC is licensed in the State as both a direct insurer and as a reinsurer. When FMTAC is a direct insurer, it may reinsure all or a portion of its potential liabilities with commercial reinsurers. FMTAC retains independent entities to handle the claims administration process. FMTAC may deposit certain of its assets in trust with third parties in order to secure its insurance or reinsurance obligations under some of the insurance policies.

New York State Department of Financial Services ("NYSDFS") regulations require that every captive insurance company licensed in the State be audited by State regulators every three to five years for compliance with State regulations and generally accepted accounting standards. FMTAC's third audit covering the period from January 1, 2011 to December 31, 2015 was completed during 2017 and a favorable sign-off from NYSDFS was received on January 29, 2019. NYSDFS is conducting an audit of FMTAC for the period of January 1, 2016 to December 31, 2020. The final report from NYSDFS has not yet been received.

The major insurance policies are maintained for the benefit of the Related Entities, and the expiration dates of such policies are set forth in the following chart:

| Insurance Program | Expiration Date |
|---|---|
| Property Insurance | May 1, 2024 |
| Commuter Stations and Force Liability | December 15, 2023 |
| FMTAC Excess Loss Fund | October 31, 2023 |
| Commercial Excess Liability Policy | October 31, 2023 |
| All Agency Protective Liability | June 1, 2024 |
| Paratransit and Non-Revenue Vehicle Policies | March 1, 2024 |
| Premises Liability | December 7, 2023 |
| Builder's Risk | Various |
| Owner Controlled Insurance Programs | Various |

**Property Insurance Program**

*Property Insurance.* Effective May 1, 2023, FMTAC renewed the all-agency property insurance programs. For the annual period commencing May 1, 2023, FMTAC directly insures property damage claims of the Related Entities in excess of a $25 million per occurrence deductible, subject to an annual $75 million aggregate deductible. The total All Risk program annual limit is $500 million per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of $7.5 million per occurrence. In addition to the noted $25 million per occurrence self-insured deductible, MTA self-insures above that deductible for $147.082 million within the overall $500 million per occurrence property program as follows: $20.277 million (or 40.55%) of the primary $50 million layer, plus $23.777 million (or 47.55%) of the $50 million excess $50 million layer, plus $14.792 million (or 29.58%) of the $50 million excess $100 million layer, plus $8.827 million (or 17.65%) of the $50 million excess $150 million layer, plus $4.484 million (or 8.96%) of the $50 million excess $200 million layer, plus $12.548 million (or 25.09%) of the $50 million excess $250 million layer, plus $13.547 million (or 27.09%) of the $50 million excess $300 million layer, plus $14.997 million (or 29.99%) of the $50 million excess $350 million layer, plus $18.664 million (or 37.32%) of the $50 million excess $400 million layer, and $15.164 million (or 30.32%) of the $50 million excess $450 million layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the $500 million per occurrence noted above, FMTAC's property insurance program has been expanded to include a further layer of $100 million of fully collateralized storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three-year period from May 19, 2023 to April 30, 2026. The expanded protection is reinsured by MetroCat Re Ltd. 2023-1, a Bermuda special purpose insurer independent from MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2023-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of $200 million. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of $215 million for any one occurrence and in the annual aggregate, (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds $5 million and less than the $200 million TRIPRA trigger up to a maximum recovery of $200 million for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of $215 million. Recovery under the terrorism policy is subject to a deductible of $25 million per occurrence and $75 million in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed $75 million future losses in that policy year are subject to a deductible of $7.5 million. The terrorism coverages expire on May 1, 2025.

**Commuter Stations and Force Liability**

- Commuter Station Liability Insurance. FMTAC directly insures MTA Long Island Rail Road and MTA Metro-North Railroad under the stations policy, which covers third party liability, bodily injury and property damage and personal injury at commuter rail passenger stations, including moving train hazards while confined to the station area, and includes elevators, escalators, platforms, appurtenances, land, approaches and parking lots, if they are owned by the Related Entities. These policies insure up to the Self-Insured Retention set forth in the table included under the caption "FMTAC Excess Loss Fund" below per occurrence with no aggregate stop loss protection.

- Commuter Force Account Insurance. FMTAC directly insures MTA Long Island Rail Road and MTA Metro-North Railroad under the force account policy, which covers third party liability, physical damage and medical payments on commuter rail force account work (i.e., employees of the commuter railroads in the course of doing work for the benefit of the Related Entities) reimbursed by others. These policies insure up to the Self-Insured Retention set forth in the table included under the caption "FMTAC Excess Loss Fund" below per occurrence with no aggregate stop loss protection.
- The cost of the stations insurance is factored into the level of station maintenance payments required to be paid by the City and the counties in the MTA Commuter Transportation District. See "PART 2. FINANCIAL – INFORMATION REVENUES OF THE RELATED ENTITIES – Financial Assistance and Service Reimbursements from Local Municipalities – *Commuter System Station Maintenance Payments*".

On December 15, 2015, FMTAC increased the primary coverage on the Station Liability and Force Account liability policies from $10 million to $11 million for MTA Metro-North Railroad and MTA Long Island Rail Road.

**FMTAC Excess Loss Fund**

FMTAC operates an Excess Liability Fund ("ELF") insurance program that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. The self-insured retention limits, by agency, are set forth in the table below. The maximum amount of claims arising out of any one occurrence is the total assets of the ELF program available for claims, but in no event greater than $50 million. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying MTA and the other Related Entities above their specifically assigned self-insured retention with a limit of $50 million per occurrence and a $50 million annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. Based on actuarial review and analysis of agencies' underlying losses, the Excess Loss premium for the policy period October 31, 2022 – October 31, 2023 was $14 million. For the next renewal period, a similar analysis will be conducted and appropriate premium charges will be determined. On December 31, 2022, the balance of the assets in this program was $174.04 million.

| | Self-Insured Retention (in millions of dollars) | | | |
|---|---|---|---|---|
| Related Entity | 10/31/06 - 10/31/09 | 10/31/09 - 10/31/12 | 10/31/12 - 10/31/15 | 10/31/15 to Present |
| MTA New York City Transit<br>MaBSTOA<br>MTA Long Island Rail Road<br>MTA Metro-North Railroad<br>MTA Bus | $8 | $9 | $10 | $11 |
| MTA Staten Island Railway<br>MTA Metropolitan Suburban Bus Authority * | $2.3 | $2.6 | $3 | $3.2 |
| MTA Bridges and Tunnels<br>MTA Headquarters | $1.6 | $1.9 | $2.6 | $3.2 |

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords MTA and the other Related Entities additional coverage limits of $357.5 million, for a total limit of $407.5 million ($357.5 million in excess of $50 million). In certain circumstances, when the assets in the ELF program are exhausted due to payment of claims, the All-Agency Excess Liability Insurance Policy will assume the coverage position of $50 million.

* The MTA subsidiary Metropolitan Suburban Bus Authority discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs. FMTAC excess loss coverage remains in place only with respect to claims arising out of MTA Metropolitan Suburban Bus Authority incidents which occurred on or before December 31, 2011.

During 2022 and to date, the ELF program has paid approximately $25.1 million, as the ELF's share of settlements that exceeded the MTA Long Island Rail Road self-insured retention for the New Hyde Park loss on October 8, 2016 and the Atlantic Terminal loss on January 4, 2017.

The following are pending cases and claims that could result in payments under this liability policy in excess of agency retentions, as well as certain noted claims that closed in the past year without payment from the excess loss fund:

- *MTA Metro-North Railroad Valhalla* - An incident occurring on February 3, 2015, when an MTA Metro-North Railroad Harlem Line train struck an automobile in a highway-rail grade crossing between the Valhalla and Hawthorne stations, has resulted in assertion of personal injury claims against the railroad. The driver of the automobile and five passengers on the train were killed. A number of passengers, and the train engineer, were injured. The National Transportation Safety Board (NTSB) adopted its report on the causes of the accident on July 25, 2017, finding that the probable cause of the accident was the driver of the automobile, for undetermined reasons, moving the vehicle on to the tracks while the Commerce Street highway-railroad grade crossing warning system was activated, into the path of the MTA Metro-North Railroad train. Contributing to the accident was the automobile driver: (1) stopping beyond the stop line, within the boundary of the highway-railroad grade crossing, despite warning signs indicating the approach to the grade crossing; and (2) reducing the available time to clear the grade crossing by exiting the vehicle after the grade crossing warning system activated because the driver's attention was diverted by the grade crossing warning system crossing gate arm striking her vehicle. Contributing to the severity of the accident was the third rail penetrating the passenger compartment of the lead passenger railcar and the post-accident fire. While there is no indication from the NTSB's findings that MTA Metro-North Railroad was at fault in connection with this incident, 37 lawsuits have been filed to date against MTA Metro-North Railroad, many of which name other defendants as well. Notwithstanding MTA Metro-North Railroad's position that it has no responsibility for this incident, if plaintiffs are successful in their claims against MTA Metro-North Railroad, damages could exceed the self-insured retention and impact the FMTAC and excess layers of insurance. The motions for summary judgment were recently decided. Judge Lubell of Westchester County Supreme Court issued three separate decisions. The Court denied the motion of defendant Mount Pleasant and Engineer Smalls individually. Defendants MTA and MTA Metro-North's motion were partially granted and denied allowing certain claims pertaining to the operation of the train, the design of the crossing and the training of the engineer. The Town of Mount Pleasant has submitted a motion to renew/reargue. No trial date has been scheduled.

- *MTA Long Island Rail Road - Atlantic Terminal Bumper Block Strike*. An incident occurred on January 4, 2017, when an MTA Long Island Rail Road Far Rockaway Line train struck a bumper block in the Atlantic Terminal-Brooklyn Station. This incident resulted in 173 injury claims, which includes 11 employee FELA claims. To date, 122 claims have been put into suit. MTA Long Island Rail Road has paid out the entire $11 million FMTAC Station Maintenance retention limit in expenses and settlements and $16.5 million has impacted the excess layer of insurance. The current outstanding reserves are $4.8 million and there are 13 open lawsuits.

- *MTA Long Island Rail Road—New Hyde Park Collision* - On October 8, 2016, while MTA Long Island Rail Road was conducting track work east of the New Hyde Park Station on track placed out of service, a piece of track equipment derailed fouling live track which was then struck by a train carrying passengers, causing the passenger train to derail. Numerous passengers and several employees were injured due to this accident. The FRA, along with MTA Long Island Rail Road conducted investigations into this matter. There have been a total of 72 claims related to this accident; 57 passenger injuries, 8 employee injuries and the remaining are the property damage claims. The derailment caused damage to three passenger cars, the track area and the track equipment involved. At this time, 33 lawsuits have been filed against MTA Long Island Rail Road. MTA Long Island Rail Road has paid out the entire $11 million FMTAC Force Account retention limit in expenses and settlements and $8.6 million has impacted the excess layer of insurance. The current outstanding reserves are $3.3 million and there are 11 open lawsuits.

- *DiRusso v. Triborough Bridge and Tunnel Authority, et al.* - Plaintiff, an employee of Tully Construction subcontractor Welsbach Electric Co., commenced this action in Supreme Court, Kings County, regarding an incident on May 16, 2017. Plaintiff was performing electrical work on a man lift in the Hugh Carey Tunnel when a MTA Bridges and Tunnels vehicle operated by an MTA Bridges and Tunnels employee struck the man lift causing the plaintiff to fall approximately 15 to 20 feet and sustain personal injuries. It is claimed that MTA Bridges and Tunnels was in violation of Labor Law §§200, 240 and 241(6) as well as relevant sections of the New York State Industrial Code and OSHA regulations. A settlement was reached on February 23, 2023.

- *Diaz v. MTA New York City Transit Authority* - On January 15, 2015, plaintiff, then 32 years old, was walking within the crosswalk when he was struck by an MTA New York City Transit bus making a right-hand turn. Plaintiff suffered fractures of his right clavicle, right scapular body, pelvis, right hip, right ribs, a right hip dislocation and a traumatic partial amputation or his right foot. A settlement was reached on May 12, 2022.

- *Robert Liciaga v. MTA New York City Transit Authority* - On April 10, 2016, plaintiff, then 23 years old, rode his bicycle through a cordoned-off construction site beneath the elevated subway line and was struck by a rotted cross tie which was dropped into a designated "drop zone". Plaintiff sustained severe and permanent injuries and is now confined to a long-term care facility on Roosevelt Island. A Kings County Supreme Court jury found MTA New York City Transit 100% liable and awarded Plaintiff $110 million. The trial judge reduced the pain and suffering awards after post-trial motions were made thereby reducing the total award to roughly $69 million. MTA New York City Transit appealed. Oral argument has not yet been scheduled by the appellate court. The appeal is pending. Thus, an appellate decision is not expected until mid to late 2023. Settlement has not been reached as plaintiff insists on recovering the entire judgment amount. The case has been reported to ELF, which would be responsible for the remaining limits available excess of the $11 million self-insured retention.

- *Corrigan v. MTA New York City Transit Authority* - On March 8, 2010, 37-year-old male plaintiff made contact with an uptown #6 train at the 14th Street station in Manhattan resulting in a traumatic brain injury, multiple facial, orbital, sinus and subarachnoid hemorrhage. Plaintiff does not remember the accident. The police accident report indicates that immediately before the accident, plaintiff was vomiting and walked into the moving train. Before discovery was completed, plaintiff's ex-wife, who is also a named plaintiff, filed for bankruptcy. Due to the bankruptcy filing, the state court judge stayed this action. The current reserve is $1 million. The case has been reported to ELF, which would be responsible for the remaining limits available excess of the $9 million self-insured retention.

- *Sang Gi Kang, et al v. MTA New York City Transit Authority & MTA* - On September 18, 2017, an MTA New York City Transit bus making a right turn was struck in the rear by a Dahlia Group, Inc. tour bus travelling straight at an excessive speed passing through two red traffic signals. The National Transportation Safety Board concluded that the probable cause of the accident was the Dahlia bus driver's "unintended acceleration of the motor coach and inability to brake for reasons that could not be conclusively determined from the information available". There are currently 25 lawsuits; 4 fatalities, 12 MTA New York City Transit bus passengers including the MTA New York City Transit driver, 2 pedestrians, 2 persons in a car struck by the MTA New York City Transit bus and 4 property damage claims. Discovery is ongoing. Although MTA New York City Transit maintains that liability lies with Dahlia, Dahlia's insurance limit of $5 million is not enough coverage to satisfy the injury and property damage claims from this event. Should MTA New York City Transit be found even 1% liable, it will be responsible for the entirety of any amount awarded plaintiffs. MTA New York City Transit is thus concerned that it may not prevail on a summary judgment motion or trial in this matter. Settlement will therefore be explored as discovery continues. Discovery is ongoing. Demands received from plaintiffs following the November 2022 conference are being evaluated. Defendants' offers will be finalized once all demands have been received and medical evaluations have been completed. The case has been reported to ELF, which would be responsible for the remaining limits available excess of the $11 million self-insured retention.

- *Rajan Patel v. MTA New York City Transit Authority* - On February 17, 2018, plaintiff was struck by a southbound 4 subway train resulting in below the knee amputation of both legs. Although the Note of Issue was filed, discovery is still being completed. A trial date has been set for June 29, 2023. MTA New York City Transit brought third-party actions against two bars that served the plaintiff alcohol prior to the accident. One bar brought an untimely motion to dismiss which was denied. The bar is appealing this denial. The other bar defaulted. MTA New York City Transit intends to vigorously defend this action and cannot predict the outcome of the litigation at this time. The case has been reported to ELF, which would be responsible for the remaining limits available excess of the $11 million self-insured retention.

- *Leykin v. MTA New York City Transit Authority* - On February 2, 2018, plaintiff was struck and dragged by an incoming train at the DeKalb Avenue train station resulting in bilateral knee amputation, right hand injury and skull fractures. Plaintiff filed a note of issue at the end of 2021. A settlement was reached in August 2022.

- *Mathews v. MTA New York City Transit Authority* - On June 6, 2017, while crossing outside the crosswalk and mid-block, plaintiff, was struck by an MTA New York City Transit bus that had just made a right turn. Plaintiff has had multiple surgeries to both legs including a right leg amputation. A trial date has not yet been set. Meanwhile, the parties are exploring third-party mediation. The case has been reported to ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Beauchamp v. MTA New York City Transit Authority* - On the evening of March 6, 2017, plaintiff, then 62 years old, was lawfully crossing southbound in the crosswalk on Houston Street when she was struck by an M14D bus making a left turn onto Houston Street from Avenue D. Plaintiff was pinned under the bus and had to be extracted by the FDNY. Plaintiff sustained multiple injuries and will need future care. Plaintiff is currently using a wheelchair; she is unable to ambulate independently. Trial was scheduled for June 5, 2023, and adjourned by the court without a new date. The MTA New York City Transit self-insured retention is $11 million. The matter has been reported to ELF, which would be responsible for settlement payments up to the remaining available limits.

- *Cropper v. MTA New York City Transit Authority* - On June 6, 2006, 39-year-old Plaintiff was thrown from his bicycle and into the path of an MTA New York City Transit bus when his bicycle was struck by the opening door of a parked taxi. The driver of the MTA New York City Transit bus that struck Plaintiff, was named as a defendant. Because the driver failed to cooperate in his defense, MTA New York City Transit was relieved as his counsel. A default judgment was subsequently entered against him. The case then proceeded to trial against MTA New York City Transit and the taxicab defendants. A New York County jury found MTA New York City Transit and the taxicab driver liable for the accident and judgment was entered in Plaintiff's favor for $10.5 million. MTA New York City Transit appealed and the Appellate Division, First Department dismissed the case against MTA New York City Transit. Years after the Appellate Division ruled, Plaintiff brought a motion against MTA New York City Transit seeking to recoup the $10.5 million judgment based on an assignment Plaintiff obtained from MTA New York City Transit's bus driver. That motion was denied and appealed by Plaintiff. The Appellate Division affirmed the denial of the motion on the grounds that since all claims against MTA New York City Transit had been resolved, the court lacked jurisdiction. Plaintiff has subsequently commenced a new plenary action for the same relief. MTA New York City Transit has moved for summary judgment dismissing the action and Plaintiff has cross-moved for summary judgment seeking an order directing MTA New York City Transit to pay the judgment. A decision on the motions was denied. Plaintiff is expected to appeal the decision. The ELF reported case has been re-opened. The ELF would be responsible for any amount in excess of the $7 million self-insured retention up to the remaining available limits.

- *Aviles v. MTA New York City Transit Authority* - On February 15, 2016, 46-year-old Plaintiff alleges he slipped on a wet and slushy subway platform at the Woodhaven Blvd. station and fell in the space between the platform and two cars of the train as the train pulled out of the station. Plaintiff claims that when he reached the train, it was stopped with its doors closed and that he banged on the doors for 10-15 seconds and therefore should have been seen by the conductor. Plaintiff suffered a fractured pelvis, right hip, right arm, injuries to bladder, prostate and rectum, partial paralysis, vesicocutaneous (bladder) fistula, rectal repair, colostomy and nephrostomy, lacerations, head trauma and severe emotional distress and depression. Plaintiff has undergone numerous surgeries and has had significant issues with wound healing. Plaintiff has undergone numerous surgeries to reconstruct his bladder and parts of his digestive system to restore his ability to control his defecation and urination. From the time of the incident, and allegedly into the foreseeable future, he will have to use stoma bags for both functions. Plaintiff remains bed ridden and continues to reside in a rehabilitation facility. Hospital reports confirm that plaintiff's blood alcohol content was measured at .32 following the accident and that plaintiff had been hospitalized a week before the accident because of a drug overdose that was deemed a suicide attempt. The court ordered a further discovery conference for July 2023 at which time the court is expected to place this case on the trial calendar. Settlement discussions will be entertained at that time. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Maycock v. MTA New York City Transit Authority* - On June 6, 2014, then 7-year-old Plaintiff boarded a B46 MTA New York City Transit bus alone at the corner of Malcolm X Blvd. and Fulton Street, Brooklyn. When the bus pulled away from the bus stop, the plaintiff informed the bus driver that he had been separated from his grandmother and asked to be let off. The bus drove to the other side of the Fulton Street intersection and let the Plaintiff off approximately 40 feet past the intersection where there was no bus stop. The Plaintiff disembarked safely, ran to the intersection, ran across Fulton Street to a concrete triangular medium in the center of the intersection, and after running through eastbound vehicles stopped in traffic, was hit by a westbound car traveling 30-mph. The plaintiff suffered a fractured jaw, had multiple surgeries, multiple pelvic fractures without surgery and alleges a traumatic brain injury. The traumatic brain injury is confirmed by multiple unrelated medical professionals. Plaintiff is now 15, attends high school and has been held back twice. A Kings County Supreme County jury apportioned liability for the accident at 20% against co-defendant and 80% against MTA New York City Transit. At the conclusion of the liability trial, the court granted co-defendant's motion and dismissed the action against co-defendant. Following a damages trial, the jury awarded $18 million ($6 million for past pain and suffering, $12 million for future pain and suffering). MTA New York City Transit's post-trial motion to dismiss the case, or alternatively to reduce the award, is pending. Appellate practice is anticipated to ensue following a decision on the post-trial motions. The case has been reported to ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits.

- *Bronx Bus GWB Overhang Cases* - On January 14, 2021, an articulated MTA New York City Transit bus making a left turn onto the George Washington Bridge overpass, lost control, went onto the sidewalk and through a metal guardrail. The front of the bus fell face down 60' and hung perpendicular to the roadway below, while the rear portion of the bus located behind the accordion remained on University Avenue. The investigation into the cause of the accident is ongoing. There are currently 7 lawsuits; each plaintiff was a passenger on the bus. Claimed injuries range from spinal herniations, leg and hip fractures to shoulder and knee tears. One plaintiff has been granted liability against MTA New York City Transit. MTA New York City Transit has appealed that decision. Since the investigation is ongoing and discovery has just commenced, MTA New York City Transit cannot predict the outcome of the litigation at this time. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Bronx Bus Concrete Median Cases* - On September 9, 2019, at approximately 12:48 pm, an articulated MTA New York City Transit bus struck a concrete median in the roadway while attempting a left-turn in the vicinity of Webster Avenue and 165th Street. Ten (10) personal injury claims have been filed, all passengers on the bus, and 9 are in suit. The injuries claimed range from spinal fusions to shoulder and knee injuries. One case settled. In two of the nine law-suits, Plaintiff has been granted liability against MTA New York City Transit. All remaining cases are in the early stages of discovery. MTA New York City Transit cannot predict the outcome of the litigation at this time. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Brooklyn Bus Brownstone Cases* - On Monday June 7, 2021, an MTA New York City Transit bus traveling southbound on Bedford Avenue near Lincoln Road, rear-ended a truck that was stopped in traffic. The bus then crossed over the opposing lanes of traffic, contacted three other vehicles and drove into a brownstone. The cause of the accident is under investigation, but the bus driver claimed his foot became caught between the gas and brake pedals. Currently, there are 5 property damage claims and 15 personal injury claims, and 4 personal injury lawsuit. MTA New York City Transit cannot predict the outcome of the litigation at this time. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Brooklyn 36th Street Subway Shooting* - On the morning of April 12, 2022, a mass shooting occurred on a northbound N train on an MTA New York City Transit subway in Sunset Park, Brooklyn. A gunman wearing a gas mask threw two smoke grenades onto the train and opened fire. Police said that the gunman was able to fire 33 shots, striking 10 people aboard the Manhattan-bound N train as it pulled into the 36th Street station in Sunset Park, Brooklyn. To date, 9 claims (including 1 loss of consortium claim) have been received and 4 lawsuits have been filed. The case has been reported to the ELF, which would be responsible for any amount is excess of the $11 million self-insured retention up to the remaining limits.

- *Henry v. MTA New York City Transit Authority* - On August 27, 2018, at about 9 pm, while straddling the double yellow lines of Gun Hill Road in the Bronx, outside of a crosswalk, 60-year-old plaintiff was struck in the head by the driver side mirror of an MTA New York City Transit bus. The on-board bus cameras captured the incident. Plaintiff sustained extensive polytrauma due to blunt force impact, including fractures to her hips, ribs and cervical and thoratic spines and lacerations to her liver. Plaintiff was hospitalized for 2.5 months, during which time she was intubated for 3 weeks and underwent spinal fusion for levels T5 to T10 and hip surgeries to repair severe socket fractures in both hips. Discovery is ongoing. A court conference is scheduled for June 20, 2023, at which time settlement will be explored. The case has been reported to ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits.

- *Bronx Bus accident with FDNY Truck* - On the afternoon of November 16, 2018, an MTA New York City Transit bus traveling northbound on Webster Avenue in the Bronx, collided with an FDNY firetruck (with lights on) that had turned onto Webster Avenue from East 175th Street in the Bronx. The incident was captured on bus video. There are 12 personal injury lawsuits, all of which are in the early stages of discovery. Thus, MTA New York City Transit cannot predict the outcome of the litigation at this time. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *Singh v. MTA New York City Transit Authority* - On June 12, 2018, at approximately 7:10 pm, 59-year-old plaintiff, a limo driver, was stopped for a red signal on northbound 3rd Avenue when his vehicle was struck from behind by an MTA New York City Transit Authority bus. Plaintiff sustained herniated and bulging discs in cervical and lumbar spine, requiring a 2-level cervical fusion, 2 lumbar fusion surgeries, bilateral shoulder tears and bilateral knee sprains with derangement requiring bilateral knee injections and recommendation for future surgery. Liability was granted against MTA New York City Transit in September 2020. This matter is on the trial calendar; however, discovery is ongoing. A pre-trial conference is scheduled for late June 2023, with jury selection scheduled for November 1, 2023. Settlement will be explored once discovery is completed. The case has been reported to ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

- *125th Street Derailment* - On June 27, 2017, a southbound A train pulling into the 125th Street station in Harlem derailed with wheels of two cars off the tracks. The derailment also caused damage to subway cars, track, and related track equipment and infrastructure in the vicinity of the derailment. Thirty-one (31) personal injury lawsuits were commenced. A majority of such lawsuits have settled. Thirteen (13) cases remain. Injuries alleged in the remaining cases include fusions surgeries and discectomies. The case has been reported to ELF, which would be responsible for any amount in excess of the $10 million self-insured retention up to the remaining limits available.

- *Bronx Bus and Van collision* - On July 12, 2022, at approximately 10:26 am, an MTA New York City Transit bus traveling northbound on Spofford Avenue collided with a van traveling eastbound on Longfellow Avenue that proceeded through a stop sign, without stopping. The impact was to the left rear wheel well of the bus. The accident was captured on bus video. Eight personal injury claims, all passengers on the bus, have been filed and none of them are in suit. Thus, MTA New York City Transit cannot predict the outcome of the litigation at this time. Claimed injuries range from cervical and lumbar spine, shoulders, knees and ankles. The case has been reported to ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits.

- *Pisano, Jr. v. SIRTOA* - On November 24, 2016, at about 4:00 am, then 23-year-old plaintiff was intoxicated at the Bay Terrace Staten Island Railway train station. He was seen in the station video stumbling and standing on the platform for about 13 minutes before stumbling to the end of the platform. The camera loses sight of him at that point. The train is seen entering the station and making a normal station stop. The Engineer states that as he was entering the station, he saw what he perceived to be a plastic garbage bag to the left of the train as he pulls into the station. Upon making the station stop, he asked his conductor (operating at the rear of a 4-car train) to check behind the train and see if he saw anything. The conductor observed plaintiff laying injured across the tracks. Plaintiff sustained a traumatic amputation of his right leg below the knee which was surgically raised to an above the knee amputation due to infections and debridements, a head injury with degloving to the scalp, surgical removal of left kidney, removal of spleen, pelvic fracture, l-5 fracture, lacerations to liver, bladder and prostate, colectomy with subsequent reversal, diaphragmatic hernia and psychological injury involving stress, nightmare, anxiety and depression. Plaintiff returned to work after 10 months. He is being treated for depression and may need revision surgery. Discovery and depositions are continuing. A compliance conference has been scheduled for June 15, 2023. The case has been reported to the ELF, which would be responsible for any amount in excess of the $3.2 million self-insured retention up to the remaining limits available.

- *Barragan v. MTA New York City Transit Authority* - 29-year-old plaintiff, while walking within a crosswalk, was struck by an MTA New York City Transit bus at the intersection of Fifth Avenue and 60th Street in Brooklyn. Plaintiff claimed three cervical herniations and one lumbar herniation without surgery, knee injuries requiring arthroscopic surgery on each knee and a left rotator cuff tear without surgery. Following a damages trial, a Kings County jury awarded plaintiff $10.6 million ($1,700,000 for past pain and suffering; $5,500,000 for future pain and suffering and $3,400,000 over 47 years for future medical expenses). Judgment was entered in July 2020 in the approximate sum of $14.5 million. MTA New York City Transit has appealed. An appellate decision is expected sometime in late 2023/early 2024. The case has been reported to ELF, which would be responsible for any amount in excess of the $10 million self-insured retention up to the remaining limits available.

- *Malerba v. MTA New York City Transit Authority* - On September 2, 2008, 51-year-old plaintiff, an employee of 3rd party defendant Ameron Global (subcontractor hired by to maintain and service fire extinguisher systems in the subway booths), was severely injured while servicing a fire suppressant tank at Ameron Global's facility when the tank exploded. As a result, plaintiff sustained vision loss in the left eye, hearing loss, multiple left-sided facial fractures to the occipital bones and maxilla, skull fractures, right wrist and arm fractures and traumatic brain injuries. Plaintiff also has a significant claim for economic damages. This matter is currently on the trial calendar with pending motions to strike the Note of Issue due to outstanding discovery issues. The case has been reported to ELF, which would be responsible for any amount in excess of the $8 million self-insured retention up to the remaining limits available.

- *Staten Island Bus Collision with Dump Truck* - On March 7, 2022, at approximately 9:56 am, an MTA New York City Transit S40 bus was traveling eastbound on Richmond Terrace, near Stuyvesant Avenue, in Richmond County when it drove into the rear of a stopped, double parked, dump truck owned by co-defendant Jet Hauling LLC. The right front of the bus made contact with the left rear of the truck. The bus was equipped with video cameras that recorded the accident. In a recorded call to Console immediately following the collision, the bus operator admitted to falling asleep at the wheel. The police issued the co-defendant's dump truck a ticket for double parking. Twelve notices of claim for personal injury were filed. One was withdrawn. Seven lawsuits have commenced. The case has been reported to the ELF, which would be responsible for any amount in excess of the $11 million self-insured retention up to the remaining limits available.

**All Agency Protective Liability**

- *FMTAC All-Agency Protective Liability Program*. Under the All-Agency Protective Liability Program ("AAPL"), FMTAC directly insures the Related Entities against claims arising out of work performed by independent contractors on capital projects. The policy provides coverage of $2 million per occurrence.
- *FMTAC All-Agency Protective Excess Liability Program*. FMTAC directly insures the Related Entities to provide excess coverage above the AAPL. The policy provides coverage of $9 million in excess of $2 million per occurrence, with an $18 million annual aggregate. Any excess is covered by the ELF program.

**Paratransit and Non-Revenue Vehicle Policies**

- *MTA New York City Transit Paratransit Program*. FMTAC maintained a commercial automobile liability policy that provided coverage to vendors under the Access A Ride contract, to perform services on behalf of MTA New York City Transit with policy limits of $1 million per occurrence, excess of a $2 million self-insured retention. Effective March 1, 2023, FMTAC maintains a policy that provides $3 million per occurrence to fund self-insured losses.
- *MTA Non-Revenue Auto Liability*. This program covers non-revenue vehicles (i.e., administrative and other vehicles not used for the generation of passenger revenues) of MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, MTA Police Department, the MTA Inspector General, MTA Construction and Development and MTA Headquarters. The program limit is $11 million per occurrence on a combined single limit with a $1 million deductible for each accident. Primary limits of $6 million was procured through the commercial marketplace. Excess limits of $5 million was procured through FMTAC. FMTAC renewed its $1 million deductible buy back policy, where it assumes the liability of the agencies for their deductible.
- Claims and claims administration are funded out of the General Operating Account.

**Premises Liability**

Premises Liability insurance covers liability arising out of the ownership, maintenance and use of various MTA locations, including 341/345/347 Madison Avenue, 2 Broadway, and the MTA Inspector General's office at 1 Penn Plaza. The program provides the Related Entities with coverage of up to $1 million per occurrence with a $2 million aggregate.

**Owner Controlled Insurance Program**

In an owner controlled insurance program ("OCIP"), MTA RIM arranges for the insurance coverage for all of the construction activity covered by the OCIP, rather than reimbursing the individual contractors and subcontractors for obtaining their own insurance. OCIPs have historically been regarded as more economical than requiring the contractors and subcontractors to obtain the insurance directly. Economies arise from, among other things, the risk pooling nature of the program (i.e., the risks relating to insuring each individual project separately is generally considered greater than the risks associated with collectively insuring many projects) and that MTA, due to its financial strength and successful operation of safety management programs at the job sites, is generally better able to procure insurance at favorable rates than individual smaller contractors and subcontractors. In addition, an OCIP provides the same level of insurance coverage at each project, which was not always possible when the individual contractors and subcontractors were required to obtain the insurance.

Generally, commercial insurance policies are obtained for the OCIP, but FMTAC will typically retain a significant portion of each insured loss which ranges from the first $500,000 to $10,000,000 of each insured workers' compensation or general liability loss and up to the first $50 million of a builders risk loss on a network expansion project. FMTAC holds deposit moneys and/or collateral in trust with a commercial bank as security for its reimbursement obligation to the commercial insurance carrier for any losses. Unexpended funds are retained by FMTAC and used to discount future OCIP programs. The following are active MTA OCIP programs with ongoing projects:

- MTA New York City Transit, MTA Long Island Rail Road, MTA Metro-North Railroad, SBDP 2015-2019 Capital Programs;
- MTA Long Island Rail Road Expansion Project from Floral Park to Hicksville;
- Bridge Program 2020-2024;
- Penn Station Access; and
- Mini OCIP 2022.

**Builder's Risk**

- Builder's Risk insurance is a type of property insurance that provides coverage for physical damage to the insured structure during the course of construction. Builder's Risk insurance is not liability insurance.
- Builder's Risk for the Capital Program OCIPs covers a project for the full project value up to a limit of $100 million. Penn Station Access Builder's Risk was placed on December 31, 2022 with a limit of $300 million.
- Claims and claims administration are funded out of the FMTAC General Operating Account.

## LITIGATION

**General**

The Related Entities maintain extensive property, liability, station liability, force account, construction, and other insurance as generally described above in this Part 6 under "INSURANCE". Claims for money damages described below may be fully or substantially covered by insurance, subject to the individual agency retention set forth under "INSURANCE – FMTAC Excess Loss Fund", where applicable. Each of the Related Entities additionally annually budgets an amount that it projects will be sufficient to pay for judgments and claims during that year.

The Related Entities also provide accruals in their financial statements for their estimated liability for claims by third parties for personal injury arising from, among other things, bodily injury (including death), false arrest, malicious prosecution, and libel and slander, for property damage for which they may be liable as a result of their operations, and advertising offense, including defamation, invasion of right of privacy, piracy, unfair competition, and idea misappropriation. The estimated liabilities are based upon independent actuarial advice obtained by the Related Entities. However, except in special circumstances and except for the annual judgments and claims budgeted amounts, additional cash reserves are not generally established in an amount equal to the full amount of the accrual.

For the Related Entities on a consolidated basis, a summary of activity in estimated liability as computed by actuaries arising from injuries to persons, including employees, and damage to third-party property, for the year ended December 31, 2022, is contained in Footnote 11 ("Estimated Liability Arising from Injuries to Persons") to the MTA's audited Consolidated Financial Statements for the years ended December 31, 2022 and 2021.

**MTA**

*Lockheed Martin Transportation Security Solutions v. MTA Capital Construction and MTA*. MTA is a defendant, along with MTA Construction and Development, in an action brought in April 2009 by Lockheed Martin Transportation Security Solutions ("Lockheed") in federal district court in Manhattan. (*Lockheed Martin Transportation*

*Security Solutions v. MTA Capital Construction Company and Metropolitan Transportation Authority*.) Lockheed initially sought a judgment declaring that MTA and MTA Construction and Development were in breach of its contract for furnishing and installing an integrated electronic security ("IESS") program, and an order terminating Lockheed's obligations. Following MTA's termination of its contract, Lockheed amended its complaint to seek damages for delay and disputed work items ($80 million, later revised to $93 million) or, alternatively, for the alleged "reasonable value of work performed" by Lockheed ($137 million, later raised to $149 million), exclusive of pre-judgment interest, based on its claim that MTA wrongfully terminated the contract. MTA and MTA Construction and Development are vigorously contesting Lockheed's claims for money damages and counterclaimed, alleging that Lockheed materially breached the contract and seeking damages which were estimated to be $205,909,468, exclusive of pre-judgment interest. Following the completion of discovery, in July 2013, both MTA and Lockheed moved for partial summary judgment in connection with various claims.

By decision dated September 16, 2014, the court granted in part and otherwise denied each party's respective motion. With respect to MTA's motion, the Court dismissed Lockheed's claim under a *quantum meruit* theory, thereby reducing MTA's exposure by roughly $50 million, to approximately $94 million (exclusive of pre-judgment interest). Trial commenced on October 6, 2014 and concluded on November 14, 2014. Based on the trial record, MTA reduced its damages claim to $189 million, exclusive of pre-judgment interest. Lockheed's claim for damages remained the same. Post-trial papers were submitted on November 24, 2014 and the final reply papers were submitted on December 5, 2014. The parties now await the decision of the Court. The final outcome of this action cannot be determined at this time.

In July 2009, Lockheed's performance bond sureties on the contract commenced a related action in federal district court in Manhattan against Lockheed and the MTA defendants, alleging that they are unable to conclude that the conditions to their obligations under the bond have been satisfied. They seek a declaration of the rights and obligations of the parties under the bond. (*Travelers Casualty and Surety Company, et. al. v. Metropolitan Transportation Authority, et al.*). MTA and MTA C&D answered and counterclaimed against the sureties, seeking damages in connection with the sureties' violation of their bond obligations in an amount to be determined at trial. The matter was consolidated with the *Lockheed* action above. In October 2013, the sureties moved for partial summary judgment on their exposure, seeking a reduction of their potential obligation by $5.4 million to account for a progress payment issued by MTA to Lockheed post-default. By decision dated September 15, 2014, the Court denied that motion. The final outcome of this action must await the outcome of the underlying action (*Lockheed v. MTA*, discussed above), and cannot be determined at this time.

*Actions for Personal Injuries/Property Damage/Workers' Compensation*. As of December 31, 2022, there were approximately 11 actions and claims pending against MTA comprised of Federal Employers' Liability Act, no fault, and other personal injury and property damage claims, which would be paid from MTA's operating budget in the event of any liability. Also, as of that date, there were approximately 15 pending Workers' Compensation cases.

**Transit System**

As of December 31, 2022, MTA New York City Transit and MaBSTOA had an active inventory of 10,129 personal injury claims and lawsuits and 1,489 property damage matters arising out of the operation and administration of the Transit System. In addition, with respect to the Access-A-Ride (Paratransit) program, as of December 31, 2022, there was an active inventory of approximately 652 personal injury cases and approximately 70 property damage cases arising out of the operation of vehicles leased to outside vendors that provide Access-A-Ride service. Such Access-A-Ride claims are covered by a commercial automobile policy which in 2022, had policy limits of $3 million per occurrence, subject to a $2 million deductible.

As of December 31, 2022, MTA Staten Island Railway had a pending inventory of 3 claims and lawsuits relating to personal injury and property damage arising from the operations of MTA Staten Island Railway.

*Workers' Compensation and No-Fault*. As of December 31, 2022, MTA New York City Transit and MaBSTOA had an active inventory of approximately 11,435 Workers' Compensation cases and approximately 1,599 no-fault cases. As of December 31, 2022, there were 25 Workers' Compensation cases for MTA Staten Island Railway.

*Other Litigation*. As of December 31, 2022, there was an inventory of approximately 581 federal and state court plenary litigation actions and special proceedings as well as administrative matters pending before various state, federal and local administrative agencies.

In February 2022, a putative class action (*Valerie Britt, et al. v. MTA, et al.)* was filed in Supreme Court, New York County against MTA and MTA New York City Transit by five individual plaintiffs who allege that defendants violated the New York City Human Rights Law by failing to provide to the customers with disabilities who use Access-a-

Ride the same fare discounts provided to subway and bus customers. Plaintiffs and are seeking declaratory relief as well as money damages, and attorneys' fees. Defendant's Amended Answer was filed on February 1, 2023.

*Actions Relating to the Transit Capital Program*. MTA New York City Transit has received claims from various contractors engaged in work on various Transit Capital Program projects. The aggregate amount demanded by all such claimants could result in an increase in the cost of the capital projects that are the subject of such disputes. The Transit Capital Program contemplates the payments associated with such contractor and non-contractor claims from project-specific and general program contingency funds, as well as other available monies pledged for capital purposes.

Other matters relating to the Transit Capital Program are noted below.

In 2016, a lawsuit was filed in the U.S. District Court for the Southern District of New York (*Bronx Independent Living Services, et al. v. MTA, et al.*) challenging the lack of elevators at Middletown Road subway station located in the Bronx. MTA and MTA New York City Transit were sued by two disabled rights advocacy organizations and two individuals who allege violations of the ADA and other statutes, for proceeding with certain construction work at the station without also installing elevators or ramps. The complaint seeks declaratory and injunctive relief; no claim for monetary relief is asserted. MTA and MTA New York City Transit answered the complaint in September 2016 and denied any asserted violation of applicable law. In March 2018, the federal government was granted leave to join the action and filed an intervenor-complaint, which defendants answered in April 2018. Fact discovery has been conducted and plaintiffs' motion for partial summary judgment was granted by the court in March 2019. The court held that the alterations made at the Middletown Road station affected the "usability" of the station, thereby triggering the application of the U.S. Department of Transportation regulation set forth in 49 C.F.R. Section 37.43(a)(1). Expert discovery relating to the defendants' principal defense—that installing an elevator or ramp at the Middletown Road Station as part of a larger renewal project was "technically infeasible" within the meaning of the federal DOT regulations and hence not legally required—has been completed. The parties' cross-motions for summary judgment were each denied on March 29, 2021. The parties are engaged in settlement negotiations. The outcome of the litigation cannot be determined at this time. Were plaintiffs to prevail in obtaining an injunction requiring installation of an elevator or ramp at the Middletown Road station, the costs associated with such an injunction would fall within the coverage of the MTA New York City Transit capital program.

In 2017 and 2019, two purported class actions concerning the lack of elevators in the subway system were filed against MTA New York City Transit and MTA by several individuals and advocacy organizations on behalf of persons with mobility disabilities. In *Center for Independence of the Disabled, New York ("CIDNY"), et al. v. MTA, et al.* (Supreme Court, New York County), plaintiffs asserted that defendants, by not having installed elevators in all subway stations in the system, discriminated against plaintiffs on the basis of their disabilities in violation of the New York City Human Rights Law. In May of 2019, *De La Rosa v. MTA, et al.* (formerly *Forsee, et al. v. MTA, et al.*), an action was filed against MTA, MTA New York City Transit and the City of New York alleged that defendants violated the Americans with Disabilities Act and other state and local laws by proceeding with renovation work at subway stations over the years without installing elevators or ramps. Plaintiffs in both actions sought declaratory and injunctive relief. Plaintiffs and the Transit Defendants have entered into a settlement agreement concerning both of these matters which has received final federal court approval on April 7, 2023 and final State Court approval on April 24, 2023.

In 2017, in *CIDNY et al. v. MTA, et al.* (Southern District of New York), plaintiffs allege, among other things, that defendants inadequately maintain the existing elevators in the subway system, provide insufficient notice to elevator users about outages, and provide insufficient alternative transportation during elevator outages. These alleged deficiencies are claimed to constitute discrimination in violation of Title II of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the City Human Rights Law. Defendants' motion for summary judgment was granted in March 2020. In that decision, the District Court noted that MTA and MTA New York City Transit had shown system-wide, elevators are in working order an average of 96.5 to 98.7% of the time, and that the plaintiffs had not identified any measures required by law that MTA and MTA New York City Transit had failed to undertake. In August 2021, the Second Circuit vacated the judgment and remanded the case to the District Court, but solely for further consideration of whether MTA New York City Transit provides reasonable accommodations to those subway riders impacted by elevator outages by way of notification and alternative modes of transportation such as paratransit and buses. Additional discovery is now complete, and MTA New York City Transit's renewed summary judgment motion was filed on March 17, 2023, with all briefing to be completed by April 28, 2023.

**Commuter System**

*Actions for Personal Injuries/Property Damage*. As of December 31, 2022, MTA Metro-North Railroad had an active inventory of approximately 360 personal injury claims and lawsuits arising out of the operation and administration of MTA Metro-North Railroad, of which 178 were the result of claims filed by employees pursuant to FELA, and approximately 182 were claims filed by third parties. Also, as of that date, there were no pending property damage cases. With respect to claims for personal injury arising from the December 1, 2013 derailment of a southbound MTA Metro-North Railroad train north of the Spuyten Duyvil station in the Bronx, MTA Metro-North Railroad has exhausted its self-insured retention of $10 million and FMTAC has reimbursed MTA Metro-North Railroad $50 million. Amounts incurred in excess of the $10 million self-insured retention with respect to such Spuyten Duyvil claims are covered under an all-agency excess liability policy insured by FMTAC for $50 million per occurrence. Additionally, MTA maintains $350 million in liability coverage through the commercial insurance markets that is in excess of the $50 million coverage layer provided by FMTAC.

*Valhalla Law Suits*. An incident occurring on February 3, 2015, when an MTA Metro-North Railroad Harlem Line train struck an automobile in a highway-rail grade crossing between the Valhalla and Hawthorne stations, has resulted in assertion of personal injury claims against the railroad. The driver of the automobile and five passengers on the train were killed. A number of passengers, and the train engineer, were injured. The NTSB adopted its report on the causes of the accident on July 25, 2017, finding that the probable cause of the accident was the driver of the automobile, for undetermined reasons, moving the vehicle on to the tracks while the Commerce Street highway-railroad grade crossing warning system was activated, into the path of the MTA Metro-North Railroad train. Contributing to the severity of the accident was the third rail penetrating the passenger compartment of the lead passenger railcar and the post-accident fire. While there is no indication from the NTSB's findings that MTA Metro-North Railroad was at fault in connection with this incident, 37 lawsuits have been filed to date against MTA Metro-North Railroad, many of which name other defendants as well. Notwithstanding MTA Metro-North Railroad's position that it has no responsibility for this incident, if plaintiffs are successful in their claims against MTA Metro-North Railroad, damages could exceed the self-insured retention and impact the FMTAC and excess layers of insurance.

The motions for summary judgment were recently decided. Judge Lubell of Westchester County Supreme Court issued three separate decisions. The Court denied the motion of defendant Mount Pleasant and Engineer Smalls individually. MTA Metro-North Railroad's motion was partially granted and denied, allowing certain claims pertaining to the operation of the train, the design of the crossing and the training of the engineer. It is likely that if the case were to go to trial it would be scheduled in the second or third quarter of 2023, notwithstanding possible appeals.

*Rodriguez v. City of New York, et al.* In March 2021, Felipe Rodriguez filed suit against the City, MTA, MTA Long Island Rail Road, and several former NYPD and MTA Long Island Rail Road police officers. Rodriguez was arrested and convicted of murder in 1987, but was granted clemency and released in 2017. The District Attorney reinvestigated the case and allegedly uncovered the fact that detectives, including certain former MTA Long Island Rail Road police detectives, had coerced false statements from witnesses and committed other violations and misconduct. Rodriguez claims malicious prosecution and various constitutional claims. Motions to dismiss concerning certain counts were briefed in 2021. On March 14, 2022, the court granted in part and denied in part the motions, dismissing claims against MTA and MTA Long Island Rail Road corporate entities. On June 7, 2022, the court granted in part and denied in part a motion by Rodriguez for reconsideration of the March 14, 2022 order, and reinstated his *Monell* claim against the NYPD. The case against the individuals is proceeding with discovery, and a court-supervised settlement conference is set for July 14, 2022. The outcome of this litigation cannot be determined at this time.

As of December 31, 2022, MTA Long Island Rail Road had an active inventory of approximately 1,290 personal injury claims and lawsuits arising out of the operation and administration of the MTA Long Island Rail Road, of which 770 were the result of claims filed by employees pursuant to the FELA, and approximately 520 were claims filed by third parties. Also, there were approximately 31 pending property damage matters and 188 affirmative claims.

*MTA Long Island Rail Road - Atlantic Terminal Bumper Block Strike*. An incident occurred on January 4, 2017, when an MTA Long Island Rail Road Far Rockaway Line train struck a bumper block in the Atlantic Terminal-Brooklyn Station. This incident resulted in 173 injury claims, which includes 11 employee FELA claims. To date, 122 claims have been put into suit. MTA Long Island Rail Road has paid out the entire $11 million FMTAC Station Maintenance retention limit in expenses and settlements and $13.4 million has impacted the excess layer of insurance. The current outstanding reserves are $5.7 million and there are 16 open lawsuits.

*MTA Long Island Rail Road - New Hyde Park Collision*. On October 8, 2016, while MTA Long Island Rail Road was conducting track work east of the New Hyde Park Station on track placed out of service, a piece of track equipment derailed fouling live track and was struck by a train carrying passengers causing the passenger train to derail. Numerous passengers and several employees were injured due to this accident. The FRA, along with MTA Long Island Rail Road, conducted investigations into this matter. There has been a total of 72 claims related to this accident, 57 passenger injuries, 8 employee injuries and the remaining are the property damage claims. The derailment caused damage to three passenger cars, the track area and the track equipment involved. At this time, 33 lawsuits have been filed against MTA and MTA Long Island Rail Road. MTA Long Island Rail Road has paid out the entire $11 million FMTAC Force Account retention limit in expenses and settlements, and $7.8 million has impacted the excess layer of insurance. The current outstanding reserves are $5.3 million and there are 11 open lawsuits.

*Actions Relating to the Commuter Capital Program*. From time to time, MTA Long Island Rail Road and MTA Metro-North Railroad receive claims relating to various Commuter Capital Program projects. In general, the aggregate amount demanded by all such claimants, if recovered in full, could result in a material increase in the cost of the capital projects that are the subject of such disputes. The capital program contemplates the payment of such claims from project-specific and general program contingency funds, as well as other available moneys pledged for capital purposes.

*Amtrak v. MTA Long Island Rail Road* – Amtrak claims that the railroads operating in Penn Station are responsible for the cleanup of PCBs and other hazardous substances that were deposited on the tracks, which may have migrated to other areas of the station including, but not limited to, lighting, drains and other equipment. MTA Long Island Rail Road operated commuter rail lines in Penn Station during a 50-year period when PCBs were used in train transformers. Amtrak alleges that these transformers leaked and contaminated the tracks in Penn Station. Amtrak presented to MTA Long Island Rail Road a model which claims, based on the number of trains and usage, that MTA Long Island Rail Road is responsible for 20% of cleanup costs which are approximately $30 million to date. MTA Long Island Rail Road has entered into a tolling agreement with Amtrak while further investigation is being conducted.

Newtown Creek – Newtown Creek is a federally-listed Superfund site. A group of private parties known as the Newtown Creek Group ("NCG") are working together on the investigation and eventual remediation of Newtown Creek. In 2017, NCG sent a Notice of Potential Liability pursuant to CERCLA to MTA Long Island Rail Road concerning the Creek. In addition, the NCG has asserted that MTA Long Island Rail Road may be a potential responsible party due to its historical operations along Newtown Creek. Additional parties were sent similar notices, who are acting cooperatively along with MTA Long Island Rail Road as the "small parties group". The NCG has approached the small parties group, requesting that the group agree to contribute to the cost of an "early action" remedy of the first two miles of the 3.5-mile creek. The members of the small parties group made an initial settlement offer for remediation costs relative to the first 0-2 miles of contamination at the Superfund site and investigation costs to date relative to the entire Superfund site which was rejected.

**MTA Bridges and Tunnels**

*Farina, et al. v. MTA, TBTA, et al*. – A putative class action lawsuit (*Farina v. MTA, TBTA, Transworld Systems, Inc., and Conduent, Inc.*) was filed in the U.S. District Court for the Southern District of New York on February 16, 2018 and assigned to U.S. District Judge Naomi Reice Buchwald. MTA Bridges and Tunnels and MTA were served on February 21, 2018. The representative plaintiff in the *Farina* case alleged that the $100 violation fee allegedly imposed for each toll violation at MTA Bridges and Tunnels is excessive and that the fee policies, practices, and collection methods are illegal and unconstitutional. Putative class action lawsuits were also filed by the same plaintiffs' counsel in the same federal court on February 20, 2018 (*Gardner v. MTA, TBTA, The Port Authority of New York and New Jersey, AllianceOne Receivables Management, Inc. and Conduent, Inc.*) and on March 5, 2018 (*Troiano v. MTA, TBTA, The Port Authority of New York and New Jersey, New York State Thruway Authority, Transworld Systems, Inc., AllianceOne Receivables Management, Inc. and Conduent, Inc.*). MTA Bridges and Tunnels and MTA were served in *Gardner* on March 6, 2018 and in *Troiano* on April 6, 2018. The allegations regarding MTA Bridges and Tunnels and MTA were substantially the same in all three actions, except that *Gardner* and *Troiano* also alleged that $50 violation fees are excessive and improper. On April 16, 2018, the Court consolidated the three cases into one case and on April 30, 2018 plaintiffs filed one consolidated complaint (*Farina, Gardner, Troiano, Ritchie, and Rojas v. MTA, TBTA, The Port Authority of New York and New Jersey, New York State Thruway Authority, Transworld Systems, Inc., AllianceOne Receivables Management, Inc., Linebarger Goggan Blair & Sampson, LLP and Conduent, Inc.*). The consolidated complaint included plaintiffs Farina, Gardner, and Troiano as well as two additional plaintiffs, Richie and Rojas, whose alleged claims also arose from the assessment of $50 and $100 violation fees.

After discovery and on June 30, 2021, MTA Bridges and Tunnels and the Port Authority filed Motions for Summary Judgment. On March 10, 2022, the Court issued its Opinion and Order granting MTA Bridges and Tunnel's Motion for Summary Judgment as to both remaining claims (Excessive Fines and Unjust Enrichment) against each of the Plaintiffs. The Court also granted the Port Authority's Motion for Summary Judgment. The Court entered its judgment on March 11, 2022.

On April 11, 2022, Plaintiffs filed their Notice of Appeal to the U.S. Court of Appeals for the Second Circuit. By so-ordered stipulation filed on September 14, 2022, the appeal was withdrawn with prejudice as to Appellee Port

Authority. On September 23, 2022, Plaintiffs-Appellants served and filed their opening brief as to Appellee MTA Bridges and Tunnels. On December 23, 2022, Appellee MTA Bridges and Tunnels filed its answering brief. On February 3, 2023, Plaintiffs-Appellants filed their reply brief.

*Conte, et al. v. MTA and TBTA* – This putative collective action lawsuit was filed in the U.S. District Court for the Southern District of New York on March 23, 2021 and assigned to U.S. District Judge Valerie E. Caproni. Plaintiffs, Bridge and Tunnel Maintainers and Custodians, allege that they regularly perform pre-shift work without compensation; that there is a time-shaving policy that automatically rounds officers' check-in times up to their scheduled tour; that supplemental pay, including differentials and bonuses, are not included in the regular rate of pay when calculating overtime; that the payment of overtime is delayed; and that, for Maintainers, overtime is only paid for time in excess of 80 hours in a workweek, rather than 40. On May 28, 2021, MTA and MTA Bridges and Tunnels filed answers with appropriate affirmative defenses. The matter was mediated on October 21, 2021 before Carol Wittenberg and the parties were unable to reach a settlement. On December 8, 2021, Plaintiffs filed a motion for conditional certification of a collective action under the Fair Labor Standards Act ("FLSA") and the motion was granted on January 4, 2022. MTA and MTA Bridges and Tunnels did not oppose the motion, but reserved the right to move to decertify the collective after the close of fact discovery. Notice was issued to all putative members of the FLSA collective who had not yet joined. The opt-in period closed on March 4, 2022, and approximately 223 opt-in plaintiffs filed consent to join forms. At the status conference on November 10, 2022, the Court stayed all deadlines until April 7, 2023 to enable the parties to update their discovery responses and expert analyses and try to resolve the case by then or proceed with motions for decertification and summary judgment soon thereafter. Outside counsel is vigorously defending this matter.

*Mercado, et al. v. MTA and TBTA* – This putative collective action lawsuit was filed in the U.S. District Court for the Southern District of New York on August 17, 2020 and assigned to U.S. District Judge Analisa Torres. Thereafter, the parties engaged in motion practice related to conditional certification of a putative FLSA collective and consolidation with a similar matter commenced by other Bridge and Tunnel officers, which extended the time for MTA Bridges and Tunnels and MTA to interpose answers to the complaint. Plaintiffs, Bridge and Tunnel Officers, allege that they regularly perform pre-shift and post-shift work without compensation; that there is a time-shaving policy that automatically rounds officers' check-in times up to their scheduled tour; that supplemental pay, including differentials and bonuses, are not included in the regular rate of pay when calculating overtime; and that the payment of overtime and other wages is delayed. On July 15, 2021, MTA and MTA Bridges and Tunnels filed answers with appropriate affirmative defenses. The matter was mediated on January 19, 2022 before Carol Wittenberg and the parties were unable to reach a settlement but continued settlement negotiations and engaging in discovery. Eventually, the parties agreed to a proposed settlement and later executed a settlement agreement on July 28, 2022. The settlement papers were ultimately submitted for Court approval on December 9, 2022, where final approval remains pending.

*Actions for Personal Injuries/Property Damage*. As of December 31, 2022, MTA Bridges and Tunnels had an active inventory of approximately 132 personal injury claims and lawsuits (including intentional torts such as false arrest) and approximately 25 property damage matters arising out of the operation and administration of the MTA Bridges and Tunnels facilities (including construction).

*Workers' Compensation and No-Fault*. As of December 31, 2022, MTA Bridges and Tunnels had an active inventory of approximately 589 Workers' Compensation cases and 1 no-fault cases.

*Actions Relating to MTA Bridges and Tunnels' Capital Program*. From time to time, MTA Bridges and Tunnels receives claims relating to various MTA Bridges and Tunnels' Capital Program projects. In general, the aggregate amount demanded by all such claimants, if recovered in full, could result in a material increase in the cost of the capital projects that are the subject of such disputes. The Capital Program contemplates the payment of such claims from project-specific and general program contingency funds, as well as other available moneys pledged for capital purposes. Therefore, such claims are not listed here.

**MTA Bus**

As of April 7, 2023, MTA Bus had an active inventory of approximately 1,262 personal injury claims and lawsuits, approximately 1,712 property damage matters, approximately 688 no-fault cases arising out of the operation and administration of the MTA Bus System, and approximately 2,131 Workers' Compensation cases.

**Metropolitan Suburban Bus Company***

*Actions for Personal Injuries/Property Damage*. As of December 31, 2022, Metropolitan Suburban Bus Company had an active inventory of 10 personal injury claims and lawsuits and 1 property damage matters arising out of the operation and administration of MTA LI Bus.

*Workers' Compensation and No-Fault*. As of December 31, 2022, Metropolitan Suburban Bus Company had approximately 1 Workers' Compensation cases and 1 open no-fault claim.

* The MTA subsidiary, Metropolitan Suburban Bus Authority, discontinued its provision of transportation services at the end of 2011. Its activities are limited to the winding up of its affairs.

## INDEX OF DEFINED TERMS


Penn Station LIRR Concourse Project
(Low-Hanging 'Head Knockers' Removed)

# Part II. Tab 1: Issues Covered by this Annual Report

**(Dollars in Millions)**
**As of April 28, 2023**

| Credit/Ratings | Series Information | | | | Outstanding | | | |
|---|---|---|---|---|---|---|---|---|
| **Underlying Ratings (Moody's/S&P Global/Fitch/KBRA)** | **Series** | **Original Date of Issue** | **Series Final Maturity on Outstanding Principal** | **Principal Issue Amount** | **Fixed Amount** | **Variable Amount** | **Synthetic Fixed Amount** | **Total Outstanding** |
| | 2002D | 5/30/2002 | 11/1/2032 | $400.00 | $ 7.88 | - | $ 200.00 | $ 207.88 |
| **MTA Transportation** | 2002G | 11/20/2002 | 11/1/2026 | 400.00 | - | 17.47 | 46.81 | 64.27 |
| **Revenue Bonds** | 2003A | 5/14/2003 | 11/15/2023 | 475.34 | 17.46 | - | - | 17.46 |
| **(A3/BBB+/A-/AA)** | 2005B | 7/1/2005 | 11/15/2024 | 750.00 | 52.89 | - | - | 52.89 |
| | 2005D | 11/2/2005 | 11/1/2035 | 250.00 | - | - | 187.70 | 187.70 |
| **Outlooks** | 2005E | 11/2/2005 | 11/1/2035 | 250.00 | - | 75.08 | 112.60 | 187.68 |
| Moody's: Stable outlook | 2006B | 12/20/2006 | 11/15/2026 | 717.73 | 72.65 | - | - | 72.65 |
| S&P Global: Stable outlook | 2008B | 2/21/2008 | 11/15/2023 | 487.53 | 17.39 | - | - | 17.39 |
| Fitch Ratings: Negative outlook | 2009A | 10/15/2009 | 11/15/2039 | 502.32 | 325.00 | - | - | 325.00 |
| KBRA: Stable outlook | 2010A | 1/13/2010 | 11/15/2039 | 363.95 | 363.95 | - | - | 363.95 |
| | 2010B | 2/11/2010 | 11/15/2039 | 656.98 | 547.73 | - | - | 547.73 |
| | 2010C | 7/7/2010 | 11/15/2040 | 510.49 | 382.19 | - | - | 382.19 |
| | 2010E | 12/29/2010 | 11/15/2040 | 750.00 | 582.35 | - | - | 582.35 |
| | 2012A | 3/15/2012 | 11/15/2042 | 150.00 | 50.00 | 100.00 | - | 150.00 |
| | 2012B | 3/15/2012 | 11/15/2039 | 250.00 | 77.23 | - | - | 77.23 |
| | 2012C | 5/3/2012 | 11/15/2042 | 727.43 | 63.01 | - | - | 63.01 |
| | 2012E | 7/20/2012 | 11/15/2038 | 650.00 | 136.09 | - | - | 136.09 |
| | 2012F | 9/28/2012 | 11/15/2025 | 1,268.45 | 20.00 | - | - | 20.00 |
| | 2012G | 11/13/2012 | 11/1/2032 | 359.45 | - | - | 355.08 | 355.08 |
| | 2012H | 11/15/2012 | 11/15/2037 | 350.00 | 40.77 | - | - | 40.77 |
| | 2013A | 1/24/2013 | 11/15/2042 | 500.00 | 252.26 | - | - | 252.26 |
| | 2013B | 4/2/2013 | 11/15/2043 | 500.00 | 277.93 | - | - | 277.93 |
| | 2013C | 6/11/2013 | 11/15/2043 | 500.00 | 275.38 | - | - | 275.38 |
| | 2013D | 7/11/2013 | 11/15/2043 | 333.79 | 175.41 | - | - | 175.41 |
| | 2013E | 11/15/2013 | 11/15/2043 | 500.00 | 298.97 | - | - | 298.97 |
| | 2014A | 2/28/2014 | 11/15/2044 | 400.00 | 173.39 | - | - | 173.39 |
| | 2014B | 4/17/2014 | 11/15/2044 | 500.00 | 358.92 | - | - | 358.92 |
| | 2014C | 6/26/2014 | 11/15/2036 | 500.00 | 195.52 | - | - | 195.52 |
| | 2014D | 11/4/2014 | 11/15/2044 | 500.00 | 295.46 | - | - | 295.46 |
| | 2015A | 1/22/2015 | 11/15/2045 | 850.00 | 723.96 | - | - | 723.96 |
| | 2015B | 3/19/2015 | 11/15/2055 | 275.06 | 245.73 | - | - | 245.73 |
| | 2015C | 8/18/2015 | 11/15/2035 | 550.00 | 477.11 | - | - | 477.11 |
| | 2015D | 9/17/2015 | 11/15/2035 | 407.70 | 287.54 | - | - | 287.54 |
| | 2015E | 9/10/2015 | 11/15/2050 | 650.00 | - | 496.19 | - | 496.19 |
| | 2015F | 12/17/2015 | 11/15/2036 | 330.43 | 262.40 | - | - | 262.40 |
| | 2016A | 2/25/2016 | 11/15/2056 | 782.52 | 643.07 | - | - | 643.07 |
| | 2016B | 6/30/2016 | 11/15/2037 | 673.99 | 520.72 | - | - | 520.72 |
| | 2016C | 7/28/2016 | 11/15/2056 | 863.86 | 558.15 | - | - | 558.15 |
| | 2016D | 10/26/2016 | 11/15/2035 | 645.66 | 420.93 | - | - | 420.93 |
| | 2017A | 3/16/2017 | 11/15/2057 | 325.59 | 314.35 | - | - | 314.35 |
| | 2017B | 9/28/2017 | 11/15/2028 | 662.03 | 571.44 | - | - | 571.44 |
| | 2017C | 12/14/2017 | 11/15/2040 | 2,021.46 | 2,172.94 | - | - | 2,172.94 |
| | 2017D | 12/21/2017 | 11/15/2047 | 643.10 | 643.10 | - | - | 643.10 |
| | 2018B | 8/23/2018 | 11/15/2028 | 207.22 | 170.48 | - | - | 170.48 |
| | 2019A | 2/6/2019 | 11/15/2048 | 454.15 | 454.15 | - | - | 454.15 |
| | 2019B | 5/14/2019 | 11/15/2052 | 177.19 | 177.19 | - | - | 177.19 |
| | 2019C | 8/14/2019 | 11/15/2049 | 422.43 | 422.43 | - | - | 422.43 |
| | 2019D | 11/7/2019 | 11/15/2048 | 241.75 | 241.75 | - | - | 241.75 |
| | 2020A | 1/16/2020 | 11/15/2054 | 924.75 | 924.75 | - | - | 924.75 |
| | 2020B | 3/27/2020 | 11/15/2046 | 162.66 | - | 121.86 | - | 121.86 |
| | 2020C | 5/14/2020 | 11/15/2055 | 1,725.00 | 1,725.00 | - | - | 1,725.00 |
| | 2020D | 9/18/2020 | 11/15/2050 | 900.00 | 900.00 | - | - | 900.00 |
| | 2020E | 11/13/2020 | 11/15/2045 | 419.92 | 419.92 | - | - | 419.92 |
| | 2021A | 2/12/2021 | 11/15/2050 | 700.00 | 700.00 | - | - | 700.00 |
| | **Total Transportation Revenue Bonds** | | | **$ 30,519.87** | **$ 19,036.84** | **$ 810.59** | **$ 902.18** | **$ 20,749.60** |

# Part II. Tab 1: Issues Covered by this Annual Report

**(Dollars in Millions)**
**As of April 28, 2023**

| Credit/Ratings | Series Information | | | | Outstanding | | | |
|---|---|---|---|---|---|---|---|---|
| **Underlying Ratings (Moody's/S&P Global/Fitch/KBRA)** | **Series** | **Original Date of Issue** | **Series Final Maturity on Outstanding Principal** | **Principal Issue Amount** | **Fixed Amount** | **Variable Amount** | **Synthetic Fixed Amount** | **Total Outstanding** |
| | 2001C | 12/19/2001 | 1/1/2032 | $148.20 | - | $ 68.56 | $ 7.00 | $75.56 |
| | 2002F | 11/13/2002 | 11/1/2032 | 246.48 | 102.94 | - | - | 102.94 |
| | 2003B | 12/10/2003 | 1/1/2033 | 250.00 | - | 58.61 | 59.82 | 118.43 |
| | 2005A | 5/11/2005 | 11/1/2041 | 150.00 | - | 86.56 | 15.52 | 102.07 |
| **TBTA General** | 2005B | 7/7/2005 | 1/1/2032 | 800.00 | - | - | 555.00 | 555.00 |
| **Revenue Bonds** | 2008B | 3/27/2008 | 11/15/2038 | 252.23 | 126.75 | - | - | 126.75 |
| **(Aa3/AA-/AA-/AA)** | 2009A | 2/18/2009 | 11/15/2024 | 475.00 | 1.54 | - | - | 1.54 |
| | 2009B | 9/17/2009 | 11/15/2039 | 200.00 | 200.00 | - | - | 200.00 |
| **Outlooks for TBTA General and Subordinate** | 2010A | 10/28/2010 | 11/15/2040 | 346.96 | 263.02 | - | - | 263.02 |
| Moody's: Stable outlook | 2012A | 6/6/2012 | 11/15/2042 | 231.49 | 38.08 | - | - | 38.08 |
| S&P Global: Stable outlook | 2012B | 8/23/2012 | 11/15/2032 | 1,236.90 | 231.50 | - | - | 231.50 |
| Fitch Ratings: Stable outlook | 2013B | 1/29/2013 | 11/15/2030 | 257.20 | 129.50 | - | - | 129.50 |
| KBRA: Stable outlook | 2013C | 4/18/2013 | 11/15/2043 | 200.00 | 15.00 | - | - | 15.00 |
| | 2014A | 2/6/2014 | 11/15/2044 | 250.00 | 175.66 | - | - | 175.66 |
| | 2015A | 5/15/2015 | 11/15/2050 | 225.00 | 182.89 | - | - | 182.89 |
| | 2015B | 11/16/2015 | 11/15/2045 | 65.00 | 56.12 | - | - | 56.12 |
| | 2016A | 1/28/2016 | 11/15/2046 | 541.24 | 485.30 | - | - | 485.30 |
| | 2017A | 1/19/2017 | 11/15/2047 | 300.00 | 286.59 | - | - | 286.59 |
| | 2017B | 1/19/2017 | 11/15/2038 | 902.98 | 902.98 | - | - | 902.98 |
| | 2017C | 11/17/2017 | 11/15/2042 | 720.99 | 720.99 | - | - | 720.99 |
| | 2018A | 2/1/2018 | 11/15/2048 | 351.93 | 351.93 | - | - | 351.93 |
| | 2018B | 8/30/2018 | 11/15/2031 | 270.09 | 270.09 | - | - | 270.09 |
| | 2018C | 8/30/2018 | 11/15/2038 | 159.28 | 159.28 | - | - | 159.28 |
| | 2018D | 10/4/2018 | 11/15/2038 | 125.00 | 98.99 | - | - | 98.99 |
| | 2018E Taxable | 12/12/2018 | 11/15/2032 | 148.47 | - | 23.29 | 125.19 | 148.47 |
| | 2019A | 5/23/2019 | 11/15/2049 | 150.00 | 150.00 | - | - | 150.00 |
| | 2019B Taxable | 9/25/2019 | 11/15/2044 | 102.47 | 102.47 | - | - | 102.47 |
| | 2019C | 12/3/2019 | 11/15/2048 | 200.00 | 200.00 | - | - | 200.00 |
| | 2020A | 5/27/2020 | 11/15/2054 | 525.00 | 525.00 | - | - | 525.00 |
| | 2021A | 3/31/2021 | 11/15/2056 | 400.00 | 400.00 | - | - | 400.00 |
| | 2022A | 8/18/2022 | 11/15/2057 | 400.00 | 400.00 | - | - | 400.00 |
| | 2023A | 2/14/2023 | 11/15/2039 | 828.23 | 828.23 | - | - | 828.23 |
| | **Total TBTA General Revenue Bonds** | | | **$ 11,460.12** | **$ 7,404.81** | **$ 237.01** | **$ 762.52** | **$ 8,404.33** |
| **TBTA Subordinate** | 2013A | 1/29/2013 | 11/15/2032 | $ 653.96 | $ 291.49 | - | - | $ 291.49 |
| **Revenue Bonds** | 2013D Taxable | 12/19/2013 | 11/15/2025 | 313.98 | 59.29 | - | - | 59.29 |
| **(A1/A+/A+/ AA-)** | **Total TBTA Subordinate Revenue Bonds** | | | **$ 967.94** | **$ 350.78** | **$ -** | **$ -** | **$ 350.78** |
| **TBTA 2nd Subordinate Revenue Bonds** | 2021A BANS | 6/10/2021 | 11/1/2025 | $ 192.84 | $ 192.84 | - | - | $ 192.84 |
| **(A1/NAF/A+/NAF)** | **Total TBTA 2nd Subordinate Revenue Bonds** | | | **$ 192.84** | **$ 192.84** | **$ -** | **$ -** | **$ 192.84** |
| **Outlooks** | | | | | | | | |
| Moody's: Stable outlook | | | | | | | | |
| Fitch Ratings: Stable outlook | | | | | | | | |
| | 2008A | 6/25/2008 | 11/1/2031 | $352.92 | - | $ 3.93 | $ 257.50 | $ 261.43 |
| **MTA Dedicated** | 2008B | 8/7/2008 | 11/15/2034 | 348.18 | 151.22 | 44.74 | - | 195.96 |
| **Tax Fund Bonds** | 2009C | 4/30/2009 | 11/15/2039 | 750.00 | 750.00 | - | - | 750.00 |
| **(NAF/AA/AA/NAF)** | 2010A | 3/25/2010 | 11/15/2040 | 502.99 | 388.33 | - | - | 388.33 |
| **Outlooks** | 2012A | 10/25/2012 | 11/15/2032 | 959.47 | 272.08 | - | - | 272.08 |
| S&P Global: Stable outlook | 2016A | 3/10/2016 | 11/15/2036 | 579.96 | 515.61 | - | - | 515.61 |
| Fitch Ratings: Stable outlook | 2016B | 5/26/2016 | 11/15/2056 | 588.31 | 561.24 | - | - | 561.24 |
| | 2017A | 2/23/2017 | 11/15/2047 | 312.83 | 296.55 | - | - | 296.55 |
| | 2017B | 5/17/2017 | 11/15/2057 | 680.27 | 672.55 | - | - | 672.55 |
| | 2022A | 3/1/2022 | 11/15/2052 | 377.96 | 377.96 | - | - | 377.96 |
| | **Total Dedicated Tax Fund Bonds** | | | **$ 5,452.85** | **$ 3,985.52** | **$ 48.67** | **$ 257.50** | **$ 4,291.69** |

# Part II. Tab 1: Issues Covered by this Annual Report

**(Dollars in Millions)**
**As of April 28, 2023**

| Credit/Ratings | Series Information | | | | Outstanding | | | |
|---|---|---|---|---|---|---|---|---|
| **Underlying Ratings (Moody's/S&P Global/Fitch/KBRA)** | **Series** | **Original Date of Issue** | **Series Final Maturity on Outstanding Principal** | **Principal Issue Amount** | **Fixed Amount** | **Variable Amount** | **Synthetic Fixed Amount** | **Total Outstanding** |
| **Payroll Mobility Tax Obligations** | 2020A BANS* | 12/17/2020 | 12/15/2023 | $ 2,907.28 | $ 2,907.28 | - | - | $ 2,907.28 |
| **(NAF/AA+/AA+/AA+)** | 2021A | 5/5/2021 | 5/15/2051 | 1,238.21 | 1,238.21 | - | - | 1,238.21 |
| **Outlooks** | 2021B | 8/31/2021 | 5/15/2056 | 369.20 | 369.20 | - | - | 369.20 |
| S&P Global: Stable outlook | 2021C | 9/30/2021 | 5/15/2051 | 853.63 | 848.23 | - | - | 848.23 |
| Fitch Ratings: Stable outlook | 2022A | 2/10/2022 | 5/15/2057 | 592.68 | 592.68 | - | - | 592.68 |
| KBRA: Stable outlook | 2022B | 8/18/2022 | 5/15/2042 | 1,000.02 | 1,000.02 | - | - | 1,000.02 |
| | 2022C | 5/12/2022 | 5/15/2057 | 927.95 | 927.95 | - | - | 927.95 |
| *Ratings only by Fitch and KBRA | 2022A BANS | 9/1/2022 | 8/15/2024 | 951.37 | 951.37 | - | - | 951.37 |
| | 2022D | 9/15/2022 | 5/15/2052 | 748.68 | 765.69 | - | - | 765.69 |
| | 2022E | 11/1/2022 | 11/15/2057 | 700.20 | 600.64 | 11.23 | 88.33 | 700.20 |
| | 2022B BANS | 12/15/2022 | 12/16/2024 | 766.54 | 766.54 | - | - | 766.54 |
| | 2023A | 1/12/2023 | 11/15/2037 | 764.95 | 764.95 | - | - | 764.95 |
| | **Total Payroll Mobility Tax Obligations** | | | **$ 11,820.70** | **$ 11,732.75** | **$ 11.23** | **$ 88.33** | **$ 11,832.31** |
| **Sales Tax Revenue Bonds** | 2022A | 7/20/2022 | 5/15/2062 | $ 700.00 | $ 700.00 | - | - | $ 700.00 |
| **(TBTA Capital Lockbox - City Sales Tax)** | 2023A | 3/14/2023 | 5/15/2063 | 1,253.75 | 1,253.75 | - | - | 1,253.75 |
| **(NAF/AA+/AAA/NAF)** | **Total Sales Tax Revenue Bonds** | | | **$ 1,953.75** | **$ 1,953.75** | **$ -** | **$ -** | **$ 1,953.75** |
| **Outlooks** | | | | | | | | |
| S&P Global: Stable outlook | | | | | | | | |
| Fitch Ratings: Stable outlook | | | | | | | | |
| | **All MTA Obligations** | | | **$ 62,368.06** | **$ 44,657.27** | **$ 1,107.50** | **$ 2,010.52** | **$ 47,775.29** |
| **OTHER OBLIGATIONS** | | | | | | | | |
| **MTA Hudson Rail Yards Trust Obligations** | | | | | | | | |
| **(A3/NAF/NAF/A-)** | 2016A | 9/22/2016 | 11/15/2056 | $ 1,057.43 | $ 682.43 | $ - | $ - | $ 682.43 |
| **Outlooks** | 2020A* | 3/27/2020 | 11/15/2046 | 162.66 | 121.86 | - | - | 121.86 |
| Moody's: Negative outlook | **Total Hudson Rail Yards Trust Obligations** | | | **$ 1,220.09** | **$ 804.29** | **$ -** | **$ -** | **$ 804.29** |
| KBRA: Stable outlook | | | | | | | | |
| *Not Rated | **Grand Total Obligations** | | | **$ 63,588.15** | **$ 45,461.56** | **$ 1,107.50** | **$ 2,010.52** | **$ 48,579.57** |

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7 Line 40 Street-Lowery Street Station

# Part II. Tab 2: Details of Each Bond Issue

**$400,000,000** **Transportation Revenue Variable Rate Refunding Bonds, Series 2002D**

**Date of Issue:** May 30, 2002

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2002D-1

**Par Outstanding** $7,875,000

**Mode:** Fixed **Mode Offering Date:** May 09, 2012

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $2,875,000 | 3.000% | 11/01/2022 | 59259YPW3 | |
| 11/1/2024 | $5,000,000 | 3.000% | 11/01/2022 | 59259YPX1 | AGM |
| **Total:** | $7,875,000 | | | | |

## Sub Series TRB 2002D-2a-1

**Par Outstanding** $50,000,000

**Mode:** FRN **Mode Offering Date:** March 31, 2021 **Next Tender Date:** April 01, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2029 | $5,700,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL47 | AGM |
| 11/1/2030 | $7,850,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL47 | AGM |
| 11/1/2031 | $7,750,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL47 | AGM |
| 11/1/2032 | $28,700,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL47 | AGM |
| **Total:** | $50,000,000 | | | | |

**$400,000,000** **Transportation Revenue Variable Rate Refunding Bonds, Series 2002D**

**Date of Issue:** May 30, 2002

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2002D-2a-2

**Par Outstanding** $50,000,000

**Mode:** FRN **Mode Offering Date:** April 06, 2021 **Next Tender Date:** April 01, 2026

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2029 | $5,700,000 | 67% of SOFR + 0.800% | 01/01/2026 | 59261AL54 | AGM |
| 11/1/2030 | $7,850,000 | 67% of SOFR + 0.800% | 01/01/2026 | 59261AL54 | AGM |
| 11/1/2031 | $7,750,000 | 67% of SOFR + 0.800% | 01/01/2026 | 59261AL54 | AGM |
| 11/1/2032 | $28,700,000 | 67% of SOFR + 0.800% | 01/01/2026 | 59261AL54 | AGM |
| **Total:** | $50,000,000 | | | | |

## Sub Series TRB 2002D-2b

**Par Outstanding** $100,000,000

**Mode:** FRN **Mode Offering Date:** April 01, 2021 **Next Tender Date:** April 01, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2029 | $11,400,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL62 | AGM |
| 11/1/2030 | $15,700,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL62 | AGM |
| 11/1/2031 | $15,500,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL62 | AGM |
| 11/1/2032 | $57,400,000 | 67% of SOFR + 0.550% | 01/01/2024 | 59261AL62 | AGM |
| **Total:** | $100,000,000 | | | | |

**$400,000,000** **Transportation Revenue Variable Rate Bonds, Series 2002G**

**Date of Issue:** November 20, 2002

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2002G-1f Refunding Bonds

**Par Outstanding** $19,270,000

**Mode:** FRN **Mode Offering Date:** June 30, 2021

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $5,235,000 | 67% of SOFR + 0.430% | Non-Call | 59261AL96 | |
| 11/1/2024 | $5,445,000 | 67% of SOFR + 0.430% | Non-Call | 59261AL96 | |
| 11/1/2025 | $5,665,000 | 67% of SOFR + 0.430% | Non-Call | 59261AL96 | |
| 11/1/2026 | $2,925,000 | 67% of SOFR + 0.430% | Non-Call | 59261AL96 | |
| **Total:** | $19,270,000 | | | | |

## Sub Series TRB 2002G-1g

**Par Outstanding** $19,255,000 **Short Term Ratings:** VMIG1/A-1+/F1+/NR

**Credit Provider:** TD Bank, N.A. **Facility Effective:** October 12, 2021 **Facility Expiration:** November 01, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $5,235,000 | Weekly | 10/12/2021 | 59259Y7Q6 | |
| 11/1/2024 | $5,440,000 | Weekly | 10/12/2021 | 59259Y7Q6 | |
| 11/1/2025 | $5,660,000 | Weekly | 10/12/2021 | 59259Y7Q6 | |
| 11/1/2026 | $2,920,000 | Weekly | 10/12/2021 | 59259Y7Q6 | |
| **Total:** | $19,255,000 | | | | |

**$400,000,000 Transportation Revenue Variable Rate Bonds, Series 2002G**

**Date of Issue:** November 20, 2002

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2002G-1h

**Par Outstanding** $25,745,000

**Mode:** FRN **Mode Offering Date:** February 01, 2022

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $6,995,000 | 67% of SOFR + 0.400% | Non-Call | 59261AM95 | |
| **Total:** | $6,995,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2024 | $7,275,000 | 67% of SOFR + 0.600% | Non-Call | 59261AN29 | |
| 11/1/2025 | $7,565,000 | 67% of SOFR + 0.600% | Non-Call | 59261AN29 | |
| 11/1/2026 | $3,910,000 | 67% of SOFR + 0.600% | Non-Call | 59261AN29 | |
| **Total:** | $18,750,000 | | | | |

**$475,340,000 Transportation Revenue Bonds, Series 2003A**

**Date of Issue:** May 14, 2003

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $17,460,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $17,460,000 | 5.500% | Non-Call | 59259RNW0 | AGM |
| **Total:** | $17,460,000 | | | | |

**$750,000,000 Transportation Revenue Bonds, Series 2005B**

**Date of Issue:** July 01, 2005

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $52,890,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $25,770,000 | 5.250% | Non-Call | 59259RWP5 | Ambac |
| 11/15/2024 | $27,120,000 | 5.250% | Non-Call | 59259RWQ3 | Ambac |
| **Total:** | $52,890,000 | | | | |

## $250,000,000 Transportation Revenue Variable Rate Bonds, Series 2005D

**Date of Issue:** November 02, 2005

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2005D-1

**Par Outstanding** $112,600,000

**Mode:** FRN **Mode Offering Date:** June 30, 2021 **Next Tender Date:** April 01, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $6,775,000 | 67% of SOFR + 0.330% | Non-Call | 59261AM20 | |
| 11/1/2024 | $7,050,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2025 | $7,325,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2026 | $7,625,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2027 | $7,925,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2028 | $8,250,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2029 | $8,575,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2030 | $8,925,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2031 | $9,250,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2032 | $9,625,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2033 | $10,025,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2034 | $10,425,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| 11/1/2035 | $10,825,000 | 67% of SOFR + 0.330% | 01/01/2024 | 59261AM20 | |
| **Total:** | $112,600,000 | | | | |

**$250,000,000 Transportation Revenue Variable Rate Bonds, Series 2005D**

**Date of Issue:** November 02, 2005

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2005D-2

**Par Outstanding** $75,100,000

**Short Term Ratings:** VMIG 1/A-1/F1+/NAF

**Credit Provider:** Bank of Montreal **Facility Effective:** November 01, 2022 **Facility Expiration:** October 31, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $4,500,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2024 | $4,700,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2025 | $4,875,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2026 | $5,075,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2027 | $5,275,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2028 | $5,500,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2029 | $5,700,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2030 | $5,950,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2031 | $6,175,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2032 | $6,425,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2033 | $6,675,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2034 | $6,975,000 | Daily | 11/01/2022 | 59261AS57 | |
| 11/1/2035 | $7,275,000 | Daily | 11/01/2022 | 59261AS57 | |
| **Total:** | $75,100,000 | | | | |

**$250,000,000** **Transportation Revenue Variable Rate Bonds, Series 2005E**

**Date of Issue:** November 02, 2005

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2005E-1

**Par Outstanding** $131,375,000

**Short Term Ratings:** VMIG 1/A-1/F1/NR

**Credit Provider:** Barclays Bank PLC **Facility Effective:** August 18, 2021 **Facility Expiration:** August 18, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $7,910,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2024 | $8,210,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2025 | $8,560,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2026 | $8,890,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2027 | $9,240,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2028 | $9,610,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2029 | $10,010,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2030 | $10,380,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2031 | $10,830,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2032 | $11,250,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2033 | $11,705,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2034 | $12,145,000 | Weekly | 08/18/2021 | 59261AM38 | |
| 11/1/2035 | $12,635,000 | Weekly | 08/18/2021 | 59261AM38 | |
| **Total:** | $131,375,000 | | | | |

**$250,000,000 Transportation Revenue Variable Rate Bonds, Series 2005E**

**Date of Issue:** November 02, 2005

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2005E-2

**Par Outstanding** $56,302,500

**Short Term Ratings:** VMIG 1/A-1/F1+/NAF

**Credit Provider:** Bank of America, N.A. **Facility Effective:** November 22, 2021 **Facility Expiration:** December 08, 2023

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $3,390,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2024 | $3,517,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2025 | $3,667,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2026 | $3,810,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2027 | $3,960,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2028 | $4,117,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2029 | $4,290,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2030 | $4,447,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2031 | $4,642,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2032 | $4,822,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2033 | $5,017,500 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2034 | $5,205,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| 11/1/2035 | $5,415,000 | Weekly | 11/22/2021 | 59261ASD0 | |
| **Total:** | $56,302,500 | | | | |

## $717,730,000 Transportation Revenue Bonds, Series 2006B

**Date of Issue:** December 20, 2006

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $72,645,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $72,645,000 | 5.250% | Non-Call | 59259RS47 | AGM |
| **Total:** | $72,645,000 | | | | |

**$487,530,000 Transportation Revenue Bonds, Series 2008B**

**Date of Issue:** February 21, 2008

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2008B-3

**Par Outstanding** $17,385,000

**Mode:** Fixed **Mode Offering Date:** November 15, 2013

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $17,385,000 | 5.000% | Non-Call | 59259YN96 | |
| **Total:** | $17,385,000 | | | | |

## $502,320,000 Transportation Revenue Bonds, Series 2009A

**Date of Issue:** October 15, 2009

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2009A-1 Build America Bonds

**Par Outstanding** $325,000,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2029 | $24,330,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2030 | $25,260,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2031 | $26,220,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2032 | $27,220,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2033 | $28,260,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2034 | $29,340,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2035 | $30,460,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2036 | $31,620,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2037 | $32,830,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2038 | $34,080,000 | 5.871% | Make-Whole | 59259YBF5 | |
| 11/15/2039 | $35,380,000 | 5.871% | Make-Whole | 59259YBF5 | |
| **Total:** | $325,000,000 | | | | |

**$363,945,000** **Transportation Revenue Bonds - Build America Bonds, Series 2010A**

**Date of Issue:** January 13, 2010

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $363,945,000

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2033 | $45,655,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2034 | $47,620,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2035 | $49,670,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2036 | $51,810,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2037 | $54,035,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2038 | $56,365,000 | 6.668% | Make-Whole | 59259YBY4 | |
| 11/15/2039 | $58,790,000 | 6.668% | Make-Whole | 59259YBY4 | |
| **Total:** | $363,945,000 | | | | |

**$656,975,000 Transportation Revenue Bonds, Series 2010B**

**Date of Issue:** February 11, 2010

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2010B-1 Build America Bonds

**Par Outstanding** $547,730,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $31,905,000 | 5.754% | Make-Whole | 59259YCC1 | |
| 11/15/2024 | $14,785,000 | 5.854% | Make-Whole | 59259YCD9 | |
| **Total:** | $46,690,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $460,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2025 | $15,830,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2026 | $16,510,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2027 | $17,215,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2028 | $17,950,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2029 | $58,155,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2030 | $60,640,000 | 6.548% | Make-Whole | 59259YCA5 | |
| 11/15/2031 | $63,240,000 | 6.548% | Make-Whole | 59259YCA5 | |
| **Total:** | $250,000,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2032 | $65,945,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2033 | $23,150,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2034 | $24,170,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2035 | $25,230,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2036 | $26,345,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2037 | $27,505,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2038 | $28,715,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| 11/15/2039 | $29,980,000 | 6.648% | Make-Whole | 59259YBZ1 | |
| **Total:** | $251,040,000 | | | | |

## $510,485,000 Transportation Revenue Bonds, Series 2010C

**Date of Issue:** July 07, 2010

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2010C-1 Build America Bonds

**Par Outstanding** $382,185,000

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $14,995,000 | 6.200% | Make-Whole | 59259YDK2 | |
| 11/15/2024 | $15,930,000 | 6.200% | Make-Whole | 59259YDK2 | |
| 11/15/2025 | $16,915,000 | 6.200% | Make-Whole | 59259YDK2 | |
| 11/15/2026 | $17,965,000 | 6.200% | Make-Whole | 59259YDK2 | |
| **Total:** | $65,805,000 | | | | |

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2027 | $5,980,000 | 6.587% | Make-Whole | 59259YDB2 | |
| 11/15/2028 | $6,370,000 | 6.587% | Make-Whole | 59259YDB2 | |
| 11/15/2029 | $6,790,000 | 6.587% | Make-Whole | 59259YDB2 | |
| 11/15/2030 | $7,240,000 | 6.587% | Make-Whole | 59259YDB2 | |
| **Total:** | $26,380,000 | | | | |

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2031 | $21,310,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2032 | $22,730,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2033 | $24,250,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2034 | $25,870,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2035 | $27,600,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2036 | $29,445,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2037 | $31,410,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2038 | $33,505,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2039 | $35,745,000 | 6.687% | Make-Whole | 59259YDC0 | |
| 11/15/2040 | $38,135,000 | 6.687% | Make-Whole | 59259YDC0 | |
| **Total:** | $290,000,000 | | | | |

**$750,000,000** **Transportation Revenue Bonds - Build America Bonds, Series 2010E**

**Date of Issue:** December 29, 2010

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2010E Build America Bonds

**Par Outstanding** $582,350,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $5,500,000 | 6.734% | Make-Whole | 59259YGE3 | |
| 11/15/2027 | $5,740,000 | 6.734% | Make-Whole | 59259YGE3 | |
| 11/15/2028 | $5,990,000 | 6.734% | Make-Whole | 59259YGE3 | |
| 11/15/2029 | $6,250,000 | 6.734% | Make-Whole | 59259YGE3 | |
| 11/15/2030 | $6,520,000 | 6.734% | Make-Whole | 59259YGE3 | |
| **Total:** | $30,000,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2031 | $45,115,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2032 | $47,110,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2033 | $49,195,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2034 | $51,370,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2035 | $53,640,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2036 | $56,010,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2037 | $58,485,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2038 | $61,070,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2039 | $63,770,000 | 6.814% | Make-Whole | 59259YGF0 | |
| 11/15/2040 | $66,585,000 | 6.814% | Make-Whole | 59259YGF0 | |
| **Total:** | $552,350,000 | | | | |

## $150,000,000 Transportation Revenue Bonds, Series 2012A

**Date of Issue:** March 15, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2012A-1

**Par Outstanding** $50,000,000

**Mode:** Fixed **Mode Offering Date:** May 15, 2013

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $50,000,000 | 5.000% | 05/15/2023 | 59259YA58 | |
| **Total:** | $50,000,000 | | | | |

### Sub Series TRB 2012A-2

**Par Outstanding** $50,000,000 **Short Term Ratings:** VMIG1/A-1/F1+/NR

**Credit Provider:** BMO Harris Bank, N.A. **Facility Effective:** May 26, 2022 **Facility Expiration:** June 02, 2025

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $50,000,000 | Weekly | 05/26/2022 | 59261AZD2 | |
| **Total:** | $50,000,000 | | | | |

### Sub Series TRB 2012A-3

**Par Outstanding** $50,000,000

**Mode:** FRN **Mode Offering Date:** February 01, 2022 **Next Tender Date:** April 01, 2026

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $50,000,000 | 67% of SOFR + 0.650% | Non-Call | 59261AM87 | |
| **Total:** | $50,000,000 | | | | |

## $250,000,000 Transportation Revenue Bonds, Series 2012B

**Date of Issue:** March 15, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $77,225,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $7,660,000 | 3.000% | 11/15/2022 | 59259YMP1 | |
| 11/15/2025 | $8,005,000 | 3.000% | 11/15/2022 | 59259YMQ9 | |
| 11/15/2026 | $8,365,000 | 3.250% | 11/15/2022 | 59259YMR7 | |
| 11/15/2027 | $8,780,000 | 3.500% | 11/15/2022 | 59259YMS5 | |
| 11/15/2036 | $13,625,000 | 4.000% | 11/15/2022 | 59259YNB1 | |
| **Total:** | $46,435,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $15,020,000 | 4.250% | 11/15/2022 | 59259YNC9 | |
| 11/15/2039 | $15,770,000 | 4.250% | 11/15/2022 | 59259YNC9 | |
| **Total:** | $30,790,000 | | | | |

## $727,430,000 Transportation Revenue Bonds, Series 2012C

**Date of Issue:** May 03, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $63,010,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2027 | $11,335,000 | 3.500% | 11/15/2022 | 59259YNU9 | |
| **Total:** | $11,335,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $19,980,000 | 4.250% | 11/15/2022 | 59259YPL7 | |
| 11/15/2042 | $31,695,000 | 4.250% | 11/15/2022 | 59259YPL7 | |
| **Total:** | $51,675,000 | | | | |

## $650,000,000 Transportation Revenue Bonds, Series 2012E

**Date of Issue:** July 20, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $136,090,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2027 | $19,925,000 | 3.500% | 11/15/2022 | 59259YSC4 | |
| 11/15/2032 | $25,065,000 | 3.500% | 11/15/2022 | 59259YSH3 | |
| **Total:** | $44,990,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $29,185,000 | 4.000% | 11/15/2022 | 59259YSK6 | |
| 11/15/2037 | $30,350,000 | 4.000% | 11/15/2022 | 59259YSK6 | |
| 11/15/2038 | $31,565,000 | 4.000% | 11/15/2022 | 59259YSK6 | |
| **Total:** | $91,100,000 | | | | |

## $1,268,445,000 Transportation Revenue Refunding Bonds, Series 2012F

**Date of Issue:** September 28, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $20,000,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2025 | $20,000,000 | 3.125% | 11/15/2022 | 59259YTF6 | |
| **Total:** | $20,000,000 | | | | |

## $359,450,000 Transportation Revenue Variable Rate Refunding Bonds, Series 2012G

**Date of Issue:** November 13, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2012G-1

**Par Outstanding** $84,450,000

**Short Term Ratings:** VMIG1/A-1/F1/NR

**Credit Provider:** Barclays Bank PLC **Facility Effective:** October 31, 2019 **Facility Expiration:** October 31, 2023

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2032 | $84,450,000 | Daily | 10/31/2019 | 59261AB22 | |
| **Total:** | $84,450,000 | | | | |

### Sub Series TRB 2012G-2

**Par Outstanding** $125,000,000

**Short Term Ratings:** VMIG1/A-1+/F1+/NR

**Credit Provider:** TD Bank, N.A. **Facility Effective:** October 12, 2021 **Facility Expiration:** November 01, 2024

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2031 | $89,925,000 | Weekly | 10/12/2021 | 59259Y7S2 | |
| 11/1/2032 | $35,075,000 | Weekly | 10/12/2021 | 59259Y7S2 | |
| **Total:** | $125,000,000 | | | | |

### Sub Series TRB 2012G-3

**Par Outstanding** $75,000,000

**Mode:** FRN **Mode Offering Date:** February 03, 2020 **Next Tender Date:** February 01, 2025

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2030 | $10,750,000 | SIFMA + 0.430% | 08/01/2024 | 59261AE94 | |
| 11/1/2031 | $64,250,000 | SIFMA + 0.430% | 08/01/2024 | 59261AE94 | |
| **Total:** | $75,000,000 | | | | |

## $359,450,000 Transportation Revenue Variable Rate Refunding Bonds, Series 2012G

**Date of Issue:** November 13, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2012G-4

**Par Outstanding** $70,625,000

**Short Term Ratings:** VMIG 1/A-1/F1+/NAF

**Credit Provider:** Bank of Montreal **Facility Effective:** November 01, 2022 **Facility Expiration:** October 31, 2025

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $475,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2024 | $500,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2025 | $525,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2026 | $550,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2027 | $575,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2028 | $12,725,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2029 | $13,525,000 | Daily | 11/01/2022 | 59261AS65 | |
| 11/1/2030 | $41,750,000 | Daily | 11/01/2022 | 59261AS65 | |
| **Total:** | $70,625,000 | | | | |

## $350,000,000 Transportation Revenue Bonds, Series 2012H

**Date of Issue:** November 15, 2012

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $40,770,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2028 | $4,970,000 | 3.000% | 11/15/2022 | 59261AP76 | |
| 11/15/2032 | $5,930,000 | 3.250% | 11/15/2022 | 59261AP84 | |
| **Total:** | $10,900,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $6,685,000 | 3.625% | 11/15/2022 | 59261AQ26 | |
| 11/15/2036 | $6,930,000 | 3.625% | 11/15/2022 | 59261AQ26 | |
| 11/15/2037 | $16,255,000 | 3.625% | 11/15/2022 | 59261AQ26 | |
| **Total:** | $29,870,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2013A

**Date of Issue:** January 24, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $252,260,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,945,000 | 4.000% | 05/15/2023 | 59259YXK0 | |
| 11/15/2023 | $7,595,000 | 5.000% | 05/15/2023 | 59259YYD5 | |
| 11/15/2028 | $6,315,000 | 4.000% | 05/15/2023 | 59259YXQ7 | |
| 11/15/2033 | $2,720,000 | 4.000% | 05/15/2023 | 59259YXV6 | |
| 11/15/2033 | $15,940,000 | 5.000% | 05/15/2023 | 59259YYE3 | |
| **Total:** | $36,515,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2034 | $19,565,000 | 5.000% | 05/15/2023 | 59259YXW4 | |
| 11/15/2035 | $20,545,000 | 5.000% | 05/15/2023 | 59259YXW4 | |
| 11/15/2036 | $21,570,000 | 5.000% | 05/15/2023 | 59259YXW4 | |
| 11/15/2037 | $22,650,000 | 5.000% | 05/15/2023 | 59259YXW4 | |
| 11/15/2038 | $23,785,000 | 5.000% | 05/15/2023 | 59259YXW4 | |
| **Total:** | $108,115,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $24,970,000 | 5.000% | 05/15/2023 | 59261AUW5 | |
| 11/15/2040 | $26,220,000 | 5.000% | 05/15/2023 | 59261AUW5 | |
| 11/15/2041 | $27,530,000 | 5.000% | 05/15/2023 | 59261AUW5 | |
| 11/15/2042 | $28,910,000 | 5.000% | 05/15/2023 | 59261AUW5 | |
| **Total:** | $107,630,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2013B

**Date of Issue:** April 02, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $277,930,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $5,200,000 | 4.000% | 05/15/2023 | 59259YZB8 | |
| 11/15/2023 | $6,325,000 | 5.000% | 05/15/2023 | 59259YZL6 | |
| 11/15/2028 | $1,630,000 | 4.000% | 05/15/2023 | 59259YZC6 | |
| 11/15/2033 | $18,670,000 | 5.000% | 05/15/2023 | 59259YZW2 | |
| 11/15/2034 | $19,605,000 | 5.000% | 05/15/2023 | 59259YA33 | |
| **Total:** | $51,430,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $20,585,000 | 5.000% | 05/15/2023 | 59259YZD4 | |
| 11/15/2036 | $21,615,000 | 5.000% | 05/15/2023 | 59259YZD4 | |
| 11/15/2037 | $22,695,000 | 5.000% | 05/15/2023 | 59259YZD4 | |
| 11/15/2038 | $23,830,000 | 5.000% | 05/15/2023 | 59259YZD4 | |
| **Total:** | $88,725,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $25,020,000 | 5.000% | 05/15/2023 | 59259YZX0 | |
| 11/15/2040 | $26,270,000 | 5.000% | 05/15/2023 | 59259YZX0 | |
| 11/15/2041 | $12,250,000 | 5.000% | 05/15/2023 | 59259YZX0 | |
| 11/15/2042 | $12,865,000 | 5.000% | 05/15/2023 | 59259YZX0 | |
| 11/15/2043 | $13,505,000 | 5.000% | 05/15/2023 | 59259YZX0 | |
| **Total:** | $89,910,000 | | | | |

**$500,000,000 Transportation Revenue Bonds, Series 2013B**

**Date of Issue:** April 02, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $15,335,000 | 4.000% | 05/15/2023 | 59259YZE2 | |
| 11/15/2042 | $15,945,000 | 4.000% | 05/15/2023 | 59259YZE2 | |
| 11/15/2043 | $16,585,000 | 4.000% | 05/15/2023 | 59259YZE2 | |
| **Total:** | $47,865,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2013C

**Date of Issue:** June 11, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $275,375,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $1,775,000 | 3.000% | Non-Call | 59259YB73 | |
| 11/15/2023 | $9,760,000 | 5.000% | Non-Call | 59259YE47 | |
| 11/15/2033 | $18,740,000 | 4.000% | 05/15/2023 | 59259YC98 | |
| 11/15/2043 | $30,230,000 | 4.000% | 05/15/2023 | 59259YD30 | |
| **Total:** | $60,505,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2034 | $19,485,000 | 5.000% | 05/15/2023 | 59259YD22 | |
| 11/15/2035 | $20,460,000 | 5.000% | 05/15/2023 | 59259YD22 | |
| 11/15/2036 | $21,485,000 | 5.000% | 05/15/2023 | 59259YD22 | |
| 11/15/2037 | $22,560,000 | 5.000% | 05/15/2023 | 59259YD22 | |
| 11/15/2038 | $23,685,000 | 5.000% | 05/15/2023 | 59259YD22 | |
| **Total:** | $107,675,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $24,870,000 | 5.000% | 05/15/2023 | 59259YE54 | |
| 11/15/2040 | $26,115,000 | 5.000% | 05/15/2023 | 59259YE54 | |
| 11/15/2041 | $27,420,000 | 5.000% | 05/15/2023 | 59259YE54 | |
| 11/15/2042 | $28,790,000 | 5.000% | 05/15/2023 | 59259YE54 | |
| **Total:** | $107,195,000 | | | | |

## $333,790,000 Transportation Revenue Bonds, Series 2013D

**Date of Issue:** July 11, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $175,410,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $7,660,000 | 5.000% | Non-Call | 59259YF87 | |
| 11/15/2039 | $17,040,000 | 4.750% | 11/15/2023 | 59259YH44 | |
| **Total:** | $24,700,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2034 | $13,350,000 | 5.000% | 11/15/2023 | 59259YH36 | |
| 11/15/2035 | $14,020,000 | 5.000% | 11/15/2023 | 59259YH36 | |
| 11/15/2036 | $14,720,000 | 5.000% | 11/15/2023 | 59259YH36 | |
| 11/15/2037 | $15,455,000 | 5.000% | 11/15/2023 | 59259YH36 | |
| 11/15/2038 | $16,230,000 | 5.000% | 11/15/2023 | 59259YH36 | |
| **Total:** | $73,775,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $17,850,000 | 5.000% | 11/15/2023 | 59259YH51 | |
| 11/15/2041 | $18,740,000 | 5.000% | 11/15/2023 | 59259YH51 | |
| 11/15/2042 | $19,680,000 | 5.000% | 11/15/2023 | 59259YH51 | |
| 11/15/2043 | $20,665,000 | 5.000% | 11/15/2023 | 59259YH51 | |
| **Total:** | $76,935,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2013E

**Date of Issue:** November 15, 2013

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $298,965,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,120,000 | 4.000% | Non-Call | 59259YL31 | |
| 11/15/2023 | $8,545,000 | 5.000% | Non-Call | 59259YN88 | |
| 11/15/2032 | $18,050,000 | 5.000% | 11/15/2023 | 59259YM48 | |
| 11/15/2033 | $18,950,000 | 5.000% | 11/15/2023 | 59259YM55 | |
| **Total:** | $48,665,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2034 | $19,900,000 | 5.000% | 11/15/2023 | 59259YM63 | |
| 11/15/2035 | $20,895,000 | 5.000% | 11/15/2023 | 59259YM63 | |
| 11/15/2036 | $21,940,000 | 5.000% | 11/15/2023 | 59259YM63 | |
| 11/15/2037 | $23,035,000 | 5.000% | 11/15/2023 | 59259YM63 | |
| 11/15/2038 | $24,190,000 | 5.000% | 11/15/2023 | 59259YM63 | |
| **Total:** | $109,960,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $25,400,000 | 5.000% | 11/15/2023 | 59259YM71 | |
| 11/15/2040 | $26,670,000 | 5.000% | 11/15/2023 | 59259YM71 | |
| 11/15/2041 | $28,000,000 | 5.000% | 11/15/2023 | 59259YM71 | |
| 11/15/2042 | $29,400,000 | 5.000% | 11/15/2023 | 59259YM71 | |
| 11/15/2043 | $30,870,000 | 5.000% | 11/15/2023 | 59259YM71 | |
| **Total:** | $140,340,000 | | | | |

**$400,000,000 Transportation Revenue Bonds, Series 2014A**

**Date of Issue:** February 28, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2014A-1

**Par Outstanding** $165,550,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $11,255,000 | 5.000% | Non-Call | 59259YQ69 | |
| 11/15/2032 | $4,475,000 | 5.000% | 11/15/2023 | 59259YQ93 | |
| 11/15/2033 | $3,630,000 | 5.000% | 11/15/2023 | 59259YR27 | |
| 11/15/2034 | $3,870,000 | 5.000% | 11/15/2023 | 59259YR68 | |
| **Total:** | $23,230,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $15,200,000 | 5.250% | 11/15/2023 | 59259YR35 | |
| 11/15/2036 | $15,340,000 | 5.250% | 11/15/2023 | 59259YR35 | |
| 11/15/2037 | $16,875,000 | 5.250% | 11/15/2023 | 59259YR35 | |
| 11/15/2038 | $13,685,000 | 5.250% | 11/15/2023 | 59259YR35 | |
| 11/15/2039 | $13,025,000 | 5.250% | 11/15/2023 | 59259YR35 | |
| **Total:** | $74,125,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $12,910,000 | 5.000% | 11/15/2023 | 59259YR43 | |
| 11/15/2041 | $13,655,000 | 5.000% | 11/15/2023 | 59259YR43 | |
| 11/15/2042 | $14,585,000 | 5.000% | 11/15/2023 | 59259YR43 | |
| 11/15/2043 | $13,040,000 | 5.000% | 11/15/2023 | 59259YR43 | |
| 11/15/2044 | $14,005,000 | 5.000% | 11/15/2023 | 59259YR43 | |
| **Total:** | $68,195,000 | | | | |

## $400,000,000 Transportation Revenue Bonds, Series 2014A

**Date of Issue:** February 28, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2014A-2 Refunding Bonds

**Par Outstanding** $7,835,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2032 | $7,835,000 | 5.000% | 11/15/2023 | 59259YS91 | |
| **Total:** | $7,835,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2014B

**Date of Issue:** April 17, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $358,920,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $10,890,000 | 5.000% | Non-Call | 59259YU56 | |
| 11/15/2024 | $11,435,000 | 5.000% | 05/15/2024 | 59259YU64 | |
| 11/15/2028 | $4,085,000 | 3.750% | 05/15/2024 | 59259YV22 | |
| 11/15/2030 | $15,270,000 | 5.000% | 05/15/2024 | 59259YV48 | |
| 11/15/2031 | $6,350,000 | 4.000% | 05/15/2024 | 59259YV55 | |
| 11/15/2031 | $9,685,000 | 5.000% | 05/15/2024 | 59259YW88 | |
| 11/15/2032 | $16,775,000 | 5.250% | 05/15/2024 | 59259YV63 | |
| 11/15/2033 | $17,655,000 | 5.250% | 05/15/2024 | 59259YV71 | |
| 11/15/2034 | $18,580,000 | 5.250% | 05/15/2024 | 59259YV89 | |
| 11/15/2035 | $19,555,000 | 5.250% | 05/15/2024 | 59259YW39 | |
| 11/15/2036 | $3,450,000 | 4.250% | 05/15/2024 | 59259YW47 | |
| 11/15/2036 | $17,135,000 | 5.250% | 05/15/2024 | 59259YW96 | |
| 11/15/2037 | $21,630,000 | 5.250% | 05/15/2024 | 59259YW54 | |
| 11/15/2038 | $22,765,000 | 5.250% | 05/15/2024 | 59259YW62 | |
| 11/15/2039 | $23,960,000 | 5.250% | 05/15/2024 | 59259YW21 | |
| **Total:** | $219,220,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $12,640,000 | 5.000% | 05/15/2024 | 59259YV97 | |
| 11/15/2041 | $13,275,000 | 5.000% | 05/15/2024 | 59259YV97 | |
| 11/15/2042 | $13,935,000 | 5.000% | 05/15/2024 | 59259YV97 | |
| 11/15/2043 | $14,635,000 | 5.000% | 05/15/2024 | 59259YV97 | |
| 11/15/2044 | $15,365,000 | 5.000% | 05/15/2024 | 59259YV97 | |
| **Total:** | $69,850,000 | | | | |

**$500,000,000 Transportation Revenue Bonds, Series 2014B**

**Date of Issue:** April 17, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $12,580,000 | 5.250% | 05/15/2024 | 59259YX20 | |
| 11/15/2041 | $13,235,000 | 5.250% | 05/15/2024 | 59259YX20 | |
| 11/15/2042 | $13,935,000 | 5.250% | 05/15/2024 | 59259YX20 | |
| 11/15/2043 | $14,665,000 | 5.250% | 05/15/2024 | 59259YX20 | |
| 11/15/2044 | $15,435,000 | 5.250% | 05/15/2024 | 59259YX20 | |
| **Total:** | $69,850,000 | | | | |

## $500,000,000 Transportation Revenue Bonds, Series 2014C

**Date of Issue:** June 26, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $195,515,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $36,025,000 | 5.000% | Non-Call | 59259YZ36 | |
| 11/15/2024 | $47,575,000 | 5.000% | Non-Call | 59259YZ44 | |
| 11/15/2030 | $15,510,000 | 5.000% | 11/15/2024 | 59259Y2A6 | |
| 11/15/2031 | $16,285,000 | 5.000% | 11/15/2024 | 59259Y2B4 | |
| 11/15/2032 | $17,100,000 | 5.000% | 11/15/2024 | 59259Y2C2 | |
| 11/15/2033 | $17,955,000 | 5.000% | 11/15/2024 | 59259Y2D0 | |
| 11/15/2034 | $23,855,000 | 4.000% | 11/15/2024 | 59259Y2E8 | |
| 11/15/2035 | $18,210,000 | 5.000% | 11/15/2024 | 59259Y2F5 | |
| 11/15/2036 | $3,000,000 | 5.000% | 11/15/2024 | 59259Y2G3 | |
| **Total:** | $195,515,000 | | | | |

**$500,000,000** **Transportation Revenue Bonds, Series 2014D**

**Date of Issue:** November 04, 2014

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2014D-1

**Par Outstanding** $295,455,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2030 | $11,155,000 | 5.000% | 11/15/2024 | 59259Y2S7 | |
| 11/15/2031 | $11,715,000 | 5.000% | 11/15/2024 | 59259Y2T5 | |
| 11/15/2032 | $12,295,000 | 5.000% | 11/15/2024 | 59259Y2U2 | |
| 11/15/2033 | $12,910,000 | 5.000% | 11/15/2024 | 59259Y2V0 | |
| 11/15/2034 | $515,000 | 5.000% | 11/15/2024 | 59259Y2W8 | |
| 11/15/2035 | $955,000 | 5.000% | 11/15/2024 | 59259Y2X6 | |
| 11/15/2036 | $4,960,000 | 5.000% | 11/15/2024 | 59259Y2Y4 | |
| **Total:** | $54,505,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $37,330,000 | 5.000% | 11/15/2024 | 59259Y3A5 | |
| 11/15/2038 | $39,190,000 | 5.000% | 11/15/2024 | 59259Y3A5 | |
| 11/15/2039 | $40,415,000 | 5.000% | 11/15/2024 | 59259Y3A5 | |
| **Total:** | $116,935,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $22,445,000 | 5.250% | 11/15/2024 | 59259Y2Z1 | |
| 11/15/2041 | $23,565,000 | 5.250% | 11/15/2024 | 59259Y2Z1 | |
| 11/15/2042 | $24,745,000 | 5.250% | 11/15/2024 | 59259Y2Z1 | |
| 11/15/2043 | $25,980,000 | 5.250% | 11/15/2024 | 59259Y2Z1 | |
| 11/15/2044 | $27,280,000 | 5.250% | 11/15/2024 | 59259Y2Z1 | |
| **Total:** | $124,015,000 | | | | |

**$850,000,000 Transportation Revenue Bonds, Series 2015A**

**Date of Issue:** January 22, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2015A-1

**Par Outstanding** $475,910,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,365,000 | 4.000% | Non-Call | 59259Y3H0 | |
| 11/15/2023 | $15,040,000 | 5.000% | Non-Call | 59259Y4D8 | |
| 11/15/2024 | $19,285,000 | 5.000% | Non-Call | 59259Y4E6 | |
| 11/15/2025 | $1,390,000 | 3.000% | 05/15/2025 | 59259Y3J6 | |
| 11/15/2025 | $18,870,000 | 5.000% | 05/15/2025 | 59259Y4F3 | |
| 11/15/2026 | $5,515,000 | 5.000% | 05/15/2025 | 59259Y3K3 | |
| 11/15/2027 | $8,600,000 | 5.000% | 05/15/2025 | 59259Y3L1 | |
| 11/15/2028 | $495,000 | 5.000% | 05/15/2025 | 59259Y3M9 | |
| 11/15/2029 | $7,260,000 | 5.000% | 05/15/2025 | 59259Y3R8 | |
| 11/15/2030 | $5,500,000 | 5.000% | 05/15/2025 | 59259Y3S6 | |
| 11/15/2031 | $435,000 | 5.000% | 05/15/2025 | 59259Y3T4 | |
| 11/15/2032 | $750,000 | 5.000% | 05/15/2025 | 59259Y3U1 | |
| 11/15/2033 | $8,370,000 | 5.000% | 05/15/2025 | 59259Y3V9 | |
| 11/15/2034 | $9,690,000 | 5.000% | 05/15/2025 | 59259Y3W7 | |
| 11/15/2035 | $9,625,000 | 5.000% | 05/15/2025 | 59259Y3N7 | |
| 11/15/2036 | $20,770,000 | 5.000% | 05/15/2025 | 59259Y4G1 | |
| 11/15/2037 | $25,550,000 | 5.000% | 05/15/2025 | 59259Y4H9 | |
| **Total:** | $160,510,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $26,775,000 | 5.000% | 05/15/2025 | 59259Y3P2 | |
| 11/15/2039 | $28,050,000 | 5.000% | 05/15/2025 | 59259Y3P2 | |
| 11/15/2040 | $40,680,000 | 5.000% | 05/15/2025 | 59259Y3P2 | |
| **Total:** | $95,505,000 | | | | |

**$850,000,000 Transportation Revenue Bonds, Series 2015A**

**Date of Issue:** January 22, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $39,800,000 | 5.000% | 05/15/2025 | 59259Y3Q0 | |
| 11/15/2042 | $41,785,000 | 5.000% | 05/15/2025 | 59259Y3Q0 | |
| 11/15/2043 | $43,875,000 | 5.000% | 05/15/2025 | 59259Y3Q0 | |
| 11/15/2044 | $46,070,000 | 5.000% | 05/15/2025 | 59259Y3Q0 | |
| 11/15/2045 | $48,365,000 | 5.000% | 05/15/2025 | 59259Y3Q0 | |
| **Total:** | $219,895,000 | | | | |

## Sub Series TRB 2015A-2

**Par Outstanding** $248,045,000

**Mode:** PUT **Mode Offering Date:** May 14, 2020 **Next Tender Date:** May 15, 2030

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $25,975,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2039 | $27,275,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2040 | $28,640,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2041 | $30,070,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2042 | $31,575,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2043 | $33,150,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2044 | $34,810,000 | 5.000% | Non-Call | 59261AG68 | |
| 11/15/2045 | $36,550,000 | 5.000% | Non-Call | 59261AG68 | |
| **Total:** | $248,045,000 | | | | |

## $275,055,000 Transportation Revenue Bonds, Series 2015B

**Date of Issue:** March 19, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $245,730,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,385,000 | 5.000% | Non-Call | 59259Y4T3 | |
| 11/15/2024 | $3,555,000 | 5.000% | Non-Call | 59259Y4U0 | |
| 11/15/2025 | $3,730,000 | 5.000% | 05/15/2025 | 59259Y4V8 | |
| 11/15/2027 | $4,110,000 | 3.000% | 05/15/2025 | 59259Y4X4 | |
| 11/15/2029 | $4,445,000 | 5.000% | 05/15/2025 | 59259Y4Z9 | |
| 11/15/2030 | $4,670,000 | 3.250% | 05/15/2025 | 59259Y5A3 | |
| 11/15/2031 | $4,820,000 | 5.000% | 05/15/2025 | 59259Y5B1 | |
| 11/15/2032 | $5,065,000 | 5.000% | 05/15/2025 | 59259Y5C9 | |
| 11/15/2033 | $5,315,000 | 5.000% | 05/15/2025 | 59259Y5D7 | |
| 11/15/2034 | $5,580,000 | 3.500% | 05/15/2025 | 59259Y5E5 | |
| 11/15/2035 | $5,775,000 | 5.000% | 05/15/2025 | 59259Y5F2 | |
| **Total:** | $50,450,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $6,065,000 | 5.000% | 05/15/2025 | 59259Y5G0 | |
| 11/15/2037 | $6,370,000 | 5.000% | 05/15/2025 | 59259Y5G0 | |
| 11/15/2038 | $6,685,000 | 5.000% | 05/15/2025 | 59259Y5G0 | |
| 11/15/2039 | $7,020,000 | 5.000% | 05/15/2025 | 59259Y5G0 | |
| 11/15/2040 | $7,370,000 | 5.000% | 05/15/2025 | 59259Y5G0 | |
| **Total:** | $33,510,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $7,740,000 | 4.000% | 05/15/2025 | 59259Y5H8 | |
| 11/15/2042 | $8,050,000 | 4.000% | 05/15/2025 | 59259Y5H8 | |
| 11/15/2043 | $8,375,000 | 4.000% | 05/15/2025 | 59259Y5H8 | |
| 11/15/2044 | $8,705,000 | 4.000% | 05/15/2025 | 59259Y5H8 | |
| 11/15/2045 | $9,055,000 | 4.000% | 05/15/2025 | 59259Y5H8 | |
| **Total:** | $41,925,000 | | | | |

**$275,055,000 Transportation Revenue Bonds, Series 2015B**

**Date of Issue:** March 19, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $9,420,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2047 | $9,910,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2048 | $10,435,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2049 | $10,980,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2050 | $11,555,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2051 | $12,165,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2052 | $12,800,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2053 | $13,475,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2054 | $14,180,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| 11/15/2055 | $14,925,000 | 5.250% | 05/15/2025 | 59259Y5J4 | |
| **Total:** | $119,845,000 | | | | |

**$550,000,000 Transportation Revenue Refunding Bonds, Series 2015C**

**Date of Issue:** August 18, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2015C-1

**Par Outstanding** $477,110,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2025 | $5,315,000 | 5.000% | Non-Call | 59259Y5Q8 | |
| 11/15/2026 | $16,235,000 | 5.000% | 11/15/2025 | 59259Y5R6 | |
| 11/15/2027 | $44,430,000 | 5.000% | 11/15/2025 | 59259Y5S4 | |
| 11/15/2028 | $7,205,000 | 3.125% | 11/15/2025 | 59259Y5Z8 | |
| 11/15/2028 | $24,760,000 | 5.000% | 11/15/2025 | 59259Y5T2 | |
| 11/15/2028 | $30,195,000 | 5.250% | 11/15/2025 | 59259Y6C8 | |
| 11/15/2029 | $22,420,000 | 5.000% | 11/15/2025 | 59259Y5U9 | |
| 11/15/2029 | $41,535,000 | 5.250% | 11/15/2025 | 59259Y6D6 | |
| 11/15/2030 | $10,200,000 | 3.400% | 11/15/2025 | 59259Y6A2 | |
| 11/15/2030 | $17,145,000 | 5.000% | 11/15/2025 | 59259Y5V7 | |
| 11/15/2030 | $43,980,000 | 5.250% | 11/15/2025 | 59259Y6E4 | |
| 11/15/2031 | $17,590,000 | 5.000% | 11/15/2025 | 59259Y5Y1 | |
| 11/15/2031 | $45,110,000 | 5.250% | 11/15/2025 | 59259Y6F1 | |
| 11/15/2034 | $11,025,000 | 3.700% | 11/15/2025 | 59259Y6B0 | |
| 11/15/2034 | $63,170,000 | 5.000% | 11/15/2025 | 59259Y5W5 | |
| 11/15/2035 | $76,795,000 | 5.000% | 11/15/2025 | 59259Y5X3 | |
| **Total:** | $477,110,000 | | | | |

**$407,695,000 Transportation Revenue Refunding Bonds, Series 2015D**

**Date of Issue:** September 17, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2015D-1

**Par Outstanding** $287,535,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $6,575,000 | 5.000% | Non-Call | 59259Y6H7 | |
| 11/15/2026 | $13,500,000 | 5.000% | 11/15/2025 | 59259Y6J3 | |
| 11/15/2027 | $13,500,000 | 5.000% | 11/15/2025 | 59259Y6K0 | |
| 11/15/2028 | $24,935,000 | 5.000% | 11/15/2025 | 59259Y6L8 | |
| 11/15/2029 | $27,435,000 | 5.000% | 11/15/2025 | 59259Y6M6 | |
| 11/15/2030 | $24,730,000 | 5.000% | 11/15/2025 | 59259Y6N4 | |
| 11/15/2031 | $38,110,000 | 5.000% | 11/15/2025 | 59259Y6P9 | |
| 11/15/2032 | $25,000,000 | 5.000% | 11/15/2025 | 59259Y6Q7 | |
| 11/15/2033 | $25,000,000 | 5.000% | 11/15/2025 | 59259Y6R5 | |
| 11/15/2034 | $20,000,000 | 5.000% | 11/15/2025 | 59259Y6S3 | |
| 11/15/2035 | $8,155,000 | 3.375% | 11/15/2025 | 59259Y6U8 | |
| 11/15/2035 | $17,785,000 | 5.000% | 11/15/2025 | 59259Y6T1 | |
| **Total:** | $244,725,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2032 | $20,885,000 | 5.000% | 11/15/2025 | 59259Y6V6 | |
| 11/15/2033 | $21,925,000 | 5.000% | 11/15/2025 | 59259Y6V6 | |
| **Total:** | $42,810,000 | | | | |

## $650,000,000 Transportation Revenue Variable Rate Bonds, Series 2015E

**Date of Issue:** September 10, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2015E-1

**Par Outstanding** $147,775,000

**Short Term Ratings:** VMIG 1/A-1/F1/NR

**Credit Provider:** Barclays Bank PLC

**Facility Effective:** August 18, 2021

**Facility Expiration:** August 18, 2025

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2029 | $5,230,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2030 | $5,440,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2031 | $5,655,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2032 | $5,885,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2033 | $6,115,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2034 | $6,360,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2035 | $6,620,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2036 | $6,885,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2037 | $7,155,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2038 | $7,445,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2039 | $7,735,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2040 | $8,050,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2041 | $8,370,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2042 | $8,705,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2043 | $9,055,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2044 | $9,420,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2045 | $9,795,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2046 | $4,405,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2047 | $4,580,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2048 | $4,765,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2049 | $4,955,000 | Daily | 08/18/2021 | 59261AM53 | |
| 11/15/2050 | $5,150,000 | Daily | 08/18/2021 | 59261AM53 | |
| **Total:** | $147,775,000 | | | | |

**$650,000,000** **Transportation Revenue Variable Rate Bonds, Series 2015E**

**Date of Issue:** September 10, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2015E-2

**Par Outstanding** $193,565,000

**Mode:** FRN **Mode Offering Date:** September 05, 2018 **Next Tender Date:** September 05, 2023

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2029 | $5,650,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2030 | $5,880,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2031 | $6,115,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2032 | $6,360,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2033 | $6,610,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2034 | $6,875,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2035 | $7,150,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2036 | $7,440,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2037 | $7,735,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2038 | $8,045,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2039 | $8,365,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2040 | $8,700,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2041 | $9,050,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2042 | $9,410,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2043 | $9,785,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2044 | $10,180,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2045 | $10,585,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2046 | $11,010,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2047 | $11,450,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2048 | $11,905,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2049 | $12,385,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| 11/15/2050 | $12,880,000 | SIFMA + 1.050% | 09/05/2018 | 59261AXA0 | |
| **Total:** | $193,565,000 | | | | |

**$650,000,000 Transportation Revenue Variable Rate Bonds, Series 2015E**

**Date of Issue:** September 10, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2015E-3

**Par Outstanding** $154,850,000

**Short Term Ratings:** VMIG1/A-1/F1+/NAF

**Credit Provider:** Bank of America, N.A. **Facility Effective:** August 31, 2022 **Facility Expiration:** September 02, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2029 | $4,520,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2030 | $4,700,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2031 | $4,890,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2032 | $5,085,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2033 | $5,290,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2034 | $5,500,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2035 | $5,720,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2036 | $5,950,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2037 | $6,190,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2038 | $6,435,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2039 | $6,695,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2040 | $6,960,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2041 | $7,240,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2042 | $7,530,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2043 | $7,830,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2044 | $8,145,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2045 | $8,470,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2046 | $8,805,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2047 | $9,160,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2048 | $9,525,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2049 | $9,905,000 | Daily | 08/31/2022 | 59261AWK9 | |
| 11/15/2050 | $10,305,000 | Daily | 08/31/2022 | 59261AWK9 | |
| **Total:** | $154,850,000 | | | | |

## $330,430,000 Transportation Revenue Refunding Bonds, Series 2015F

**Date of Issue:** December 17, 2015

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $262,400,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $13,325,000 | 5.000% | Non-Call | 59261AAG2 | |
| 11/15/2024 | $13,990,000 | 5.000% | Non-Call | 59261AAH0 | |
| 11/15/2025 | $14,695,000 | 5.000% | Non-Call | 59261AAJ6 | |
| 11/15/2026 | $9,405,000 | 5.000% | 11/15/2025 | 59261AAK3 | |
| 11/15/2027 | $16,240,000 | 5.000% | 11/15/2025 | 59261AAL1 | |
| 11/15/2028 | $17,055,000 | 5.000% | 11/15/2025 | 59261AAM9 | |
| 11/15/2029 | $30,380,000 | 5.000% | 11/15/2025 | 59261AAN7 | |
| 11/15/2030 | $18,770,000 | 3.250% | 11/15/2025 | 59261AAP2 | |
| 11/15/2031 | $19,380,000 | 3.250% | 11/15/2025 | 59261AAQ0 | |
| 11/15/2032 | $20,010,000 | 5.000% | 11/15/2025 | 59261AAR8 | |
| 11/15/2033 | $16,510,000 | 3.250% | 11/15/2025 | 59261AAW7 | |
| 11/15/2033 | $4,500,000 | 5.000% | 11/15/2025 | 59261AAS6 | |
| 11/15/2034 | $14,770,000 | 3.375% | 11/15/2025 | 59261AAX5 | |
| 11/15/2034 | $7,000,000 | 5.000% | 11/15/2025 | 59261AAT4 | |
| 11/15/2035 | $22,620,000 | 5.000% | 11/15/2025 | 59261AAU1 | |
| 11/15/2036 | $23,750,000 | 5.000% | 11/15/2025 | 59261AAV9 | |
| **Total:** | $262,400,000 | | | | |

**$782,520,000 Transportation Revenue Green Bonds, Series 2016A**

**Date of Issue:** February 25, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2016A-1

**Par Outstanding** $412,275,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $5,690,000 | 5.000% | Non-Call | 59261ACB1 | |
| 11/15/2024 | $5,975,000 | 5.000% | Non-Call | 59261ACC9 | |
| 11/15/2025 | $6,275,000 | 2.500% | Non-Call | 59261ACD7 | |
| 11/15/2026 | $6,430,000 | 5.000% | 05/15/2026 | 59261ACE5 | |
| 11/15/2027 | $6,750,000 | 5.000% | 05/15/2026 | 59261ACF2 | |
| 11/15/2028 | $7,090,000 | 5.000% | 05/15/2026 | 59261ACG0 | |
| 11/15/2029 | $7,445,000 | 5.000% | 05/15/2026 | 59261ACH8 | |
| 11/15/2030 | $7,815,000 | 5.000% | 05/15/2026 | 59261ACJ4 | |
| 11/15/2031 | $8,205,000 | 5.000% | 05/15/2026 | 59261ACK1 | |
| 11/15/2032 | $8,620,000 | 5.000% | 05/15/2026 | 59261ACL9 | |
| 11/15/2033 | $8,175,000 | 4.000% | 05/15/2026 | 59261ACZ8 | |
| 11/15/2033 | $875,000 | 5.000% | 05/15/2026 | 59261ACM7 | |
| 11/15/2034 | $9,415,000 | 3.000% | 05/15/2026 | 59261ACN5 | |
| 11/15/2035 | $3,540,000 | 3.100% | 05/15/2026 | 59261ACV7 | |
| 11/15/2035 | $5,000,000 | 4.000% | 05/15/2026 | 59261ADA2 | |
| 11/15/2035 | $1,160,000 | 5.000% | 05/15/2026 | 59261ACP0 | |
| 11/15/2036 | $10,070,000 | 5.000% | 05/15/2026 | 59261ACQ8 | |
| **Total:** | $108,530,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $4,555,000 | 5.000% | 05/15/2026 | 59261ACU9 | |
| 11/15/2038 | $4,780,000 | 5.000% | 05/15/2026 | 59261ACU9 | |
| 11/15/2039 | $5,020,000 | 5.000% | 05/15/2026 | 59261ACU9 | |
| 11/15/2040 | $5,275,000 | 5.000% | 05/15/2026 | 59261ACU9 | |
| 11/15/2041 | $5,535,000 | 5.000% | 05/15/2026 | 59261ACU9 | |
| **Total:** | $25,165,000 | | | | |

**$782,520,000 Transportation Revenue Green Bonds, Series 2016A**

**Date of Issue:** February 25, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $6,020,000 | 3.500% | 05/15/2026 | 59261ACR6 | |
| 11/15/2038 | $6,230,000 | 3.500% | 05/15/2026 | 59261ACR6 | |
| 11/15/2039 | $6,450,000 | 3.500% | 05/15/2026 | 59261ACR6 | |
| 11/15/2040 | $6,670,000 | 3.500% | 05/15/2026 | 59261ACR6 | |
| 11/15/2041 | $6,905,000 | 3.500% | 05/15/2026 | 59261ACR6 | |
| **Total:** | $32,275,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $9,960,000 | 5.000% | 05/15/2026 | 59261ACS4 | |
| 11/15/2043 | $10,580,000 | 5.000% | 05/15/2026 | 59261ACS4 | |
| 11/15/2044 | $11,230,000 | 5.000% | 05/15/2026 | 59261ACS4 | |
| 11/15/2045 | $11,910,000 | 5.000% | 05/15/2026 | 59261ACS4 | |
| 11/15/2046 | $12,625,000 | 5.000% | 05/15/2026 | 59261ACS4 | |
| **Total:** | $56,305,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $3,000,000 | 4.000% | 05/15/2026 | 59261ACX3 | |
| 11/15/2043 | $3,000,000 | 4.000% | 05/15/2026 | 59261ACX3 | |
| 11/15/2044 | $3,000,000 | 4.000% | 05/15/2026 | 59261ACX3 | |
| 11/15/2045 | $3,000,000 | 4.000% | 05/15/2026 | 59261ACX3 | |
| 11/15/2046 | $3,000,000 | 4.000% | 05/15/2026 | 59261ACX3 | |
| **Total:** | $15,000,000 | | | | |

**$782,520,000 Transportation Revenue Green Bonds, Series 2016A**

**Date of Issue:** February 25, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $13,750,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2048 | $14,475,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2049 | $15,235,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2050 | $16,035,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2051 | $16,875,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2052 | $17,760,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2053 | $18,695,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2054 | $19,675,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2055 | $20,705,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| 11/15/2056 | $21,795,000 | 5.250% | 05/15/2026 | 59261ACW5 | |
| **Total:** | $175,000,000 | | | | |

## Sub Series TRB 2016A-2

**Par Outstanding** $230,795,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $35,365,000 | 5.000% | Non-Call | 59261ADG9 | |
| 11/15/2024 | $34,860,000 | 5.000% | Non-Call | 59261ADH7 | |
| 11/15/2025 | $7,590,000 | 4.000% | Non-Call | 59261ADQ7 | |
| 11/15/2025 | $46,400,000 | 5.000% | Non-Call | 59261ADJ3 | |
| 11/15/2026 | $1,840,000 | 4.000% | Non-Call | 59261ADK0 | |
| 11/15/2026 | $36,515,000 | 5.000% | Non-Call | 59261ADN4 | |
| 11/15/2027 | $40,255,000 | 5.000% | 11/15/2026* | 59261ADL8 | |
| 11/15/2028 | $1,255,000 | 2.500% | 11/15/2026* | 59261ADM6 | |
| 11/15/2028 | $26,715,000 | 5.000% | 11/15/2026* | 59261ADP9 | |
| **Total:** | $230,795,000 | | | | |

*** Also Subject to Make-Whole Call**

**$673,990,000 Transportation Revenue Refunding Bonds, Series 2016B**

**Date of Issue:** June 30, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $520,720,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $990,000 | 4.000% | Non-Call | 59261AET0 | |
| 11/15/2023 | $23,065,000 | 5.000% | Non-Call | 59261AFJ1 | |
| 11/15/2024 | $1,045,000 | 4.000% | Non-Call | 59261AEU7 | |
| 11/15/2024 | $24,200,000 | 5.000% | Non-Call | 59261AFK8 | |
| 11/15/2025 | $5,195,000 | 4.000% | Non-Call | 59261AEV5 | |
| 11/15/2025 | $21,300,000 | 5.000% | Non-Call | 59261AFL6 | |
| 11/15/2026 | $6,245,000 | 4.000% | Non-Call | 59261AEW3 | |
| 11/15/2026 | $21,525,000 | 5.000% | Non-Call | 59261AFM4 | |
| 11/15/2027 | $29,095,000 | 5.000% | 11/15/2026 | 59261AEX1 | |
| 11/15/2028 | $11,060,000 | 5.000% | 11/15/2026 | 59261AEY9 | |
| 11/15/2029 | $14,630,000 | 5.000% | 11/15/2026 | 59261AEZ6 | |
| 11/15/2030 | $7,500,000 | 5.000% | 11/15/2026 | 59261AFA0 | |
| 11/15/2031 | $1,855,000 | 5.000% | 11/15/2026 | 59261AFB8 | |
| 11/15/2032 | $2,175,000 | 5.000% | 11/15/2026 | 59261AFC6 | |
| 11/15/2033 | $15,720,000 | 5.000% | 11/15/2026 | 59261AFN2 | |
| 11/15/2034 | $18,060,000 | 4.000% | 11/15/2026 | 59261AFP7 | |
| 11/15/2034 | $20,415,000 | 5.000% | 11/15/2026 | 59261AFW2 | |
| 11/15/2035 | $46,570,000 | 5.000% | 11/15/2026 | 59261AFQ5 | |
| 11/15/2036 | $98,000,000 | 4.000% | 11/15/2026 | 59261AFR3 | |
| **Total:** | $368,645,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $46,225,000 | 5.000% | 11/15/2026 | 59261AFS1 | |
| 11/15/2037 | $105,850,000 | 5.000% | 11/15/2026 | 59261AFS1 | |
| **Total:** | $152,075,000 | | | | |

**$863,860,000 Transportation Revenue Bonds, Series 2016C**

**Date of Issue:** July 28, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2016C-1

**Par Outstanding** $502,025,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $6,255,000 | 5.000% | Non-Call | 59261AGU5 | |
| 11/15/2024 | $6,570,000 | 5.000% | Non-Call | 59261AGV3 | |
| 11/15/2025 | $6,895,000 | 5.000% | Non-Call | 59261AGW1 | |
| 11/15/2026 | $7,240,000 | 4.000% | Non-Call | 59261AGX9 | |
| 11/15/2027 | $7,530,000 | 5.000% | 11/15/2026 | 59261AGY7 | |
| 11/15/2028 | $7,905,000 | 5.000% | 11/15/2026 | 59261AGZ4 | |
| 11/15/2029 | $8,305,000 | 5.000% | 11/15/2026 | 59261AHA8 | |
| 11/15/2030 | $8,720,000 | 5.000% | 11/15/2026 | 59261AHB6 | |
| 11/15/2031 | $9,155,000 | 5.000% | 11/15/2026 | 59261AHC4 | |
| 11/15/2032 | $9,610,000 | 5.000% | 11/15/2026 | 59261AHD2 | |
| 11/15/2033 | $10,090,000 | 5.000% | 11/15/2026 | 59261AHE0 | |
| 11/15/2034 | $10,595,000 | 5.000% | 11/15/2026 | 59261AHF7 | |
| 11/15/2035 | $11,125,000 | 5.000% | 11/15/2026 | 59261AHG5 | |
| 11/15/2036 | $11,680,000 | 5.000% | 11/15/2026 | 59261AHH3 | |
| 11/15/2037 | $12,265,000 | 4.000% | 11/15/2026 | 59261AHM2 | |
| 11/15/2038 | $12,755,000 | 4.000% | 11/15/2026 | 59261AHQ3 | |
| 11/15/2039 | $13,265,000 | 5.000% | 11/15/2026 | 59261AHN0 | |
| **Total:** | $159,960,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $13,930,000 | 4.000% | 11/15/2026 | 59261AHJ9 | |
| 11/15/2041 | $14,485,000 | 4.000% | 11/15/2026 | 59261AHJ9 | |
| **Total:** | $28,415,000 | | | | |

**$863,860,000 Transportation Revenue Bonds, Series 2016C**

**Date of Issue:** July 28, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $4,650,000 | 5.000% | 11/15/2026 | 59261AHK6 | |
| 11/15/2043 | $4,885,000 | 5.000% | 11/15/2026 | 59261AHK6 | |
| 11/15/2044 | $5,125,000 | 5.000% | 11/15/2026 | 59261AHK6 | |
| 11/15/2045 | $5,385,000 | 5.000% | 11/15/2026 | 59261AHK6 | |
| 11/15/2046 | $5,655,000 | 5.000% | 11/15/2026 | 59261AHK6 | |
| **Total:** | $25,700,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $5,540,000 | 4.000% | 11/15/2026 | 59261AHR1 | |
| 11/15/2043 | $5,760,000 | 4.000% | 11/15/2026 | 59261AHR1 | |
| 11/15/2044 | $5,990,000 | 4.000% | 11/15/2026 | 59261AHR1 | |
| 11/15/2045 | $6,230,000 | 4.000% | 11/15/2026 | 59261AHR1 | |
| 11/15/2046 | $6,480,000 | 4.000% | 11/15/2026 | 59261AHR1 | |
| **Total:** | $30,000,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $4,875,000 | 3.000% | 11/15/2026 | 59261AHS9 | |
| 11/15/2043 | $5,020,000 | 3.000% | 11/15/2026 | 59261AHS9 | |
| 11/15/2044 | $5,175,000 | 3.000% | 11/15/2026 | 59261AHS9 | |
| 11/15/2045 | $5,330,000 | 3.000% | 11/15/2026 | 59261AHS9 | |
| 11/15/2046 | $5,485,000 | 3.000% | 11/15/2026 | 59261AHS9 | |
| **Total:** | $25,885,000 | | | | |

**$863,860,000 Transportation Revenue Bonds, Series 2016C**

**Date of Issue:** July 28, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $7,950,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2048 | $8,350,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2049 | $8,765,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2050 | $9,205,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2051 | $9,665,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2052 | $10,145,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2053 | $10,655,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2054 | $11,185,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2055 | $11,745,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| 11/15/2056 | $12,335,000 | 5.000% | 11/15/2026 | 59261AHL4 | |
| **Total:** | $100,000,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $10,380,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2048 | $10,920,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2049 | $11,495,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2050 | $12,100,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2051 | $12,735,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2052 | $13,405,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2053 | $14,105,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2054 | $14,850,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2055 | $15,630,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| 11/15/2056 | $16,445,000 | 5.250% | 11/15/2026 | 59261AHP5 | |
| **Total:** | $132,065,000 | | | | |

## $863,860,000 Transportation Revenue Bonds, Series 2016C

**Date of Issue:** July 28, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2016C-2a

**Par Outstanding** $56,120,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $26,390,000 | 3.000% | 11/15/2026 | 59261AHT7 | |
| 11/15/2038 | $29,730,000 | 4.000% | 11/15/2026 | 59261AHU4 | |
| **Total:** | $56,120,000 | | | | |

**$645,655,000 Transportation Revenue Refunding Bonds, Series 2016D**

**Date of Issue:** October 26, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $420,925,000

**Serial Bonds**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $13,725,000 | 4.000% | Non-Call | 59261AJK4 | |
| 11/15/2026 | $14,510,000 | 5.000% | Non-Call | 59261AJL2 | |
| 11/15/2027 | $57,015,000 | 5.000% | 11/15/2026 | 59261AJM0 | |
| 11/15/2028 | $30,895,000 | 5.000% | 11/15/2026 | 59261AJN8 | |
| 11/15/2029 | $57,805,000 | 5.000% | 11/15/2026 | 59261AJP3 | |
| 11/15/2030 | $60,700,000 | 5.000% | 11/15/2026 | 59261AJQ1 | |
| 11/15/2031 | $52,730,000 | 5.000% | 11/15/2026 | 59261AJR9 | |
| 11/15/2031 | $11,000,000 | 5.250% | 11/15/2026 | 59261AJY4 | |
| 11/15/2032 | $31,595,000 | 3.000% | 11/15/2026 | 59261AJS7 | |
| 11/15/2032 | $29,005,000 | 4.000% | 11/15/2026 | 59261AJW8 | |
| 11/15/2033 | $19,845,000 | 4.000% | 11/15/2026 | 59261AJT5 | |
| 11/15/2034 | $20,635,000 | 4.000% | 11/15/2026 | 59261AJU2 | |
| 11/15/2035 | $21,465,000 | 3.125% | 11/15/2026 | 59261AJV0 | |
| **Total:** | $420,925,000 | | | | |

## $325,585,000 Transportation Revenue Green Bonds, Series 2017A

**Date of Issue:** March 16, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2017A-1

**Par Outstanding** $177,715,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $2,170,000 | 5.000% | Non-Call | 59261ALK1 | |
| 11/15/2024 | $2,255,000 | 4.000% | Non-Call | 59261ALL9 | |
| 11/15/2025 | $2,365,000 | 5.000% | Non-Call | 59261ALM7 | |
| 11/15/2026 | $2,485,000 | 5.000% | Non-Call | 59261ALN5 | |
| 11/15/2027 | $2,610,000 | 5.000% | 05/15/2027 | 59261ALP0 | |
| 11/15/2028 | $2,740,000 | 5.000% | 05/15/2027 | 59261ALQ8 | |
| 11/15/2029 | $2,875,000 | 5.000% | 05/15/2027 | 59261ALR6 | |
| 11/15/2030 | $3,020,000 | 3.250% | 05/15/2027 | 59261ALS4 | |
| 11/15/2031 | $3,120,000 | 5.000% | 05/15/2027 | 59261ALT2 | |
| 11/15/2032 | $3,275,000 | 5.000% | 05/15/2027 | 59261ALU9 | |
| 11/15/2033 | $3,440,000 | 3.500% | 05/15/2027 | 59261ALV7 | |
| 11/15/2034 | $3,560,000 | 5.000% | 05/15/2027 | 59261ALW5 | |
| 11/15/2035 | $3,735,000 | 5.000% | 05/15/2027 | 59261ALX3 | |
| 11/15/2036 | $3,925,000 | 5.000% | 05/15/2027 | 59261ALY1 | |
| 11/15/2037 | $4,050,000 | 5.000% | 05/15/2027 | 59261ALZ8 | |
| 11/15/2047 | $1,070,000 | 5.000% | 05/15/2027 | 59261AMA2 | |
| **Total:** | $46,695,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $4,320,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| 11/15/2039 | $4,495,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| 11/15/2040 | $4,675,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| 11/15/2041 | $4,860,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| 11/15/2042 | $5,055,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| 11/15/2043 | $5,255,000 | 4.000% | 05/15/2027 | 59261AMC8 | |
| **Total:** | $28,660,000 | | | | |

**$325,585,000 Transportation Revenue Green Bonds, Series 2017A**

**Date of Issue:** March 16, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2044 | $5,470,000 | 4.000% | 05/15/2027 | 59261AMD6 | |
| 11/15/2045 | $5,685,000 | 4.000% | 05/15/2027 | 59261AMD6 | |
| 11/15/2046 | $5,915,000 | 4.000% | 05/15/2027 | 59261AMD6 | |
| 11/15/2047 | $5,080,000 | 4.000% | 05/15/2027 | 59261AMD6 | |
| 11/15/2048 | $6,405,000 | 4.000% | 05/15/2027 | 59261AMD6 | |
| **Total:** | $28,555,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2049 | $6,665,000 | 5.000% | 05/15/2027 | 59261AME4 | |
| 11/15/2050 | $6,995,000 | 5.000% | 05/15/2027 | 59261AME4 | |
| 11/15/2051 | $7,345,000 | 5.000% | 05/15/2027 | 59261AME4 | |
| **Total:** | $21,005,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2052 | $7,715,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| 11/15/2053 | $8,120,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| 11/15/2054 | $8,545,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| 11/15/2055 | $8,995,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| 11/15/2056 | $9,465,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| 11/15/2057 | $9,960,000 | 5.250% | 05/15/2027 | 59261AMB0 | |
| **Total:** | $52,800,000 | | | | |

**$325,585,000 Transportation Revenue Green Bonds, Series 2017A**

**Date of Issue:** March 16, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2017A-2 Refunding Bonds

**Par Outstanding** $136,635,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $10,875,000 | 5.000% | Non-Call | 59261AMF1 | |
| 11/15/2025 | $22,955,000 | 5.000% | Non-Call | 59261AMG9 | |
| 11/15/2026 | $24,105,000 | 5.000% | Non-Call | 59261AMH7 | |
| 11/15/2027 | $25,305,000 | 5.000% | 05/15/2027 | 59261AMJ3 | |
| 11/15/2028 | $24,940,000 | 5.000% | 05/15/2027 | 59261AMK0 | |
| 11/15/2029 | $13,880,000 | 5.000% | 05/15/2027 | 59261AML8 | |
| 11/15/2030 | $14,575,000 | 5.000% | 05/15/2027 | 59261AMM6 | |
| **Total:** | $136,635,000 | | | | |

**$662,025,000 Transportation Revenue Refunding Green Bonds, Series 2017B**

**Date of Issue:** September 28, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $571,440,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $2,515,000 | 3.000% | Non-Call | 59261AND5 | |
| 11/15/2023 | $3,190,000 | 4.000% | Non-Call | 59261ANB9 | |
| 11/15/2023 | $167,310,000 | 5.000% | Non-Call | 59261ANC7 | |
| 11/15/2024 | $2,690,000 | 4.000% | Non-Call | 59261ANF0 | |
| 11/15/2024 | $145,940,000 | 5.000% | Non-Call | 59261ANE3 | |
| 11/15/2025 | $103,250,000 | 5.000% | Non-Call | 59261ANG8 | |
| 11/15/2026 | $54,855,000 | 5.000% | Non-Call | 59261ANH6 | |
| 11/15/2027 | $1,810,000 | 4.000% | Non-Call | 59261ANJ2 | |
| 11/15/2027 | $42,925,000 | 5.000% | Non-Call | 59261ANK9 | |
| 11/15/2028 | $46,955,000 | 5.000% | Non-Call | 59261ANL7 | |
| **Total:** | $571,440,000 | | | | |

## $2,021,461,605 Transportation Revenue Refunding Green Bonds, Series 2017C

**Date of Issue:** December 14, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2017C-1

**Par Outstanding** $1,821,460,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $44,980,000 | 5.000% | Non-Call | 59261APM3 | |
| 11/15/2024 | $4,265,000 | 3.000% | Non-Call | 59261APN1 | |
| 11/15/2024 | $4,310,000 | 4.000% | Non-Call | 59261APP6 | |
| 11/15/2024 | $96,725,000 | 5.000% | Non-Call | 59261APQ4 | |
| 11/15/2025 | $1,600,000 | 3.000% | Non-Call | 59261APT8 | |
| 11/15/2025 | $1,125,000 | 4.000% | Non-Call | 59261APS0 | |
| 11/15/2025 | $133,575,000 | 5.000% | Non-Call | 59261APR2 | |
| 11/15/2026 | $1,825,000 | 3.000% | Non-Call | 59261APV3 | |
| 11/15/2026 | $4,300,000 | 4.000% | Non-Call | 59261APU5 | |
| 11/15/2026 | $173,050,000 | 5.000% | Non-Call | 59261APW1 | |
| 11/15/2027 | $95,205,000 | 5.000% | Non-Call | 59261APX9 | |
| 11/15/2028 | $146,960,000 | 5.000% | 05/15/2028 | 59261APY7 | |
| 11/15/2029 | $158,000,000 | 5.000% | 05/15/2028 | 59261APZ4 | |
| 11/15/2030 | $124,225,000 | 5.000% | 05/15/2028 | 59261AQA8 | |
| 11/15/2031 | $68,945,000 | 4.000% | 05/15/2028 | 59261AQC4 | |
| 11/15/2031 | $153,135,000 | 5.000% | 05/15/2028 | 59261AQB6 | |
| 11/15/2032 | $99,240,000 | 4.000% | 05/15/2028 | 59261AQD2 | |
| 11/15/2033 | $70,020,000 | 5.000% | 05/15/2028 | 59261AQE0 | |
| 11/15/2034 | $21,840,000 | 4.000% | 05/15/2028 | 59261AQF7 | |
| 11/15/2034 | $85,385,000 | 5.000% | 05/15/2028 | 59261AQG5 | |
| 11/15/2035 | $85,030,000 | 4.000% | 05/15/2028 | 59261AQH3 | |
| 11/15/2036 | $76,830,000 | 3.250% | 05/15/2028 | 59261AQK6 | |
| 11/15/2036 | $11,580,000 | 4.000% | 05/15/2028 | 59261AQJ9 | |
| 11/15/2037 | $28,775,000 | 3.375% | 05/15/2028 | 59261AQM2 | |
| 11/15/2037 | $49,405,000 | 4.000% | 05/15/2028 | 59261AQL4 | |
| 11/15/2038 | $81,130,000 | 4.000% | 05/15/2028 | 59261AQN0 | |
| **Total:** | $1,821,460,000 | | | | |

**$2,021,461,605 Transportation Revenue Refunding Green Bonds, Series 2017C**

**Date of Issue:** December 14, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2017C-2

**Par Outstanding** $351,475,000

## Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2027 | $28,315,000 | 0.000% | Non-Call | 59261APF8 | |
| 11/15/2029 | $62,075,000 | 0.000% | Non-Call | 59261APG6 | |
| 11/15/2032 | $70,000,000 | 0.000% | Non-Call | 59261APH4 | |
| 11/15/2033 | $43,785,000 | 0.000% | Non-Call | 59261APJ0 | |
| 11/15/2039 | $84,370,000 | 0.000% | Non-Call | 59261APK7 | |
| 11/15/2040 | $62,930,000 | 0.000% | Non-Call | 59261APL5 | |
| **Total:** | $351,475,000 | | | | |

**$643,095,000 Transportation Revenue Refunding Bonds, Series 2017D**

**Date of Issue:** December 21, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $643,095,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $4,820,000 | 5.000% | Non-Call | 59261ASQ1 | |
| 11/15/2024 | $6,285,000 | 5.000% | Non-Call | 59261ASR9 | |
| 11/15/2025 | $6,620,000 | 5.000% | Non-Call | 59261ASS7 | |
| 11/15/2026 | $7,310,000 | 5.000% | Non-Call | 59261AST5 | |
| 11/15/2027 | $7,675,000 | 5.000% | Non-Call | 59261ASU2 | |
| 11/15/2028 | $8,035,000 | 5.000% | 05/15/2028 | 59261ASV0 | |
| 11/15/2029 | $2,055,000 | 5.000% | 05/15/2028 | 59261ASW8 | |
| 11/15/2030 | $73,225,000 | 5.000% | 05/15/2028 | 59261ASX6 | |
| 11/15/2031 | $17,980,000 | 5.000% | 05/15/2028 | 59261ASY4 | |
| 11/15/2032 | $1,630,000 | 3.000% | 05/15/2028 | 59261ATA5 | |
| 11/15/2032 | $47,080,000 | 5.000% | 05/15/2028 | 59261ASZ1 | |
| 11/15/2033 | $42,435,000 | 5.000% | 05/15/2028 | 59261ATB3 | |
| 11/15/2034 | $12,770,000 | 5.000% | 05/15/2028 | 59261ATC1 | |
| 11/15/2035 | $25,295,000 | 5.000% | 05/15/2028 | 59261ATD9 | |
| 11/15/2036 | $2,790,000 | 5.000% | 05/15/2028 | 59261ATE7 | |
| 11/15/2037 | $2,930,000 | 5.000% | 05/15/2028 | 59261ATF4 | |
| 11/15/2038 | $3,080,000 | 3.250% | 05/15/2028 | 59261ATG2 | |
| 11/15/2039 | $3,180,000 | 3.250% | 05/15/2028 | 59261ATH0 | |
| **Total:** | $275,195,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $98,295,000 | 4.000% | 05/15/2028 | 59261ATJ6 | |
| 11/15/2041 | $95,495,000 | 4.000% | 05/15/2028 | 59261ATJ6 | |
| 11/15/2042 | $60,135,000 | 4.000% | 05/15/2028 | 59261ATJ6 | |
| **Total:** | $253,925,000 | | | | |

**$643,095,000 Transportation Revenue Refunding Bonds, Series 2017D**

**Date of Issue:** December 21, 2017

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $48,215,000 | 4.000% | 05/15/2028 | 59261ATK3 | |
| 11/15/2044 | $18,275,000 | 4.000% | 05/15/2028 | 59261ATK3 | |
| 11/15/2045 | $19,005,000 | 4.000% | 05/15/2028 | 59261ATK3 | |
| 11/15/2046 | $14,920,000 | 4.000% | 05/15/2028 | 59261ATK3 | |
| **Total:** | $100,415,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $4,850,000 | 3.375% | 05/15/2028 | 59261ATL1 | |
| 11/15/2047 | $8,710,000 | 3.375% | 05/15/2028 | 59261ATL1 | |
| **Total:** | $13,560,000 | | | | |

## $207,220,000 Transportation Revenue Refunding Green Bonds, Series 2018B

**Date of Issue:** August 23, 2018

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $170,475,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $17,080,000 | 5.000% | Non-Call | 59261AWU7 | |
| 11/15/2024 | $21,365,000 | 5.000% | Non-Call | 59261AWV5 | |
| 11/15/2025 | $26,870,000 | 5.000% | Non-Call | 59261AWW3 | |
| 11/15/2026 | $37,995,000 | 5.000% | Non-Call | 59261AWX1 | |
| 11/15/2027 | $31,985,000 | 5.000% | Non-Call | 59261AWY9 | |
| 11/15/2028 | $35,180,000 | 5.000% | Non-Call | 59261AWZ6 | |
| **Total:** | $170,475,000 | | | | |

## $454,150,000 Transportation Revenue Green Bonds, Series 2019A

**Date of Issue:** February 06, 2019

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2019A-1

**Par Outstanding** $191,345,000

**Mode:** PUT **Mode Offering Date:** February 06, 2019 **Next Tender Date:** November 15, 2024

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $93,340,000 | 5.000% | Non-Call | 59261AXR3 | |
| 11/15/2048 | $98,005,000 | 5.000% | Non-Call | 59261AXR3 | |
| **Total:** | $191,345,000 | | | | |

### Sub Series TRB 2019A-2

**Par Outstanding** $162,805,000

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2044 | $79,415,000 | 5.000% | 11/15/2028 | 59261AXS1 | AGM |
| 11/15/2045 | $83,390,000 | 5.000% | 11/15/2028 | 59261AXT9 | |
| **Total:** | $162,805,000 | | | | |

### Sub Series TRB 2019A-3

**Par Outstanding** $100,000,000

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $100,000,000 | 4.000% | 11/15/2028 | 59261AXU6 | AGM |
| **Total:** | $100,000,000 | | | | |

## $177,185,000 Transportation Revenue Green Bonds, Series 2019B

**Date of Issue:** May 14, 2019

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $177,185,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2049 | $41,620,000 | 4.000% | 05/15/2029 | 59261AYW1 | AGM |
| 11/15/2050 | $43,285,000 | 4.000% | 05/15/2029 | 59261AYX9 | |
| **Total:** | $84,905,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2051 | $45,015,000 | 5.000% | 05/15/2029 | 59261AYZ4 | |
| 11/15/2052 | $47,265,000 | 5.000% | 05/15/2029 | 59261AYZ4 | |
| **Total:** | $92,280,000 | | | | |

**$422,430,000 Transportation Revenue Green Bonds, Series 2019C**

**Date of Issue:** August 14, 2019

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $422,430,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $26,800,000 | 5.000% | 11/15/2029 | 59261AZN0 | |
| 11/15/2039 | $28,140,000 | 5.000% | 11/15/2029 | 59261AZP5 | |
| 11/15/2040 | $29,545,000 | 5.000% | 11/15/2029 | 59261AZQ3 | |
| 11/15/2041 | $31,020,000 | 5.000% | 11/15/2029 | 59261AZR1 | |
| 11/15/2042 | $32,575,000 | 5.000% | 11/15/2029 | 59261AZS9 | |
| 11/15/2043 | $34,200,000 | 5.000% | 11/15/2029 | 59261AZT7 | |
| 11/15/2044 | $35,910,000 | 5.000% | 11/15/2029 | 59261AZU4 | |
| 11/15/2045 | $37,710,000 | 4.000% | 11/15/2029 | 59261AZV2 | AGM |
| 11/15/2046 | $39,215,000 | 4.000% | 11/15/2029 | 59261AZW0 | AGM |
| 11/15/2047 | $40,785,000 | 4.000% | 11/15/2029 | 59261AZX8 | AGM |
| 11/15/2048 | $42,415,000 | 4.000% | 11/15/2029 | 59261AZY6 | AGM |
| 11/15/2049 | $44,115,000 | 4.000% | 11/15/2029 | 59261AZZ3 | AGM |
| **Total:** | $422,430,000 | | | | |

**$241,745,000 Transportation Revenue Refunding Green Bonds, Series 2019D**

**Date of Issue:** November 07, 2019

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2019D-1

**Par Outstanding** $140,320,000

**Mode:** PUT **Mode Offering Date:** November 07, 2019 **Next Tender Date:** November 15, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2033 | $68,450,000 | 5.000% | Non-Call | 59261AB48 | |
| 11/15/2034 | $71,870,000 | 5.000% | Non-Call | 59261AB48 | |
| **Total:** | $140,320,000 | | | | |

## Sub Series TRB 2019D-2 Taxable

**Par Outstanding** $101,425,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $32,640,000 | 3.500% | 11/15/2029* | 59261AB55 | AGM |
| 11/15/2047 | $33,785,000 | 3.600% | 11/15/2029* | 59261AB63 | |
| 11/15/2048 | $35,000,000 | 3.540% | 11/15/2029* | 59261AB71 | AGM |
| **Total:** | $101,425,000 | | | | |

*** Also Subject to Make-Whole Call**

**$924,750,000** **Transportation Revenue Green Bonds, Series 2020A**

**Date of Issue:** January 16, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2020A-1

**Par Outstanding** $686,840,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $33,835,000 | 4.000% | 05/15/2030 | 59261AC70 | |
| 11/15/2041 | $35,190,000 | 4.000% | 05/15/2030 | 59261AC88 | AGM |
| 11/15/2042 | $36,595,000 | 4.000% | 05/15/2030 | 59261AC96 | AGM |
| 11/15/2043 | $38,060,000 | 4.000% | 05/15/2030 | 59261AD20 | AGM |
| 11/15/2044 | $39,585,000 | 4.000% | 05/15/2030 | 59261AD38 | AGM |
| 11/15/2045 | $41,165,000 | 4.000% | 05/15/2030 | 59261AD46 | |
| 11/15/2046 | $42,810,000 | 4.000% | 05/15/2030 | 59261AD53 | |
| 11/15/2047 | $44,525,000 | 5.000% | 05/15/2030 | 59261AD61 | |
| 11/15/2048 | $46,750,000 | 5.000% | 05/15/2030 | 59261AD79 | |
| 11/15/2049 | $49,090,000 | 5.000% | 05/15/2030 | 59261AD87 | |
| 11/15/2050 | $51,555,000 | 4.000% | 05/15/2030 | 59261AD95 | AGM |
| 11/15/2051 | $53,615,000 | 4.000% | 05/15/2030 | 59261AE29 | |
| 11/15/2052 | $55,760,000 | 4.000% | 05/15/2030 | 59261AE37 | |
| 11/15/2053 | $57,995,000 | 4.000% | 05/15/2030 | 59261AE45 | |
| 11/15/2054 | $60,310,000 | 4.000% | 05/15/2030 | 59261AE52 | AGM |
| **Total:** | $686,840,000 | | | | |

**$924,750,000 Transportation Revenue Green Bonds, Series 2020A**

**Date of Issue:** January 16, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2020A-2 Refunding Bonds

**Par Outstanding** $237,910,000

**Mode:** PUT **Mode Offering Date:** January 16, 2020 **Next Tender Date:** May 15, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2028 | $11,210,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2029 | $11,615,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2030 | $29,255,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2031 | $55,480,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2032 | $50,970,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2033 | $38,940,000 | 5.000% | Non-Call | 59261AE60 | |
| 11/15/2034 | $40,440,000 | 5.000% | Non-Call | 59261AE60 | |
| **Total:** | $237,910,000 | | | | |

## $162,660,000 Transportation Revenue Refunding Bonds, Series 2020B

**Date of Issue:** March 27, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2020B-1

**Par Outstanding** $59,740,000

**Short Term Ratings:** VMIG 1/A-1/F1/NR

**Credit Provider:** PNC Bank National Association

**Facility Effective:** March 24, 2022

**Facility Expiration:** March 22, 2024

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $59,740,000 | Weekly | 03/24/2022 | 59261AL70 | |
| **Total:** | $59,740,000 | | | | |

### Sub Series TRB 2020B-2

**Par Outstanding** $62,115,000

**Short Term Ratings:** VMIG 1/A-1/F1/NR

**Credit Provider:** PNC Bank National Association

**Facility Effective:** March 24, 2022

**Facility Expiration:** March 22, 2024

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $62,115,000 | Weekly | 03/24/2022 | 59261AN37 | |
| **Total:** | $62,115,000 | | | | |

**$1,725,000,000 Transportation Revenue Green Bonds, Series 2020C**

**Date of Issue:** May 14, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2020C-1

**Par Outstanding** $1,125,000,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2038 | $38,260,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2039 | $40,185,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2040 | $42,200,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2041 | $44,315,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2042 | $46,530,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2043 | $48,850,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2044 | $51,275,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| 11/15/2045 | $53,820,000 | 4.750% | 05/15/2030 | 59261AG35 | |
| **Total:** | $365,435,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $67,225,000 | 5.000% | 05/15/2030 | 59261AG43 | |
| 11/15/2047 | $70,165,000 | 5.000% | 05/15/2030 | 59261AG43 | |
| 11/15/2048 | $73,250,000 | 5.000% | 05/15/2030 | 59261AG43 | |
| 11/15/2049 | $76,490,000 | 5.000% | 05/15/2030 | 59261AG43 | |
| 11/15/2050 | $79,890,000 | 5.000% | 05/15/2030 | 59261AG43 | |
| **Total:** | $367,020,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2051 | $70,210,000 | 5.250% | 05/15/2030 | 59261AG50 | |
| 11/15/2052 | $74,145,000 | 5.250% | 05/15/2030 | 59261AG50 | |
| 11/15/2053 | $78,290,000 | 5.250% | 05/15/2030 | 59261AG50 | |
| 11/15/2054 | $82,650,000 | 5.250% | 05/15/2030 | 59261AG50 | |
| 11/15/2055 | $87,250,000 | 5.250% | 05/15/2030 | 59261AG50 | |
| **Total:** | $392,545,000 | | | | |

## $1,725,000,000 Transportation Revenue Green Bonds, Series 2020C

**Date of Issue:** May 14, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

### Sub Series TRB 2020C-2 Taxable

**Par Outstanding** $600,000,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $196,410,000 | 5.175% | Make-Whole | 59261AG76 | |
| 11/15/2048 | $196,410,000 | 5.175% | Make-Whole | 59261AG76 | |
| 11/15/2049 | $196,405,000 | 5.175% | Make-Whole | 59261AG76 | |
| **Total:** | $589,225,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $3,590,000 | 5.525% | 5/15/2030* | 59261AG84 | |
| 11/15/2048 | $3,590,000 | 5.525% | 5/15/2030* | 59261AG84 | |
| 11/15/2049 | $3,595,000 | 5.525% | 5/15/2030* | 59261AG84 | |
| **Total:** | $10,775,000 | | | | |

*** Also Subject to Make-Whole Call**

**$900,000,000 Transportation Revenue Green Bonds, Series 2020D**

**Date of Issue:** September 18, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $900,000,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $100,000,000 | 5.000% | 11/15/2030 | 59261AH26 | |
| 11/15/2044 | $100,000,000 | 5.000% | 11/15/2030 | 59261AH34 | |
| 11/15/2045 | $100,000,000 | 5.000% | 11/15/2030 | 59261AH42 | |
| 11/15/2046 | $100,000,000 | 4.000% | 11/15/2030 | 59261AH67 | |
| 11/15/2047 | $100,000,000 | 4.000% | 11/15/2030 | 59261AH75 | |
| 11/15/2048 | $100,000,000 | 4.000% | 11/15/2030 | 59261AH59 | |
| 11/15/2049 | $150,000,000 | 4.000% | 11/15/2030 | 59261AH83 | |
| 11/15/2050 | $150,000,000 | 4.000% | 11/15/2030 | 59261AH91 | |
| **Total:** | $900,000,000 | | | | |

**$419,915,000 Transportation Revenue Refunding Green Bonds, Series 2020E**

**Date of Issue:** November 13, 2020

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

**Par Outstanding** $419,915,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $28,505,000 | 4.000% | Non-Call | 59261AJ24 | |
| 11/15/2027 | $29,640,000 | 5.000% | Non-Call | 59261AJ32 | |
| 11/15/2028 | $31,115,000 | 5.000% | Non-Call | 59261AJ40 | |
| 11/15/2029 | $32,665,000 | 5.000% | Non-Call | 59261AJ57 | |
| 11/15/2030 | $34,295,000 | 5.000% | Non-Call | 59261AJ65 | |
| 11/15/2032 | $32,790,000 | 5.000% | 11/15/2030 | 59261AJ73 | |
| 11/15/2033 | $34,330,000 | 5.000% | 11/15/2030 | 59261AJ81 | |
| **Total:** | $223,340,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2044 | $98,745,000 | 4.000% | 11/15/2030 | 59261AJ99 | |
| 11/15/2045 | $97,830,000 | 4.000% | 11/15/2030 | 59261AJ99 | |
| **Total:** | $196,575,000 | | | | |

**$700,000,000 Transportation Revenue Bonds, Series 2021A**

**Date of Issue:** February 12, 2021

**Underlying Ratings: (M/S&P/F/K)** A3/BBB+/A-/AA

## Sub Series TRB 2021A-1 Green Bonds

**Par Outstanding** $495,000,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2044 | $62,670,000 | 4.000% | 05/15/2031 | 59261AK22 | |
| 11/15/2045 | $65,180,000 | 4.000% | 05/15/2031 | 59261AK30 | |
| 11/15/2046 | $67,785,000 | 4.000% | 05/15/2031 | 59261AK48 | |
| 11/15/2047 | $70,500,000 | 4.000% | 05/15/2031 | 59261AK55 | |
| 11/15/2048 | $73,315,000 | 4.000% | 05/15/2031 | 59261AK63 | |
| 11/15/2049 | $76,250,000 | 4.000% | 05/15/2031 | 59261AK71 | |
| 11/15/2050 | $79,300,000 | 4.000% | 05/15/2031 | 59261AK89 | |
| **Total:** | $495,000,000 | | | | |

## Sub Series TRB 2021A-2

**Par Outstanding** $205,000,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $65,670,000 | 4.000% | 05/15/2031 | 59261AK97 | |
| 11/15/2042 | $68,300,000 | 4.000% | 05/15/2031 | 59261AL21 | |
| 11/15/2043 | $71,030,000 | 4.000% | 05/15/2031 | 59261AL39 | |
| **Total:** | $205,000,000 | | | | |

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Henry Hudson Bridge

# TBTA General Revenue Bonds

**$148,200,000 TBTA General Revenue Variable Rate Bonds, Series 2001C**

**Date of Issue:** December 19, 2001

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $75,560,000

**Short Term Ratings: (M/S&P/F/K)** VMIG 1/NR/F1+/NR

**Credit Provider:** State Street Bank and Trust Company **Facility Effective:** June 27, 2018 **Facility Expiration:** June 26, 2023

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $7,140,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2025 | $7,425,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2026 | $7,725,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2027 | $8,030,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2028 | $8,350,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2029 | $8,690,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2030 | $9,035,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2031 | $9,395,000 | Daily | 06/27/2018 | 89602RED3 | |
| 1/1/2032 | $9,770,000 | Daily | 06/27/2018 | 89602RED3 | |
| **Total:** | $75,560,000 | | | | |

**$246,480,000 TBTA General Revenue Refunding Bonds, Series 2002F**

**Date of Issue:** November 13, 2002

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $102,935,000

**Mode:** Fixed **Mode Offering Date:** October 27, 2021

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $8,570,000 | 4.000% | Non-Call | 89602RGX7 | |
| 11/1/2024 | $8,915,000 | 4.000% | Non-Call | 89602RGY5 | |
| 11/1/2025 | $9,270,000 | 4.000% | Non-Call | 89602RGZ2 | |
| 11/1/2026 | $9,640,000 | 5.000% | Non-Call | 89602RHA6 | |
| 11/1/2027 | $10,025,000 | 5.000% | Non-Call | 89602RHB4 | |
| 11/1/2028 | $10,430,000 | 5.000% | Non-Call | 89602RHC2 | |
| 11/1/2029 | $10,850,000 | 5.000% | Non-Call | 89602RHD0 | |
| 11/1/2030 | $11,285,000 | 5.000% | Non-Call | 89602RHE8 | |
| 11/1/2031 | $11,740,000 | 5.000% | Non-Call | 89602RHF5 | |
| 11/1/2032 | $12,210,000 | 5.000% | 11/01/2031 | 89602RHG3 | |
| **Total:** | $102,935,000 | | | | |

**$250,000,000 TBTA General Revenue Variable Rate Bonds, Series 2003B**

**Date of Issue:** December 10, 2003

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

## Sub Series TBTA 2003B-1

**Par Outstanding** $89,095,000

**Short Term Ratings:** VMIG 1/A-1+/F1+/NR

**Credit Provider:** U.S. Bank National Association

**Facility Effective:** January 19, 2022

**Facility Expiration:** January 17, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $7,540,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2025 | $7,835,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2026 | $8,155,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2027 | $8,480,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2028 | $8,820,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2029 | $9,165,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2030 | $9,535,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2031 | $9,920,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2032 | $10,310,000 | Daily | 01/19/2022 | 89602RHH1 | |
| 1/1/2033 | $9,335,000 | Daily | 01/19/2022 | 89602RHH1 | |
| **Total:** | $89,095,000 | | | | |

## $250,000,000 TBTA General Revenue Variable Rate Bonds, Series 2003B

**Date of Issue:** December 10, 2003

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2003B-2

**Par Outstanding** $29,330,000

**Mode:** FRN **Mode Offering Date:** December 03, 2019 **Next Tender Date:** November 15, 2024

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $2,480,000 | SIFMA + 0.250% | Non-Call | 89602RFW0 | |
| 1/1/2025 | $2,580,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2026 | $2,680,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2027 | $2,790,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2028 | $2,900,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2029 | $3,020,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2030 | $3,140,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2031 | $3,260,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2032 | $3,400,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| 1/1/2033 | $3,080,000 | SIFMA + 0.250% | 05/15/2024 | 89602RFW0 | |
| **Total:** | $29,330,000 | | | | |

**$150,000,000 TBTA General Revenue Variable Rate Bonds, Series 2005A**

**Date of Issue:** May 11, 2005

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $102,070,000

**Short Term Ratings: (M/S&P/F/K)** VMIG 1/A-1/F1/NR

**Credit Provider:** Barclays Bank PLC **Facility Effective:** January 24, 2020 **Facility Expiration:** January 24, 2024

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2041 | $102,070,000 | Weekly | 01/24/2020 | 89602RFX8 | |
| **Total:** | $102,070,000 | | | | |

## $800,000,000 TBTA General Revenue Variable Rate Refunding Bonds, Series 2005B

**Date of Issue:** July 07, 2005

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2005B-2a

**Par Outstanding** $92,500,000

**Short Term Ratings:** VMIG 1/A-1+/F1+/NR

**Credit Provider:** State Street Bank and Trust Company

**Facility Effective:** January 21, 2021

**Facility Expiration:** January 21, 2026

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $5,100,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2025 | $500,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2026 | $500,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2027 | $600,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2028 | $3,200,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2029 | $18,800,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2030 | $19,300,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2031 | $21,900,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| 1/1/2032 | $22,600,000 | Weekly | 01/21/2021 | 89602RGK5 | |
| **Total:** | $92,500,000 | | | | |

## $800,000,000 TBTA General Revenue Variable Rate Refunding Bonds, Series 2005B

**Date of Issue:** July 07, 2005

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2005B-2b

**Par Outstanding** $92,500,000

**Short Term Ratings:** VMIG 1/A-1+/F1+/NR

**Credit Provider:** State Street Bank and Trust Company **Facility Effective:** January 21, 2021 **Facility Expiration:** January 21, 2026

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $5,200,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2025 | $500,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2026 | $500,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2027 | $500,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2028 | $3,200,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2029 | $18,700,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2030 | $19,400,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2031 | $21,900,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| 1/1/2032 | $22,600,000 | Weekly | 01/21/2021 | 89602RGM1 | |
| **Total:** | $92,500,000 | | | | |

## $800,000,000 TBTA General Revenue Variable Rate Refunding Bonds, Series 2005B

**Date of Issue:** July 07, 2005

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2005B-3

**Par Outstanding** $185,000,000

**Short Term Ratings:** VMIG 1/NR/F1+/NR

**Credit Provider:** State Street Bank and Trust Company **Facility Effective:** June 27, 2018 **Facility Expiration:** June 26, 2023

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $10,300,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2025 | $1,000,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2026 | $1,000,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2027 | $1,100,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2028 | $6,400,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2029 | $37,500,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2030 | $38,700,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2031 | $43,800,000 | Daily | 06/27/2018 | 89602REB7 | |
| 1/1/2032 | $45,200,000 | Daily | 06/27/2018 | 89602REB7 | |
| **Total:** | $185,000,000 | | | | |

### Sub Series TBTA 2005B-4a

**Par Outstanding** $102,500,000

**Mode:** FRN **Mode Offering Date:** February 01, 2021 **Next Tender Date:** February 01, 2024

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2024 | $10,300,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2025 | $1,000,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2026 | $1,000,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2027 | $1,100,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2028 | $6,400,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2029 | $37,500,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| 1/1/2032 | $45,200,000 | 67% of SOFR + 0.380% | 11/01/2023 | 89602RGJ8 | |
| **Total:** | $102,500,000 | | | | |

## $800,000,000 TBTA General Revenue Variable Rate Refunding Bonds, Series 2005B

**Date of Issue:** July 07, 2005

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2005B-4c

**Par Outstanding** $82,500,000

**Short Term Ratings:** VMIG 1/A-1+/F1+/NR

**Credit Provider:** U.S. Bank National Association

**Facility Effective:** May 20, 2022

**Facility Expiration:** May 23, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 1/1/2030 | $38,700,000 | Daily | 05/20/2022 | 89602RFC4 | |
| 1/1/2031 | $43,800,000 | Daily | 05/20/2022 | 89602RFC4 | |
| **Total:** | $82,500,000 | | | | |

## $252,230,000 TBTA General Revenue Bonds, Series 2008B

**Date of Issue:** March 27, 2008

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2008B-2

**Par Outstanding** $53,005,000

**Mode:** Fixed **Mode Offering Date:** October 27, 2021

**Serial Bonds**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2025 | $9,160,000 | 4.000% | Non-Call | 89602RGT6 | |
| 11/15/2026 | $28,755,000 | 5.000% | Non-Call | 89602RGU3 | |
| 11/15/2027 | $15,090,000 | 5.000% | Non-Call | 89602RGV1 | |
| **Total:** | $53,005,000 | | | | |

### Sub Series TBTA 2008B-3

**Par Outstanding** $73,745,000

**Mode:** Fixed **Mode Offering Date:** November 16, 2015

**Serial Bonds**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2033 | $1,550,000 | 5.000% | 11/15/2025 | 89602N4F8 | |
| 11/15/2034 | $16,580,000 | 5.000% | 11/15/2025 | 89602N4G6 | |
| 11/15/2035 | $8,740,000 | 5.000% | 11/15/2025 | 89602N4H4 | |
| 11/15/2036 | $10,830,000 | 5.000% | 11/15/2025 | 89602N4J0 | |
| 11/15/2037 | $15,080,000 | 5.000% | 11/15/2025 | 89602N4K7 | |
| 11/15/2038 | $20,965,000 | 5.000% | 11/15/2025 | 89602N4L5 | |
| **Total:** | $73,745,000 | | | | |

## $475,000,000 TBTA General Revenue Bonds, Series 2009A

**Date of Issue:** February 18, 2009

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2009A-1

**Par Outstanding** $1,540,000

**Mode:** Fixed **Mode Offering Date:** November 15, 2012

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $140,000 | 3.000% | 11/15/2022 | 89602RDL6 | |
| 11/15/2024 | $1,400,000 | 2.625% | 11/15/2022 | 89602RDM4 | |
| **Total:** | $1,540,000 | | | | |

**$200,000,000 TBTA General Revenue Bonds - Build America Bonds, Series 2009B**

**Date of Issue:** September 17, 2009

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $200,000,000

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $35,640,000 | 5.420% | Make-Whole | 89602NUM4 | |
| 11/15/2036 | $37,700,000 | 5.420% | Make-Whole | 89602NUM4 | |
| **Total:** | $73,340,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $39,875,000 | 5.500% | Make-Whole | 89602NUN2 | |
| 11/15/2038 | $42,175,000 | 5.500% | Make-Whole | 89602NUN2 | |
| 11/15/2039 | $44,610,000 | 5.500% | Make-Whole | 89602NUN2 | |
| **Total:** | $126,660,000 | | | | |

## $346,960,000 TBTA General Revenue Bonds, Series 2010A

**Date of Issue:** October 28, 2010

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2010A-2 Build America Bonds

**Par Outstanding** $263,020,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $9,265,000 | 4.500% | Make-Whole | 89602NVF8 | |
| 11/15/2024 | $9,665,000 | 4.750% | Make-Whole | 89602NVG6 | |
| 11/15/2025 | $10,095,000 | 5.000% | Make-Whole | 89602NVH4 | |
| 11/15/2026 | $10,550,000 | 5.150% | Make-Whole | 89602NVJ0 | |
| 11/15/2027 | $11,105,000 | 5.300% | Make-Whole | 89602NVK7 | |
| **Total:** | $50,680,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2028 | $11,695,000 | 5.450% | Make-Whole | 89602NVL5 | |
| 11/15/2029 | $12,315,000 | 5.450% | Make-Whole | 89602NVL5 | |
| 11/15/2030 | $12,965,000 | 5.450% | Make-Whole | 89602NVL5 | |
| 11/15/2031 | $13,650,000 | 5.450% | Make-Whole | 89602NVL5 | |
| 11/15/2032 | $14,395,000 | 5.450% | Make-Whole | 89602NVL5 | |
| **Total:** | $65,020,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2033 | $15,175,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2034 | $16,000,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2035 | $16,870,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2036 | $17,790,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2037 | $18,765,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2038 | $19,800,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2039 | $20,885,000 | 5.550% | Make-Whole | 89602NVM3 | |
| 11/15/2040 | $22,035,000 | 5.550% | Make-Whole | 89602NVM3 | |
| **Total:** | $147,320,000 | | | | |

**$231,490,000** **TBTA General Revenue Bonds, Series 2012A**

**Date of Issue:** June 06, 2012

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $38,075,000

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $12,195,000 | 4.000% | 11/15/2022 | 89602RJX4 | |
| 11/15/2041 | $12,685,000 | 4.000% | 11/15/2022 | 89602RJX4 | |
| 11/15/2042 | $13,195,000 | 4.000% | 11/15/2022 | 89602RJX4 | |
| **Total:** | $38,075,000 | | | | |

**$1,236,898,275 TBTA General Revenue Refunding Bonds, Series 2012B**

**Date of Issue:** August 23, 2012

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $231,500,000

## Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2027 | $15,000,000 | 0.000% | Non-Call | 89602NA79 | |
| 11/15/2028 | $15,000,000 | 0.000% | Non-Call | 89602NA87 | |
| 11/15/2029 | $15,000,000 | 0.000% | Non-Call | 89602NA38 | |
| 11/15/2030 | $10,000,000 | 0.000% | Non-Call | 89602NA95 | |
| 11/15/2031 | $10,000,000 | 0.000% | Non-Call | 89602NB29 | |
| 11/15/2032 | $166,500,000 | 0.000% | Non-Call | 89602NA20 | |
| **Total:** | $231,500,000 | | | | |

## $257,195,000 TBTA General Revenue Refunding Bonds, Series 2013B

**Date of Issue:** January 29, 2013

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $129,495,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $20,000,000 | 4.000% | Non-Call | 89602NJ39 | |
| 11/15/2023 | $34,890,000 | 5.000% | Non-Call | 89602NK37 | |
| 11/15/2024 | $18,800,000 | 5.000% | 11/15/2023 | 89602NJ47 | |
| 11/15/2025 | $6,985,000 | 5.000% | 11/15/2023 | 89602NJ54 | |
| 11/15/2026 | $7,470,000 | 5.000% | 11/15/2023 | 89602NJ62 | |
| 11/15/2027 | $16,055,000 | 5.000% | 11/15/2023 | 89602NH64 | |
| 11/15/2028 | $8,025,000 | 5.000% | 11/15/2023 | 89602NJ70 | |
| 11/15/2029 | $8,425,000 | 5.000% | 11/15/2023 | 89602NJ88 | |
| 11/15/2030 | $8,845,000 | 5.000% | 11/15/2023 | 89602NK45 | |
| **Total:** | $129,495,000 | | | | |

**$200,000,000 TBTA General Revenue Bonds, Series 2013C**

**Date of Issue:** April 18, 2013

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $15,000,000

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $2,785,000 | 3.750% | 05/15/2023 | 89602NT20 | |
| 11/15/2040 | $2,885,000 | 3.750% | 05/15/2023 | 89602NT20 | |
| 11/15/2041 | $2,995,000 | 3.750% | 05/15/2023 | 89602NT20 | |
| 11/15/2042 | $3,110,000 | 3.750% | 05/15/2023 | 89602NT20 | |
| 11/15/2043 | $3,225,000 | 3.750% | 05/15/2023 | 89602NT20 | |
| **Total:** | $15,000,000 | | | | |

## $250,000,000 TBTA General Revenue Bonds, Series 2014A

**Date of Issue:** February 06, 2014

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $175,655,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $1,895,000 | 3.000% | Non-Call | 89602NW75 | |
| 11/15/2023 | $3,700,000 | 5.000% | Non-Call | 89602NY65 | |
| 11/15/2029 | $7,360,000 | 5.000% | 05/15/2024 | 89602NX58 | |
| 11/15/2030 | $7,725,000 | 5.000% | 05/15/2024 | 89602NX66 | |
| 11/15/2031 | $8,110,000 | 5.000% | 05/15/2024 | 89602NX74 | |
| 11/15/2032 | $8,520,000 | 4.000% | 05/15/2024 | 89602NX82 | |
| 11/15/2033 | $8,860,000 | 5.000% | 05/15/2024 | 89602NX90 | |
| 11/15/2034 | $9,300,000 | 4.000% | 05/15/2024 | 89602NY24 | |
| 11/15/2035 | $9,675,000 | 4.000% | 05/15/2024 | 89602NY99 | |
| **Total:** | $65,145,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $485,000 | 4.250% | 05/15/2024 | 89602NY32 | |
| 11/15/2037 | $505,000 | 4.250% | 05/15/2024 | 89602NY32 | |
| 11/15/2038 | $530,000 | 4.250% | 05/15/2024 | 89602NY32 | |
| 11/15/2039 | $550,000 | 4.250% | 05/15/2024 | 89602NY32 | |
| **Total:** | $2,070,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $7,615,000 | 5.000% | 05/15/2024 | 89602NY40 | |
| 11/15/2041 | $8,005,000 | 5.000% | 05/15/2024 | 89602NY40 | |
| 11/15/2042 | $8,415,000 | 5.000% | 05/15/2024 | 89602NY40 | |
| 11/15/2043 | $8,840,000 | 5.000% | 05/15/2024 | 89602NY40 | |
| 11/15/2044 | $9,295,000 | 5.000% | 05/15/2024 | 89602NY40 | |
| **Total:** | $42,170,000 | | | | |

**$250,000,000 TBTA General Revenue Bonds, Series 2014A**

**Date of Issue:** February 06, 2014

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $9,575,000 | 5.000% | 05/15/2024 | 89602NY57 | |
| 11/15/2037 | $10,055,000 | 5.000% | 05/15/2024 | 89602NY57 | |
| 11/15/2038 | $10,555,000 | 5.000% | 05/15/2024 | 89602NY57 | |
| 11/15/2039 | $11,085,000 | 5.000% | 05/15/2024 | 89602NY57 | |
| **Total:** | $41,270,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $4,595,000 | 4.375% | 05/15/2024 | 89602NY81 | |
| 11/15/2041 | $4,790,000 | 4.375% | 05/15/2024 | 89602NY81 | |
| 11/15/2042 | $4,990,000 | 4.375% | 05/15/2024 | 89602NY81 | |
| 11/15/2043 | $5,205,000 | 4.375% | 05/15/2024 | 89602NY81 | |
| 11/15/2044 | $5,420,000 | 4.375% | 05/15/2024 | 89602NY81 | |
| **Total:** | $25,000,000 | | | | |

**$225,000,000 TBTA General Revenue Bonds, Series 2015A**

**Date of Issue:** May 15, 2015

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $182,890,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,695,000 | 5.000% | Non-Call | 89602N2P8 | |
| 11/15/2024 | $3,880,000 | 5.000% | Non-Call | 89602N2Q6 | |
| 11/15/2029 | $4,950,000 | 5.000% | 05/15/2025 | 89602N2V5 | |
| 11/15/2030 | $5,200,000 | 5.000% | 05/15/2025 | 89602N2W3 | |
| 11/15/2031 | $5,460,000 | 5.000% | 05/15/2025 | 89602N2X1 | |
| 11/15/2033 | $5,730,000 | 5.000% | 05/15/2025 | 89602N2Y9 | |
| 11/15/2034 | $6,020,000 | 3.250% | 05/15/2025 | 89602N2Z6 | |
| 11/15/2035 | $6,215,000 | 5.000% | 05/15/2025 | 89602N3A0 | |
| **Total:** | $41,150,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $6,525,000 | 5.000% | 05/15/2025 | 89602N3B8 | |
| 11/15/2037 | $6,850,000 | 5.000% | 05/15/2025 | 89602N3B8 | |
| 11/15/2038 | $7,195,000 | 5.000% | 05/15/2025 | 89602N3B8 | |
| 11/15/2039 | $7,555,000 | 5.000% | 05/15/2025 | 89602N3B8 | |
| 11/15/2040 | $7,930,000 | 5.000% | 05/15/2025 | 89602N3B8 | |
| **Total:** | $36,055,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $8,330,000 | 5.250% | 05/15/2025 | 89602N3C6 | |
| 11/15/2042 | $8,765,000 | 5.250% | 05/15/2025 | 89602N3C6 | |
| 11/15/2043 | $9,225,000 | 5.250% | 05/15/2025 | 89602N3C6 | |
| 11/15/2044 | $9,710,000 | 5.250% | 05/15/2025 | 89602N3C6 | |
| 11/15/2045 | $10,220,000 | 5.250% | 05/15/2025 | 89602N3C6 | |
| **Total:** | $46,250,000 | | | | |

**$225,000,000 TBTA General Revenue Bonds, Series 2015A**

**Date of Issue:** May 15, 2015

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $10,755,000 | 5.000% | 05/15/2025 | 89602N3D4 | |
| 11/15/2047 | $11,295,000 | 5.000% | 05/15/2025 | 89602N3D4 | |
| 11/15/2048 | $11,860,000 | 5.000% | 05/15/2025 | 89602N3D4 | |
| 11/15/2049 | $12,450,000 | 5.000% | 05/15/2025 | 89602N3D4 | |
| 11/15/2050 | $13,075,000 | 5.000% | 05/15/2025 | 89602N3D4 | |
| **Total:** | $59,435,000 | | | | |

**$65,000,000** **TBTA General Revenue Bonds, Series 2015B**

**Date of Issue:** November 16, 2015

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $56,120,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $1,460,000 | 5.000% | Non-Call | 89602N3P7 | |
| 11/15/2024 | $1,530,000 | 5.000% | Non-Call | 89602N3Q5 | |
| 11/15/2025 | $1,605,000 | 5.000% | Non-Call | 89602N3R3 | |
| 11/15/2026 | $1,685,000 | 5.000% | 11/15/2025 | 89602N3S1 | |
| 11/15/2027 | $1,770,000 | 5.000% | 11/15/2025 | 89602N3T9 | |
| 11/15/2028 | $1,860,000 | 5.000% | 11/15/2025 | 89602N3U6 | |
| 11/15/2029 | $1,955,000 | 5.000% | 11/15/2025 | 89602N3V4 | |
| 11/15/2030 | $2,050,000 | 5.000% | 11/15/2025 | 89602N3W2 | |
| 11/15/2031 | $2,155,000 | 5.000% | 11/15/2025 | 89602N3X0 | |
| 11/15/2033 | $2,260,000 | 5.000% | 11/15/2025 | 89602N3Y8 | |
| 11/15/2034 | $2,375,000 | 5.000% | 11/15/2025 | 89602N3Z5 | |
| 11/15/2035 | $2,495,000 | 5.000% | 11/15/2025 | 89602N4A9 | |
| **Total:** | $23,200,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2036 | $2,620,000 | 5.000% | 11/15/2025 | 89602N4B7 | |
| 11/15/2037 | $2,750,000 | 5.000% | 11/15/2025 | 89602N4B7 | |
| 11/15/2038 | $2,885,000 | 5.000% | 11/15/2025 | 89602N4B7 | |
| 11/15/2039 | $3,030,000 | 5.000% | 11/15/2025 | 89602N4B7 | |
| 11/15/2040 | $3,180,000 | 5.000% | 11/15/2025 | 89602N4B7 | |
| **Total:** | $14,465,000 | | | | |

**$65,000,000** **TBTA General Revenue Bonds, Series 2015B**

**Date of Issue:** November 16, 2015

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $3,340,000 | 5.000% | 11/15/2025 | 89602N4C5 | |
| 11/15/2042 | $3,505,000 | 5.000% | 11/15/2025 | 89602N4C5 | |
| 11/15/2043 | $3,685,000 | 5.000% | 11/15/2025 | 89602N4C5 | |
| 11/15/2044 | $3,865,000 | 5.000% | 11/15/2025 | 89602N4C5 | |
| 11/15/2045 | $4,060,000 | 5.000% | 11/15/2025 | 89602N4C5 | |
| **Total:** | $18,455,000 | | | | |

**$541,240,000 TBTA General Revenue Bonds, Series 2016A**

**Date of Issue:** January 28, 2016

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $485,300,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $46,645,000 | 5.000% | Non-Call | 89602N5A8 | |
| 11/15/2024 | $51,315,000 | 5.000% | Non-Call | 89602N5B6 | |
| 11/15/2025 | $22,265,000 | 5.000% | Non-Call | 89602N5C4 | |
| 11/15/2026 | $21,820,000 | 5.000% | 05/15/2026 | 89602N5D2 | |
| 11/15/2027 | $8,275,000 | 5.000% | 05/15/2026 | 89602N5E0 | |
| 11/15/2028 | $17,515,000 | 5.000% | 05/15/2026 | 89602N5F7 | |
| 11/15/2029 | $18,400,000 | 5.000% | 05/15/2026 | 89602N5G5 | |
| 11/15/2030 | $19,315,000 | 5.000% | 05/15/2026 | 89602N5H3 | |
| 11/15/2031 | $30,440,000 | 5.000% | 05/15/2026 | 89602N5J9 | |
| 11/15/2033 | $20,700,000 | 5.000% | 05/15/2026 | 89602N5K6 | |
| 11/15/2034 | $23,325,000 | 3.000% | 05/15/2026 | 89602N5L4 | |
| 11/15/2034 | $10,235,000 | 5.000% | 05/15/2026 | 89602N5U4 | |
| 11/15/2035 | $24,025,000 | 3.000% | 05/15/2026 | 89602N5M2 | |
| 11/15/2035 | $10,745,000 | 5.000% | 05/15/2026 | 89602N5V2 | |
| 11/15/2036 | $11,280,000 | 5.000% | 05/15/2026 | 89602N5N0 | |
| **Total:** | $336,300,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $11,845,000 | 5.000% | 05/15/2026 | 89602N5P5 | |
| 11/15/2038 | $12,440,000 | 5.000% | 05/15/2026 | 89602N5P5 | |
| 11/15/2039 | $13,060,000 | 5.000% | 05/15/2026 | 89602N5P5 | |
| 11/15/2040 | $13,715,000 | 5.000% | 05/15/2026 | 89602N5P5 | |
| 11/15/2041 | $14,400,000 | 5.000% | 05/15/2026 | 89602N5P5 | |
| **Total:** | $65,460,000 | | | | |

**$541,240,000** **TBTA General Revenue Bonds, Series 2016A**

**Date of Issue:** January 28, 2016

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2042 | $15,120,000 | 5.000% | 05/15/2026 | 89602N5Q3 | |
| 11/15/2043 | $15,875,000 | 5.000% | 05/15/2026 | 89602N5Q3 | |
| 11/15/2044 | $16,670,000 | 5.000% | 05/15/2026 | 89602N5Q3 | |
| 11/15/2045 | $17,500,000 | 5.000% | 05/15/2026 | 89602N5Q3 | |
| 11/15/2046 | $18,375,000 | 5.000% | 05/15/2026 | 89602N5Q3 | |
| **Total:** | $83,540,000 | | | | |

**$300,000,000 TBTA General Revenue Bonds, Series 2017A**

**Date of Issue:** January 19, 2017

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $286,585,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $46,755,000 | 5.000% | Non-Call | 89602N6S8 | |
| 11/15/2025 | $8,165,000 | 5.000% | Non-Call | 89602N6T6 | |
| 11/15/2026 | $8,655,000 | 5.000% | Non-Call | 89602N6U3 | |
| 11/15/2027 | $19,240,000 | 5.000% | 05/15/2027 | 89602N6V1 | |
| 11/15/2030 | $4,565,000 | 3.000% | 05/15/2027 | 89602N6W9 | |
| 11/15/2033 | $9,445,000 | 5.000% | 05/15/2027 | 89602N6X7 | |
| 11/15/2034 | $9,915,000 | 5.000% | 05/15/2027 | 89602N6Y5 | |
| 11/15/2035 | $10,410,000 | 5.000% | 05/15/2027 | 89602N6Z2 | |
| 11/15/2036 | $9,560,000 | 3.375% | 05/15/2027 | 89602N7A6 | |
| 11/15/2037 | $11,255,000 | 5.000% | 05/15/2027 | 89602N7B4 | |
| 11/15/2038 | $11,815,000 | 5.000% | 05/15/2027 | 89602N7E8 | |
| **Total:** | $149,780,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $12,405,000 | 5.000% | 05/15/2027 | 89602N7C2 | |
| 11/15/2040 | $13,025,000 | 5.000% | 05/15/2027 | 89602N7C2 | |
| 11/15/2041 | $13,680,000 | 5.000% | 05/15/2027 | 89602N7C2 | |
| 11/15/2042 | $14,365,000 | 5.000% | 05/15/2027 | 89602N7C2 | |
| **Total:** | $53,475,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $15,080,000 | 5.000% | 05/15/2027 | 89602N7D0 | |
| 11/15/2044 | $15,835,000 | 5.000% | 05/15/2027 | 89602N7D0 | |
| 11/15/2045 | $16,625,000 | 5.000% | 05/15/2027 | 89602N7D0 | |
| 11/15/2046 | $17,460,000 | 5.000% | 05/15/2027 | 89602N7D0 | |
| 11/15/2047 | $18,330,000 | 5.000% | 05/15/2027 | 89602N7D0 | |
| **Total:** | $83,330,000 | | | | |

## $902,975,000 TBTA General Revenue Refunding Bonds, Series 2017B

**Date of Issue:** January 19, 2017

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $902,975,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $10,940,000 | 5.000% | Non-Call | 89602N7T5 | |
| 11/15/2025 | $14,305,000 | 5.000% | Non-Call | 89602N7U2 | |
| 11/15/2026 | $15,135,000 | 5.000% | Non-Call | 89602N7V0 | |
| 11/15/2027 | $30,725,000 | 5.000% | 05/15/2027 | 89602N7F5 | |
| 11/15/2028 | $63,480,000 | 5.000% | Non-Call | 89602N7G3 | |
| 11/15/2029 | $82,820,000 | 5.000% | 05/15/2027 | 89602N7H1 | |
| 11/15/2030 | $88,325,000 | 5.000% | 05/15/2027 | 89602N7J7 | |
| 11/15/2031 | $92,465,000 | 5.000% | 05/15/2027 | 89602N7K4 | |
| 11/15/2032 | $56,905,000 | 5.000% | 05/15/2027 | 89602N7L2 | |
| 11/15/2033 | $74,450,000 | 5.000% | 05/15/2027 | 89602N7M0 | |
| 11/15/2034 | $49,100,000 | 5.000% | 05/15/2027 | 89602N7N8 | |
| 11/15/2035 | $61,360,000 | 5.000% | 05/15/2027 | 89602N7P3 | |
| 11/15/2036 | $88,595,000 | 5.000% | 05/15/2027 | 89602N7Q1 | |
| 11/15/2037 | $88,635,000 | 5.000% | 05/15/2027 | 89602N7R9 | |
| 11/15/2038 | $85,735,000 | 5.000% | 05/15/2027 | 89602N7S7 | |
| **Total:** | $902,975,000 | | | | |

## $720,990,000 TBTA General Revenue Bonds, Series 2017C

**Date of Issue:** November 17, 2017

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

### Sub Series TBTA 2017C-1 Refunding Bonds

**Par Outstanding** $520,990,000

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $17,185,000 | 5.000% | Non-Call | 89602RCA1 | |
| 11/15/2024 | $20,890,000 | 5.000% | Non-Call | 89602RCB9 | |
| 11/15/2025 | $2,255,000 | 3.000% | Non-Call | 89602RCD5 | |
| 11/15/2025 | $3,180,000 | 4.000% | Non-Call | 89602RCE3 | |
| 11/15/2025 | $120,555,000 | 5.000% | Non-Call | 89602RCC7 | |
| 11/15/2026 | $1,955,000 | 4.000% | Non-Call | 89602RCF0 | |
| 11/15/2026 | $108,895,000 | 5.000% | Non-Call | 89602RCG8 | |
| 11/15/2027 | $10,400,000 | 4.000% | Non-Call | 89602RCJ2 | |
| 11/15/2027 | $118,110,000 | 5.000% | Non-Call | 89602RCH6 | |
| 11/15/2028 | $117,565,000 | 5.000% | Non-Call | 89602RCK9 | |
| **Total:** | $520,990,000 | | | | |

### Sub Series TBTA 2017C-2

**Par Outstanding** $200,000,000

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $46,405,000 | 5.000% | 11/15/2027 | 89602RCL7 | |
| 11/15/2040 | $48,720,000 | 5.000% | 11/15/2027 | 89602RCL7 | |
| 11/15/2041 | $51,160,000 | 5.000% | 11/15/2027 | 89602RCL7 | |
| 11/15/2042 | $53,715,000 | 5.000% | 11/15/2027 | 89602RCL7 | |
| **Total:** | $200,000,000 | | | | |

**$351,930,000 TBTA General Revenue Bonds, Series 2018A**

**Date of Issue:** February 01, 2018

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $351,930,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $51,830,000 | 5.000% | 05/15/2028 | 89602RDV4 | |
| 11/15/2044 | $54,425,000 | 5.000% | 05/15/2028 | 89602RDW2 | |
| 11/15/2045 | $57,145,000 | 5.000% | 05/15/2028 | 89602RDX0 | |
| 11/15/2046 | $60,005,000 | 5.000% | 05/15/2028 | 89602RDY8 | |
| 11/15/2047 | $63,005,000 | 4.000% | 05/15/2028 | 89602RDZ5 | |
| 11/15/2048 | $65,520,000 | 4.000% | 05/15/2028 | 89602REA9 | |
| **Total:** | $351,930,000 | | | | |

## $270,090,000 TBTA General Revenue Refunding Bonds, Series 2018B

**Date of Issue:** August 30, 2018

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $270,090,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $18,185,000 | 5.000% | Non-Call | 89602REF8 | |
| 11/15/2025 | $17,430,000 | 5.000% | Non-Call | 89602REG6 | |
| 11/15/2026 | $18,400,000 | 5.000% | Non-Call | 89602REH4 | |
| 11/15/2027 | $25,715,000 | 5.000% | Non-Call | 89602REJ0 | |
| 11/15/2028 | $45,650,000 | 5.000% | Non-Call | 89602REK7 | |
| 11/15/2029 | $47,620,000 | 5.000% | Non-Call | 89602REL5 | |
| 11/15/2030 | $52,245,000 | 5.000% | Non-Call | 89602REM3 | |
| 11/15/2031 | $44,845,000 | 5.000% | Non-Call | 89602REN1 | |
| **Total:** | $270,090,000 | | | | |

## $159,280,000 TBTA General Revenue Refunding Bonds, Series 2018C

**Date of Issue:** August 30, 2018

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $159,280,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2031 | $10,290,000 | 5.000% | 11/15/2028 | 89602REP6 | |
| 11/15/2033 | $21,920,000 | 5.000% | 11/15/2028 | 89602REQ4 | |
| 11/15/2034 | $23,025,000 | 5.000% | 11/15/2028 | 89602RER2 | |
| 11/15/2035 | $4,075,000 | 4.000% | 11/15/2028 | 89602RES0 | |
| 11/15/2035 | $20,100,000 | 5.000% | 11/15/2028 | 89602RET8 | |
| 11/15/2036 | $25,330,000 | 5.000% | 11/15/2028 | 89602REU5 | |
| 11/15/2037 | $26,615,000 | 5.000% | 11/15/2028 | 89602REV3 | |
| 11/15/2038 | $17,085,000 | 3.375% | 11/15/2028 | 89602REX9 | |
| 11/15/2038 | $10,840,000 | 5.000% | 11/15/2028 | 89602REW1 | |
| **Total:** | $159,280,000 | | | | |

**$125,000,000 TBTA General Revenue Bonds, Series 2018D**

**Date of Issue:** October 04, 2018

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $98,985,000

**Mode:** Fixed **Mode Offering Date:** October 01, 2020

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2033 | $24,740,000 | 5.000% | 11/15/2030 | 89602RGC3 | |
| 11/15/2034 | $32,155,000 | 5.000% | 11/15/2030 | 89602RGD1 | |
| 11/15/2035 | $4,535,000 | 5.000% | 11/15/2030 | 89602RGE9 | |
| 11/15/2036 | $11,885,000 | 5.000% | 11/15/2030 | 89602RGF6 | |
| 11/15/2037 | $11,800,000 | 4.000% | 11/15/2030 | 89602RGG4 | |
| 11/15/2038 | $13,870,000 | 4.000% | 11/15/2030 | 89602RGH2 | |
| **Total:** | $98,985,000 | | | | |

**$148,470,000 TBTA General Revenue Variable Rate Refunding Bonds, Series 2018E Taxable**

**Date of Issue:** December 12, 2018

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $148,470,000

**Short Term Ratings: (M/S&P/F/K)** VMIG 1/A-1/F1+/NR

**Credit Provider:** UBS AG **Facility Effective:** December 08, 2022 **Facility Expiration:** December 05, 2025

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $18,485,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2027 | $19,330,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2028 | $20,205,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2029 | $21,115,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2030 | $22,065,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2031 | $23,050,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| 11/15/2032 | $24,220,000 | Weekly | 12/08/2022 | 89602RHU2 | |
| **Total:** | $148,470,000 | | | | |

**$150,000,000 TBTA General Revenue Bonds, Series 2019A**

**Date of Issue:** May 23, 2019

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $150,000,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2041 | $13,685,000 | 5.000% | 05/15/2029 | 89602RFG5 | |
| 11/15/2042 | $14,365,000 | 5.000% | 05/15/2029 | 89602RFH3 | |
| 11/15/2043 | $15,085,000 | 5.000% | 05/15/2029 | 89602RFJ9 | |
| 11/15/2044 | $15,840,000 | 4.000% | 05/15/2029 | 89602RFK6 | |
| **Total:** | $58,975,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2045 | $16,475,000 | 5.000% | 05/15/2029 | 89602RFL4 | |
| 11/15/2046 | $17,295,000 | 5.000% | 05/15/2029 | 89602RFL4 | |
| 11/15/2047 | $18,160,000 | 5.000% | 05/15/2029 | 89602RFL4 | |
| 11/15/2048 | $19,070,000 | 5.000% | 05/15/2029 | 89602RFL4 | |
| 11/15/2049 | $20,025,000 | 5.000% | 05/15/2029 | 89602RFL4 | |
| **Total:** | $91,025,000 | | | | |

**$102,465,000 TBTA General Revenue Refunding Bonds, Series 2019B Taxable**

**Date of Issue:** September 25, 2019

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $102,465,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2044 | $102,465,000 | 3.427% | 11/15/2029* | 89602RFM2 | |
| **Total:** | $102,465,000 | | | | |

*** Also Subject to Make-Whole Call**

**$200,000,000 TBTA General Revenue Bonds, Series 2019C**

**Date of Issue:** December 03, 2019

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $200,000,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $25,000,000 | 4.000% | 11/15/2029 | 89602RFN0 | |
| 11/15/2041 | $25,000,000 | 4.000% | 11/15/2029 | 89602RFP5 | |
| 11/15/2042 | $25,000,000 | 4.000% | 11/15/2029 | 89602RFQ3 | |
| 11/15/2043 | $25,000,000 | 4.000% | 11/15/2029 | 89602RFR1 | |
| 11/15/2045 | $25,000,000 | 3.000% | 11/15/2029 | 89602RFS9 | |
| 11/15/2046 | $25,000,000 | 3.000% | 11/15/2029 | 89602RFT7 | |
| 11/15/2047 | $25,000,000 | 3.000% | 11/15/2029 | 89602RFU4 | |
| 11/15/2048 | $25,000,000 | 3.000% | 11/15/2029 | 89602RFV2 | |
| **Total:** | $200,000,000 | | | | |

**$525,000,000 TBTA General Revenue Bonds, Series 2020A**

**Date of Issue:** May 27, 2020

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $525,000,000

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2045 | $41,990,000 | 5.000% | 11/15/2030 | 89602RFZ3 | |
| 11/15/2046 | $44,090,000 | 5.000% | 11/15/2030 | 89602RFZ3 | |
| 11/15/2047 | $46,295,000 | 5.000% | 11/15/2030 | 89602RFZ3 | |
| 11/15/2048 | $48,610,000 | 5.000% | 11/15/2030 | 89602RFZ3 | |
| 11/15/2049 | $51,040,000 | 5.000% | 11/15/2030 | 89602RFZ3 | |
| **Total:** | $232,025,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2050 | $26,000,000 | 5.000% | 11/15/2030 | 89602RGA7 | |
| 11/15/2051 | $26,000,000 | 5.000% | 11/15/2030 | 89602RGA7 | |
| 11/15/2052 | $26,000,000 | 5.000% | 11/15/2030 | 89602RGA7 | |
| 11/15/2053 | $26,000,000 | 5.000% | 11/15/2030 | 89602RGA7 | |
| 11/15/2054 | $26,000,000 | 5.000% | 11/15/2030 | 89602RGA7 | |
| **Total:** | $130,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2050 | $27,590,000 | 4.000% | 11/15/2030 | 89602RGB5 | |
| 11/15/2051 | $29,995,000 | 4.000% | 11/15/2030 | 89602RGB5 | |
| 11/15/2052 | $32,495,000 | 4.000% | 11/15/2030 | 89602RGB5 | |
| 11/15/2053 | $35,095,000 | 4.000% | 11/15/2030 | 89602RGB5 | |
| 11/15/2054 | $37,800,000 | 4.000% | 11/15/2030 | 89602RGB5 | |
| **Total:** | $162,975,000 | | | | |

**$400,000,000 TBTA General Revenue Bonds, Series 2021A**

**Date of Issue:** March 31, 2021

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $400,000,000

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $28,155,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| 11/15/2047 | $29,565,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| 11/15/2048 | $31,040,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| 11/15/2049 | $32,595,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| 11/15/2050 | $34,225,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| 11/15/2051 | $35,935,000 | 5.000% | 05/15/2031 | 89602RGP4 | |
| **Total:** | $191,515,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2052 | $18,100,000 | 4.000% | 05/15/2031 | 89602RGR0 | |
| 11/15/2053 | $19,000,000 | 4.000% | 05/15/2031 | 89602RGR0 | |
| 11/15/2054 | $19,955,000 | 4.000% | 05/15/2031 | 89602RGR0 | |
| 11/15/2055 | $20,950,000 | 4.000% | 05/15/2031 | 89602RGR0 | |
| 11/15/2056 | $21,995,000 | 4.000% | 05/15/2031 | 89602RGR0 | |
| **Total:** | $100,000,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2052 | $19,630,000 | 5.000% | 05/15/2031 | 89602RGQ2 | |
| 11/15/2053 | $20,615,000 | 5.000% | 05/15/2031 | 89602RGQ2 | |
| 11/15/2054 | $21,645,000 | 5.000% | 05/15/2031 | 89602RGQ2 | |
| 11/15/2055 | $22,730,000 | 5.000% | 05/15/2031 | 89602RGQ2 | |
| 11/15/2056 | $23,865,000 | 5.000% | 05/15/2031 | 89602RGQ2 | |
| **Total:** | $108,485,000 | | | | |

## $400,000,000 TBTA General Revenue Bonds, Series 2022A

**Date of Issue:** August 18, 2022

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $400,000,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2040 | $25,060,000 | 5.000% | 11/15/2032 | 89602RHM0 | |
| 11/15/2041 | $26,310,000 | 5.000% | 11/15/2032 | 89602RHN8 | |
| 11/15/2042 | $27,630,000 | 5.000% | 11/15/2032 | 89602RHP3 | |
| 11/15/2045 | $18,540,000 | 5.000% | 11/15/2032 | 89602RHQ1 | |
| **Total:** | $97,540,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $19,470,000 | 5.000% | 11/15/2032 | 89602RHR9 | |
| 11/15/2047 | $20,440,000 | 5.000% | 11/15/2032 | 89602RHR9 | |
| **Total:** | $39,910,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2048 | $21,465,000 | 4.000% | 11/15/2032 | 89602RHS7 | |
| 11/15/2049 | $22,320,000 | 4.000% | 11/15/2032 | 89602RHS7 | |
| 11/15/2050 | $23,215,000 | 4.000% | 11/15/2032 | 89602RHS7 | |
| 11/15/2051 | $24,145,000 | 4.000% | 11/15/2032 | 89602RHS7 | |
| 11/15/2052 | $25,110,000 | 4.000% | 11/15/2032 | 89602RHS7 | |
| **Total:** | $116,255,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2053 | $26,210,000 | 5.500% | 11/15/2032 | 89602RHT5 | |
| 11/15/2054 | $27,655,000 | 5.500% | 11/15/2032 | 89602RHT5 | |
| 11/15/2055 | $29,175,000 | 5.500% | 11/15/2032 | 89602RHT5 | |
| 11/15/2056 | $30,780,000 | 5.500% | 11/15/2032 | 89602RHT5 | |
| 11/15/2057 | $32,475,000 | 5.500% | 11/15/2032 | 89602RHT5 | |
| **Total:** | $146,295,000 | | | | |

## $828,225,000 TBTA General Revenue Refunding Bonds, Series 2023A

**Date of Issue:** February 14, 2023

**Underlying Ratings: (M/S&P/F/K)** Aa3/AA-/AA-/AA

**Par Outstanding** $828,225,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $42,030,000 | 5.000% | Non-Call | 89602RHW8 | |
| 11/15/2025 | $121,215,000 | 5.000% | Non-Call | 89602RHX6 | |
| 11/15/2026 | $127,105,000 | 5.000% | Non-Call | 89602RHY4 | |
| 11/15/2027 | $95,525,000 | 5.000% | Non-Call | 89602RHZ1 | |
| 11/15/2028 | $2,000,000 | 4.000% | Non-Call | 89602RJB2 | |
| 11/15/2028 | $93,965,000 | 5.000% | Non-Call | 89602RJA4 | |
| 11/15/2029 | $7,400,000 | 4.000% | Non-Call | 89602RJD8 | |
| 11/15/2029 | $41,180,000 | 5.000% | Non-Call | 89602RJC0 | |
| 11/15/2030 | $7,800,000 | 4.000% | Non-Call | 89602RJF3 | |
| 11/15/2030 | $32,625,000 | 5.000% | Non-Call | 89602RJE6 | |
| 11/15/2031 | $8,250,000 | 4.000% | Non-Call | 89602RJH9 | |
| 11/15/2031 | $31,285,000 | 5.000% | Non-Call | 89602RJG1 | |
| 11/15/2032 | $8,700,000 | 4.000% | Non-Call | 89602RJJ5 | |
| 11/15/2032 | $18,040,000 | 5.000% | Non-Call | 89602RJK2 | |
| 11/15/2033 | $20,860,000 | 5.000% | 05/15/2033 | 89602RJL0 | |
| 11/15/2034 | $6,200,000 | 4.000% | 05/15/2033 | 89602RJM8 | |
| 11/15/2034 | $22,660,000 | 5.000% | 05/15/2033 | 89602RJN6 | |
| 11/15/2035 | $30,290,000 | 5.000% | 05/15/2033 | 89602RJP1 | |
| 11/15/2036 | $31,870,000 | 5.000% | 05/15/2033 | 89602RJQ9 | |
| 11/15/2037 | $9,855,000 | 4.000% | 05/15/2033 | 89602RJR7 | |
| 11/15/2037 | $23,645,000 | 5.000% | 05/15/2033 | 89602RJS5 | |
| 11/15/2038 | $10,500,000 | 4.000% | 05/15/2033 | 89602RJU0 | |
| 11/15/2038 | $24,700,000 | 5.000% | 05/15/2033 | 89602RJT3 | |
| 11/15/2039 | $10,525,000 | 4.000% | 05/15/2033 | 89602RJV8 | |
| **Total:** | $828,225,000 | | | | |

Marine Parkway-Gil Hodges Memorial Bridge

**$653,964,652** **TBTA Subordinate Revenue Refunding Bonds, Series 2013A**

**Date of Issue:** January 29, 2013

**Underlying Ratings: (M/S&P/F/K)** A1/A+/A+/AA-

**Par Outstanding** $291,490,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $10,680,000 | 4.000% | 05/15/2023 | 89602NE75 | |
| 11/15/2023 | $45,540,000 | 5.000% | 05/15/2023 | 89602NH23 | |
| 11/15/2024 | $10,000,000 | 5.000% | 05/15/2023 | 89602RJZ9 | |
| **Total:** | $66,220,000 | | | | |

## Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2029 | $58,760,000 | 0.000% | Non-Call | 89602NG40 | |
| 11/15/2030 | $59,720,000 | 0.000% | Non-Call | 89602NF82 | |
| 11/15/2031 | $59,775,000 | 0.000% | Non-Call | 89602NF90 | |
| 11/15/2032 | $47,015,000 | 0.000% | Non-Call | 89602NG24 | |
| **Total:** | $225,270,000 | | | | |

**$313,975,000 TBTA Subordinate Revenue Refunding Bonds, Series 2013D Taxable**

**Date of Issue:** December 19, 2013

**Underlying Ratings: (M/S&P/F/K)** A1/A+/A+/AA-

## Sub Series TBTA SUB 2013D-1 Taxable

**Par Outstanding** $59,290,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $24,895,000 | 4.134% | Make-Whole | 89602NU36 | |
| 11/15/2024 | $16,790,000 | 4.284% | Make-Whole | 89602NU44 | |
| 11/15/2025 | $17,605,000 | 4.434% | Make-Whole | 89602NU93 | |
| **Total:** | $59,290,000 | | | | |


TBTA Second Subordinate Revenue BANS

Queens Midtown Tunnel

## $192,835,000 TBTA Second Subordinate Revenue Bond Anticipation Notes, Series 2021A

**Date of Issue:** June 10, 2021

**Underlying Ratings: (M/S&P/F/K)** A1/NAF/A+/NAF

**Par Outstanding** $192,835,000

### Note Maturity

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2025 | $192,835,000 | 5.000% | Non-Call | 89602RGS8 | |
| **Total:** | $192,835,000 | | | | |

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Staten Island Railway Clifton Car Maintenance Shop
(Hurricane-Resistant)

## $352,915,000 Dedicated Tax Fund Variable Rate Refunding Bonds, Series 2008A

**Date of Issue:** June 25, 2008

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Sub Series DTF 2008A-1

**Par Outstanding** $130,710,000

**Short Term Ratings:** NAF/A-1+/F1+/NAF

**Credit Provider:** TD Bank, N.A. **Facility Effective:** June 01, 2022 **Facility Expiration:** June 13, 2025

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $12,585,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2024 | $13,025,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2025 | $13,495,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2026 | $13,970,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2027 | $14,465,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2028 | $14,975,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2029 | $15,510,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2030 | $16,060,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| 11/1/2031 | $16,625,000 | Daily | 06/01/2022 | 59259N8Q9 | |
| **Total:** | $130,710,000 | | | | |

### Sub Series DTF 2008A-2a

**Par Outstanding** $45,860,000

**Short Term Ratings:** NAF/A-1+/F1+/NAF

**Credit Provider:** TD Bank, N.A. **Facility Effective:** June 01, 2022 **Facility Expiration:** November 01, 2026

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2023 | $12,585,000 | Daily | 06/01/2022 | 59260XBE7 | |
| 11/1/2024 | $13,030,000 | Daily | 06/01/2022 | 59260XBE7 | |
| 11/1/2025 | $13,495,000 | Daily | 06/01/2022 | 59260XBE7 | |
| 11/1/2026 | $6,750,000 | Daily | 06/01/2022 | 59260XBE7 | |
| **Total:** | $45,860,000 | | | | |

**$352,915,000** **Dedicated Tax Fund Variable Rate Refunding Bonds, Series 2008A**

**Date of Issue:** June 25, 2008

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Sub Series DTF 2008A-2b

**Par Outstanding** $84,855,000

**Short Term Ratings:** NAF/A-1/F1/NAF

**Credit Provider:** PNC Bank National Association

**Facility Effective:** October 25, 2022

**Facility Expiration:** October 24, 2025

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2026 | $7,220,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| 11/1/2027 | $14,465,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| 11/1/2028 | $14,975,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| 11/1/2029 | $15,510,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| 11/1/2030 | $16,055,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| 11/1/2031 | $16,630,000 | Weekly | 10/25/2022 | 59260XAB4 | |
| **Total:** | $84,855,000 | | | | |

## $348,175,000 Dedicated Tax Fund Refunding Bonds, Series 2008B

**Date of Issue:** August 07, 2008

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Sub Series DTF 2008B-1

**Par Outstanding** $69,490,000

**Mode:** Fixed **Mode Offering Date:** August 13, 2013

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $5,745,000 | 5.000% | Non-Call | 59259NV34 | |
| 11/15/2024 | $5,695,000 | 5.000% | 11/15/2023 | 59259NV42 | |
| 11/15/2025 | $5,775,000 | 5.000% | 11/15/2023 | 59259NV59 | |
| 11/15/2026 | $5,820,000 | 5.000% | 11/15/2023 | 59259NV67 | |
| 11/15/2027 | $2,865,000 | 4.000% | 11/15/2023 | 59259NV75 | |
| 11/15/2028 | $5,975,000 | 4.000% | 11/15/2023 | 59259NV83 | |
| 11/15/2029 | $12,790,000 | 5.000% | 11/15/2023 | 59259NV91 | |
| 11/15/2030 | $13,085,000 | 4.250% | 11/15/2023 | 59259NW25 | |
| 11/15/2031 | $8,965,000 | 5.000% | 11/15/2023 | 59259NW33 | |
| 11/15/2033 | $1,435,000 | 4.375% | 11/15/2023 | 59259NW41 | |
| 11/15/2034 | $1,340,000 | 4.500% | 11/15/2023 | 59259NW58 | |
| **Total:** | $69,490,000 | | | | |

### Sub Series DTF 2008B-3b

**Par Outstanding** $43,460,000

**Mode:** Fixed **Mode Offering Date:** October 03, 2016

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2028 | $4,665,000 | 5.000% | 11/15/2026 | 59259N5Q2 | |
| 11/15/2029 | $25,325,000 | 5.000% | 11/15/2026 | 59259N5R0 | |
| 11/15/2030 | $13,470,000 | 5.000% | 11/15/2026 | 59259N5P4 | |
| **Total:** | $43,460,000 | | | | |

## $348,175,000 Dedicated Tax Fund Refunding Bonds, Series 2008B

**Date of Issue:** August 07, 2008

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Sub Series DTF 2008B-3c

**Par Outstanding** $44,740,000

**Short Term Ratings:** NAF/A-1/F1/NAF

**Credit Provider:** PNC Bank National Association

**Facility Effective:** October 25, 2022

**Facility Expiration:** October 24, 2025

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/1/2030 | $15,590,000 | Weekly | 10/25/2022 | 59260XAD0 | |
| 11/1/2031 | $22,250,000 | Weekly | 10/25/2022 | 59260XAD0 | |
| 11/1/2033 | $3,565,000 | Weekly | 10/25/2022 | 59260XAD0 | |
| 11/1/2034 | $3,335,000 | Weekly | 10/25/2022 | 59260XAD0 | |
| **Total:** | $44,740,000 | | | | |

### Sub Series DTF 2008B-4

**Par Outstanding** $38,270,000

**Mode:** Fixed

**Mode Offering Date:** August 13, 2013

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $14,265,000 | 5.000% | Non-Call | 59259NX40 | |
| 11/15/2024 | $14,130,000 | 5.000% | 11/15/2023 | 59259NX57 | |
| 11/15/2025 | $9,875,000 | 5.000% | 11/15/2023 | 59259NX65 | |
| **Total:** | $38,270,000 | | | | |

**$750,000,000 Dedicated Tax Fund Bonds - Build America Bonds, Series 2009C**

**Date of Issue:** April 30, 2009

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Sub Series DTF 2009C Build America Bonds

**Par Outstanding** $750,000,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $250,000,000 | 7.336% | Make-Whole | 59259NZH9 | |
| 11/15/2038 | $250,000,000 | 7.336% | Make-Whole | 59259NZH9 | |
| 11/15/2039 | $250,000,000 | 7.336% | Make-Whole | 59259NZH9 | |
| **Total:** | $750,000,000 | | | | |

**$502,990,000 Dedicated Tax Fund Bonds, Series 2010A**

**Date of Issue:** March 25, 2010

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Sub Series DTF 2010A-2 Build America Bonds

**Par Outstanding** $388,330,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $12,705,000 | 5.355% | Make-Whole | 59259NZU0 | |
| 11/15/2024 | $13,385,000 | 5.455% | Make-Whole | 59259NZV8 | |
| 11/15/2025 | $14,120,000 | 5.535% | Make-Whole | 59259NZW6 | |
| **Total:** | $40,210,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $14,905,000 | 5.989% | Make-Whole | 59259NZM8 | |
| 11/15/2027 | $15,795,000 | 5.989% | Make-Whole | 59259NZM8 | |
| 11/15/2028 | $16,745,000 | 5.989% | Make-Whole | 59259NZM8 | |
| 11/15/2029 | $17,750,000 | 5.989% | Make-Whole | 59259NZM8 | |
| 11/15/2030 | $18,815,000 | 5.989% | Make-Whole | 59259NZM8 | |
| **Total:** | $84,010,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2031 | $19,945,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2032 | $21,160,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2033 | $22,450,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2034 | $23,820,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2035 | $25,275,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2036 | $26,815,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2037 | $28,450,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2038 | $30,185,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2039 | $32,030,000 | 6.089% | Make-Whole | 59259NZN6 | |
| 11/15/2040 | $33,980,000 | 6.089% | Make-Whole | 59259NZN6 | |
| **Total:** | $264,110,000 | | | | |

**$959,465,613 Dedicated Tax Fund Refunding Bonds, Series 2012A**

**Date of Issue:** October 25, 2012

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

**Par Outstanding** $272,075,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $5,000,000 | 2.500% | 11/15/2022 | 59259NR39 | |
| 11/15/2028 | $50,000,000 | 3.000% | 11/15/2022 | 59259NR70 | |
| **Total:** | $55,000,000 | | | | |

## Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2030 | $88,525,000 | 0.000% | Non-Call | 59259NT29 | |
| 11/15/2032 | $128,550,000 | 0.000% | Non-Call | 59259NS95 | |
| **Total:** | $217,075,000 | | | | |

## $579,955,000 Dedicated Tax Fund Refunding Bonds, Series 2016A

**Date of Issue:** March 10, 2016

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

**Par Outstanding** $515,605,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $15,270,000 | 5.000% | Non-Call | 59259N2C6 | |
| 11/15/2024 | $1,750,000 | 4.000% | Non-Call | 59259N2D4 | |
| 11/15/2024 | $36,000,000 | 5.000% | Non-Call | 59259N2R3 | |
| 11/15/2025 | $7,500,000 | 4.000% | Non-Call | 59259N2E2 | |
| 11/15/2025 | $39,300,000 | 5.000% | Non-Call | 59259N2S1 | |
| 11/15/2026 | $15,750,000 | 4.000% | Make-Whole | 59259N2F9 | |
| 11/15/2026 | $19,160,000 | 5.000% | Make-Whole | 59259N2T9 | |
| 11/15/2027 | $36,495,000 | 5.250% | 11/15/2026* | 59259N2G7 | |
| 11/15/2028 | $38,415,000 | 5.250% | 11/15/2026* | 59259N2H5 | |
| 11/15/2029 | $40,435,000 | 5.250% | 11/15/2026* | 59259N2J1 | |
| 11/15/2030 | $45,550,000 | 5.250% | 11/15/2026* | 59259N2K8 | |
| 11/15/2031 | $47,940,000 | 5.250% | 11/15/2026* | 59259N2L6 | |
| 11/15/2032 | $41,370,000 | 5.250% | 11/15/2026* | 59259N2U6 | |
| 11/15/2033 | $6,990,000 | 3.125% | 11/15/2026* | 59259N2M4 | |
| 11/15/2033 | $22,010,000 | 5.250% | 11/15/2026* | 59259N2V4 | |
| 11/15/2034 | $1,475,000 | 4.000% | 11/15/2026* | 59259N2N2 | |
| 11/15/2034 | $37,905,000 | 5.250% | 11/15/2026* | 59259N2W2 | |
| 11/15/2035 | $2,050,000 | 4.000% | 11/15/2026* | 59259N2P7 | |
| 11/15/2035 | $39,380,000 | 5.250% | 11/15/2026* | 59259N2X0 | |
| 11/15/2036 | $2,920,000 | 3.250% | 11/15/2026* | 59259N2Q5 | |
| 11/15/2036 | $17,940,000 | 5.250% | 11/15/2026* | 59259N2Y8 | |
| **Total:** | $515,605,000 | | | | |

*** Also Subject to Make-Whole Call**

## $588,305,000 Dedicated Tax Fund Green Bonds, Series 2016B

**Date of Issue:** May 26, 2016

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Sub Series DTF 2016B-1

**Par Outstanding** $386,350,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $4,965,000 | 5.000% | Non-Call | 59259N3W1 | |
| 11/15/2024 | $5,215,000 | 5.000% | Non-Call | 59259N3X9 | |
| 11/15/2025 | $5,475,000 | 5.000% | Non-Call | 59259N3Y7 | |
| 11/15/2026 | $5,745,000 | 5.000% | Non-Call | 59259N3Z4 | |
| 11/15/2027 | $6,035,000 | 5.000% | 11/15/2026 | 59259N4A8 | |
| 11/15/2028 | $6,335,000 | 5.000% | 11/15/2026 | 59259N4B6 | |
| 11/15/2029 | $6,655,000 | 5.000% | 11/15/2026 | 59259N4C4 | |
| 11/15/2030 | $6,985,000 | 5.000% | 11/15/2026 | 59259N4D2 | |
| 11/15/2031 | $7,335,000 | 5.000% | 11/15/2026 | 59259N4E0 | |
| 11/15/2032 | $7,700,000 | 5.000% | 11/15/2026 | 59259N4F7 | |
| 11/15/2033 | $8,085,000 | 5.000% | 11/15/2026 | 59259N4G5 | |
| 11/15/2034 | $8,490,000 | 5.000% | 11/15/2026 | 59259N3H4 | |
| 11/15/2035 | $8,915,000 | 5.000% | 11/15/2026 | 59259N3J0 | |
| 11/15/2036 | $198,415,000 | 5.000% | 11/15/2026 | 59259N3K7 | |
| **Total:** | $286,350,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $3,025,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2038 | $3,175,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2039 | $3,335,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2040 | $3,500,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2041 | $3,675,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2042 | $3,860,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2043 | $4,055,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2044 | $4,255,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2045 | $4,470,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| 11/15/2046 | $4,690,000 | 5.000% | 11/15/2026 | 59259N3L5 | |
| **Total:** | $38,040,000 | | | | |

**$588,305,000 Dedicated Tax Fund Green Bonds, Series 2016B**

**Date of Issue:** May 26, 2016

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2047 | $4,925,000 | 5.000% | 11/15/2026 | 59259N3M3 | |
| 11/15/2048 | $5,175,000 | 5.000% | 11/15/2026 | 59259N3M3 | |
| 11/15/2049 | $5,430,000 | 5.000% | 11/15/2026 | 59259N3M3 | |
| 11/15/2050 | $5,705,000 | 5.000% | 11/15/2026 | 59259N3M3 | |
| 11/15/2051 | $5,990,000 | 5.000% | 11/15/2026 | 59259N3M3 | |
| **Total:** | $27,225,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2052 | $6,285,000 | 5.000% | 11/15/2026 | 59259N3N1 | |
| 11/15/2053 | $6,600,000 | 5.000% | 11/15/2026 | 59259N3N1 | |
| 11/15/2054 | $6,930,000 | 5.000% | 11/15/2026 | 59259N3N1 | |
| 11/15/2055 | $7,280,000 | 5.000% | 11/15/2026 | 59259N3N1 | |
| 11/15/2056 | $7,640,000 | 5.000% | 11/15/2026 | 59259N3N1 | |
| **Total:** | $34,735,000 | | | | |

**$588,305,000 Dedicated Tax Fund Green Bonds, Series 2016B**

**Date of Issue:** May 26, 2016

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Sub Series DTF 2016B-2

**Par Outstanding** $174,890,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $14,170,000 | 5.000% | Non-Call | 59259N4R1 | |
| 11/15/2027 | $14,875,000 | 5.000% | 11/15/2026 | 59259N4S9 | |
| 11/15/2028 | $15,615,000 | 5.000% | 11/15/2026 | 59259N4T7 | |
| 11/15/2029 | $16,400,000 | 5.000% | 11/15/2026 | 59259N4U4 | |
| 11/15/2030 | $17,220,000 | 5.000% | 11/15/2026 | 59259N4V2 | |
| 11/15/2032 | $7,955,000 | 5.000% | 11/15/2026 | 59259N4H3 | |
| 11/15/2033 | $10,900,000 | 5.000% | 11/15/2026 | 59259N4J9 | |
| 11/15/2034 | $11,445,000 | 5.000% | 11/15/2026 | 59259N4K6 | |
| 11/15/2035 | $12,020,000 | 5.000% | 11/15/2026 | 59259N4L4 | |
| 11/15/2036 | $12,615,000 | 5.000% | 11/15/2026 | 59259N4M2 | |
| 11/15/2037 | $13,250,000 | 5.000% | 11/15/2026 | 59259N4N0 | |
| 11/15/2038 | $8,865,000 | 4.000% | 11/15/2026 | 59259N4P5 | |
| 11/15/2038 | $5,045,000 | 5.000% | 11/15/2026 | 59259N4W0 | |
| 11/15/2039 | $7,220,000 | 3.000% | 11/15/2026 | 59259N4Q3 | |
| 11/15/2039 | $7,295,000 | 5.000% | 11/15/2026 | 59259N4X8 | |
| **Total:** | $174,890,000 | | | | |

## $312,825,000 Dedicated Tax Fund Green Bonds, Series 2017A

**Date of Issue:** February 23, 2017

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

**Par Outstanding** $296,545,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $3,760,000 | 5.000% | Non-Call | 59259N5Y5 | |
| 11/15/2024 | $3,950,000 | 5.000% | Non-Call | 59259N5Z2 | |
| 11/15/2025 | $4,145,000 | 5.000% | Non-Call | 59259N6A6 | |
| 11/15/2026 | $4,355,000 | 5.000% | Non-Call | 59259N6B4 | |
| 11/15/2027 | $4,570,000 | 5.000% | 05/15/2027 | 59259N6C2 | |
| 11/15/2028 | $4,800,000 | 5.000% | 05/15/2027 | 59259N6D0 | |
| 11/15/2029 | $5,040,000 | 5.000% | 05/15/2027 | 59259N6E8 | |
| 11/15/2030 | $5,290,000 | 3.000% | 05/15/2027 | 59259N6F5 | |
| 11/15/2031 | $5,450,000 | 5.000% | 05/15/2027 | 59259N6G3 | |
| 11/15/2032 | $5,725,000 | 5.000% | 05/15/2027 | 59259N6H1 | |
| 11/15/2033 | $6,010,000 | 5.000% | 05/15/2027 | 59259N6J7 | |
| 11/15/2034 | $7,750,000 | 3.500% | 05/15/2027 | 59259N6K4 | |
| 11/15/2034 | $17,250,000 | 5.000% | 05/15/2027 | 59259N6R9 | |
| 11/15/2035 | $15,000,000 | 4.000% | 05/15/2027 | 59259N6T5 | |
| 11/15/2035 | $55,000,000 | 5.000% | 05/15/2027 | 59259N6L2 | |
| 11/15/2036 | $9,355,000 | 5.000% | 05/15/2027 | 59259N6M0 | |
| 11/15/2037 | $9,825,000 | 5.000% | 05/15/2027 | 59259N6N8 | |
| 11/15/2038 | $10,315,000 | 5.000% | 05/15/2027 | 59259N6U2 | |
| **Total:** | $177,590,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $1,480,000 | 4.000% | 05/15/2027 | 59259N6P3 | |
| 11/15/2040 | $1,540,000 | 4.000% | 05/15/2027 | 59259N6P3 | |
| 11/15/2041 | $1,600,000 | 4.000% | 05/15/2027 | 59259N6P3 | |
| 11/15/2042 | $1,665,000 | 4.000% | 05/15/2027 | 59259N6P3 | |
| **Total:** | $6,285,000 | | | | |

**$312,825,000 Dedicated Tax Fund Green Bonds, Series 2017A**

**Date of Issue:** February 23, 2017

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $9,350,000 | 5.000% | 05/15/2027 | 59259N6S7 | |
| 11/15/2040 | $9,820,000 | 5.000% | 05/15/2027 | 59259N6S7 | |
| 11/15/2041 | $10,310,000 | 5.000% | 05/15/2027 | 59259N6S7 | |
| 11/15/2042 | $10,825,000 | 5.000% | 05/15/2027 | 59259N6S7 | |
| **Total:** | $40,305,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $13,095,000 | 5.000% | 05/15/2027 | 59259N6Q1 | |
| 11/15/2044 | $13,750,000 | 5.000% | 05/15/2027 | 59259N6Q1 | |
| 11/15/2045 | $14,440,000 | 5.000% | 05/15/2027 | 59259N6Q1 | |
| 11/15/2046 | $15,160,000 | 5.000% | 05/15/2027 | 59259N6Q1 | |
| 11/15/2047 | $15,920,000 | 5.000% | 05/15/2027 | 59259N6Q1 | |
| **Total:** | $72,365,000 | | | | |

**$680,265,000 Dedicated Tax Fund Green Bonds, Series 2017B**

**Date of Issue:** May 17, 2017

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

## Sub Series DTF 2017B-1

**Par Outstanding** $305,465,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $1,725,000 | 4.000% | Non-Call | 59259N7R8 | |
| 11/15/2024 | $1,795,000 | 4.000% | Non-Call | 59259N7S6 | |
| 11/15/2025 | $1,860,000 | 4.000% | Non-Call | 59259N7T4 | |
| 11/15/2026 | $2,645,000 | 5.000% | Non-Call | 59259N7U1 | |
| 11/15/2027 | $14,040,000 | 5.000% | Non-Call | 59259N7V9 | |
| 11/15/2028 | $6,665,000 | 5.000% | 11/15/2027 | 59259N7W7 | |
| 11/15/2029 | $12,160,000 | 5.000% | 11/15/2027 | 59259N7X5 | |
| 11/15/2030 | $7,735,000 | 5.000% | 11/15/2027 | 59259N7Y3 | |
| 11/15/2031 | $5,585,000 | 5.000% | 11/15/2027 | 59259N7Z0 | |
| 11/15/2032 | $8,090,000 | 5.000% | 11/15/2027 | 59259N8A4 | |
| 11/15/2033 | $6,870,000 | 5.000% | 11/15/2027 | 59259N8B2 | |
| 11/15/2034 | $22,470,000 | 5.000% | 11/15/2027 | 59259N8C0 | |
| 11/15/2035 | $33,940,000 | 5.000% | 11/15/2027 | 59259N8D8 | |
| 11/15/2036 | $4,825,000 | 5.000% | 11/15/2027 | 59259N8E6 | |
| 11/15/2037 | $5,060,000 | 5.000% | 11/15/2027 | 59259N8F3 | |
| 11/15/2038 | $5,320,000 | 3.500% | 11/15/2027 | 59259N8G1 | |
| **Total:** | $140,785,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2039 | $5,500,000 | 5.000% | 11/15/2027 | 59259N8N6 | |
| 11/15/2040 | $5,775,000 | 5.000% | 11/15/2027 | 59259N8N6 | |
| 11/15/2041 | $6,070,000 | 5.000% | 11/15/2027 | 59259N8N6 | |
| 11/15/2042 | $6,370,000 | 5.000% | 11/15/2027 | 59259N8N6 | |
| **Total:** | $23,715,000 | | | | |

## $680,265,000 Dedicated Tax Fund Green Bonds, Series 2017B

**Date of Issue:** May 17, 2017

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2043 | $6,690,000 | 5.000% | 11/15/2027 | 59259N8J5 | |
| 11/15/2044 | $7,020,000 | 5.000% | 11/15/2027 | 59259N8J5 | |
| 11/15/2045 | $7,375,000 | 5.000% | 11/15/2027 | 59259N8J5 | |
| 11/15/2046 | $7,745,000 | 5.000% | 11/15/2027 | 59259N8J5 | |
| 11/15/2047 | $8,130,000 | 5.000% | 11/15/2027 | 59259N8J5 | |
| **Total:** | $36,960,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2048 | $8,340,000 | 4.000% | 11/15/2027 | 59259N8L0 | |
| 11/15/2049 | $8,685,000 | 4.000% | 11/15/2027 | 59259N8L0 | |
| 11/15/2050 | $9,040,000 | 4.000% | 11/15/2027 | 59259N8L0 | |
| 11/15/2051 | $9,415,000 | 4.000% | 11/15/2027 | 59259N8L0 | |
| 11/15/2052 | $9,800,000 | 4.000% | 11/15/2027 | 59259N8L0 | |
| **Total:** | $45,280,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2048 | $200,000 | 5.000% | 11/15/2027 | 59259N8K2 | |
| 11/15/2049 | $200,000 | 5.000% | 11/15/2027 | 59259N8K2 | |
| 11/15/2050 | $200,000 | 5.000% | 11/15/2027 | 59259N8K2 | |
| 11/15/2051 | $200,000 | 5.000% | 11/15/2027 | 59259N8K2 | |
| 11/15/2052 | $200,000 | 5.000% | 11/15/2027 | 59259N8K2 | |
| **Total:** | $1,000,000 | | | | |

## $680,265,000 Dedicated Tax Fund Green Bonds, Series 2017B

**Date of Issue:** May 17, 2017

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2053 | $10,395,000 | 5.250% | 11/15/2027 | 59259N8M8 | |
| 11/15/2054 | $10,940,000 | 5.250% | 11/15/2027 | 59259N8M8 | |
| 11/15/2055 | $11,515,000 | 5.250% | 11/15/2027 | 59259N8M8 | |
| 11/15/2056 | $12,120,000 | 5.250% | 11/15/2027 | 59259N8M8 | |
| 11/15/2057 | $12,755,000 | 5.250% | 11/15/2027 | 59259N8M8 | |
| **Total:** | $57,725,000 | | | | |

### Sub Series DTF 2017B-2 Refunding Green Bonds

**Par Outstanding** $367,085,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2023 | $17,815,000 | 5.000% | Non-Call | 59259N6W8 | |
| 11/15/2024 | $18,650,000 | 5.000% | Non-Call | 59259N6X6 | |
| 11/15/2025 | $19,635,000 | 5.000% | Non-Call | 59259N6Y4 | |
| 11/15/2026 | $20,675,000 | 5.000% | Non-Call | 59259N6Z1 | |
| 11/15/2027 | $21,655,000 | 5.000% | Non-Call | 59259N7A5 | |
| 11/15/2028 | $19,720,000 | 5.000% | 11/15/2027 | 59259N7B3 | |
| 11/15/2031 | $17,785,000 | 5.000% | 11/15/2027 | 59259N7C1 | |
| 11/15/2032 | $18,675,000 | 4.000% | 11/15/2027 | 59259N7D9 | |
| 11/15/2033 | $30,000,000 | 3.125% | 11/15/2027 | 59259N7F4 | |
| 11/15/2033 | $50,000,000 | 4.000% | 11/15/2027 | 59259N7H0 | |
| 11/15/2033 | $45,285,000 | 5.000% | 11/15/2027 | 59259N7E7 | |
| 11/15/2033 | $40,000,000 | 5.250% | 11/15/2027 | 59259N7G2 | |
| 11/15/2034 | $20,000,000 | 4.000% | 11/15/2027 | 59259N7K3 | |
| 11/15/2034 | $27,190,000 | 5.000% | 11/15/2027 | 59259N7J6 | |
| **Total:** | $367,085,000 | | | | |

**$377,955,000 Dedicated Tax Fund Bonds, Series 2022A**

**Date of Issue:** March 01, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA/AA/NAF

**Par Outstanding** $377,955,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2032 | $11,015,000 | 5.000% | 05/15/2032 | 59260XAH1 | |
| 11/15/2033 | $11,565,000 | 5.000% | 05/15/2032 | 59260XAJ7 | |
| 11/15/2034 | $12,140,000 | 5.000% | 05/15/2032 | 59260XAK4 | |
| 11/15/2035 | $12,750,000 | 5.000% | 05/15/2032 | 59260XAL2 | |
| 11/15/2036 | $13,385,000 | 5.000% | 05/15/2032 | 59260XAM0 | |
| 11/15/2037 | $14,055,000 | 5.000% | 05/15/2032 | 59260XAN8 | |
| 11/15/2038 | $14,760,000 | 4.000% | 05/15/2032 | 59260XAP3 | |
| 11/15/2039 | $15,350,000 | 4.000% | 05/15/2032 | 59260XAQ1 | |
| 11/15/2040 | $15,965,000 | 4.000% | 05/15/2032 | 59260XAR9 | |
| 11/15/2041 | $16,600,000 | 4.000% | 05/15/2032 | 59260XAS7 | |
| 11/15/2042 | $17,265,000 | 4.000% | 05/15/2032 | 59260XAT5 | |
| 11/15/2043 | $17,955,000 | 4.000% | 05/15/2032 | 59260XAU2 | |
| 11/15/2044 | $18,675,000 | 5.000% | 05/15/2032 | 59260XAV0 | |
| 11/15/2045 | $19,610,000 | 5.000% | 05/15/2032 | 59260XAW8 | |
| 11/15/2046 | $20,590,000 | 5.000% | 05/15/2032 | 59260XAX6 | |
| 11/15/2047 | $21,620,000 | 5.000% | 05/15/2032 | 59260XAY4 | |
| 11/15/2048 | $22,700,000 | 5.000% | 05/15/2032 | 59260XAZ1 | |
| 11/15/2049 | $23,835,000 | 5.000% | 05/15/2032 | 59260XBA5 | |
| 11/15/2050 | $25,025,000 | 4.000% | 05/15/2032 | 59260XBB3 | |
| 11/15/2051 | $26,025,000 | 4.000% | 05/15/2032 | 59260XBC1 | |
| 11/15/2052 | $27,070,000 | 4.000% | 05/15/2032 | 59260XBD9 | |
| **Total:** | $377,955,000 | | | | |

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ADA Elevators: Court Square G Line Station

## $2,907,280,000 MTA Payroll Mobility Tax Bond Anticipation Notes, Series 2020A

**Date of Issue:** December 17, 2020

**Underlying Ratings: (M/S&P/F/K)** NAF/NAF/AA+/AA+

**Par Outstanding** $2,907,280,000

**Short Term Ratings: (M/S&P/F/K)** NAF/NAF/F1+/K1+

### Note Maturity

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 12/15/2023 | $2,907,280,000 | 1.330% | 12/17/2020 | 59261CAA1 | |
| **Total:** | $2,907,280,000 | | | | |

## $1,238,210,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021A

**Date of Issue:** May 05, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2021A-1

**Par Outstanding** $633,535,000

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2045 | $44,300,000 | 4.000% | 05/15/2031 | 89602HAA5 | |
| 5/15/2046 | $86,710,000 | 4.000% | 05/15/2031 | 89602HAA5 | |
| **Total:** | $131,010,000 | | | | |

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $90,710,000 | 5.000% | 05/15/2031 | 89602HAB3 | |
| 5/15/2048 | $95,365,000 | 5.000% | 05/15/2031 | 89602HAB3 | |
| 5/15/2049 | $100,255,000 | 5.000% | 05/15/2031 | 89602HAB3 | |
| 5/15/2050 | $105,395,000 | 5.000% | 05/15/2031 | 89602HAB3 | |
| 5/15/2051 | $110,800,000 | 5.000% | 05/15/2031 | 89602HAB3 | |
| **Total:** | $502,525,000 | | | | |

### Sub Series PMT 2021A-2 Rfndg Bonds (24 Put)

**Par Outstanding** $118,740,000

**Mode:** PUT **Mode Offering Date:** May 05, 2021 **Next Tender Date:** May 15, 2024

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2041 | $25,535,000 | 2.000% | Non-Call | 89602HAC1 | |
| 5/15/2042 | $26,055,000 | 2.000% | Non-Call | 89602HAC1 | |
| 5/15/2043 | $26,580,000 | 2.000% | Non-Call | 89602HAC1 | |
| 5/15/2044 | $27,120,000 | 2.000% | Non-Call | 89602HAC1 | |
| 5/15/2045 | $13,450,000 | 2.000% | Non-Call | 89602HAC1 | |
| **Total:** | $118,740,000 | | | | |

## $1,238,210,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021A

**Date of Issue:** May 05, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2021A-2 Rfndg Bonds (26 Put)

**Par Outstanding** $118,745,000

**Mode:** PUT **Mode Offering Date:** May 05, 2021 **Next Tender Date:** May 15, 2026

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2041 | $25,655,000 | 2.000% | Non-Call | 89602HAD9 | |
| 5/15/2042 | $26,175,000 | 2.000% | Non-Call | 89602HAD9 | |
| 5/15/2043 | $26,700,000 | 2.000% | Non-Call | 89602HAD9 | |
| 5/15/2044 | $27,240,000 | 2.000% | Non-Call | 89602HAD9 | |
| 5/15/2045 | $12,975,000 | 2.000% | Non-Call | 89602HAD9 | |
| **Total:** | $118,745,000 | | | | |

### Sub Series PMT 2021A-2 Rfndg Bonds (28 Put)

**Par Outstanding** $118,740,000

**Mode:** PUT **Mode Offering Date:** May 05, 2021 **Next Tender Date:** May 15, 2028

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2041 | $25,655,000 | 2.000% | Non-Call | 89602HAE7 | |
| 5/15/2042 | $26,170,000 | 2.000% | Non-Call | 89602HAE7 | |
| 5/15/2043 | $26,705,000 | 2.000% | Non-Call | 89602HAE7 | |
| 5/15/2044 | $27,240,000 | 2.000% | Non-Call | 89602HAE7 | |
| 5/15/2045 | $12,970,000 | 2.000% | Non-Call | 89602HAE7 | |
| **Total:** | $118,740,000 | | | | |

**$1,238,210,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021A**

**Date of Issue:** May 05, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Sub Series PMT 2021A-3 Taxable Refunding Bonds

**Par Outstanding** $248,450,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2033 | $31,955,000 | 2.261% | 5/15/2031* | 89602HAF4 | |
| 5/15/2034 | $32,725,000 | 2.411% | 5/15/2031* | 89602HAG2 | |
| 5/15/2035 | $33,545,000 | 2.511% | 5/15/2031* | 89602HAH0 | |
| 5/15/2036 | $34,420,000 | 2.591% | 5/15/2031* | 89602HAJ6 | |
| 5/15/2037 | $35,360,000 | 2.691% | 5/15/2031* | 89602HAK3 | |
| 5/15/2040 | $80,445,000 | 2.917% | 5/15/2031* | 89602HAL1 | |
| **Total:** | $248,450,000 | | | | |

*** Also Subject to Make-Whole Call**

## $369,195,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021B

**Date of Issue:** August 31, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2021B-1

**Par Outstanding** $241,580,000

#### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2036 | $14,735,000 | 5.000% | 05/15/2031 | 89602HAM9 | |
| 5/15/2037 | $8,900,000 | 5.000% | 05/15/2031 | 89602HAN7 | |
| 5/15/2038 | $7,680,000 | 5.000% | 05/15/2031 | 89602HAP2 | |
| 5/15/2041 | $1,700,000 | 5.000% | 05/15/2031 | 89602HAQ0 | |
| 5/15/2042 | $4,250,000 | 5.000% | 05/15/2031 | 89602HAR8 | |
| **Total:** | $37,265,000 | | | | |

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2043 | $10,400,000 | 5.000% | 05/15/2031 | 89602HAS6 | |
| 5/15/2044 | $10,900,000 | 5.000% | 05/15/2031 | 89602HAS6 | |
| 5/15/2045 | $11,500,000 | 5.000% | 05/15/2031 | 89602HAS6 | |
| 5/15/2046 | $11,890,000 | 5.000% | 05/15/2031 | 89602HAS6 | |
| **Total:** | $44,690,000 | | | | |

#### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2052 | $11,040,000 | 4.000% | 05/15/2031 | 89602HAT4 | |
| 5/15/2053 | $11,545,000 | 4.000% | 05/15/2031 | 89602HAT4 | |
| 5/15/2054 | $12,075,000 | 4.000% | 05/15/2031 | 89602HAT4 | |
| 5/15/2055 | $12,630,000 | 4.000% | 05/15/2031 | 89602HAT4 | |
| 5/15/2056 | $13,210,000 | 4.000% | 05/15/2031 | 89602HAT4 | |
| **Total:** | $60,500,000 | | | | |

## $369,195,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021B

**Date of Issue:** August 31, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2051 | $17,875,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| 5/15/2052 | $14,875,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| 5/15/2053 | $15,530,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| 5/15/2054 | $16,220,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| 5/15/2055 | $16,935,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| 5/15/2056 | $17,690,000 | 5.000% | 05/15/2028 | 89602HAU1 | |
| **Total:** | $99,125,000 | | | | |

### Sub Series PMT 2021B-2

**Par Outstanding** $127,615,000

**Mode:** PUT **Mode Offering Date:** August 31, 2021 **Next Tender Date:** May 15, 2026

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2039 | $11,315,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2040 | $11,845,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2041 | $10,640,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2042 | $8,920,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2043 | $3,375,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2044 | $3,530,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2045 | $3,625,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2046 | $3,960,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2047 | $16,545,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2048 | $17,325,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2049 | $17,910,000 | 5.000% | Non-Call | 89602HAV9 | |
| 5/15/2050 | $18,625,000 | 5.000% | Non-Call | 89602HAV9 | |
| **Total:** | $127,615,000 | | | | |

**$853,628,707** **TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021C**

**Date of Issue:** September 30, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Sub Series PMT 2021C-1a

**Par Outstanding** $316,680,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2023 | $16,360,000 | 5.000% | Non-Call | 89602HAW7 | |
| 5/15/2025 | $5,000,000 | 5.000% | Non-Call | 89602HAX5 | |
| 5/15/2037 | $17,500,000 | 5.000% | 11/15/2031 | 89602HAY3 | |
| 5/15/2038 | $18,400,000 | 5.000% | 11/15/2031 | 89602HAZ0 | |
| 5/15/2039 | $19,345,000 | 5.000% | 11/15/2031 | 89602HBA4 | |
| 5/15/2040 | $20,335,000 | 5.000% | 11/15/2031 | 89602HBB2 | |
| 5/15/2041 | $21,375,000 | 5.000% | 11/15/2031 | 89602HBC0 | |
| 5/15/2042 | $22,360,000 | 4.000% | 11/15/2031 | 89602HBD8 | |
| **Total:** | $140,675,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2043 | $23,270,000 | 4.000% | 11/15/2031 | 89602HBE6 | |
| 5/15/2044 | $24,220,000 | 4.000% | 11/15/2031 | 89602HBE6 | |
| 5/15/2045 | $25,210,000 | 4.000% | 11/15/2031 | 89602HBE6 | |
| 5/15/2046 | $26,240,000 | 4.000% | 11/15/2031 | 89602HBE6 | |
| **Total:** | $98,940,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $13,880,000 | 5.000% | 11/15/2031 | 89602HBF3 | |
| 5/15/2048 | $14,605,000 | 5.000% | 11/15/2031 | 89602HBF3 | |
| 5/15/2049 | $15,370,000 | 5.000% | 11/15/2031 | 89602HBF3 | |
| 5/15/2050 | $16,180,000 | 5.000% | 11/15/2031 | 89602HBF3 | |
| 5/15/2051 | $17,030,000 | 5.000% | 11/15/2031 | 89602HBF3 | |
| **Total:** | $77,065,000 | | | | |

**$853,628,707 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021C**

**Date of Issue:** September 30, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Sub Series PMT 2021C-1b

**Par Outstanding** $75,000,000

**Mode:** PUT **Mode Offering Date:** September 30, 2021 **Next Tender Date:** May 15, 2026

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $13,570,000 | 5.000% | Non-Call | 89602HBG1 | |
| 5/15/2048 | $14,250,000 | 5.000% | Non-Call | 89602HBG1 | |
| 5/15/2049 | $14,965,000 | 5.000% | Non-Call | 89602HBG1 | |
| 5/15/2050 | $15,715,000 | 5.000% | Non-Call | 89602HBG1 | |
| 5/15/2051 | $16,500,000 | 5.000% | Non-Call | 89602HBG1 | |
| **Total:** | $75,000,000 | | | | |

## $853,628,707 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021C

**Date of Issue:** September 30, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2021C-2 Refunding Bonds

**Par Outstanding** $171,870,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2023 | $10,370,000 | 5.000% | Non-Call | 89602HBJ5 | |
| 5/15/2024 | $1,285,000 | 5.000% | Non-Call | 89602HBK2 | |
| 5/15/2025 | $10,965,000 | 5.000% | Non-Call | 89602HBL0 | |
| 5/15/2026 | $11,530,000 | 5.000% | Non-Call | 89602HBM8 | |
| 5/15/2027 | $12,120,000 | 5.000% | Non-Call | 89602HBN6 | |
| 5/15/2028 | $12,700,000 | 5.000% | Non-Call | 89602HBP1 | |
| 5/15/2031 | $5,555,000 | 5.000% | Non-Call | 89602HBQ9 | |
| 5/15/2032 | $33,905,000 | 3.000% | 11/15/2031 | 89602HBR7 | |
| 5/15/2033 | $20,625,000 | 3.000% | 11/15/2031 | 89602HBS5 | |
| 5/15/2034 | $15,090,000 | 4.000% | 11/15/2031 | 89602HBU0 | |
| 5/15/2035 | $18,970,000 | 4.000% | 11/15/2031 | 89602HBV8 | |
| 5/15/2036 | $4,050,000 | 4.000% | 11/15/2031 | 89602HBW6 | |
| **Total:** | $157,165,000 | | | | |

### Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2033 | $14,705,000 | 0.000% | 11/15/2031 | 89602HBT3 | |
| **Total:** | $14,705,000 | | | | |

## $853,628,707 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2021C

**Date of Issue:** September 30, 2021

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2021C-3

**Par Outstanding** $284,675,000

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $14,260,000 | 2.500% | 11/15/2031 | 89602HBX4 | |
| 5/15/2048 | $14,620,000 | 2.500% | 11/15/2031 | 89602HBX4 | |
| 5/15/2049 | $14,990,000 | 2.500% | 11/15/2031 | 89602HBX4 | |
| 5/15/2050 | $15,370,000 | 2.500% | 11/15/2031 | 89602HBX4 | |
| 5/15/2051 | $15,760,000 | 2.500% | 11/15/2031 | 89602HBX4 | |
| **Total:** | $75,000,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $27,225,000 | 3.000% | 11/15/2031 | 89602HBZ9 | |
| 5/15/2048 | $28,055,000 | 3.000% | 11/15/2031 | 89602HBZ9 | |
| 5/15/2049 | $28,910,000 | 3.000% | 11/15/2031 | 89602HBZ9 | |
| 5/15/2050 | $29,790,000 | 3.000% | 11/15/2031 | 89602HBZ9 | |
| 5/15/2051 | $30,695,000 | 3.000% | 11/15/2031 | 89602HBZ9 | |
| **Total:** | $144,675,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2047 | $11,980,000 | 4.000% | 11/15/2031 | 89602HBY2 | |
| 5/15/2048 | $12,470,000 | 4.000% | 11/15/2031 | 89602HBY2 | |
| 5/15/2049 | $12,980,000 | 4.000% | 11/15/2031 | 89602HBY2 | |
| 5/15/2050 | $13,510,000 | 4.000% | 11/15/2031 | 89602HBY2 | |
| 5/15/2051 | $14,060,000 | 4.000% | 11/15/2031 | 89602HBY2 | |
| **Total:** | $65,000,000 | | | | |

**$592,680,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2022A**

**Date of Issue:** February 10, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $592,680,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2040 | $22,990,000 | 4.000% | 05/15/2032 | 89602HCA3 | |
| 5/15/2041 | $23,930,000 | 4.000% | 05/15/2032 | 89602HCB1 | |
| 5/15/2042 | $24,905,000 | 4.000% | 05/15/2032 | 89602HCC9 | |
| 5/15/2043 | $26,055,000 | 5.000% | 05/15/2032 | 89602HCD7 | |
| 5/15/2044 | $27,390,000 | 5.000% | 05/15/2032 | 89602HCE5 | |
| 5/15/2052 | $135,000,000 | 5.000% | Non-Call | 89602HCH8 | |
| **Total:** | $260,270,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2045 | $28,795,000 | 5.000% | 05/15/2032 | 89602HCF2 | |
| 5/15/2046 | $30,270,000 | 5.000% | 05/15/2032 | 89602HCF2 | |
| 5/15/2047 | $31,825,000 | 5.000% | 05/15/2032 | 89602HCF2 | |
| **Total:** | $90,890,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $33,285,000 | 4.000% | 05/15/2032 | 89602HCG0 | |
| 5/15/2049 | $34,645,000 | 4.000% | 05/15/2032 | 89602HCG0 | |
| 5/15/2050 | $36,060,000 | 4.000% | 05/15/2032 | 89602HCG0 | |
| 5/15/2051 | $37,530,000 | 4.000% | 05/15/2032 | 89602HCG0 | |
| **Total:** | $141,520,000 | | | | |

**$592,680,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2022A**

**Date of Issue:** February 10, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2053 | $18,100,000 | 5.000% | 05/15/2032 | 89602HCJ4 | |
| 5/15/2054 | $19,000,000 | 5.000% | 05/15/2032 | 89602HCJ4 | |
| 5/15/2055 | $19,950,000 | 5.000% | 05/15/2032 | 89602HCJ4 | |
| 5/15/2056 | $20,950,000 | 5.000% | 05/15/2032 | 89602HCJ4 | |
| 5/15/2057 | $22,000,000 | 5.000% | 05/15/2032 | 89602HCJ4 | |
| **Total:** | $100,000,000 | | | | |

## $951,370,000 TBTA Payroll Mobility Tax Bond Anticipation Notes, Series 2022A

**Date of Issue:** September 01, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $951,370,000

**Short Term Ratings: (M/S&P/F/K)** NAF/SP-1+/F1+/K1+

### Note Maturity

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 8/15/2024 | $951,370,000 | 5.000% | Non-Call | 89602HDT1 | |
| **Total:** | $951,370,000 | | | | |

**$1,000,015,000 TBTA Payroll Mobility Tax Senior Lien Refunding Bonds, Series 2022B**

**Date of Issue:** August 18, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $1,000,015,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2023 | $4,895,000 | 5.000% | Non-Call | 89602HCL9 | |
| 5/15/2024 | $5,135,000 | 5.000% | Non-Call | 89602HCM7 | |
| 5/15/2025 | $5,400,000 | 5.000% | Non-Call | 89602HCN5 | |
| 5/15/2026 | $27,425,000 | 4.000% | Non-Call | 89602HCQ8 | |
| 5/15/2026 | $132,575,000 | 5.000% | Non-Call | 89602HCP0 | |
| 5/15/2027 | $28,925,000 | 4.000% | Non-Call | 89602HCR6 | |
| 5/15/2027 | $91,665,000 | 5.000% | Non-Call | 89602HCS4 | |
| 5/15/2028 | $160,000,000 | 5.000% | Non-Call | 89602HCT2 | |
| 5/15/2029 | $160,000,000 | 5.000% | Non-Call | 89602HCU9 | |
| 5/15/2030 | $160,000,000 | 5.000% | Non-Call | 89602HCV7 | |
| 5/15/2031 | $105,845,000 | 5.000% | Non-Call | 89602HCW5 | |
| 5/15/2032 | $45,195,000 | 5.000% | Non-Call | 89602HCX3 | |
| 5/15/2033 | $5,700,000 | 5.000% | 05/15/2032 | 89602HCY1 | |
| 5/15/2034 | $8,090,000 | 5.000% | 05/15/2032 | 89602HCZ8 | |
| 5/15/2035 | $8,510,000 | 5.000% | 05/15/2032 | 89602HDA2 | |
| 5/15/2036 | $8,945,000 | 5.000% | 05/15/2032 | 89602HDB0 | |
| 5/15/2038 | $9,740,000 | 5.000% | 05/15/2032 | 89602HDC8 | |
| 5/15/2039 | $10,240,000 | 5.000% | 05/15/2032 | 89602HDD6 | |
| 5/15/2040 | $8,085,000 | 5.000% | 05/15/2032 | 89602HDE4 | |
| 5/15/2041 | $8,495,000 | 5.000% | 05/15/2032 | 89602HDF1 | |
| 5/15/2042 | $5,150,000 | 5.000% | 05/15/2032 | 89602HDG9 | |
| **Total:** | $1,000,015,000 | | | | |

## $766,540,000 TBTA Payroll Mobility Tax Bond Anticipation Notes, Series 2022B

**Date of Issue:** December 15, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $766,540,000

**Short Term Ratings: (M/S&P/F/K)** NAF/SP-1+/F1+/K1+

### Note Maturity

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 12/16/2024 | $766,540,000 | 5.000% | Non-Call | 89602HEZ6 | |
| **Total:** | $766,540,000 | | | | |

## $927,950,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2022C

**Date of Issue:** May 12, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $927,950,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2040 | $63,330,000 | 5.000% | 05/15/2032 | 89602HDH7 | |
| 5/15/2041 | $57,020,000 | 5.250% | 05/15/2032 | 89602HDJ3 | |
| 5/15/2042 | $62,620,000 | 5.000% | 05/15/2032 | 89602HDK0 | |
| 5/15/2043 | $15,570,000 | 4.000% | 05/15/2032 | 89602HDL8 | |
| 5/15/2043 | $37,650,000 | 5.000% | 05/15/2032 | 89602HDM6 | |
| 5/15/2044 | $40,955,000 | 5.000% | 05/15/2032 | 89602HDN4 | |
| **Total:** | $277,145,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2045 | $58,510,000 | 5.000% | 05/15/2032 | 89602HDP9 | |
| 5/15/2046 | $61,510,000 | 5.000% | 05/15/2032 | 89602HDP9 | |
| 5/15/2047 | $64,665,000 | 5.000% | 05/15/2032 | 89602HDP9 | |
| **Total:** | $184,685,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $22,060,000 | 4.125% | 05/15/2032 | 89602HDQ7 | |
| 5/15/2049 | $22,990,000 | 4.125% | 05/15/2032 | 89602HDQ7 | |
| 5/15/2050 | $23,960,000 | 4.125% | 05/15/2032 | 89602HDQ7 | |
| 5/15/2051 | $24,965,000 | 4.125% | 05/15/2032 | 89602HDQ7 | |
| 5/15/2052 | $26,020,000 | 4.125% | 05/15/2032 | 89602HDQ7 | |
| **Total:** | $119,995,000 | | | | |

## $927,950,000 TBTA Payroll Mobility Tax Senior Lien Bonds, Series 2022C

**Date of Issue:** May 12, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $53,870,000 | 5.250% | 05/15/2032 | 89602HDR5 | |
| 5/15/2049 | $56,775,000 | 5.250% | 05/15/2032 | 89602HDR5 | |
| 5/15/2050 | $59,835,000 | 5.250% | 05/15/2032 | 89602HDR5 | |
| 5/15/2051 | $63,060,000 | 5.250% | 05/15/2032 | 89602HDR5 | |
| 5/15/2052 | $66,460,000 | 5.250% | 05/15/2032 | 89602HDR5 | |
| **Total:** | $300,000,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2053 | $8,280,000 | 5.250% | 05/15/2032 | 89602HDS3 | |
| 5/15/2054 | $8,730,000 | 5.250% | 05/15/2032 | 89602HDS3 | |
| 5/15/2055 | $9,200,000 | 5.250% | 05/15/2032 | 89602HDS3 | |
| 5/15/2056 | $9,695,000 | 5.250% | 05/15/2032 | 89602HDS3 | |
| 5/15/2057 | $10,220,000 | 5.250% | 05/15/2032 | 89602HDS3 | |
| **Total:** | $46,125,000 | | | | |

**$748,682,066 TBTA Payroll Mobility Tax Senior Lien Green Bonds, Series 2022D**

**Date of Issue:** September 15, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Sub Series PMT 2022D-1a Refunding Bonds

**Par Outstanding** $230,745,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2026 | $2,505,000 | 5.000% | Non-Call | 89602HDU8 | |
| 11/15/2027 | $1,065,000 | 5.000% | Non-Call | 89602HDV6 | |
| 11/15/2028 | $43,570,000 | 5.000% | Non-Call | 89602HDW4 | |
| 11/15/2029 | $10,000,000 | 4.000% | Non-Call | 89602HDY0 | |
| 11/15/2029 | $19,370,000 | 5.000% | Non-Call | 89602HDX2 | |
| 11/15/2030 | $10,225,000 | 4.000% | Non-Call | 89602HDZ7 | |
| 11/15/2031 | $3,855,000 | 4.000% | Non-Call | 89602HEB9 | |
| 11/15/2031 | $6,800,000 | 5.000% | Non-Call | 89602HEA1 | |
| 11/15/2032 | $7,750,000 | 5.000% | Non-Call | 89602HEC7 | |
| 11/15/2033 | $1,785,000 | 5.000% | 11/15/2032 | 89602HED5 | |
| 11/15/2034 | $1,395,000 | 5.000% | 11/15/2032 | 89602HEE3 | |
| 11/15/2037 | $25,235,000 | 5.000% | 11/15/2032 | 89602HEF0 | |
| 11/15/2038 | $33,940,000 | 5.000% | 11/15/2032 | 89602HEG8 | |
| 11/15/2039 | $61,330,000 | 5.000% | 11/15/2032 | 89602HEH6 | |
| 11/15/2040 | $615,000 | 4.000% | 11/15/2032 | 89602HEJ2 | |
| 11/15/2041 | $640,000 | 4.000% | 11/15/2032 | 89602HEK9 | |
| 11/15/2042 | $665,000 | 4.000% | 11/15/2032 | 89602HEL7 | |
| **Total:** | $230,745,000 | | | | |

## Sub Series PMT 2022D-1b Refunding Bonds

**Par Outstanding** $37,210,000

### Capital Appreciation Bonds

| Maturity | Accreted Value at Maturity | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2030 | $3,370,000 | 0.000% | Make-Whole | 89602HER4 | |
| 11/15/2035 | $1,465,000 | 0.000% | Make-Whole | 89602HES2 | |
| 11/15/2036 | $25,235,000 | 0.000% | Make-Whole | 89602HET0 | |
| 11/15/2039 | $7,140,000 | 0.000% | Make-Whole | 89602HEU7 | |
| **Total:** | $37,210,000 | | | | |

## $748,682,066 TBTA Payroll Mobility Tax Senior Lien Green Bonds, Series 2022D

**Date of Issue:** September 15, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2022D-2

**Par Outstanding** $497,735,000

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2043 | $24,275,000 | 5.250% | 11/15/2032 | 89602HEN3 | |
| 5/15/2044 | $26,275,000 | 5.250% | 11/15/2032 | 89602HEN3 | |
| 5/15/2045 | $28,385,000 | 5.250% | 11/15/2032 | 89602HEN3 | |
| 5/15/2046 | $30,610,000 | 5.250% | 11/15/2032 | 89602HEN3 | |
| 5/15/2047 | $32,950,000 | 5.250% | 11/15/2032 | 89602HEN3 | |
| **Total:** | $142,495,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2043 | $15,000,000 | 4.500% | 11/15/2032 | 89602HEM5 | |
| 5/15/2044 | $15,000,000 | 4.500% | 11/15/2032 | 89602HEM5 | |
| 5/15/2045 | $15,000,000 | 4.500% | 11/15/2032 | 89602HEM5 | |
| 5/15/2046 | $15,000,000 | 4.500% | 11/15/2032 | 89602HEM5 | |
| 5/15/2047 | $15,000,000 | 4.500% | 11/15/2032 | 89602HEM5 | |
| **Total:** | $75,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $30,455,000 | 5.500% | 11/15/2032 | 89602HEQ6 | |
| 5/15/2049 | $33,090,000 | 5.500% | 11/15/2032 | 89602HEQ6 | |
| 5/15/2050 | $35,885,000 | 5.500% | 11/15/2032 | 89602HEQ6 | |
| 5/15/2051 | $38,845,000 | 5.500% | 11/15/2032 | 89602HEQ6 | |
| 5/15/2052 | $41,965,000 | 5.500% | 11/15/2032 | 89602HEQ6 | |
| **Total:** | $180,240,000 | | | | |

**$748,682,066 TBTA Payroll Mobility Tax Senior Lien Green Bonds, Series 2022D**

**Date of Issue:** September 15, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $20,000,000 | 4.500% | 11/15/2032 | 89602HEP8 | |
| 5/15/2049 | $20,000,000 | 4.500% | 11/15/2032 | 89602HEP8 | |
| 5/15/2050 | $20,000,000 | 4.500% | 11/15/2032 | 89602HEP8 | |
| 5/15/2051 | $20,000,000 | 4.500% | 11/15/2032 | 89602HEP8 | |
| 5/15/2052 | $20,000,000 | 4.500% | 11/15/2032 | 89602HEP8 | |
| **Total:** | $100,000,000 | | | | |

## $700,200,000 TBTA Payroll Mobility Tax Senior Lien Green Bonds, Series 2022E

**Date of Issue:** November 01, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2022E-1

**Balloon Amount:** $188,630,000 **Balloon Maturity:** November 15, 2027

**Expected Final Maturity Date**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2053 | $34,135,000 | 5.000% | 08/15/2027 | 89602HEV5 | |
| 11/15/2054 | $35,845,000 | 5.000% | 08/15/2027 | 89602HEV5 | |
| 11/15/2055 | $37,635,000 | 5.000% | 08/15/2027 | 89602HEV5 | |
| 11/15/2056 | $39,520,000 | 5.000% | 08/15/2027 | 89602HEV5 | |
| 11/15/2057 | $41,495,000 | 5.000% | 08/15/2027 | 89602HEV5 | |
| **Total:** | $188,630,000 | | | | |

### Sub Series PMT 2022E-2a Refunding Bonds

**Balloon Amount:** $99,560,000 **Balloon Maturity:** April 01, 2026

**Expected Final Maturity Date**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2037 | $28,320,000 | 67% of SOFR + 1.050% | 10/01/2025 | 89602HEW3 | |
| 11/15/2038 | $29,060,000 | 67% of SOFR + 1.050% | 10/01/2025 | 89602HEW3 | |
| 11/15/2040 | $20,675,000 | 67% of SOFR + 1.050% | 10/01/2025 | 89602HEW3 | |
| 11/15/2041 | $21,505,000 | 67% of SOFR + 1.050% | 10/01/2025 | 89602HEW3 | |
| **Total:** | $99,560,000 | | | | |

**$700,200,000** **TBTA Payroll Mobility Tax Senior Lien Green Bonds, Series 2022E**

**Date of Issue:** November 01, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

### Sub Series PMT 2022E-2b Rfndg Bonds (27 balloon mat)

**Balloon Amount:** $111,690,000 **Balloon Maturity:** November 15, 2027

#### Expected Final Maturity Date

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $5,690,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2036 | $10,290,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2037 | $9,600,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2038 | $13,140,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2040 | $17,980,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2041 | $19,250,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2042 | $20,410,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| 11/15/2043 | $15,330,000 | 5.000% | 08/15/2027 | 89602HEX1 | |
| **Total:** | $111,690,000 | | | | |

### Sub Series PMT 2022E-2b Rfndg Bonds (32 balloon mat)

**Balloon Amount:** $300,320,000 **Balloon Maturity:** November 15, 2032

#### Expected Final Maturity Date

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2035 | $15,290,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2036 | $27,675,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2037 | $25,810,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2038 | $35,345,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2040 | $48,360,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2041 | $51,760,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2042 | $54,875,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| 11/15/2043 | $41,205,000 | 5.000% | 05/15/2032 | 89602HEY9 | |
| **Total:** | $300,320,000 | | | | |

## $764,950,000 TBTA Payroll Mobility Tax Senior Lien Refunding Green Bonds, Series 2023A

**Date of Issue:** January 12, 2023

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AA+/AA+

**Par Outstanding** $764,950,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2024 | $192,080,000 | 5.000% | Non-Call | 89602HFB8 | |
| 5/15/2025 | $10,060,000 | 5.000% | Non-Call | 89602HFC6 | |
| 11/15/2025 | $59,840,000 | 5.000% | Non-Call | 89602HFD4 | |
| 11/15/2026 | $73,780,000 | 5.000% | Non-Call | 89602HFE2 | |
| 11/15/2027 | $77,470,000 | 5.000% | Non-Call | 89602HFF9 | |
| 11/15/2028 | $33,245,000 | 5.000% | Non-Call | 89602HFG7 | |
| 11/15/2029 | $84,300,000 | 5.000% | Non-Call | 89602HFH5 | |
| 11/15/2031 | $37,395,000 | 4.000% | Non-Call | 89602HFJ1 | |
| 11/15/2031 | $51,125,000 | 5.000% | Non-Call | 89602HFK8 | |
| 11/15/2033 | $27,745,000 | 4.000% | 05/15/2033 | 89602HFM4 | |
| 11/15/2033 | $17,650,000 | 5.000% | 05/15/2033 | 89602HFL6 | |
| 11/15/2034 | $3,780,000 | 4.000% | 05/15/2033 | 89602HFP7 | |
| 11/15/2034 | $41,085,000 | 5.000% | 05/15/2033 | 89602HFN2 | |
| 11/15/2035 | $41,060,000 | 4.000% | 05/15/2033 | 89602HFQ5 | |
| 11/15/2037 | $14,335,000 | 4.000% | 05/15/2033 | 89602HFR3 | |
| **Total:** | $764,950,000 | | | | |

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ADA Elevators: Dyckman Street, 1 Line Station

**$700,000,000** **TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2022A**

**Date of Issue:** July 20, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

**Par Outstanding** $700,000,000

## Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2025 | $2,015,000 | 5.000% | Non-Call | 896035AA0 | |
| 5/15/2026 | $2,455,000 | 5.000% | Non-Call | 896035AB8 | |
| 5/15/2027 | $2,925,000 | 5.000% | Non-Call | 896035AC6 | |
| 5/15/2028 | $3,420,000 | 5.000% | Non-Call | 896035AD4 | |
| 5/15/2029 | $3,945,000 | 5.000% | Non-Call | 896035AE2 | |
| 5/15/2030 | $4,495,000 | 5.000% | Non-Call | 896035AF9 | |
| 5/15/2031 | $5,080,000 | 5.000% | Non-Call | 896035AG7 | |
| 5/15/2032 | $5,695,000 | 5.000% | Non-Call | 896035AH5 | |
| 5/15/2033 | $6,350,000 | 5.000% | 11/15/2032 | 896035AJ1 | |
| 5/15/2034 | $7,035,000 | 5.000% | 11/15/2032 | 896035AK8 | |
| 5/15/2035 | $7,760,000 | 5.000% | 11/15/2032 | 896035AL6 | |
| 5/15/2036 | $8,525,000 | 5.000% | 11/15/2032 | 896035AM4 | |
| 5/15/2037 | $9,335,000 | 5.000% | 11/15/2032 | 896035AN2 | |
| 5/15/2038 | $10,185,000 | 5.000% | 11/15/2032 | 896035AP7 | |
| 5/15/2039 | $11,085,000 | 5.000% | 11/15/2032 | 896035AQ5 | |
| 5/15/2040 | $12,030,000 | 5.000% | 11/15/2032 | 896035AR3 | |
| 5/15/2041 | $13,030,000 | 5.000% | 11/15/2032 | 896035AS1 | |
| 5/15/2042 | $14,085,000 | 5.000% | 11/15/2032 | 896035AT9 | |
| 5/15/2043 | $4,100,000 | 5.000% | 11/15/2032 | 896035AU6 | |
| 5/15/2044 | $16,360,000 | 5.000% | 11/15/2032 | 896035AV4 | |
| 5/15/2045 | $1,730,000 | 3.750% | 11/15/2032 | 896035AX0 | |
| 5/15/2045 | $8,000,000 | 5.000% | 11/15/2032 | 896035AW2 | |
| 5/15/2046 | $7,720,000 | 4.000% | 11/15/2032 | 896035AY8 | |
| 5/15/2046 | $7,000,000 | 5.000% | 11/15/2032 | 896035AZ5 | |
| 5/15/2047 | $850,000 | 4.000% | 11/15/2032 | 896035BB7 | |
| 5/15/2047 | $18,985,000 | 5.000% | 11/15/2032 | 896035BA9 | |
| **Total:** | $194,195,000 | | | | |

**$700,000,000** **TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2022A**

**Date of Issue:** July 20, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $7,095,000 | 4.000% | 11/15/2032 | 896035BC5 | |
| 5/15/2049 | $7,590,000 | 4.000% | 11/15/2032 | 896035BC5 | |
| 5/15/2050 | $8,095,000 | 4.000% | 11/15/2032 | 896035BC5 | |
| 5/15/2051 | $8,630,000 | 4.000% | 11/15/2032 | 896035BC5 | |
| 5/15/2052 | $9,190,000 | 4.000% | 11/15/2032 | 896035BC5 | |
| **Total:** | $40,600,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2048 | $21,315,000 | 5.250% | 11/15/2032 | 896035BD3 | |
| 5/15/2049 | $22,755,000 | 5.250% | 11/15/2032 | 896035BD3 | |
| 5/15/2050 | $24,285,000 | 5.250% | 11/15/2032 | 896035BD3 | |
| 5/15/2051 | $25,895,000 | 5.250% | 11/15/2032 | 896035BD3 | |
| 5/15/2052 | $27,585,000 | 5.250% | 11/15/2032 | 896035BD3 | |
| **Total:** | $121,835,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2053 | $20,735,000 | 4.000% | 11/15/2032 | 896035BF8 | |
| 5/15/2054 | $21,580,000 | 4.000% | 11/15/2032 | 896035BF8 | |
| 5/15/2055 | $22,870,000 | 4.000% | 11/15/2032 | 896035BF8 | |
| 5/15/2056 | $24,210,000 | 4.000% | 11/15/2032 | 896035BF8 | |
| 5/15/2057 | $25,630,000 | 4.000% | 11/15/2032 | 896035BF8 | |
| **Total:** | $115,025,000 | | | | |

**$700,000,000** **TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2022A**

**Date of Issue:** July 20, 2022

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2053 | $18,410,000 | 5.250% | 11/15/2032 | 896035BE1 | |
| 5/15/2054 | $19,920,000 | 5.250% | 11/15/2032 | 896035BE1 | |
| 5/15/2055 | $21,105,000 | 5.250% | 11/15/2032 | 896035BE1 | |
| 5/15/2056 | $22,355,000 | 5.250% | 11/15/2032 | 896035BE1 | |
| 5/15/2057 | $23,655,000 | 5.250% | 11/15/2032 | 896035BE1 | |
| **Total:** | $105,445,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2058 | $21,595,000 | 5.250% | 11/15/2032 | 896035BG6 | |
| 5/15/2059 | $23,005,000 | 5.250% | 11/15/2032 | 896035BG6 | |
| 5/15/2060 | $24,500,000 | 5.250% | 11/15/2032 | 896035BG6 | |
| 5/15/2061 | $26,070,000 | 5.250% | 11/15/2032 | 896035BG6 | |
| 5/15/2062 | $27,730,000 | 5.250% | 11/15/2032 | 896035BG6 | |
| **Total:** | $122,900,000 | | | | |

## $1,253,750,000 TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2023A

**Date of Issue:** March 14, 2023

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

**Par Outstanding** $1,253,750,000

### Serial Bonds

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2030 | $6,410,000 | 5.000% | 05/15/2033 | 896035BH4 | |
| 5/15/2031 | $7,170,000 | 5.000% | 05/15/2033 | 896035BJ0 | |
| 5/15/2032 | $7,975,000 | 5.000% | 05/15/2033 | 896035BK7 | |
| 5/15/2033 | $8,825,000 | 5.000% | 05/15/2033 | 896035BL5 | |
| 5/15/2034 | $9,720,000 | 5.000% | 05/15/2033 | 896035BM3 | |
| 5/15/2035 | $10,665,000 | 5.000% | 05/15/2033 | 896035BN1 | |
| 5/15/2036 | $11,660,000 | 5.000% | 05/15/2033 | 896035BP6 | |
| 5/15/2037 | $12,710,000 | 5.000% | 05/15/2033 | 896035BQ4 | |
| 5/15/2038 | $13,820,000 | 5.000% | 05/15/2033 | 896035BR2 | |
| 5/15/2039 | $14,990,000 | 5.000% | 05/15/2033 | 896035BS0 | |
| 5/15/2040 | $16,220,000 | 5.000% | 05/15/2033 | 896035BT8 | |
| 5/15/2041 | $17,520,000 | 5.000% | 05/15/2033 | 896035BU5 | |
| 5/15/2042 | $18,890,000 | 5.000% | 05/15/2033 | 896035BV3 | |
| 5/15/2043 | $20,330,000 | 5.000% | 05/15/2033 | 896035BW1 | |
| 5/15/2044 | $21,845,000 | 5.000% | 05/15/2033 | 896035BX9 | |
| **Total:** | $198,750,000 | | | | |

### Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2045 | $11,600,000 | 5.000% | 05/15/2033 | 896035BY7 | |
| 5/15/2046 | $12,180,000 | 5.000% | 05/15/2033 | 896035BY7 | |
| 5/15/2047 | $12,790,000 | 5.000% | 05/15/2033 | 896035BY7 | |
| 5/15/2048 | $13,430,000 | 5.000% | 05/15/2033 | 896035BY7 | |
| **Total:** | $50,000,000 | | | | |

**$1,253,750,000 TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2023A**

**Date of Issue:** March 14, 2023

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2045 | $31,790,000 | 4.000% | 05/15/2033 | 896035BZ4 | |
| 5/15/2046 | $33,065,000 | 4.000% | 05/15/2033 | 896035BZ4 | |
| 5/15/2047 | $34,385,000 | 4.000% | 05/15/2033 | 896035BZ4 | |
| 5/15/2048 | $35,760,000 | 4.000% | 05/15/2033 | 896035BZ4 | |
| **Total:** | $135,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2049 | $9,050,000 | 5.000% | 05/15/2033 | 896035CB6 | |
| 5/15/2050 | $9,500,000 | 5.000% | 05/15/2033 | 896035CB6 | |
| 5/15/2051 | $9,975,000 | 5.000% | 05/15/2033 | 896035CB6 | |
| 5/15/2052 | $10,475,000 | 5.000% | 05/15/2033 | 896035CB6 | |
| 5/15/2053 | $11,000,000 | 5.000% | 05/15/2033 | 896035CB6 | |
| **Total:** | $50,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2049 | $23,020,000 | 4.125% | 05/15/2033 | 896035CA8 | |
| 5/15/2050 | $23,970,000 | 4.125% | 05/15/2033 | 896035CA8 | |
| 5/15/2051 | $24,960,000 | 4.125% | 05/15/2033 | 896035CA8 | |
| 5/15/2052 | $25,990,000 | 4.125% | 05/15/2033 | 896035CA8 | |
| 5/15/2053 | $27,060,000 | 4.125% | 05/15/2033 | 896035CA8 | |
| **Total:** | $125,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2054 | $6,300,000 | 5.250% | 05/15/2033 | 896035CC4 | |
| 5/15/2055 | $6,635,000 | 5.250% | 05/15/2033 | 896035CC4 | |
| 5/15/2056 | $6,980,000 | 5.250% | 05/15/2033 | 896035CC4 | |
| 5/15/2057 | $7,350,000 | 5.250% | 05/15/2033 | 896035CC4 | |
| 5/15/2058 | $7,735,000 | 5.250% | 05/15/2033 | 896035CC4 | |
| **Total:** | $35,000,000 | | | | |

**$1,253,750,000 TBTA Sales Tax Revenue Bonds (TBTA Capital Lockbox - City Sales Tax), Series 2023A**

**Date of Issue:** March 14, 2023

**Underlying Ratings: (M/S&P/F/K)** NAF/AA+/AAA/NAF

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2054 | $64,295,000 | 4.250% | 05/15/2033 | 896035CD2 | |
| 5/15/2055 | $67,030,000 | 4.250% | 05/15/2033 | 896035CD2 | |
| 5/15/2056 | $69,880,000 | 4.250% | 05/15/2033 | 896035CD2 | |
| 5/15/2057 | $72,850,000 | 4.250% | 05/15/2033 | 896035CD2 | |
| 5/15/2058 | $75,945,000 | 4.250% | 05/15/2033 | 896035CD2 | |
| **Total:** | $350,000,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2059 | $6,270,000 | 5.500% | 05/15/2033 | 896035CF7 | |
| 5/15/2060 | $6,615,000 | 5.500% | 05/15/2033 | 896035CF7 | |
| 5/15/2061 | $6,980,000 | 5.500% | 05/15/2033 | 896035CF7 | |
| 5/15/2062 | $7,365,000 | 5.500% | 05/15/2033 | 896035CF7 | |
| 5/15/2063 | $7,770,000 | 5.500% | 05/15/2033 | 896035CF7 | |
| **Total:** | $35,000,000 | | | | |

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 5/15/2059 | $50,265,000 | 4.500% | 05/15/2033 | 896035CE0 | |
| 5/15/2060 | $52,530,000 | 4.500% | 05/15/2033 | 896035CE0 | |
| 5/15/2061 | $54,895,000 | 4.500% | 05/15/2033 | 896035CE0 | |
| 5/15/2062 | $57,365,000 | 4.500% | 05/15/2033 | 896035CE0 | |
| 5/15/2063 | $59,945,000 | 4.500% | 05/15/2033 | 896035CE0 | |
| **Total:** | $275,000,000 | | | | |


Hudson Rail Yards View of LIRR Western Yards

## $1,057,430,000 MTA Hudson Rail Yards Trust Obligations, Series 2016A

**Date of Issue:** September 22, 2016

**Underlying Ratings: (M/S&P/F/K)** A3/NAF/NAF/A-

**Par Outstanding** $682,430,000

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2051 | $307,000,000 | 5.000% | 11/15/2021 | 62476RAB1 | |
| **Total:** | $307,000,000 | | | | |

**Term Bond**

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2056 | $375,430,000 | 5.000% | 11/15/2023 | 62476RAC9 | |
| **Total:** | $375,430,000 | | | | |

**$162,660,000 MTA Hudson Rail Yards Trust Refunding Obligations, Series 2020A**

**Date of Issue:** March 27, 2020

**Underlying Ratings: (M/S&P/F/K)** NR/NAF/NAF/NR

**Par Outstanding** $121,855,000

## Term Bond

| Maturity | Par Outstanding | Coupon | Call Date | CUSIP | Insurer |
|---|---|---|---|---|---|
| 11/15/2046 | $121,855,000 | 5.000% | 03/27/2020 | | |
| **Total:** | $121,855,000 | | | | |

## HUDSON RAIL YARDS TRUST OBLIGATIONS
## (Schedule 1 to the Financing Agreement)

This section of MTA's 2023 Combined Continuing Disclosure Filings contains certain information relating to the Metropolitan Transportation Authority Hudson Rail Yards Trust Obligations, Series 2016A (the "HY Trust Obligations") as required by the Continuing Disclosure Agreement dated September 22, 2016, in connection with the issuance of the HY Trust Obligations. Such information includes updates to Schedule I to the Interagency Financing Agreement (the "Financing Agreement"), dated as of September 1, 2016, by and among MTA, MTA New York City Transit, MaBSTOA, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Bus, and Wells Fargo Bank, National Association, as Trustee[1].

The following information is contained in this section:

I. Principal and Interest on HY Trust Obligations - see attached Table 1 showing "MTA Financing Agreement Amount – Outstanding Debt Service"

II. Application by month of amounts to be transferred from the Capitalized Interest Fund to the Interest Account as Capitalized Interest - see attached Table 2 entitled "Capitalized Interest Transfer Amounts"

III. By Ground Lease, a monthly schedule showing the Regularly Scheduled Monthly Ground Rent - see attached Table 3 entitled "Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 03/1/2031"

IV. Applicable Redemption Prices - see attached Table 4 showing Redemption Prices for the 11/15/2046, 11/15/2051 and 11/15/2056 Maturities of the HRY Trust Obligations and HRY Refunding Trust Obligations

V. A summary of certain information regarding related Hudson Yards accounts – see attached Exhibit A entitled "Additional Annual Information"

VI. Annual Disclosure of MTA HRY Obligation Information – see attached Exhibit B

VII. Annual Disclosure of Detailed Information for Each Parcel – see attached Exhibit C

Additionally, the following information may be found in Part I to these 2023 Combined Continuing Disclosure Filings, the 2023 MTA Annual Disclosure Statement (the "ADS"), under the following headings:

- a summary presentation of the current status of development of the ERY and WRY components of the Hudson Rail Yards Project "FINANCIAL PLANS AND CAPITAL PROGRAMS – NON-CAPITAL PROGRAMS PROJECTS - HUDSON YARDS DEVELOPMENT AND FINANCING" in Part 2, and
- a discussion of litigation, if any, naming MTA as a party, related to HY Trust Obligations "LITIGATION" in Part 6.

Capitalized terms not defined in this section or in the ADS shall have the meanings provided in the Financing Agreement.

[1] On March 23, 2021, Wells Fargo Bank, N.A. ("Wells Fargo Bank"), Trustee under the Hudson Rail Yards Trust Agreement, dated September 1, 2016 (the "Trust Agreement"), pursuant to which the Hudson Rail Yards Trust Obligations, Series 2016A were issued, announced that it had entered into a definitive agreement with Computershare Trust Company, N.A., Computershare Delaware Trust Company, N.A. and Computershare Limited (collectively, "Computershare") to sell substantially all of its Corporate Trust Services business. The sale to Computershare closed on November 1, 2021. As of the date of this CCDF, Wells Fargo Bank has not transferred its roles, duties, rights, and liabilities under the Trust Agreement to Computershare.

## Table 1

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

### MTA Financing Agreement Amount - Outstanding Debt Service as of April 28, 2023

**HRY Trust Obligations, Series 2016A**

| Date | Principal Component | Interest Component | Debt Service |
|---|---|---|---|
| 5/15/2023 | | $ 17,060,750 | $ 17,060,750 |
| 11/15/2023 | | 17,060,750 | 17,060,750 |
| 5/15/2024 | | 17,060,750 | 17,060,750 |
| 11/15/2024 | | 17,060,750 | 17,060,750 |
| 5/15/2025 | | 17,060,750 | 17,060,750 |
| 11/15/2025 | | 17,060,750 | 17,060,750 |
| 5/15/2026 | | 17,060,750 | 17,060,750 |
| 11/15/2026 | | 17,060,750 | 17,060,750 |
| 5/15/2027 | | 17,060,750 | 17,060,750 |
| 11/15/2027 | | 17,060,750 | 17,060,750 |
| 5/15/2028 | | 17,060,750 | 17,060,750 |
| 11/15/2028 | | 17,060,750 | 17,060,750 |
| 5/15/2029 | | 17,060,750 | 17,060,750 |
| 11/15/2029 | | 17,060,750 | 17,060,750 |
| 5/15/2030 | | 17,060,750 | 17,060,750 |
| 11/15/2030 | | 17,060,750 | 17,060,750 |
| 5/15/2031 | | 17,060,750 | 17,060,750 |
| 11/15/2031 | | 17,060,750 | 17,060,750 |
| 5/15/2032 | | 17,060,750 | 17,060,750 |
| 11/15/2032 | | 17,060,750 | 17,060,750 |
| 5/15/2033 | | 17,060,750 | 17,060,750 |
| 11/15/2033 | | 17,060,750 | 17,060,750 |
| 5/15/2034 | | 17,060,750 | 17,060,750 |
| 11/15/2034 | | 17,060,750 | 17,060,750 |
| 5/15/2035 | | 17,060,750 | 17,060,750 |
| 11/15/2035 | | 17,060,750 | 17,060,750 |
| 5/15/2036 | | 17,060,750 | 17,060,750 |
| 11/15/2036 | | 17,060,750 | 17,060,750 |
| 5/15/2037 | | 17,060,750 | 17,060,750 |
| 11/15/2037 | | 17,060,750 | 17,060,750 |
| 5/15/2038 | | 17,060,750 | 17,060,750 |
| 11/15/2038 | | 17,060,750 | 17,060,750 |
| 5/15/2039 | | 17,060,750 | 17,060,750 |
| 11/15/2039 | | 17,060,750 | 17,060,750 |
| 5/15/2040 | | 17,060,750 | 17,060,750 |
| 11/15/2040 | | 17,060,750 | 17,060,750 |
| 5/15/2041 | | 17,060,750 | 17,060,750 |
| 11/15/2041 | | 17,060,750 | 17,060,750 |
| 5/15/2042 | | 17,060,750 | 17,060,750 |
| 11/15/2042 | | 17,060,750 | 17,060,750 |
| 5/15/2043 | | 17,060,750 | 17,060,750 |
| 11/15/2043 | | 17,060,750 | 17,060,750 |
| 5/15/2044 | | 17,060,750 | 17,060,750 |
| 11/15/2044 | | 17,060,750 | 17,060,750 |
| 5/15/2045 | | 17,060,750 | 17,060,750 |
| 11/15/2045 | | 17,060,750 | 17,060,750 |
| 5/15/2046 | | 17,060,750 | 17,060,750 |
| 11/15/2046 | | 17,060,750 | 17,060,750 |
| 5/15/2047 | | 17,060,750 | 17,060,750 |
| 11/15/2047 | | 17,060,750 | 17,060,750 |
| 5/15/2048 | | 17,060,750 | 17,060,750 |
| 11/15/2048 | | 17,060,750 | 17,060,750 |
| 5/15/2049 | | 17,060,750 | 17,060,750 |
| 11/15/2049 | | 17,060,750 | 17,060,750 |
| 5/15/2050 | | 17,060,750 | 17,060,750 |
| 11/15/2050 | | 17,060,750 | 17,060,750 |
| 5/15/2051 | | 17,060,750 | 17,060,750 |
| 11/15/2051 | 307,000,000 | 17,060,750 | 324,060,750 |
| 5/15/2052 | | 9,385,750 | 9,385,750 |
| 11/15/2052 | | 9,385,750 | 9,385,750 |
| 5/15/2053 | | 9,385,750 | 9,385,750 |
| 11/15/2053 | | 9,385,750 | 9,385,750 |
| 5/15/2054 | | 9,385,750 | 9,385,750 |
| 11/15/2054 | | 9,385,750 | 9,385,750 |
| 5/15/2055 | | 9,385,750 | 9,385,750 |
| 11/15/2055 | | 9,385,750 | 9,385,750 |
| 5/15/2056 | | 9,385,750 | 9,385,750 |
| 11/15/2056 | 375,430,000 | 9,385,750 | 384,815,750 |
| **Total** | **$ 682,430,000** | **$ 1,083,381,000** | **$ 1,765,811,000** |

**HRY Refunding Trust Obligations, Series 2020A**

| Date | Principal Component | Interest Component | Debt Service |
|---|---|---|---|
| 5/15/2023 | | $ 3,046,375 | $ 3,046,375 |
| 11/15/2023 | | 3,046,375 | 3,046,375 |
| 5/15/2024 | | 3,046,375 | 3,046,375 |
| 11/15/2024 | | 3,046,375 | 3,046,375 |
| 5/15/2025 | | 3,046,375 | 3,046,375 |
| 11/15/2025 | | 3,046,375 | 3,046,375 |
| 5/15/2026 | | 3,046,375 | 3,046,375 |
| 11/15/2026 | | 3,046,375 | 3,046,375 |
| 5/15/2027 | | 3,046,375 | 3,046,375 |
| 11/15/2027 | | 3,046,375 | 3,046,375 |
| 5/15/2028 | | 3,046,375 | 3,046,375 |
| 11/15/2028 | | 3,046,375 | 3,046,375 |
| 5/15/2029 | | 3,046,375 | 3,046,375 |
| 11/15/2029 | | 3,046,375 | 3,046,375 |
| 5/15/2030 | | 3,046,375 | 3,046,375 |
| 11/15/2030 | | 3,046,375 | 3,046,375 |
| 5/15/2031 | | 3,046,375 | 3,046,375 |
| 11/15/2031 | | 3,046,375 | 3,046,375 |
| 5/15/2032 | | 3,046,375 | 3,046,375 |
| 11/15/2032 | | 3,046,375 | 3,046,375 |
| 5/15/2033 | | 3,046,375 | 3,046,375 |
| 11/15/2033 | | 3,046,375 | 3,046,375 |
| 5/15/2034 | | 3,046,375 | 3,046,375 |
| 11/15/2034 | | 3,046,375 | 3,046,375 |
| 5/15/2035 | | 3,046,375 | 3,046,375 |
| 11/15/2035 | | 3,046,375 | 3,046,375 |
| 5/15/2036 | | 3,046,375 | 3,046,375 |
| 11/15/2036 | | 3,046,375 | 3,046,375 |
| 5/15/2037 | | 3,046,375 | 3,046,375 |
| 11/15/2037 | | 3,046,375 | 3,046,375 |
| 5/15/2038 | | 3,046,375 | 3,046,375 |
| 11/15/2038 | | 3,046,375 | 3,046,375 |
| 5/15/2039 | | 3,046,375 | 3,046,375 |
| 11/15/2039 | | 3,046,375 | 3,046,375 |
| 5/15/2040 | | 3,046,375 | 3,046,375 |
| 11/15/2040 | | 3,046,375 | 3,046,375 |
| 5/15/2041 | | 3,046,375 | 3,046,375 |
| 11/15/2041 | | 3,046,375 | 3,046,375 |
| 5/15/2042 | | 3,046,375 | 3,046,375 |
| 11/15/2042 | | 3,046,375 | 3,046,375 |
| 5/15/2043 | | 3,046,375 | 3,046,375 |
| 11/15/2043 | | 3,046,375 | 3,046,375 |
| 5/15/2044 | | 3,046,375 | 3,046,375 |
| 11/15/2044 | | 3,046,375 | 3,046,375 |
| 5/15/2045 | | 3,046,375 | 3,046,375 |
| 11/15/2045 | | 3,046,375 | 3,046,375 |
| 5/15/2046 | | 3,046,375 | 3,046,375 |
| 11/15/2046 | 121,855,000 | 3,046,375 | 124,901,375 |
| **Total** | **$ 121,855,000** | **$ 146,226,000** | **$ 268,081,000** |

**Notes:**

1) Beginning in May 2019, several early mandatory redemptions occurred in connection with Fee Purchase Payments on commercial units in 30 Hudson Yards (Tower A) and a portion of residential condominiums in 15 Hudson Yards (Tower D). The redemptions were on the earliest maturity of the Series 2016A Obligations, the 2046 maturity. A total of $212,340,000 was redeemed via early mandatory redemptions on the Series 2016A Obligations.

2) On March 27, 2020, the remaining par of the 2046 maturity of the 2016A Obligations, $162,660,000, was redeemed via an optional redemption. In conjunction with the redemption, the Trustee (Wells Fargo Bank, N.A.) issued $162,660,000 principal amount of MTA Hudson Rail Yards Refunding Trust Obligations, Series 2020A, with the same maturity date and bearing the same interest rate as the Series 2016A Obligations maturing on November 15, 2046, and delivered the 2020A Obligations to MTA in return for MTA providing sufficient moneys to redeem the 2046 maturity of the Series 2016A Obligations.

3) For the Series 2020A, there have been several early mandatory redemptions, including on February 16, 2021, for $8,430,000, on August 15, 2021 for $6,830,000, February 15, 2022, for $5,000,000, August 15, 2022 for $14,340,000, and November 15, 2022 for $6,205,000. These early mandatory redemptions reduced the outstanding principal of the Series 2020A Obligations.

# Table 2

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

### Capitalized Interest Fund Transfer Amounts

| Monthly Transfer Date | Capitalized Interest Fund Transfer Amounts (from Cap Int to Interest Account) |
|---|---|
| 4/19/2022 | $ 108,354 |
| 5/19/2022 | 108,354 |
| 6/19/2022 | 108,354 |
| 7/19/2022 | 108,354 |
| 8/19/2022 | 108,354 |
| 9/19/2022 | 108,354 |
| 10/19/2022 | 108,354 |
| 11/19/2022 | 108,354 |
| **Total** | **$ 866,830** |

As of April 28, 2023, all capitalized interest transferred to Interest Account

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## ERY Parcel A

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 3/31/2023 represent 95.70% of Parcel A.**

**Remaining percentage of Parcel A receiving ground rent is 4.3%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 32,511 | 0 | $ 32,511 | $ 8,644,219 |
| 5/1/2023 | 32,511 | 0 | 32,511 | 8,658,355 |
| 6/1/2023 | 32,511 | 0 | 32,511 | 8,672,568 |
| 7/1/2023 | 32,511 | 0 | 32,511 | 8,686,857 |
| 8/1/2023 | 32,511 | 0 | 32,511 | 8,701,224 |
| 9/1/2023 | 32,511 | 0 | 32,511 | 8,715,669 |
| 10/1/2023 | 32,511 | 0 | 32,511 | 8,730,192 |
| 11/1/2023 | 32,511 | 0 | 32,511 | 8,744,794 |
| 12/1/2023 | 32,511 | 0 | 32,511 | 8,759,474 |
| 1/1/2024 | 32,511 | 0 | 32,511 | 8,774,235 |
| 2/1/2024 | 32,511 | 0 | 32,511 | 8,789,075 |
| 3/1/2024 | 32,511 | 0 | 32,511 | 8,803,996 |
| 4/1/2024 | 32,511 | 0 | 32,511 | 8,818,997 |
| 5/1/2024 | 32,511 | 0 | 32,511 | 8,834,080 |
| 6/1/2024 | 32,511 | 0 | 32,511 | 8,849,244 |
| 7/1/2024 | 32,511 | 0 | 32,511 | 8,864,491 |
| 8/1/2024 | 32,511 | 0 | 32,511 | 8,879,820 |
| 9/1/2024 | 32,511 | 0 | 32,511 | 8,895,232 |
| 10/1/2024 | 32,511 | 0 | 32,511 | 8,910,728 |
| 11/1/2024 | 32,511 | 0 | 32,511 | 8,926,307 |
| 12/1/2024 | 32,511 | 0 | 32,511 | 8,941,971 |
| 1/1/2025 | 32,511 | 0 | 32,511 | 8,957,720 |
| 2/1/2025 | 32,511 | 0 | 32,511 | 8,973,554 |
| 3/1/2025 | 32,511 | 0 | 32,511 | 8,989,474 |
| 4/1/2025 | 32,511 | 0 | 32,511 | 9,005,480 |
| 5/1/2025 | 32,511 | 0 | 32,511 | 9,021,573 |
| 6/1/2025 | 32,511 | 0 | 32,511 | 9,037,753 |
| 7/1/2025 | 32,511 | 0 | 32,511 | 9,054,020 |
| 8/1/2025 | 32,511 | 0 | 32,511 | 9,070,376 |
| 9/1/2025 | 32,511 | 0 | 32,511 | 9,086,820 |
| 10/1/2025 | 32,511 | 0 | 32,511 | 9,103,354 |
| 11/1/2025 | 32,511 | 0 | 32,511 | 9,119,977 |
| 12/1/2025 | 32,511 | 0 | 32,511 | 9,136,690 |
| 1/1/2026 | 32,511 | 0 | 32,511 | 9,153,493 |
| 2/1/2026 | 32,511 | 0 | 32,511 | 9,170,388 |
| 3/1/2026 | 32,511 | 0 | 32,511 | 9,187,374 |
| 4/1/2026 | 32,511 | 0 | 32,511 | 9,204,452 |
| 5/1/2026 | 32,511 | 0 | 32,511 | 9,221,623 |
| 6/1/2026 | 32,511 | 0 | 32,511 | 9,238,886 |
| 7/1/2026 | 32,511 | 0 | 32,511 | 9,256,243 |
| 8/1/2026 | 32,511 | 0 | 32,511 | 9,273,694 |
| 9/1/2026 | 32,511 | 0 | 32,511 | 9,291,240 |
| 10/1/2026 | 32,511 | 0 | 32,511 | 9,308,881 |
| 11/1/2026 | 32,511 | 0 | 32,511 | 9,326,617 |
| 12/1/2026 | 32,511 | 0 | 32,511 | 9,344,449 |

## Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## ERY Parcel A

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 3/31/2023 represent 95.70% of Parcel A.**
**Remaining percentage of Parcel A receiving ground rent is 4.3%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 1/1/2027 | 32,511 | 0 | 32,511 | 9,362,378 |
| 2/1/2027 | 32,511 | 0 | 32,511 | 9,380,404 |
| 3/1/2027 | 32,511 | 0 | 32,511 | 9,398,528 |
| 4/1/2027 | 32,511 | 0 | 32,511 | 9,416,749 |
| 5/1/2027 | 32,511 | 0 | 32,511 | 9,435,070 |
| 6/1/2027 | 32,511 | 0 | 32,511 | 9,453,490 |
| 7/1/2027 | 32,511 | 0 | 32,511 | 9,472,009 |
| 8/1/2027 | 32,511 | 0 | 32,511 | 9,490,629 |
| 9/1/2027 | 32,511 | 0 | 32,511 | 9,509,350 |
| 10/1/2027 | 32,511 | 0 | 32,511 | 9,528,172 |
| 11/1/2027 | 32,511 | 0 | 32,511 | 9,547,096 |
| 12/1/2027 | 35,762 | 0 | 35,762 | 9,566,123 |
| 1/1/2028 | 35,762 | 0 | 35,762 | 9,581,983 |
| 2/1/2028 | 35,762 | 0 | 35,762 | 9,597,930 |
| 3/1/2028 | 35,762 | 0 | 35,762 | 9,613,964 |
| 4/1/2028 | 35,762 | 0 | 35,762 | 9,630,084 |
| 5/1/2028 | 35,762 | 0 | 35,762 | 9,646,291 |
| 6/1/2028 | 35,762 | 0 | 35,762 | 9,662,586 |
| 7/1/2028 | 35,762 | 0 | 35,762 | 9,678,970 |
| 8/1/2028 | 35,762 | 0 | 35,762 | 9,695,442 |
| 9/1/2028 | 35,762 | 0 | 35,762 | 9,712,003 |
| 10/1/2028 | 35,762 | 0 | 35,762 | 9,728,654 |
| 11/1/2028 | 35,762 | 0 | 35,762 | 9,745,396 |
| 12/1/2028 | 35,762 | 0 | 35,762 | 9,762,228 |
| 1/1/2029 | 35,762 | 0 | 35,762 | 9,779,151 |
| 2/1/2029 | 35,762 | 0 | 35,762 | 9,796,166 |
| 3/1/2029 | 35,762 | 0 | 35,762 | 9,813,273 |
| 4/1/2029 | 35,762 | 0 | 35,762 | 9,830,472 |
| 5/1/2029 | 35,762 | 0 | 35,762 | 9,847,765 |
| 6/1/2029 | 35,762 | 0 | 35,762 | 9,865,152 |
| 7/1/2029 | 35,762 | 0 | 35,762 | 9,882,632 |
| 8/1/2029 | 35,762 | 0 | 35,762 | 9,900,208 |
| 9/1/2029 | 35,762 | 0 | 35,762 | 9,917,878 |
| 10/1/2029 | 35,762 | 0 | 35,762 | 9,935,644 |
| 11/1/2029 | 35,762 | 0 | 35,762 | 9,953,507 |
| 12/1/2029 | 35,762 | 0 | 35,762 | 9,971,466 |
| 1/1/2030 | 35,762 | 0 | 35,762 | 9,989,523 |
| 2/1/2030 | 35,762 | 0 | 35,762 | 10,007,677 |
| 3/1/2030 | 35,762 | 0 | 35,762 | 10,025,930 |
| 4/1/2030 | 35,762 | 0 | 35,762 | 10,044,281 |
| 5/1/2030 | 35,762 | 0 | 35,762 | 10,062,732 |
| 6/1/2030 | 35,762 | 0 | 35,762 | 10,081,283 |
| 7/1/2030 | 35,762 | 0 | 35,762 | 10,099,935 |
| 8/1/2030 | 35,762 | 0 | 35,762 | 10,118,687 |
| 9/1/2030 | 35,762 | 0 | 35,762 | 10,137,541 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## ERY Parcel A

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 3/31/2023 represent 95.70% of Parcel A.**
**Remaining percentage of Parcel A receiving ground rent is 4.3%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 10/1/2030 | 35,762 | 0 | 35,762 | 10,156,497 |
| 11/1/2030 | 35,762 | 0 | 35,762 | 10,175,556 |
| 12/1/2030 | 35,762 | 0 | 35,762 | 10,194,718 |
| 1/1/2031 | 35,762 | 0 | 35,762 | 10,213,984 |
| 2/1/2031 | 35,762 | 0 | 35,762 | 10,233,354 |
| 3/1/2031 | 35,762 | 0 | 35,762 | 10,252,829 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel B (Retail Podium)

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 359,502 | 0 | $ 359,502 | $ 95,587,289 |
| 5/1/2023 | 359,502 | 0 | 359,502 | 95,743,604 |
| 6/1/2023 | 359,502 | 0 | 359,502 | 95,900,766 |
| 7/1/2023 | 359,502 | 0 | 359,502 | 96,058,778 |
| 8/1/2023 | 359,502 | 0 | 359,502 | 96,217,647 |
| 9/1/2023 | 359,502 | 0 | 359,502 | 96,377,376 |
| 10/1/2023 | 359,502 | 0 | 359,502 | 96,537,971 |
| 11/1/2023 | 359,502 | 0 | 359,502 | 96,699,435 |
| 12/1/2023 | 359,502 | 0 | 359,502 | 96,861,774 |
| 1/1/2024 | 359,502 | 0 | 359,502 | 97,024,992 |
| 2/1/2024 | 359,502 | 0 | 359,502 | 97,189,095 |
| 3/1/2024 | 359,502 | 0 | 359,502 | 97,354,086 |
| 4/1/2024 | 359,502 | 0 | 359,502 | 97,519,971 |
| 5/1/2024 | 359,502 | 0 | 359,502 | 97,686,755 |
| 6/1/2024 | 359,502 | 0 | 359,502 | 97,854,442 |
| 7/1/2024 | 359,502 | 0 | 359,502 | 98,023,037 |
| 8/1/2024 | 359,502 | 0 | 359,502 | 98,192,545 |
| 9/1/2024 | 359,502 | 0 | 359,502 | 98,362,972 |
| 10/1/2024 | 359,502 | 0 | 359,502 | 98,534,322 |
| 11/1/2024 | 359,502 | 0 | 359,502 | 98,706,600 |
| 12/1/2024 | 359,502 | 0 | 359,502 | 98,879,811 |
| 1/1/2025 | 359,502 | 0 | 359,502 | 99,053,960 |
| 2/1/2025 | 359,502 | 0 | 359,502 | 99,229,053 |
| 3/1/2025 | 359,502 | 0 | 359,502 | 99,405,094 |
| 4/1/2025 | 359,502 | 0 | 359,502 | 99,582,089 |
| 5/1/2025 | 359,502 | 0 | 359,502 | 99,760,042 |
| 6/1/2025 | 359,502 | 0 | 359,502 | 99,938,959 |
| 7/1/2025 | 359,502 | 0 | 359,502 | 100,118,845 |
| 8/1/2025 | 359,502 | 0 | 359,502 | 100,299,706 |
| 9/1/2025 | 359,502 | 0 | 359,502 | 100,481,547 |
| 10/1/2025 | 359,502 | 0 | 359,502 | 100,664,372 |
| 11/1/2025 | 359,502 | 0 | 359,502 | 100,848,188 |
| 12/1/2025 | 359,502 | 0 | 359,502 | 101,032,999 |
| 1/1/2026 | 359,502 | 0 | 359,502 | 101,218,812 |
| 2/1/2026 | 359,502 | 0 | 359,502 | 101,405,631 |
| 3/1/2026 | 359,502 | 0 | 359,502 | 101,593,461 |
| 4/1/2026 | 359,502 | 0 | 359,502 | 101,782,310 |
| 5/1/2026 | 359,502 | 0 | 359,502 | 101,972,181 |
| 6/1/2026 | 359,502 | 0 | 359,502 | 102,163,081 |
| 7/1/2026 | 359,502 | 0 | 359,502 | 102,355,014 |
| 8/1/2026 | 359,502 | 0 | 359,502 | 102,547,988 |
| 9/1/2026 | 359,502 | 0 | 359,502 | 102,742,006 |
| 10/1/2026 | 359,502 | 0 | 359,502 | 102,937,076 |
| 11/1/2026 | 359,502 | 0 | 359,502 | 103,133,202 |
| 12/1/2026 | 359,502 | 0 | 359,502 | 103,330,391 |
| 1/1/2027 | 359,502 | 0 | 359,502 | 103,528,647 |
| 2/1/2027 | 359,502 | 0 | 359,502 | 103,727,978 |
| 3/1/2027 | 359,502 | 0 | 359,502 | 103,928,388 |
| 4/1/2027 | 359,502 | 0 | 359,502 | 104,129,884 |
| 5/1/2027 | 359,502 | 0 | 359,502 | 104,332,471 |
| 6/1/2027 | 359,502 | 0 | 359,502 | 104,536,156 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel B (Retail Podium)

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 7/1/2027 | 359,502 | 0 | 359,502 | 104,740,943 |
| 8/1/2027 | 359,502 | 0 | 359,502 | 104,946,841 |
| 9/1/2027 | 359,502 | 0 | 359,502 | 105,153,853 |
| 10/1/2027 | 359,502 | 0 | 359,502 | 105,361,987 |
| 11/1/2027 | 359,502 | 0 | 359,502 | 105,571,248 |
| 12/1/2027 | 395,453 | 0 | 395,453 | 105,781,642 |
| 1/1/2028 | 395,453 | 0 | 395,453 | 105,957,032 |
| 2/1/2028 | 395,453 | 0 | 395,453 | 106,133,371 |
| 3/1/2028 | 395,453 | 0 | 395,453 | 106,310,666 |
| 4/1/2028 | 395,453 | 0 | 395,453 | 106,488,920 |
| 5/1/2028 | 395,453 | 0 | 395,453 | 106,668,141 |
| 6/1/2028 | 395,453 | 0 | 395,453 | 106,848,332 |
| 7/1/2028 | 395,453 | 0 | 395,453 | 107,029,499 |
| 8/1/2028 | 395,453 | 0 | 395,453 | 107,211,648 |
| 9/1/2028 | 395,453 | 0 | 395,453 | 107,394,783 |
| 10/1/2028 | 395,453 | 0 | 395,453 | 107,578,910 |
| 11/1/2028 | 395,453 | 0 | 395,453 | 107,764,034 |
| 12/1/2028 | 395,453 | 0 | 395,453 | 107,950,162 |
| 1/1/2029 | 395,453 | 0 | 395,453 | 108,137,297 |
| 2/1/2029 | 395,453 | 0 | 395,453 | 108,325,446 |
| 3/1/2029 | 395,453 | 0 | 395,453 | 108,514,614 |
| 4/1/2029 | 395,453 | 0 | 395,453 | 108,704,807 |
| 5/1/2029 | 395,453 | 0 | 395,453 | 108,896,030 |
| 6/1/2029 | 395,453 | 0 | 395,453 | 109,088,289 |
| 7/1/2029 | 395,453 | 0 | 395,453 | 109,281,590 |
| 8/1/2029 | 395,453 | 0 | 395,453 | 109,475,937 |
| 9/1/2029 | 395,453 | 0 | 395,453 | 109,671,337 |
| 10/1/2029 | 395,453 | 0 | 395,453 | 109,867,795 |
| 11/1/2029 | 395,453 | 0 | 395,453 | 110,065,318 |
| 12/1/2029 | 395,453 | 0 | 395,453 | 110,263,911 |
| 1/1/2030 | 395,453 | 0 | 395,453 | 110,463,579 |
| 2/1/2030 | 395,453 | 0 | 395,453 | 110,664,329 |
| 3/1/2030 | 395,453 | 0 | 395,453 | 110,866,166 |
| 4/1/2030 | 395,453 | 0 | 395,453 | 111,069,096 |
| 5/1/2030 | 395,453 | 0 | 395,453 | 111,273,126 |
| 6/1/2030 | 395,453 | 0 | 395,453 | 111,478,261 |
| 7/1/2030 | 395,453 | 0 | 395,453 | 111,684,507 |
| 8/1/2030 | 395,453 | 0 | 395,453 | 111,891,870 |
| 9/1/2030 | 395,453 | 0 | 395,453 | 112,100,356 |
| 10/1/2030 | 395,453 | 0 | 395,453 | 112,309,972 |
| 11/1/2030 | 395,453 | 0 | 395,453 | 112,520,723 |
| 12/1/2030 | 395,453 | 0 | 395,453 | 112,732,616 |
| 1/1/2031 | 395,453 | 0 | 395,453 | 112,945,656 |
| 2/1/2031 | 395,453 | 0 | 395,453 | 113,159,850 |
| 3/1/2031 | 395,453 | 0 | 395,453 | 113,375,205 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## ERY Parcel D

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of3/31/2023 represent 80.74% of Parcel D.**

**Remaining percentage of Parcel D receiving ground rent is 19.26%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 51,931 | 0 | $ 51,931 | $ 13,807,699 |
| 5/1/2023 | 51,931 | 0 | 51,931 | 13,830,279 |
| 6/1/2023 | 51,931 | 0 | 51,931 | 13,852,981 |
| 7/1/2023 | 51,931 | 0 | 51,931 | 13,875,806 |
| 8/1/2023 | 51,931 | 0 | 51,931 | 13,898,755 |
| 9/1/2023 | 51,931 | 0 | 51,931 | 13,921,828 |
| 10/1/2023 | 51,931 | 0 | 51,931 | 13,945,026 |
| 11/1/2023 | 51,931 | 0 | 51,931 | 13,968,350 |
| 12/1/2023 | 51,931 | 0 | 51,931 | 13,991,800 |
| 1/1/2024 | 51,931 | 0 | 51,931 | 14,015,377 |
| 2/1/2024 | 51,931 | 0 | 51,931 | 14,039,082 |
| 3/1/2024 | 51,931 | 0 | 51,931 | 14,062,915 |
| 4/1/2024 | 51,931 | 0 | 51,931 | 14,086,877 |
| 5/1/2024 | 51,931 | 0 | 51,931 | 14,110,969 |
| 6/1/2024 | 51,931 | 0 | 51,931 | 14,135,192 |
| 7/1/2024 | 51,931 | 0 | 51,931 | 14,159,546 |
| 8/1/2024 | 51,931 | 0 | 51,931 | 14,184,031 |
| 9/1/2024 | 51,931 | 0 | 51,931 | 14,208,650 |
| 10/1/2024 | 51,931 | 0 | 51,931 | 14,233,401 |
| 11/1/2024 | 51,931 | 0 | 51,931 | 14,258,287 |
| 12/1/2024 | 51,931 | 0 | 51,931 | 14,283,308 |
| 1/1/2025 | 51,931 | 0 | 51,931 | 14,308,464 |
| 2/1/2025 | 51,931 | 0 | 51,931 | 14,333,756 |
| 3/1/2025 | 51,931 | 0 | 51,931 | 14,359,186 |
| 4/1/2025 | 51,931 | 0 | 51,931 | 14,384,753 |
| 5/1/2025 | 51,931 | 0 | 51,931 | 14,410,458 |
| 6/1/2025 | 51,931 | 0 | 51,931 | 14,436,303 |
| 7/1/2025 | 51,931 | 0 | 51,931 | 14,462,288 |
| 8/1/2025 | 51,931 | 0 | 51,931 | 14,488,413 |
| 9/1/2025 | 51,931 | 0 | 51,931 | 14,514,680 |
| 10/1/2025 | 51,931 | 0 | 51,931 | 14,541,090 |
| 11/1/2025 | 51,931 | 0 | 51,931 | 14,567,642 |
| 12/1/2025 | 51,931 | 0 | 51,931 | 14,594,338 |
| 1/1/2026 | 51,931 | 0 | 51,931 | 14,621,179 |
| 2/1/2026 | 51,931 | 0 | 51,931 | 14,648,165 |
| 3/1/2026 | 51,931 | 0 | 51,931 | 14,675,298 |
| 4/1/2026 | 51,931 | 0 | 51,931 | 14,702,577 |
| 5/1/2026 | 51,931 | 0 | 51,931 | 14,730,004 |
| 6/1/2026 | 51,931 | 0 | 51,931 | 14,757,580 |
| 7/1/2026 | 51,931 | 0 | 51,931 | 14,785,305 |
| 8/1/2026 | 51,931 | 0 | 51,931 | 14,813,180 |
| 9/1/2026 | 51,931 | 0 | 51,931 | 14,841,207 |
| 10/1/2026 | 51,931 | 0 | 51,931 | 14,869,385 |
| 11/1/2026 | 51,931 | 0 | 51,931 | 14,897,715 |
| 12/1/2026 | 51,931 | 0 | 51,931 | 14,926,199 |
| 1/1/2027 | 51,931 | 0 | 51,931 | 14,954,838 |
| 2/1/2027 | 51,931 | 0 | 51,931 | 14,983,631 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel D

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of3/31/2023 represent 80.74% of Parcel D.**

**Remaining percentage of Parcel D receiving ground rent is 19.26%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 3/1/2027 | 51,931 | 0 | 51,931 | 15,012,581 |
| 4/1/2027 | 51,931 | 0 | 51,931 | 15,041,687 |
| 5/1/2027 | 51,931 | 0 | 51,931 | 15,070,951 |
| 6/1/2027 | 51,931 | 0 | 51,931 | 15,100,374 |
| 7/1/2027 | 51,931 | 0 | 51,931 | 15,129,955 |
| 8/1/2027 | 51,931 | 0 | 51,931 | 15,159,698 |
| 9/1/2027 | 51,931 | 0 | 51,931 | 15,189,601 |
| 10/1/2027 | 51,931 | 0 | 51,931 | 15,219,666 |
| 11/1/2027 | 51,931 | 0 | 51,931 | 15,249,894 |
| 12/1/2027 | 57,124 | 0 | 57,124 | 15,280,286 |
| 1/1/2028 | 57,124 | 0 | 57,124 | 15,305,621 |
| 2/1/2028 | 57,124 | 0 | 57,124 | 15,331,093 |
| 3/1/2028 | 57,124 | 0 | 57,124 | 15,356,704 |
| 4/1/2028 | 57,124 | 0 | 57,124 | 15,382,453 |
| 5/1/2028 | 57,124 | 0 | 57,124 | 15,408,341 |
| 6/1/2028 | 57,124 | 0 | 57,124 | 15,434,370 |
| 7/1/2028 | 57,124 | 0 | 57,124 | 15,460,540 |
| 8/1/2028 | 57,124 | 0 | 57,124 | 15,486,852 |
| 9/1/2028 | 57,124 | 0 | 57,124 | 15,513,306 |
| 10/1/2028 | 57,124 | 0 | 57,124 | 15,539,903 |
| 11/1/2028 | 57,124 | 0 | 57,124 | 15,566,645 |
| 12/1/2028 | 57,124 | 0 | 57,124 | 15,593,531 |
| 1/1/2029 | 57,124 | 0 | 57,124 | 15,620,563 |
| 2/1/2029 | 57,124 | 0 | 57,124 | 15,647,741 |
| 3/1/2029 | 57,124 | 0 | 57,124 | 15,675,067 |
| 4/1/2029 | 57,124 | 0 | 57,124 | 15,702,540 |
| 5/1/2029 | 57,124 | 0 | 57,124 | 15,730,163 |
| 6/1/2029 | 57,124 | 0 | 57,124 | 15,757,935 |
| 7/1/2029 | 57,124 | 0 | 57,124 | 15,785,857 |
| 8/1/2029 | 57,124 | 0 | 57,124 | 15,813,931 |
| 9/1/2029 | 57,124 | 0 | 57,124 | 15,842,157 |
| 10/1/2029 | 57,124 | 0 | 57,124 | 15,870,535 |
| 11/1/2029 | 57,124 | 0 | 57,124 | 15,899,068 |
| 12/1/2029 | 57,124 | 0 | 57,124 | 15,927,755 |
| 1/1/2030 | 57,124 | 0 | 57,124 | 15,956,597 |
| 2/1/2030 | 57,124 | 0 | 57,124 | 15,985,596 |
| 3/1/2030 | 57,124 | 0 | 57,124 | 16,014,751 |
| 4/1/2030 | 57,124 | 0 | 57,124 | 16,044,065 |
| 5/1/2030 | 57,124 | 0 | 57,124 | 16,073,537 |
| 6/1/2030 | 57,124 | 0 | 57,124 | 16,103,169 |
| 7/1/2030 | 57,124 | 0 | 57,124 | 16,132,962 |
| 8/1/2030 | 57,124 | 0 | 57,124 | 16,162,915 |
| 9/1/2030 | 57,124 | 0 | 57,124 | 16,193,031 |
| 10/1/2030 | 57,124 | 0 | 57,124 | 16,223,311 |
| 11/1/2030 | 57,124 | 0 | 57,124 | 16,253,754 |
| 12/1/2030 | 57,124 | 0 | 57,124 | 16,284,362 |
| 1/1/2031 | 57,124 | 0 | 57,124 | 16,315,136 |

## Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel D

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of3/31/2023 represent 80.74% of Parcel D.**
**Remaining percentage of Parcel D receiving ground rent is 19.26%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 2/1/2031 | 57,124 | 0 | 57,124 | 16,346,077 |
| 3/1/2031 | 57,124 | 0 | 57,124 | 16,377,185 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel E

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 03/31/2023 represent 22.22% of Parcel E.**
**Remaining percentage of Parcel E receiving ground rent is 77.78%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 240,596 | 0 | $ 240,596 | $ 63,971,490 |
| 5/1/2023 | 240,596 | 0 | 240,596 | 64,076,103 |
| 6/1/2023 | 240,596 | 0 | 240,596 | 64,181,283 |
| 7/1/2023 | 240,596 | 0 | 240,596 | 64,287,033 |
| 8/1/2023 | 240,596 | 0 | 240,596 | 64,393,355 |
| 9/1/2023 | 240,596 | 0 | 240,596 | 64,500,254 |
| 10/1/2023 | 240,596 | 0 | 240,596 | 64,607,731 |
| 11/1/2023 | 240,596 | 0 | 240,596 | 64,715,790 |
| 12/1/2023 | 240,596 | 0 | 240,596 | 64,824,435 |
| 1/1/2024 | 240,596 | 0 | 240,596 | 64,933,669 |
| 2/1/2024 | 240,596 | 0 | 240,596 | 65,043,494 |
| 3/1/2024 | 240,596 | 0 | 240,596 | 65,153,914 |
| 4/1/2024 | 240,596 | 0 | 240,596 | 65,264,932 |
| 5/1/2024 | 240,596 | 0 | 240,596 | 65,376,551 |
| 6/1/2024 | 240,596 | 0 | 240,596 | 65,488,775 |
| 7/1/2024 | 240,596 | 0 | 240,596 | 65,601,607 |
| 8/1/2024 | 240,596 | 0 | 240,596 | 65,715,050 |
| 9/1/2024 | 240,596 | 0 | 240,596 | 65,829,107 |
| 10/1/2024 | 240,596 | 0 | 240,596 | 65,943,783 |
| 11/1/2024 | 240,596 | 0 | 240,596 | 66,059,079 |
| 12/1/2024 | 240,596 | 0 | 240,596 | 66,175,000 |
| 1/1/2025 | 240,596 | 0 | 240,596 | 66,291,549 |
| 2/1/2025 | 240,596 | 0 | 240,596 | 66,408,729 |
| 3/1/2025 | 240,596 | 0 | 240,596 | 66,526,544 |
| 4/1/2025 | 240,596 | 0 | 240,596 | 66,644,997 |
| 5/1/2025 | 240,596 | 0 | 240,596 | 66,764,092 |
| 6/1/2025 | 240,596 | 0 | 240,596 | 66,883,832 |
| 7/1/2025 | 240,596 | 0 | 240,596 | 67,004,220 |
| 8/1/2025 | 240,596 | 0 | 240,596 | 67,125,260 |
| 9/1/2025 | 240,596 | 0 | 240,596 | 67,246,957 |
| 10/1/2025 | 240,596 | 0 | 240,596 | 67,369,312 |
| 11/1/2025 | 240,596 | 0 | 240,596 | 67,492,330 |
| 12/1/2025 | 240,596 | 0 | 240,596 | 67,616,014 |
| 1/1/2026 | 240,596 | 0 | 240,596 | 67,740,369 |
| 2/1/2026 | 240,596 | 0 | 240,596 | 67,865,397 |
| 3/1/2026 | 240,596 | 0 | 240,596 | 67,991,102 |
| 4/1/2026 | 240,596 | 0 | 240,596 | 68,117,488 |
| 5/1/2026 | 240,596 | 0 | 240,596 | 68,244,559 |
| 6/1/2026 | 240,596 | 0 | 240,596 | 68,372,318 |
| 7/1/2026 | 240,596 | 0 | 240,596 | 68,500,769 |
| 8/1/2026 | 240,596 | 0 | 240,596 | 68,629,916 |
| 9/1/2026 | 240,596 | 0 | 240,596 | 68,759,762 |
| 10/1/2026 | 240,596 | 0 | 240,596 | 68,890,312 |
| 11/1/2026 | 240,596 | 0 | 240,596 | 69,021,569 |
| 12/1/2026 | 240,596 | 0 | 240,596 | 69,153,536 |
| 1/1/2027 | 240,596 | 0 | 240,596 | 69,286,219 |
| 2/1/2027 | 240,596 | 0 | 240,596 | 69,419,620 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel E

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 03/31/2023 represent 22.22% of Parcel E.**
**Remaining percentage of Parcel E receiving ground rent is 77.78%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 3/1/2027 | 240,596 | 0 | 240,596 | 69,553,744 |
| 4/1/2027 | 240,596 | 0 | 240,596 | 69,688,595 |
| 5/1/2027 | 240,596 | 0 | 240,596 | 69,824,175 |
| 6/1/2027 | 240,596 | 0 | 240,596 | 69,960,491 |
| 7/1/2027 | 240,596 | 0 | 240,596 | 70,097,544 |
| 8/1/2027 | 240,596 | 0 | 240,596 | 70,235,340 |
| 9/1/2027 | 240,596 | 0 | 240,596 | 70,373,883 |
| 10/1/2027 | 240,596 | 0 | 240,596 | 70,513,176 |
| 11/1/2027 | 240,596 | 0 | 240,596 | 70,653,223 |
| 12/1/2027 | 264,655 | 0 | 264,655 | 70,794,029 |
| 1/1/2028 | 264,655 | 0 | 264,655 | 70,911,408 |
| 2/1/2028 | 264,655 | 0 | 264,655 | 71,029,422 |
| 3/1/2028 | 264,655 | 0 | 264,655 | 71,148,076 |
| 4/1/2028 | 264,655 | 0 | 264,655 | 71,267,372 |
| 5/1/2028 | 264,655 | 0 | 264,655 | 71,387,315 |
| 6/1/2028 | 264,655 | 0 | 264,655 | 71,507,907 |
| 7/1/2028 | 264,655 | 0 | 264,655 | 71,629,153 |
| 8/1/2028 | 264,655 | 0 | 264,655 | 71,751,055 |
| 9/1/2028 | 264,655 | 0 | 264,655 | 71,873,618 |
| 10/1/2028 | 264,655 | 0 | 264,655 | 71,996,844 |
| 11/1/2028 | 264,655 | 0 | 264,655 | 72,120,738 |
| 12/1/2028 | 264,655 | 0 | 264,655 | 72,245,303 |
| 1/1/2029 | 264,655 | 0 | 264,655 | 72,370,543 |
| 2/1/2029 | 264,655 | 0 | 264,655 | 72,496,461 |
| 3/1/2029 | 264,655 | 0 | 264,655 | 72,623,062 |
| 4/1/2029 | 264,655 | 0 | 264,655 | 72,750,348 |
| 5/1/2029 | 264,655 | 0 | 264,655 | 72,878,323 |
| 6/1/2029 | 264,655 | 0 | 264,655 | 73,006,992 |
| 7/1/2029 | 264,655 | 0 | 264,655 | 73,136,357 |
| 8/1/2029 | 264,655 | 0 | 264,655 | 73,266,424 |
| 9/1/2029 | 264,655 | 0 | 264,655 | 73,397,195 |
| 10/1/2029 | 264,655 | 0 | 264,655 | 73,528,674 |
| 11/1/2029 | 264,655 | 0 | 264,655 | 73,660,865 |
| 12/1/2029 | 264,655 | 0 | 264,655 | 73,793,773 |
| 1/1/2030 | 264,655 | 0 | 264,655 | 73,927,400 |
| 2/1/2030 | 264,655 | 0 | 264,655 | 74,061,751 |
| 3/1/2030 | 264,655 | 0 | 264,655 | 74,196,830 |
| 4/1/2030 | 264,655 | 0 | 264,655 | 74,332,641 |
| 5/1/2030 | 264,655 | 0 | 264,655 | 74,469,187 |
| 6/1/2030 | 264,655 | 0 | 264,655 | 74,606,473 |
| 7/1/2030 | 264,655 | 0 | 264,655 | 74,744,502 |
| 8/1/2030 | 264,655 | 0 | 264,655 | 74,883,279 |
| 9/1/2030 | 264,655 | 0 | 264,655 | 75,022,808 |
| 10/1/2030 | 264,655 | 0 | 264,655 | 75,163,093 |
| 11/1/2030 | 264,655 | 0 | 264,655 | 75,304,137 |
| 12/1/2030 | 264,655 | 0 | 264,655 | 75,445,946 |
| 1/1/2031 | 264,655 | 0 | 264,655 | 75,588,522 |

## Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Parcel E

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

**Fee Purchase Options closed as of 03/31/2023 represent 22.22% of Parcel E.**
**Remaining percentage of Parcel E receiving ground rent is 77.78%.**

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 2/1/2031 | 264,655 | 0 | 264,655 | 75,731,871 |
| 3/1/2031 | 264,655 | 0 | 264,655 | 75,875,996 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Retail Pavilion

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 3,946 | 0 | $ 3,946 | $ 1,049,256 |
| 5/1/2023 | 3,946 | 0 | 3,946 | 1,050,972 |
| 6/1/2023 | 3,946 | 0 | 3,946 | 1,052,697 |
| 7/1/2023 | 3,946 | 0 | 3,946 | 1,054,431 |
| 8/1/2023 | 3,946 | 0 | 3,946 | 1,056,175 |
| 9/1/2023 | 3,946 | 0 | 3,946 | 1,057,928 |
| 10/1/2023 | 3,946 | 0 | 3,946 | 1,059,691 |
| 11/1/2023 | 3,946 | 0 | 3,946 | 1,061,464 |
| 12/1/2023 | 3,946 | 0 | 3,946 | 1,063,246 |
| 1/1/2024 | 3,946 | 0 | 3,946 | 1,065,037 |
| 2/1/2024 | 3,946 | 0 | 3,946 | 1,066,839 |
| 3/1/2024 | 3,946 | 0 | 3,946 | 1,068,650 |
| 4/1/2024 | 3,946 | 0 | 3,946 | 1,070,471 |
| 5/1/2024 | 3,946 | 0 | 3,946 | 1,072,301 |
| 6/1/2024 | 3,946 | 0 | 3,946 | 1,074,142 |
| 7/1/2024 | 3,946 | 0 | 3,946 | 1,075,993 |
| 8/1/2024 | 3,946 | 0 | 3,946 | 1,077,853 |
| 9/1/2024 | 3,946 | 0 | 3,946 | 1,079,724 |
| 10/1/2024 | 3,946 | 0 | 3,946 | 1,081,605 |
| 11/1/2024 | 3,946 | 0 | 3,946 | 1,083,496 |
| 12/1/2024 | 3,946 | 0 | 3,946 | 1,085,397 |
| 1/1/2025 | 3,946 | 0 | 3,946 | 1,087,309 |
| 2/1/2025 | 3,946 | 0 | 3,946 | 1,089,231 |
| 3/1/2025 | 3,946 | 0 | 3,946 | 1,091,163 |
| 4/1/2025 | 3,946 | 0 | 3,946 | 1,093,106 |
| 5/1/2025 | 3,946 | 0 | 3,946 | 1,095,060 |
| 6/1/2025 | 3,946 | 0 | 3,946 | 1,097,024 |
| 7/1/2025 | 3,946 | 0 | 3,946 | 1,098,998 |
| 8/1/2025 | 3,946 | 0 | 3,946 | 1,100,984 |
| 9/1/2025 | 3,946 | 0 | 3,946 | 1,102,980 |
| 10/1/2025 | 3,946 | 0 | 3,946 | 1,104,986 |
| 11/1/2025 | 3,946 | 0 | 3,946 | 1,107,004 |
| 12/1/2025 | 3,946 | 0 | 3,946 | 1,109,033 |
| 1/1/2026 | 3,946 | 0 | 3,946 | 1,111,073 |
| 2/1/2026 | 3,946 | 0 | 3,946 | 1,113,123 |
| 3/1/2026 | 3,946 | 0 | 3,946 | 1,115,185 |
| 4/1/2026 | 3,946 | 0 | 3,946 | 1,117,258 |
| 5/1/2026 | 3,946 | 0 | 3,946 | 1,119,342 |
| 6/1/2026 | 3,946 | 0 | 3,946 | 1,121,438 |
| 7/1/2026 | 3,946 | 0 | 3,946 | 1,123,545 |
| 8/1/2026 | 3,946 | 0 | 3,946 | 1,125,663 |
| 9/1/2026 | 3,946 | 0 | 3,946 | 1,127,793 |
| 10/1/2026 | 3,946 | 0 | 3,946 | 1,129,934 |
| 11/1/2026 | 3,946 | 0 | 3,946 | 1,132,087 |
| 12/1/2026 | 3,946 | 0 | 3,946 | 1,134,251 |
| 1/1/2027 | 3,946 | 0 | 3,946 | 1,136,427 |
| 2/1/2027 | 3,946 | 0 | 3,946 | 1,138,616 |
| 3/1/2027 | 3,946 | 0 | 3,946 | 1,140,815 |
| 4/1/2027 | 3,946 | 0 | 3,946 | 1,143,027 |
| 5/1/2027 | 3,946 | 0 | 3,946 | 1,145,251 |
| 6/1/2027 | 3,946 | 0 | 3,946 | 1,147,487 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## ERY Retail Pavilion

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 7/1/2027 | 3,946 | 0 | 3,946 | 1,149,735 |
| 8/1/2027 | 3,946 | 0 | 3,946 | 1,151,995 |
| 9/1/2027 | 3,946 | 0 | 3,946 | 1,154,267 |
| 10/1/2027 | 3,946 | 0 | 3,946 | 1,156,552 |
| 11/1/2027 | 3,946 | 0 | 3,946 | 1,158,849 |
| 12/1/2027 | 4,341 | 0 | 4,341 | 1,161,158 |
| 1/1/2028 | 4,341 | 0 | 4,341 | 1,163,084 |
| 2/1/2028 | 4,341 | 0 | 4,341 | 1,165,019 |
| 3/1/2028 | 4,341 | 0 | 4,341 | 1,166,966 |
| 4/1/2028 | 4,341 | 0 | 4,341 | 1,168,922 |
| 5/1/2028 | 4,341 | 0 | 4,341 | 1,170,889 |
| 6/1/2028 | 4,341 | 0 | 4,341 | 1,172,867 |
| 7/1/2028 | 4,341 | 0 | 4,341 | 1,174,856 |
| 8/1/2028 | 4,341 | 0 | 4,341 | 1,176,856 |
| 9/1/2028 | 4,341 | 0 | 4,341 | 1,178,866 |
| 10/1/2028 | 4,341 | 0 | 4,341 | 1,180,887 |
| 11/1/2028 | 4,341 | 0 | 4,341 | 1,182,919 |
| 12/1/2028 | 4,341 | 0 | 4,341 | 1,184,962 |
| 1/1/2029 | 4,341 | 0 | 4,341 | 1,187,016 |
| 2/1/2029 | 4,341 | 0 | 4,341 | 1,189,082 |
| 3/1/2029 | 4,341 | 0 | 4,341 | 1,191,158 |
| 4/1/2029 | 4,341 | 0 | 4,341 | 1,193,246 |
| 5/1/2029 | 4,341 | 0 | 4,341 | 1,195,345 |
| 6/1/2029 | 4,341 | 0 | 4,341 | 1,197,455 |
| 7/1/2029 | 4,341 | 0 | 4,341 | 1,199,577 |
| 8/1/2029 | 4,341 | 0 | 4,341 | 1,201,710 |
| 9/1/2029 | 4,341 | 0 | 4,341 | 1,203,855 |
| 10/1/2029 | 4,341 | 0 | 4,341 | 1,206,012 |
| 11/1/2029 | 4,341 | 0 | 4,341 | 1,208,180 |
| 12/1/2029 | 4,341 | 0 | 4,341 | 1,210,360 |
| 1/1/2030 | 4,341 | 0 | 4,341 | 1,212,552 |
| 2/1/2030 | 4,341 | 0 | 4,341 | 1,214,755 |
| 3/1/2030 | 4,341 | 0 | 4,341 | 1,216,971 |
| 4/1/2030 | 4,341 | 0 | 4,341 | 1,219,198 |
| 5/1/2030 | 4,341 | 0 | 4,341 | 1,221,438 |
| 6/1/2030 | 4,341 | 0 | 4,341 | 1,223,690 |
| 7/1/2030 | 4,341 | 0 | 4,341 | 1,225,954 |
| 8/1/2030 | 4,341 | 0 | 4,341 | 1,228,230 |
| 9/1/2030 | 4,341 | 0 | 4,341 | 1,230,519 |
| 10/1/2030 | 4,341 | 0 | 4,341 | 1,232,820 |
| 11/1/2030 | 4,341 | 0 | 4,341 | 1,235,133 |
| 12/1/2030 | 4,341 | 0 | 4,341 | 1,237,459 |
| 1/1/2031 | 4,341 | 0 | 4,341 | 1,239,797 |
| 2/1/2031 | 4,341 | 0 | 4,341 | 1,242,149 |
| 3/1/2031 | 4,341 | 0 | 4,341 | 1,244,513 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## Total ERY

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 688,486 | 0 | $ 688,486 | $ 183,059,953 |
| 5/1/2023 | 688,486 | 0 | 688,486 | 183,359,313 |
| 6/1/2023 | 688,486 | 0 | 688,486 | 183,660,294 |
| 7/1/2023 | 688,486 | 0 | 688,486 | 183,962,906 |
| 8/1/2023 | 688,486 | 0 | 688,486 | 184,267,157 |
| 9/1/2023 | 688,486 | 0 | 688,486 | 184,573,056 |
| 10/1/2023 | 688,486 | 0 | 688,486 | 184,880,611 |
| 11/1/2023 | 688,486 | 0 | 688,486 | 185,189,833 |
| 12/1/2023 | 688,486 | 0 | 688,486 | 185,500,730 |
| 1/1/2024 | 688,486 | 0 | 688,486 | 185,813,310 |
| 2/1/2024 | 688,486 | 0 | 688,486 | 186,127,584 |
| 3/1/2024 | 688,486 | 0 | 688,486 | 186,443,560 |
| 4/1/2024 | 688,486 | 0 | 688,486 | 186,761,248 |
| 5/1/2024 | 688,486 | 0 | 688,486 | 187,080,656 |
| 6/1/2024 | 688,486 | 0 | 688,486 | 187,401,795 |
| 7/1/2024 | 688,486 | 0 | 688,486 | 187,724,673 |
| 8/1/2024 | 688,486 | 0 | 688,486 | 188,049,300 |
| 9/1/2024 | 688,486 | 0 | 688,486 | 188,375,685 |
| 10/1/2024 | 688,486 | 0 | 688,486 | 188,703,838 |
| 11/1/2024 | 688,486 | 0 | 688,486 | 189,033,769 |
| 12/1/2024 | 688,486 | 0 | 688,486 | 189,365,487 |
| 1/1/2025 | 688,486 | 0 | 688,486 | 189,699,002 |
| 2/1/2025 | 688,486 | 0 | 688,486 | 190,034,323 |
| 3/1/2025 | 688,486 | 0 | 688,486 | 190,371,461 |
| 4/1/2025 | 688,486 | 0 | 688,486 | 190,710,424 |
| 5/1/2025 | 688,486 | 0 | 688,486 | 191,051,224 |
| 6/1/2025 | 688,486 | 0 | 688,486 | 191,393,870 |
| 7/1/2025 | 688,486 | 0 | 688,486 | 191,738,372 |
| 8/1/2025 | 688,486 | 0 | 688,486 | 192,084,740 |
| 9/1/2025 | 688,486 | 0 | 688,486 | 192,432,984 |
| 10/1/2025 | 688,486 | 0 | 688,486 | 192,783,114 |
| 11/1/2025 | 688,486 | 0 | 688,486 | 193,135,141 |
| 12/1/2025 | 688,486 | 0 | 688,486 | 193,489,075 |
| 1/1/2026 | 688,486 | 0 | 688,486 | 193,844,926 |
| 2/1/2026 | 688,486 | 0 | 688,486 | 194,202,704 |
| 3/1/2026 | 688,486 | 0 | 688,486 | 194,562,420 |
| 4/1/2026 | 688,486 | 0 | 688,486 | 194,924,085 |
| 5/1/2026 | 688,486 | 0 | 688,486 | 195,287,709 |
| 6/1/2026 | 688,486 | 0 | 688,486 | 195,653,302 |
| 7/1/2026 | 688,486 | 0 | 688,486 | 196,020,876 |
| 8/1/2026 | 688,486 | 0 | 688,486 | 196,390,441 |
| 9/1/2026 | 688,486 | 0 | 688,486 | 196,762,007 |
| 10/1/2026 | 688,486 | 0 | 688,486 | 197,135,586 |
| 11/1/2026 | 688,486 | 0 | 688,486 | 197,511,189 |
| 12/1/2026 | 688,486 | 0 | 688,486 | 197,888,827 |
| 1/1/2027 | 688,486 | 0 | 688,486 | 198,268,509 |
| 2/1/2027 | 688,486 | 0 | 688,486 | 198,650,249 |
| 3/1/2027 | 688,486 | 0 | 688,486 | 199,034,056 |
| 4/1/2027 | 688,486 | 0 | 688,486 | 199,419,942 |
| 5/1/2027 | 688,486 | 0 | 688,486 | 199,807,918 |
| 6/1/2027 | 688,486 | 0 | 688,486 | 200,197,996 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## Total ERY

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 7/1/2027 | 688,486 | 0 | 688,486 | 200,590,187 |
| 8/1/2027 | 688,486 | 0 | 688,486 | 200,984,502 |
| 9/1/2027 | 688,486 | 0 | 688,486 | 201,380,953 |
| 10/1/2027 | 688,486 | 0 | 688,486 | 201,779,552 |
| 11/1/2027 | 688,486 | 0 | 688,486 | 202,180,310 |
| 12/1/2027 | 757,334 | 0 | 757,334 | 202,583,238 |
| 1/1/2028 | 757,334 | 0 | 757,334 | 202,919,127 |
| 2/1/2028 | 757,334 | 0 | 757,334 | 203,256,836 |
| 3/1/2028 | 757,334 | 0 | 757,334 | 203,596,374 |
| 4/1/2028 | 757,334 | 0 | 757,334 | 203,937,751 |
| 5/1/2028 | 757,334 | 0 | 757,334 | 204,280,978 |
| 6/1/2028 | 757,334 | 0 | 757,334 | 204,626,063 |
| 7/1/2028 | 757,334 | 0 | 757,334 | 204,973,018 |
| 8/1/2028 | 757,334 | 0 | 757,334 | 205,321,852 |
| 9/1/2028 | 757,334 | 0 | 757,334 | 205,672,575 |
| 10/1/2028 | 757,334 | 0 | 757,334 | 206,025,199 |
| 11/1/2028 | 757,334 | 0 | 757,334 | 206,379,732 |
| 12/1/2028 | 757,334 | 0 | 757,334 | 206,736,186 |
| 1/1/2029 | 757,334 | 0 | 757,334 | 207,094,570 |
| 2/1/2029 | 757,334 | 0 | 757,334 | 207,454,896 |
| 3/1/2029 | 757,334 | 0 | 757,334 | 207,817,174 |
| 4/1/2029 | 757,334 | 0 | 757,334 | 208,181,413 |
| 5/1/2029 | 757,334 | 0 | 757,334 | 208,547,626 |
| 6/1/2029 | 757,334 | 0 | 757,334 | 208,915,823 |
| 7/1/2029 | 757,334 | 0 | 757,334 | 209,286,014 |
| 8/1/2029 | 757,334 | 0 | 757,334 | 209,658,210 |
| 9/1/2029 | 757,334 | 0 | 757,334 | 210,032,422 |
| 10/1/2029 | 757,334 | 0 | 757,334 | 210,408,661 |
| 11/1/2029 | 757,334 | 0 | 757,334 | 210,786,938 |
| 12/1/2029 | 757,334 | 0 | 757,334 | 211,167,264 |
| 1/1/2030 | 757,334 | 0 | 757,334 | 211,549,650 |
| 2/1/2030 | 757,334 | 0 | 757,334 | 211,934,108 |
| 3/1/2030 | 757,334 | 0 | 757,334 | 212,320,648 |
| 4/1/2030 | 757,334 | 0 | 757,334 | 212,709,281 |
| 5/1/2030 | 757,334 | 0 | 757,334 | 213,100,020 |
| 6/1/2030 | 757,334 | 0 | 757,334 | 213,492,875 |
| 7/1/2030 | 757,334 | 0 | 757,334 | 213,887,859 |
| 8/1/2030 | 757,334 | 0 | 757,334 | 214,284,981 |
| 9/1/2030 | 757,334 | 0 | 757,334 | 214,684,255 |
| 10/1/2030 | 757,334 | 0 | 757,334 | 215,085,692 |
| 11/1/2030 | 757,334 | 0 | 757,334 | 215,489,303 |
| 12/1/2030 | 757,334 | 0 | 757,334 | 215,895,100 |
| 1/1/2031 | 757,334 | 0 | 757,334 | 216,303,095 |
| 2/1/2031 | 757,334 | 0 | 757,334 | 216,713,301 |
| 3/1/2031 | 757,334 | 0 | 757,334 | 217,125,728 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## WRY Balance Lease

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 2,753,582 | 0 | $ 2,753,582 | $ 787,380,024 |
| 5/1/2023 | 2,753,582 | 0 | 2,753,582 | 788,876,501 |
| 6/1/2023 | 2,753,582 | 0 | 2,753,582 | 790,381,084 |
| 7/1/2023 | 2,753,582 | 0 | 2,753,582 | 791,893,817 |
| 8/1/2023 | 2,753,582 | 0 | 2,753,582 | 793,414,745 |
| 9/1/2023 | 2,753,582 | 0 | 2,753,582 | 794,943,910 |
| 10/1/2023 | 2,753,582 | 0 | 2,753,582 | 796,481,359 |
| 11/1/2023 | 2,753,582 | 0 | 2,753,582 | 798,027,135 |
| 12/1/2023 | 3,028,941 | 0 | 3,028,941 | 799,581,284 |
| 1/1/2024 | 3,028,941 | 0 | 3,028,941 | 800,867,002 |
| 2/1/2024 | 3,028,941 | 0 | 3,028,941 | 802,159,684 |
| 3/1/2024 | 3,028,941 | 0 | 3,028,941 | 803,459,368 |
| 4/1/2024 | 3,028,941 | 0 | 3,028,941 | 804,766,092 |
| 5/1/2024 | 3,028,941 | 0 | 3,028,941 | 806,079,894 |
| 6/1/2024 | 3,028,941 | 0 | 3,028,941 | 807,400,813 |
| 7/1/2024 | 3,028,941 | 0 | 3,028,941 | 808,728,887 |
| 8/1/2024 | 3,028,941 | 0 | 3,028,941 | 810,064,154 |
| 9/1/2024 | 3,028,941 | 0 | 3,028,941 | 811,406,654 |
| 10/1/2024 | 3,028,941 | 0 | 3,028,941 | 812,756,426 |
| 11/1/2024 | 3,028,941 | 0 | 3,028,941 | 814,113,509 |
| 12/1/2024 | 3,028,941 | 0 | 3,028,941 | 815,477,943 |
| 1/1/2025 | 3,028,941 | 0 | 3,028,941 | 816,849,768 |
| 2/1/2025 | 3,028,941 | 0 | 3,028,941 | 818,229,023 |
| 3/1/2025 | 3,028,941 | 0 | 3,028,941 | 819,615,750 |
| 4/1/2025 | 3,028,941 | 0 | 3,028,941 | 821,009,987 |
| 5/1/2025 | 3,028,941 | 0 | 3,028,941 | 822,411,777 |
| 6/1/2025 | 3,028,941 | 0 | 3,028,941 | 823,821,160 |
| 7/1/2025 | 3,028,941 | 0 | 3,028,941 | 825,238,177 |
| 8/1/2025 | 3,028,941 | 0 | 3,028,941 | 826,662,870 |
| 9/1/2025 | 3,028,941 | 0 | 3,028,941 | 828,095,280 |
| 10/1/2025 | 3,028,941 | 0 | 3,028,941 | 829,535,448 |
| 11/1/2025 | 3,028,941 | 0 | 3,028,941 | 830,983,418 |
| 12/1/2025 | 3,028,941 | 0 | 3,028,941 | 832,439,231 |
| 1/1/2026 | 3,028,941 | 0 | 3,028,941 | 833,902,929 |
| 2/1/2026 | 3,028,941 | 0 | 3,028,941 | 835,374,556 |
| 3/1/2026 | 3,028,941 | 0 | 3,028,941 | 836,854,154 |
| 4/1/2026 | 3,028,941 | 0 | 3,028,941 | 838,341,766 |
| 5/1/2026 | 3,028,941 | 0 | 3,028,941 | 839,837,437 |
| 6/1/2026 | 3,028,941 | 0 | 3,028,941 | 841,341,209 |
| 7/1/2026 | 3,028,941 | 0 | 3,028,941 | 842,853,126 |
| 8/1/2026 | 3,028,941 | 0 | 3,028,941 | 844,373,233 |
| 9/1/2026 | 3,028,941 | 0 | 3,028,941 | 845,901,574 |
| 10/1/2026 | 3,028,941 | 0 | 3,028,941 | 847,438,193 |
| 11/1/2026 | 3,028,941 | 0 | 3,028,941 | 848,983,136 |
| 12/1/2026 | 3,028,941 | 0 | 3,028,941 | 850,536,447 |
| 1/1/2027 | 3,028,941 | 0 | 3,028,941 | 852,098,172 |
| 2/1/2027 | 3,028,941 | 0 | 3,028,941 | 853,668,356 |
| 3/1/2027 | 3,028,941 | 0 | 3,028,941 | 855,247,046 |
| 4/1/2027 | 3,028,941 | 0 | 3,028,941 | 856,834,286 |
| 5/1/2027 | 3,028,941 | 0 | 3,028,941 | 858,430,125 |
| 6/1/2027 | 3,028,941 | 0 | 3,028,941 | 860,034,607 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement
## WRY Balance Lease

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 7/1/2027 | 3,028,941 | 0 | 3,028,941 | 861,647,780 |
| 8/1/2027 | 3,028,941 | 0 | 3,028,941 | 863,269,692 |
| 9/1/2027 | 3,028,941 | 0 | 3,028,941 | 864,900,388 |
| 10/1/2027 | 3,028,941 | 0 | 3,028,941 | 866,539,918 |
| 11/1/2027 | 3,028,941 | 0 | 3,028,941 | 868,188,328 |
| 12/1/2027 | 3,028,941 | 0 | 3,028,941 | 869,845,668 |
| 1/1/2028 | 3,028,941 | 0 | 3,028,941 | 871,511,984 |
| 2/1/2028 | 3,028,941 | 0 | 3,028,941 | 873,187,327 |
| 3/1/2028 | 3,028,941 | 0 | 3,028,941 | 874,871,744 |
| 4/1/2028 | 3,028,941 | 0 | 3,028,941 | 876,565,285 |
| 5/1/2028 | 3,028,941 | 0 | 3,028,941 | 878,267,999 |
| 6/1/2028 | 3,028,941 | 0 | 3,028,941 | 879,979,937 |
| 7/1/2028 | 3,028,941 | 0 | 3,028,941 | 881,701,147 |
| 8/1/2028 | 3,028,941 | 0 | 3,028,941 | 883,431,681 |
| 9/1/2028 | 3,028,941 | 0 | 3,028,941 | 885,171,589 |
| 10/1/2028 | 3,028,941 | 0 | 3,028,941 | 886,920,921 |
| 11/1/2028 | 3,028,941 | 0 | 3,028,941 | 888,679,728 |
| 12/1/2028 | 3,331,835 | 0 | 3,331,835 | 890,448,062 |
| 1/1/2029 | 3,331,835 | 0 | 3,331,835 | 891,921,441 |
| 2/1/2029 | 3,331,835 | 0 | 3,331,835 | 893,402,799 |
| 3/1/2029 | 3,331,835 | 0 | 3,331,835 | 894,892,182 |
| 4/1/2029 | 3,331,835 | 0 | 3,331,835 | 896,389,633 |
| 5/1/2029 | 3,331,835 | 0 | 3,331,835 | 897,895,194 |
| 6/1/2029 | 3,331,835 | 0 | 3,331,835 | 899,408,911 |
| 7/1/2029 | 3,331,835 | 0 | 3,331,835 | 900,930,827 |
| 8/1/2029 | 3,331,835 | 0 | 3,331,835 | 902,460,987 |
| 9/1/2029 | 3,331,835 | 0 | 3,331,835 | 903,999,435 |
| 10/1/2029 | 3,331,835 | 0 | 3,331,835 | 905,546,216 |
| 11/1/2029 | 3,331,835 | 0 | 3,331,835 | 907,101,376 |
| 12/1/2029 | 3,331,835 | 0 | 3,331,835 | 908,664,960 |
| 1/1/2030 | 3,331,835 | 0 | 3,331,835 | 910,237,013 |
| 2/1/2030 | 3,331,835 | 0 | 3,331,835 | 911,817,581 |
| 3/1/2030 | 3,331,835 | 0 | 3,331,835 | 913,406,711 |
| 4/1/2030 | 3,331,835 | 0 | 3,331,835 | 915,004,448 |
| 5/1/2030 | 3,331,835 | 0 | 3,331,835 | 916,610,840 |
| 6/1/2030 | 3,331,835 | 0 | 3,331,835 | 918,225,933 |
| 7/1/2030 | 3,331,835 | 0 | 3,331,835 | 919,849,775 |
| 8/1/2030 | 3,331,835 | 0 | 3,331,835 | 921,482,412 |
| 9/1/2030 | 3,331,835 | 0 | 3,331,835 | 923,123,893 |
| 10/1/2030 | 3,331,835 | 0 | 3,331,835 | 924,774,265 |
| 11/1/2030 | 3,331,835 | 0 | 3,331,835 | 926,433,577 |
| 12/1/2030 | 3,331,835 | 0 | 3,331,835 | 928,101,876 |
| 1/1/2031 | 3,331,835 | 0 | 3,331,835 | 929,779,213 |
| 2/1/2031 | 3,331,835 | 0 | 3,331,835 | 931,465,635 |
| 3/1/2031 | 3,331,835 | 0 | 3,331,835 | 933,161,191 |

# Table 3
# MTA Hudson Rail Yards
## Schedule 1 Pursuant to the Financing Agreement
## Total ERY and WRY Balance Lease
### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 4/1/2023 | $ 3,442,068 | 0 | $ 3,442,068 | $ 970,439,977 |
| 5/1/2023 | 3,442,068 | 0 | 3,442,068 | 972,235,814 |
| 6/1/2023 | 3,442,068 | 0 | 3,442,068 | 974,041,379 |
| 7/1/2023 | 3,442,068 | 0 | 3,442,068 | 975,856,723 |
| 8/1/2023 | 3,442,068 | 0 | 3,442,068 | 977,681,901 |
| 9/1/2023 | 3,442,068 | 0 | 3,442,068 | 979,516,966 |
| 10/1/2023 | 3,442,068 | 0 | 3,442,068 | 981,361,970 |
| 11/1/2023 | 3,442,068 | 0 | 3,442,068 | 983,216,968 |
| 12/1/2023 | 3,717,426 | 0 | 3,717,426 | 985,082,014 |
| 1/1/2024 | 3,717,426 | 0 | 3,717,426 | 986,680,312 |
| 2/1/2024 | 3,717,426 | 0 | 3,717,426 | 988,287,268 |
| 3/1/2024 | 3,717,426 | 0 | 3,717,426 | 989,902,928 |
| 4/1/2024 | 3,717,426 | 0 | 3,717,426 | 991,527,340 |
| 5/1/2024 | 3,717,426 | 0 | 3,717,426 | 993,160,551 |
| 6/1/2024 | 3,717,426 | 0 | 3,717,426 | 994,802,608 |
| 7/1/2024 | 3,717,426 | 0 | 3,717,426 | 996,453,559 |
| 8/1/2024 | 3,717,426 | 0 | 3,717,426 | 998,113,454 |
| 9/1/2024 | 3,717,426 | 0 | 3,717,426 | 999,782,339 |
| 10/1/2024 | 3,717,426 | 0 | 3,717,426 | 1,001,460,264 |
| 11/1/2024 | 3,717,426 | 0 | 3,717,426 | 1,003,147,278 |
| 12/1/2024 | 3,717,426 | 0 | 3,717,426 | 1,004,843,430 |
| 1/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,006,548,770 |
| 2/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,008,263,346 |
| 3/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,009,987,210 |
| 4/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,011,720,412 |
| 5/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,013,463,002 |
| 6/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,015,215,030 |
| 7/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,016,976,549 |
| 8/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,018,747,610 |
| 9/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,020,528,264 |
| 10/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,022,318,563 |
| 11/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,024,118,559 |
| 12/1/2025 | 3,717,426 | 0 | 3,717,426 | 1,025,928,305 |
| 1/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,027,747,855 |
| 2/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,029,577,260 |
| 3/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,031,416,574 |
| 4/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,033,265,851 |
| 5/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,035,125,145 |
| 6/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,036,994,511 |
| 7/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,038,874,002 |
| 8/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,040,763,674 |
| 9/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,042,663,581 |
| 10/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,044,573,780 |
| 11/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,046,494,325 |
| 12/1/2026 | 3,717,426 | 0 | 3,717,426 | 1,048,425,274 |
| 1/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,050,366,681 |
| 2/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,052,318,605 |
| 3/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,054,281,102 |
| 4/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,056,254,229 |
| 5/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,058,238,043 |

# Table 3

# MTA Hudson Rail Yards

## Schedule 1 Pursuant to the Financing Agreement

## Total ERY and WRY Balance Lease

### Regularly Scheduled Monthly Ground Rent and Fee Purchase Payments through 3/1/2031

| Beginning of Month Date | Gross Monthly Rent | Abatements | Net Monthly Rent | Beginning Month Option Purchase Price |
|---|---|---|---|---|
| 6/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,060,232,603 |
| 7/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,062,237,968 |
| 8/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,064,254,194 |
| 9/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,066,281,342 |
| 10/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,068,319,470 |
| 11/1/2027 | 3,717,426 | 0 | 3,717,426 | 1,070,368,638 |
| 12/1/2027 | 3,786,275 | 0 | 3,786,275 | 1,072,428,906 |
| 1/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,074,431,111 |
| 2/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,076,444,163 |
| 3/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,078,468,118 |
| 4/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,080,503,036 |
| 5/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,082,548,977 |
| 6/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,084,606,000 |
| 7/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,086,674,165 |
| 8/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,088,753,533 |
| 9/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,090,844,164 |
| 10/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,092,946,119 |
| 11/1/2028 | 3,786,275 | 0 | 3,786,275 | 1,095,059,460 |
| 12/1/2028 | 4,089,169 | 0 | 4,089,169 | 1,097,184,248 |
| 1/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,099,016,011 |
| 2/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,100,857,695 |
| 3/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,102,709,356 |
| 4/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,104,571,046 |
| 5/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,106,442,821 |
| 6/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,108,324,734 |
| 7/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,110,216,841 |
| 8/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,112,119,197 |
| 9/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,114,031,857 |
| 10/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,115,954,877 |
| 11/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,117,888,314 |
| 12/1/2029 | 4,089,169 | 0 | 4,089,169 | 1,119,832,224 |
| 1/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,121,786,663 |
| 2/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,123,751,689 |
| 3/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,125,727,358 |
| 4/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,127,713,729 |
| 5/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,129,710,860 |
| 6/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,131,718,809 |
| 7/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,133,737,633 |
| 8/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,135,767,394 |
| 9/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,137,808,148 |
| 10/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,139,859,957 |
| 11/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,141,922,880 |
| 12/1/2030 | 4,089,169 | 0 | 4,089,169 | 1,143,996,977 |
| 1/1/2031 | 4,089,169 | 0 | 4,089,169 | 1,146,082,308 |
| 2/1/2031 | 4,089,169 | 0 | 4,089,169 | 1,148,178,935 |
| 3/1/2031 | 4,089,169 | 0 | 4,089,169 | 1,150,286,919 |

## Table 4

# MTA Hudson Rail Yards

### Schedule 1 Pursuant to the Financing Agreement

| Early Mandatory Redemption Date | Applicable Redemption Prices for the 11/15/2046 Maturity | Early Mandatory Redemption Date | Applicable Redemption Prices for the 11/15/2051 Maturity | Early Mandatory Redemption Date | Applicable Redemption Prices for the 11/15/2056 Maturity |
|---|---|---|---|---|---|
| 4/15/2022 | 100.000 | 4/15/2022 | 100.000 | 4/15/2022 | 103.657 |
| 5/15/2022 | 100.000 | 5/15/2022 | 100.000 | 5/15/2022 | 103.470 |
| 6/15/2022 | 100.000 | 6/15/2022 | 100.000 | 6/15/2022 | 103.279 |
| 7/15/2022 | 100.000 | 7/15/2022 | 100.000 | 7/15/2022 | 103.088 |
| 8/15/2022 | 100.000 | 8/15/2022 | 100.000 | 8/15/2022 | 102.897 |
| 9/15/2022 | 100.000 | 9/15/2022 | 100.000 | 9/15/2022 | 102.707 |
| 10/15/2022 | 100.000 | 10/15/2022 | 100.000 | 10/15/2022 | 102.518 |
| 11/15/2022 | 100.000 | 11/15/2022 | 100.000 | 11/15/2022 | 102.329 |
| 12/15/2022 | 100.000 | 12/15/2022 | 100.000 | 12/15/2022 | 102.135 |
| 1/15/2023 | 100.000 | 1/15/2023 | 100.000 | 1/15/2023 | 101.941 |
| 2/15/2023 | 100.000 | 2/15/2023 | 100.000 | 2/15/2023 | 101.748 |
| 3/15/2023 | 100.000 | 3/15/2023 | 100.000 | 3/15/2023 | 101.555 |
| 4/15/2023 | 100.000 | 4/15/2023 | 100.000 | 4/15/2023 | 101.363 |
| 5/15/2023 | 100.000 | 5/15/2023 | 100.000 | 5/15/2023 | 101.172 |
| 6/15/2023 | 100.000 | 6/15/2023 | 100.000 | 6/15/2023 | 100.974 |
| 7/15/2023 | 100.000 | 7/15/2023 | 100.000 | 7/15/2023 | 100.777 |
| 8/15/2023 | 100.000 | 8/15/2023 | 100.000 | 8/15/2023 | 100.581 |
| 9/15/2023 | 100.000 | 9/15/2023 | 100.000 | 9/15/2023 | 100.386 |
| 10/15/2023 | 100.000 | 10/15/2023 | 100.000 | 10/15/2023 | 100.192 |
| 11/15/2023 | 100.000 | 11/15/2023 | 100.000 | 11/15/2023 | 100.000 |

**EXHIBIT A**

## Additional Annual Disclosure

I. Aggregate reporting:

Total Ground Rent received in 2022: $40,616,332
Total Fee Purchase Payments received since the 2022 CCDF: $16,702,121.49
Total Investment Earnings: $11,537,753
Total Guaranty Payments: $0
Total Interest Reserve Advances: $7,264,541.67[*]
Total Direct Cost Rent Credits: $0
Interest Account Requirement: $20,620,750.00[†]
Interest Reserve Requirement: $ 6,972,166.67 [‡]

II. Year-end fund balances for all Trust Agreement accounts and Direct Deposit Account as of December 31, 2022 (unless otherwise indicated):

Dedicated Deposit Account: $6.00

Costs of Issuance Fund: $6,793.89

Capitalized Interest Fund: $11,898.95

Fee Purchase Payments Account: $0

Interest Account: $7,803,660.34[§]

Interest Reserve Fund: $9,416,684.77

Obligations Proceeds Fund: $670,720.28

Prepaid Rent Account: $0

Principal Redemption Account: $1,398,099.76

Rent Payment Fund: $0.00

Rent Revenue Account: $0.00

III. January 1 (end of year + 1 day) Aggregate Fee Purchase Price: $965,110,307 (as of January 1, 2023)

IV. Year-end aggregate Obligation Principal[**]: $804,285,000 (as of April 28, 2023)

Aggregate Applicable Redemption Price: $809,402,111 (as of April 15, 2023)[††]

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[*] One advance was made on 12/19/2018, which was restored on 01/08/2019.

[†] Payments are made semiannually on May 15 and November 15. Interest Account Requirement, as of April 28, 2023, reflects the reduction in debt service due to redemptions of the HRY Trust Obligations.

[‡] Interest Reserve Requirement, as of April 30, 2022, reflects the reduction in interest due to redemptions of the HRY Trust Obligations.

[§] Semi-annual payments are made on May 15 and November 15. The year-end fund balance in the Interest Account reflects the November 15 payment made and the account being replenished to build to the next semi-annual payment in May.

[**] Aggregate Obligation Principal includes remaining principal on HRY Trust Obligations, Series 2016A and HRY Refunding Trust Obligations, Series 2020A. See Exhibit B for additional information

[††] Redemption prices are show in Table 4 attached before these exhibits.

V. Total number of severed parcels on the ERY and WRY[‡‡], abatement status, and percentage of ground rent/zoning square feet for each:

a. 5 Severed Parcels on the ERY

b. All 5 parcels are past the Rent Abatement Expiration Date (they are 100% rent-paying)

c. Tower A: 2,069,217 zsf; 34.09%; As of March 31, 2023, 95.70% (6 units) of the parcel has been purchased pursuant to the fee purchase options; 4.30% (1 unit) of the parcel accounts for an annualized rent of $390,129 no further abatements

d. Retail Podium: 983,881 zsf; 16.21%; $4,314,028 no further abatements

e. Tower D: 737,779 zsf; 12.15%; As of March 31, 2023, 80.74% (249 units) of the parcel has been purchased pursuant to the fee purchase options; 19.26% (36 units) of the parcel accounts for an annualized rent of $623,167 no further abatements

f. Tower E: 846,547 zsf; 13.95%; As of March 31, 2023, 22.22% (68 units) of the parcel has been purchased pursuant to the fee purchase options; (75 units) of the parcel accounts for an annualized rent of $2,887,150 no further abatements

g. Retail Pavilion: 10,800 zsf; 0.18%; $47,355 no further abatements

VI. Percentage of WRY still under the Balance Lease: 100%

VII. General narrative of status of development such as estimates of completion dates if available, expected use, including residential condominiums:

The ERY is fully complete and operational with the following notes on each parcel:

Tower C (also known as 10 Hudson Yards or the Coach Building) is a 1,421,776 zoning square foot office building that was substantially completed in 2016. The purchase option for 10 Hudson Yards was exercised by Legacy Yards Tenant LP in July 2016, and thus it is not a source of payment or security for the HRY Trust Obligations.

Tower A (also known as 30 Hudson Yards) is a 2,069,217 zoning square foot office building with WarnerMedia as an anchor tenant. Tower A was completed in 2019.

The Retail Podium is a 983,881 zoning square foot retail mall with converted office space. It opened in March 2019.

Tower D (also known as 15 Hudson Yards) is a 737,779 zoning square foot residential condominium building that was substantially completed in 2019. The first residential closings began in the first quarter of 2019.

The Culture Shed, a 100,000 square foot cultural center, was completed in April 2019.

Tower E (also known as 35 Hudson Yards) is an 846,547 zoning square foot mixed use building with residential, office and hotel components that was completed in 2020. The first residential closings began in the third quarter of 2020.

The Retail Pavilion is a 10,800 zoning square foot facility incorporated into the public open space scheduled to open in 2020.

[‡‡] Tower C, known as 10 Hudson Yards, received a certificate of occupancy in May 2016, with Fee Conversion in August 2016, and thus is not a source of payment or security for the HRY Trust Obligations.

WRY platform design is underway, but construction has not yet commenced. In September 2022, the Related Companies publicly announced its intention to seek a casino license for the Western Rail Yard pursuant to a Request for Applications issued by the New York Gaming Facility Board. That application process is now underway.

**EXHIBIT B**

# Annual Disclosure of MTA HRY Trust Obligations Information

**Schedule 1 pursuant the Financing Agreement***

| **HRY Trust Obligation, Series 2016A, due 11/15/2051** | **Amount** |
|---|---|
| Obligations Outstanding as of May 1, 2022 | $307,000,000 |
| Obligations Redeemed prior to April 28, 2023 | $0 |
| Obligations Outstanding as of April 28, 2023 | $307,000,000 |

| **HRY Trust Obligation, Series 2016A due 11/15/2056** | **Amount** |
|---|---|
| Obligations Outstanding as of May 1, 2022 | $375,430,000 |
| Obligations Redeemed prior to April 28, 2023 | $0 |
| Obligations Outstanding as of April 28, 2023 | $375,430,000 |

| **HRY Refunding Trust Obligation, Series 2020A, due 11/15/2046**** | **Amount** |
|---|---|
| Obligations Issued as of May 1, 2022 | $142,400,000 |
| Obligations Redeemed prior to April 28, 2023 | $20,545,000 |
| Obligations Outstanding as of April 28, 2023 | $121,855,000 |

| **All MTA HRY Obligations** | **Amount** |
|---|---|
| HRY Trust Obligations, Series 2016A Outstanding as of April 28, 2023 | $682,430,000 |
| HRY Refunding Trust Obligations Series 2020A Outstanding as of April 28, 2023 | $121,855,000 |
| All HRY Obligations Outstanding as of April 30, 2022 | $804,285,000 |

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* Beginning in May 2019, several early mandatory redemptions occurred in connection with Fee Purchase Payments on commercial units in 30 Hudson Yards (Tower A) and a portion of residential condominiums in 15 Hudson Yards (Tower D). The redemptions were on the earliest maturity of the Series 2016A Obligations, the 2046 maturity. A total of $212,340,000 of the Series 2016A Obligations was redeemed via early mandatory redemptions as follows:

- May 15, 2019, $105,500,000
- July 15, 2019, $67,960,000
- November 15, 2019, $12,225,000
- February 15, 2020, $26,655,000

** On March 27, 2020, the remaining principal of the 2046 maturity of the 2016A Obligations, $162,660,000, was redeemed via an optional redemption. In conjunction with the redemption, the Trustee (Wells Fargo Bank, N.A.) issued $162,660,000 principal amount of MTA Hudson Rail Yards Refunding Trust Obligations, Series 2020A, with the same maturity date and bearing the same interest rate as the Series 2016A Obligations maturing on November 15, 2046, and delivered the 2020A Obligations to MTA in return for MTA providing sufficient moneys to redeem the 2046 maturity of the Series 2016A Obligations. The following early mandatory redemptions have been made on the HRY Series 2020A since that time:

- February 16, 2021, $8,430,000
- August 15, 2021, $6,830,000
- February 15, 2022, $5,000,000
- August 15, 2022, $14,340,000
- November 15, 2022, $6,205,000

**EXHIBIT C**

# Annual Disclosure of Detailed Information for Each Parcel
## ERY Parcel A Detail-Calendar Year 2023
### Schedule 1 pursuant to the Financing Agreement

| | |
|---|---|
| Parcel Name/Description | Tower A (30 Hudson Yards) |
| Location | NE Corner of ERY |
| Zoning Square Feet | 2,069,217 |
| Ground Lease still in effect? | Yes |
| Ground Rent Paid that is Attributable to Previous Calendar Year | $357,619 |
| Gross Ground Rent Due before Abatements in Previous Calendar Year | $357,619 |
| Abatements Applicable in Previous Calendar Year | $0 |
| Net Ground Rent Due in Previous Calendar Year | $357,619 |
| Ground Lease in payment default? | No |
| Date of initial Ground Lease payment default, if any | NA |
| If Ground Lease payment default, has MTA elected to cure? | NA |
| If Ground Lease payment default, end date for applicable MTA interest reserve advance | NA |
| Is Fee Purchase Option exercisable due to construction completion | No |
| Date of Temporary Certificate of Occupancy, if any | NA |
| Fee Purchase Price if Purchase Option exercised on January 1 of Current Calendar Year * | $8,602,267 |
| Ground Rent Payable in Current Calendar Year ** | $390,129 |

*On April 15, 2019, the Fee Purchase Option was exercised on two condo units of Tower A (representing 55.01% of Tower A and proceeds totaling $101,356,896). On May 20, 2019, the Fee Purchase Option was exercised on three condo units of Tower A (representing 31.46% of Tower A and proceeds totaling $58,186,859). On November 13, 2019, the Fee Purchase Option was exercised on one condo unit of Tower A (representing 9.23% of Tower A and proceeds totaling $17,249,081). Therefore, a total of 95.7% of Fee Purchase Options for Tower A have been exercised.

**Ground Rent Payable in Current Calendar Year represents the reduction in ground rent based on the condo unit closings that have occurred. As of March 31, 2023, only 4.3% of the ground rent is reflected.

# Annual Disclosure of Detailed Information for Each Parcel
# ERY Parcel B Detail-Calendar Year 2023
### Schedule 1 pursuant to the Financing Agreement

| | |
|---|---|
| Parcel Name/Description | Retail Podium |
| Location | E Side of ERY |
| Zoning Square Feet | 983,881 |
| Ground Lease still in effect? | Yes |
| Ground Rent Paid that is Attributable to Previous Calendar Year | $3,954,526 |
| Gross Ground Rent Due before Abatements in Previous Calendar Year | $3,954,526 |
| Abatements Applicable in Previous Calendar Year | NA |
| Net Ground Rent Due in Previous Calendar Year | $3,954,526 |
| Ground Lease in payment default? | No |
| Date of initial Ground Lease payment default, if any | NA |
| If Ground Lease payment default, has MTA elected to cure? | NA |
| If Ground Lease payment default, end date for applicable MTA interest reserve advance | NA |
| Is Fee Purchase Option exercisable due to construction completion | No |
| Date of Temporary Certificate of Occupancy, if any | NA |
| Fee Purchase Price if Purchase Option exercised on January 1 of Current Calendar Year | $95,123,379 |
| Ground Rent Payable in Current Calendar Year | $4,314,028 |

# Annual Disclosure of Detailed Information for Each Parcel
# ERY Parcel D Detail Calendar Year 2023
### Schedule 1 pursuant to the Financing Agreement

| | |
|---|---|
| Parcel Name/Description | Tower D (15 Hudson Yards) |
| Location | SW Corner of ERY |
| Zoning Square Feet | 737,779 |
| Ground Lease still in effect? | Yes |
| Ground Rent Paid that is Attributable to Previous Calendar Year | $ 571,236 |
| Gross Ground Rent Due before Abatements in Previous Calendar Year | $ 571,236 |
| Abatements Applicable in Previous Calendar Year | $0 |
| Net Ground Rent Due in Previous Calendar Year | $571,236 |
| Ground Lease in payment default? | No |
| Date of initial Ground Lease payment default, if any | NA |
| If Ground Lease payment default, has MTA elected to cure? | NA |
| If Ground Lease payment default, end date for applicable MTA interest reserve advance | NA |
| Is Fee Purchase Option exercisable due to construction completion | No |
| Date of Temporary Certificate of Occupancy, if any | NA |
| Fee Purchase Price if Purchase Option exercised on January 1 of Current Calendar Year * | $13,740,687 |
| Ground Rent Payable in Current Calendar Year ** | $623,167 |

*As of March 31, 2023, the Fee Purchase Option has been exercised on 249 residential condominium units of Parcel D (representing 80.74% of Parcel D and proceeds totaling $55,533,056).

**Ground Rent Payable in Current Calendar Year represents 19.26% in ground rent based on the condo unit closings that have occurred as of March 31, 2023.

## Annual Disclosure of Detailed Information for Each Parcel
## ERY Parcel E Detail-Calendar Year 2023
### Schedule 1 pursuant to the Financing Agreement

| | |
|---|---|
| Parcel Name/Description | Tower E (35 Hudson Yards) |
| Location | NW Corner of ERY |
| Zoning Square Feet | 846,547 |
| Ground Lease still in effect? | Yes |
| Ground Rent Paid that is Attributable to Previous Calendar Year | $2,646,554 |
| Gross Ground Rent Due before Abatements in Previous Calendar Year | $2,646,554 |
| Abatements Applicable in Previous Calendar Year | N/A |
| Net Ground Rent Due in Previous Calendar Year | $2,646,554 |
| Ground Lease in payment default? | No |
| Date of initial Ground Lease payment default, if any | NA |
| If Ground Lease payment default, has MTA elected to cure? | NA |
| If Ground Lease payment default, end date for applicable MTA interest reserve advance | NA |
| Is Fee Purchase Option exercisable due to construction completion | No |
| Date of Temporary Certificate of Occupancy, if any | NA |
| Fee Purchase Price if Purchase Option exercised on January 1 of Current Calendar Year* | $63,661,020 |
| Ground Rent Payable in Current Calendar Year** | $2,887,150 |

*As of March 31, 2023, the Fee Purchase Option has been exercised on 68 residential condominium units, representing 22.22% of Parcel E.

**Ground Rent Payable in Current Calendar Year represents 77.78% in ground rent based on the condo unit closings that have occurred as of March 31, 2023.

## Annual Disclosure of Detailed Information for Each Parcel
## ERY Retail Pavilion Detail-Calendar Year 2023
### Schedule 1 pursuant to the Financing Agreement

| | |
|---|---|
| Parcel Name/Description | Retail Pavilion |
| Location | W Side of ERY |
| Zoning Square Feet | 10,800 |
| Ground Lease still in effect? | Yes |
| Ground Rent Paid that is Attributable to Previous Calendar Year | $43,409 |
| Gross Ground Rent Due before Abatements in Previous Calendar Year | $43,409 |
| Abatements Applicable in Previous Calendar Year | NA |
| Net Ground Rent Due in Previous Calendar Year | $43,409 |
| Ground Lease in payment default? | No |
| Date of initial Ground Lease payment default, if any | NA |
| If Ground Lease payment default, has MTA elected to cure? | NA |
| If Ground Lease payment default, end date for applicable MTA interest reserve advance | NA |
| Is Fee Purchase Option exercisable due to construction completion | No |
| Date of Temporary Certificate of Occupancy, if any | NA |
| Fee Purchase Price if Purchase Option exercised on January 1 of Current Calendar Year | $1,044,163 |
| Ground Rent Payable in Current Calendar Year | $47,355 |

## Part II. Tab 3a: Notice of Material Events

If any of the following events are marked, an explanation of each such event is set forth below.
Reporting is since the last Annual Disclosure Statement was published, so reflects from May 1, 2022 through April 28, 2023.

[ ] Principal and interest payment delinquencies.

[ ] Non-payment related defaults, if material.

[ ] Unscheduled draws on debt service reserves reflecting financial difficulties.

[ ] Unscheduled draws on credit enhancements reflecting financial difficulties.

[X] Substitution of credit or liquidity providers, or their failure to perform.

The following were substitutions of credit providers because the existing credit facilities were expiring by their terms:

**Transportation Revenue Bonds**

- TRB Subseries 2005D-2 – New Letter of Credit by Bank of Montreal, acting through its Chicago Branch, effective November 1, 2022.

**TBTA General Revenue Bonds**

- TBTA Series 2018E– New Letter of Credit by UBS AG, acting through its Stamford Branch, effective December 8, 2022.

[ ] Adverse tax opinions or events affecting the tax-exempt status of the securities.

[ ] Modifications to the rights of security holders, if material.

[X] **Bond calls** (which do not include regularly scheduled or mandatory sinking fund redemptions effectuated in accordance with the resolution).

**Transportation Revenue Bonds**

- On September 20, 2022, MTA redeemed certain **Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-2** with the cash available due to the early mandatory redemption of $14,340,000 of Hudson Rail Yard Refunding Trust Obligations, Series 2020A (see note below - for which MTA is the bondholder and received the funds). The table below shows the maturity and principal amount of the bonds that were redeemed.

| Subseries | Maturity Date (November 15) | Outstanding Principal Amount | Principal Amount Redeemed | Redemption Price | CUSIP Number (59261A) |
|---|---|---|---|---|---|
| 2020B-2 | 2046 | $82,660,000 | $14,340,000 | 100% | N37 |

- On November 15, 2022, MTA redeemed certain ***Transportation Revenue Refunding Bonds, Series 2012F*** with available moneys. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Series | Dated Date | Refunded Par Amount | Maturity (November 15) | Interest Rate | Redemption Price | CUSIP Number Base (59259Y) |
|---|---|---|---|---|---|---|
| 2012F | 9/28/2012 | $72,485,000 | 2023 | 5.00% | 100% | TS8 |

- On December 1, 2022, MTA redeemed certain ***Transportation Revenue Bonds, Subseries 2002D-2, 2008B-2 and Series 2012D, 2012F, and 2012H*** with available moneys. The table below shows the maturities and principal amounts of the bonds that were redeemed.

| Series | Dated Date | Refunded Par Amount | Maturity Date | Interest Rate | Redemption Price | CUSIP Number |
|---|---|---|---|---|---|---|
| 2002D-1 | 5/9/2012 | $15,415,000 | 11/1/2023 | 5.00% | 100% | 59259YPN3 |
| 2008B-2 | 11/15/2012 | 4,300,000 | 11/15/2023 | 5.00 | 100 | 59261AQQ3 |
| 2012D | 8/20/2012 | 2,300,000 | 11/15/2023 | 4.00 | 100 | 59259YQH5 |
| 2012D | 8/20/2012 | 3,000,000 | 11/15/2023 | 5.00 | 100 | 59259YQZ5 |
| 2012F | 9/28/2012 | 1,685,000 | 11/15/2023 | 4.00 | 100 | 59259YTE9 |
| 2012H | 11/15/2012 | 1,720,000 | 11/15/2023 | 5.00 | 100 | 59261ARY5 |
| 2012H | 11/15/2012 | 5,050,000 | 11/15/2023 | 4.00 | 100 | 59259YVU0 |

- On December 7, 2022, MTA redeemed certain **Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-2** with the cash available due to the early mandatory redemption of $6,205,000 of Hudson Rail Yard Refunding Trust Obligations, Series 2020A (see note below - for which MTA is the bondholder and received the funds). Note, the original December 8, 2022 EMMA posting had an incorrect outstanding principal amount, and a corrected notice was filed on February 22, 2023 to reflect the accurate amount outstanding as of the redemption date. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Subseries | Maturity (November 15) | Outstanding Principal Amount | Principal Amount Redeemed | Interest Rate | Redemption Price | CUSIP Number Base (59261A) |
|---|---|---|---|---|---|---|
| 2020B-2 | 2046 | $68,320,000 | $6,205,000 | Variable | 100% | N37 |

- On January 12, 2023, MTA redeemed certain ***Transportation Revenue Bonds, Subseries 2002D-1, and Series 2012B, 2012C, 2012D, 2012E, 2012F and 2012H*** with proceeds from the Payroll Mobility Tax Senior Lien Refunding Green Bonds, Series 2023A transaction and other available moneys. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Series | Dated Date | Maturity | Interest Rate | Refunded Amount | Remaining Amount | Redemption Date | Redemption Price | CUSIP |
|---|---|---|---|---|---|---|---|---|
| TRB 2002D-1 | 5/30/2002 | 11/1/2024 | 5.000% | $14,455,000 | - | 1/12/2023 | 100 | 59259YPP8 |
| TRB 2002D-1 | 5/30/2002 | 11/1/2025 | 5.000% | 20,775,000 | - | 1/12/2023 | 100 | 59259YPQ6 |
| TRB 2012B | 3/15/2012 | 11/15/2033 | 4.000% | 11,770,000 | - | 1/12/2023 | 100 | 59259YMY2 |
| TRB 2012B | 3/15/2012 | 11/15/2034 | 4.000% | 12,355,000 | - | 1/12/2023 | 100 | 59259YMZ9 |
| TRB 2012B | 3/15/2012 | 11/15/2035 | 4.000% | 12,975,000 | - | 1/12/2023 | 100 | 59259YNA3 |
| TRB 2012B | 3/15/2012 | 11/15/2039 | 4.250% | 14,305,000 | $30,790,000 | 1/12/2023 | 100 | 59259YNC9 |
| TRB 2012C | 5/3/2012 | 11/15/2033 | 4.000% | 20,725,000 | - | 1/12/2023 | 100 | 59259YPG8 |
| TRB 2012D | 8/20/2012 | 11/15/2024 | 5.000% | 10,000,000 | - | 1/12/2023 | 100 | 59259YQJ1 |
| TRB 2012D | 8/20/2012 | 11/15/2025 | 5.000% | 92,000,000 | - | 1/12/2023 | 100 | 59259YQK8 |
| TRB 2012E | 7/20/2012 | 11/15/2038 | 4.000% | 80,985,000 | 91,100,000 | 1/12/2023 | 100 | 59259YSK6 |
| TRB 2012F | 9/28/2012 | 11/15/2024 | 5.000% | 119,355,000 | - | 1/12/2023 | 100 | 59259YTT6 |
| TRB 2012F | 9/28/2012 | 11/15/2025 | 5.000% | 103,750,000 | - | 1/12/2023 | 100 | 59259YTU3 |
| TRB 2012F | 9/28/2012 | 11/15/2026 | 4.000% | 3,830,000 | - | 1/12/2023 | 100 | 59259YTG4 |
| TRB 2012H | 11/15/2012 | 11/15/2024 | 5.000% | 4,170,000 | - | 1/12/2023 | 100 | 59261ANR4 |
| TRB 2012H | 11/15/2012 | 11/15/2025 | 5.000% | 4,380,000 | - | 1/12/2023 | 100 | 59261ANS2 |
| TRB 2012H | 11/15/2012 | 11/15/2034 | 4.000% | 6,430,000 | - | 1/12/2023 | 100 | 59261AP92 |

## Dedicated Tax Fund Bonds

- On December 1, 2022, MTA redeemed certain ***Dedicated Tax Fund Refunding Bonds, Series 2012A*** with available moneys. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Series | Dated Date | Refunded Par Amount | Maturity (November 15) | Interest Rate | Redemption Price | CUSIP Number Base (59259N) |
|---|---|---|---|---|---|---|
| 2012A | 10/25/2012 | $89,275,000 | 2023 | 5.00% | 100% | R21 |

- On January 12, 2023, MTA redeemed certain ***Dedicated Tax Fund Refunding Bonds, Series 2012A*** with proceeds from the Payroll Mobility Tax Senior Lien Refunding Green Bonds, Series 2023A transaction and other available moneys. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Series | Dated Date | Maturity | Interest Rate | Refunded Amount | Remaining Amount | Redemption Date | Redemption Price | CUSIP |
|---|---|---|---|---|---|---|---|---|
| DTF 2012A | 10/25/2012 | 11/15/2024 | 5.000% | $68,265,000 | - | 1/12/2023 | 100 | 59259NS38 |
| DTF 2012A | 10/25/2012 | 11/15/2025 | 5.000% | 70,280,000 | - | 1/12/2023 | 100 | 59259NR47 |
| DTF 2012A | 10/25/2012 | 11/15/2026 | 5.000% | 73,865,000 | - | 1/12/2023 | 100 | 59259NR54 |
| DTF 2012A | 10/25/2012 | 11/15/2027 | 5.000% | 77,560,000 | - | 1/12/2023 | 100 | 59259NR62 |
| DTF 2012A | 10/25/2012 | 11/15/2028 | 5.000% | 33,340,000 | - | 1/12/2023 | 100 | 59259NS46 |
| DTF 2012A | 10/25/2012 | 11/15/2029 | 5.000% | 84,400,000 | - | 1/12/2023 | 100 | 59259NR88 |
| DTF 2012A | 10/25/2012 | 11/15/2030 | 5.000% | 100,000 | - | 1/12/2023 | 100 | 59259NR96 |
| DTF 2012A | 10/25/2012 | 11/15/2031 | 4.000% | 48,320,000 | - | 1/12/2023 | 100 | 59259NS20 |
| DTF 2012A | 10/25/2012 | 11/15/2031 | 5.000% | 40,305,000 | - | 1/12/2023 | 100 | 59259NS53 |

**TBTA General Revenue and Subordinate Revenue Bonds**

- On March 16, 2023, MTA redeemed outstanding certain ***TBTA General Revenue Refunding Bonds, Series 2012B*** with available moneys. The table below shows the maturity and principal amount of the bonds that were redeemed.

| Series | Dated Date | Refunded Par Amount | Maturity (November 15) | Interest Rate | Redemption Date (March 16) | Redemption Price | CUSIP Number Base (89602N) |
|---|---|---|---|---|---|---|---|
| 2012B | 8/23/2012 | $100,100,000 | 2023 | 5.00% | 2023 | 100% | ZE7 |
| 2012B | 8/23/2012 | $60,995,000 | 2024 | 5.00% | 2023 | 100% | ZF4 |

**Hudson Rail Yard Trust Obligations**

- On August 15, 2022 and November 15, 2022, early mandatory redemptions of $14,340,000 and $6,205,000, respectively, occurred in connection with Fee Purchase Payments on a portion of residential condominiums in Hudson Yards. Both redemptions were on the ***Hudson Rail Yard Refunding Trust Obligations, Series 2020A*** (November 15, 2046 maturity) which do not have a CUSIP, and for which MTA is bondholder. Voluntary notices were posted to the existing CUSIPs of the 2016A Obligations.

**X** **Defeasances.**

**<u>Transportation Revenue Bonds</u>**

- On August 18, 2022, MTA defeased ***Transportation Revenue Bonds, Subseries 2002D-1 and Series 2012C, 2012D, 2012F, and 2012H*** with proceeds from the Payroll Mobility Tax Senior Lien Refunding Bonds, Series 2022B (Forward Delivery) transaction. The table below shows the maturity and principal amount of the bonds that were defeased until payment was made on the respective redemption dates.

| Series | Maturity | Outstanding Principal Amount | Principal Amount Refunded | Interest Rate | Redemption Price | Redemption Date | CUSIP | Pre-Refunded CUSIP | Unrefunded CUSIP |
|---|---|---|---|---|---|---|---|---|---|
| 2002D-1 | 11/1/26 | $21,665,000 | $21,665,000 | 5.000% | 100 | 11/1/22 | 59259YPR4 | | |
| | 11/1/27 | 23,120,000 | 23,120,000 | 5.000 | 100 | 11/1/22 | 59259YPS2 | | |
| | 11/1/28 | 24,680,000 | 24,680,000 | 5.000 | 100 | 11/1/22 | 59259YPT0 | | |
| | 11/1/29 | 2,000,000 | 2,000,000 | 3.750 | 100 | 11/1/22 | 59259YPU7 | | |
| | 11/1/29 | 3,770,000 | 3,770,000 | 3.625 | 100 | 11/1/22 | 59259YPY9 | | |
| 2012C | 11/15/28 | $40,385,000 | $40,385,000 | 5.000% | 100 | 11/15/22 | 59261AQV2 | | |
| | 11/15/29 | 42,400,000 | 42,400,000 | 5.000 | 100 | 11/15/22 | 59261AQW0 | | |
| | 11/15/30 | 44,520,000 | 44,520,000 | 5.000 | 100 | 11/15/22 | 59261AQX8 | | |
| | 11/15/31 | 4,755,000 | 4,755,000 | 4.000 | 100 | 11/15/22 | 59259YNY1 | | |
| | 11/15/31 | 41,990,000 | 41,990,000 | 5.000 | 100 | 11/15/22 | 59261AQY6 | | |
| 2012D | 11/15/26 | $30,000,000 | $30,000,000 | 5.000% | 100 | 11/15/22 | 59259YQL6 | | |
| | 11/15/27 | 25,000,000 | 25,000,000 | 5.000 | 100 | 11/15/22 | 59259YQM4 | | |
| | 11/15/28 | 77,640,000 | 77,640,000 | 5.000 | 100 | 11/15/22 | 59259YQN2 | | |
| | 11/15/29 | 82,000,000 | 82,000,000 | 5.000 | 100 | 11/15/22 | 59259YQP7 | | |
| | 11/15/30 | 20,540,000 | 20,540,000 | 4.000 | 100 | 11/15/22 | 59259YQQ5 | | |
| | 11/15/30 | 82,000,000 | 82,000,000 | 5.000 | 100 | 11/15/22 | 59259YRD3 | | |
| | 11/15/321 | 70,195,000 | 70,195,000 | 4.000 | 100 | 11/15/22 | 59259YQR3 | | |
| | 11/15/32 | 19,355,000 | 19,355,000 | 5.000 | 100 | 11/15/22 | 59259YRE1 | | |
| 2012F | 11/15/26 | $128,355,000 | $123,640,000 | 5.000% | 100 | 11/15/22 | 59259YTV1 | 59261AN60 | 59261AN94 |
| | 11/15/27 | 10,000,000 | 9,000,000 | 4.000 | 100 | 11/15/22 | 59259YTH2 | 59261AN52 | 59261AN86 |
| | 11/15/27 | 51,845,000 | 51,845,000 | 5.000 | 100 | 11/15/22 | 59259YTW9 | | |
| | 11/15/302 | 186,440,000 | 165,795,000 | 5.000 | 100 | 11/15/22 | 59259YTX7 | 59261AN78 | 59261AP27 |
| 2012H | 11/15/26 | $4,600,000 | $4,265,000 | 5.000% | 100 | 11/15/22 | 59261ARS8 | 59261AQ34 | 59261AR25 |
| | 11/15/27 | 4,830,000 | 4,480,000 | 5.000 | 100 | 11/15/22 | 59261ART6 | 59261AQ42 | 59261AR33 |
| | 11/15/28 | 11,260,000 | 6,290,000 | 3.000 | 100 | 11/15/22 | 59259YVZ9 | 59261AP35 | 59261AP76 |
| | 11/15/29 | 5,220,000 | 4,845,000 | 5.000 | 100 | 11/15/22 | 59261ARU3 | 59261AQ59 | 59261AR41 |
| | 11/15/30 | 5,485,000 | 5,085,000 | 5.000 | 100 | 11/15/22 | 59261ARV1 | 59261AQ67 | 59261AR58 |
| | 11/15/31 | 5,760,000 | 5,340,000 | 5.000 | 100 | 11/15/22 | 59261ARW9 | 59261AQ75 | 59261AR66 |
| | 11/15/32 | 13,430,000 | 7,500,000 | 3.250 | 100 | 11/15/22 | 59259YWD7 | 59261AP43 | 59261AP84 |
| | 11/15/33 | 6,240,000 | 5,790,000 | 5.000 | 100 | 11/15/22 | 59261ARX7 | 59261AQ83 | 59261AR74 |
| | 11/15/33 | 6,240,000 | 5,790,000 | 5.000 | 100 | 11/15/22 | 59261ARX7 | 59261AQ83 | 59261AR74 |
| | 11/15/33 | 6,240,000 | 5,790,000 | 5.000 | 100 | 11/15/22 | 59261ARX7 | 59261AQ83 | 59261AR74 |
| | 11/15/34 | 14,555,000 | 8,125,000 | 4.000 | 100 | 11/15/22 | 59259YWF2 | 59261AP50 | 59261AP92 |
| | 11/15/37 | 47,085,000 | 17,215,000 | 3.625 | 100 | 11/15/22 | 59259YWG0 | 59261AP68 | 59261AQ26 |
| | 11/15/42 | 60,885,000 | 43,720,000 | 5.000 | 100 | 11/15/22 | 59261AUJ4 | 59261AQ91 | 59261AR82 |

- On September 15, 2022, MTA defeased certain ***Transportation Revenue Bonds, Series 2012B, 2012C, 2012E, 2012F, and 2012H*** with proceeds from the Payroll Mobility Tax Senior Lien Refunding Green Bonds, Subseries 2022D-1 transaction. The table below shows the maturity and principal amount of the bonds that were defeased until payment was made on the redemption date.

| Series | Dated Date | Maturity | Interest Rate | Refunded Amount | Redemption Date | Redemption Price | CUSIP |
|---|---|---|---|---|---|---|---|
| 2012B | 03/15/2012 | 11/15/2029 | 4.000% | $ 9,680,000 | 11/15/2022 | 100.000 | 59259YMU0 |
| 2012B | 03/15/2012 | 11/15/2030 | 4.000 | 10,165,000 | 11/15/2022 | 100.000 | 59259YMV8 |
| 2012B | 03/15/2012 | 11/15/2031 | 4.000 | 10,675,000 | 11/15/2022 | 100.000 | 59259YMW6 |
| 2012B | 03/15/2012 | 11/15/2032 | 4.000 | 11,210,000 | 11/15/2022 | 100.000 | 59259YMX4 |
| 2012C | 05/03/2012 | 11/15/2041 | 5.000 | 102,440,000 | 11/15/2022 | 100.000 | 59261AUU9 |
| 2012E | 07/20/2012 | 11/15/2042 | 5.000 | 5,800,000 | 11/15/2022 | 100.000 | 59261AUS4 |
| 2012E | 07/20/2012 | 11/15/2042 | 5.000 | 27,030,000 | 11/15/2022 | 100.000 | 59261AUY1 |
| 2012F | 09/28/2012 | 11/15/2026 | 5.000 | 4,715,000 | 11/15/2022 | 100.000 | 59261AN94 |
| 2012F | 09/28/2012 | 11/15/2027 | 4.000 | 1,000,000 | 11/15/2022 | 100.000 | 59261AN86 |
| 2012F | 09/28/2012 | 11/15/2030 | 4.000 | 50,000,000 | 11/15/2022 | 100.000 | 59259YTJ8 |
| 2012F | 09/28/2012 | 11/15/2030 | 5.000 | 20,645,000 | 11/15/2022 | 100.000 | 59261AP27 |
| 2012H | 11/15/2012 | 11/15/2026 | 5.000 | 335,000 | 11/15/2022 | 100.000 | 59261AR25 |
| 2012H | 11/15/2012 | 11/15/2027 | 5.000 | 350,000 | 11/15/2022 | 100.000 | 59261AR33 |
| 2012H | 11/15/2012 | 11/15/2029 | 5.000 | 375,000 | 11/15/2022 | 100.000 | 59261AR41 |
| 2012H | 11/15/2012 | 11/15/2030 | 5.000 | 400,000 | 11/15/2022 | 100.000 | 59261AR58 |
| 2012H | 11/15/2012 | 11/15/2031 | 5.000 | 420,000 | 11/15/2022 | 100.000 | 59261AR66 |
| 2012H | 11/15/2012 | 11/15/2033 | 5.000 | 450,000 | 11/15/2022 | 100.000 | 59261AR74 |
| 2012H | 11/15/2012 | 11/15/2042 | 5.000 | 17,165,000 | 11/15/2022 | 100.000 | 59261AR82 |

## TBTA General Revenue and Subordinate Revenue Bonds

- On February 14, 2023, MTA defeased certain ***TBTA General Revenue Bonds Subseries 2009A-1 and Series 2012A, 2012B, 2013C and TBTA Subordinate Revenue Bonds, Series 2013A*** with proceeds from the TBTA General Revenue Refunding Bonds, Series 2023A transaction. The tables below show the maturity and principal amount of the bonds that were defeased until payment was made on the respective redemption dates.

| Series | Dated Date | Maturity | Interest Rate | Outstanding Amount | Refunded Amount | Amount Remaining Outstanding | Redemption Date | Redemption Price | CUSIP | Pre-Refunded CUSIP | Unrefunded CUSIP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009A-1 | 11/15/2012 | 11/15/2025 | 5.000% | $2,190,000 | $2,190,000 | - | 3/16/2023 | 100% | 89602RDN2 | | |
| 2009A-1 | 11/15/2012 | 11/15/2026 | 5.000 | 2,320,000 | 2,320,000 | - | 3/16/2023 | 100 | 89602RDP7 | | |
| 2009A-1 | 11/15/2012 | 11/15/2027 | 5.000 | 850,000 | 850,000 | - | 3/16/2023 | 100 | 89602RDQ5 | | |
| 2009A-1 | 11/15/2012 | 11/15/2028 | 3.000 | 3,700,000 | 3,700,000 | - | 3/16/2023 | 100 | 89602ND35 | | |
| 2009A-1 | 11/15/2012 | 11/15/2029 | 5.000 | 3,925,000 | 3,925,000 | - | 3/16/2023 | 100 | 89602ND43 | | |
| 2009A-1 | 11/15/2012 | 11/15/2030 | 5.000 | 4,140,000 | 4,140,000 | - | 3/16/2023 | 100 | 89602ND50 | | |
| 2009A-1 | 11/15/2012 | 11/15/2031 | 5.000 | 4,380,000 | 4,380,000 | - | 3/16/2023 | 100 | 89602ND68 | | |
| 2009A-1 | 11/15/2012 | 11/15/2032 | 5.000 | 4,635,000 | 4,635,000 | - | 3/16/2023 | 100 | 89602ND76 | | |
| 2009A-1 | 11/15/2012 | 11/15/2034 | 5.000 | 10,215,000 | 10,215,000 | - | 3/16/2023 | 100 | 89602ND84 | | |
| 2009A-1 | 11/15/2012 | 11/15/2036 | 5.000 | 11,475,000 | 11,475,000 | - | 3/16/2023 | 100 | 89602NE26 | | |
| 2009A-1 | 11/15/2012 | 11/15/2038 | 5.000 | 12,885,000 | 12,885,000 | - | 3/16/2023 | 100 | 89602ND92 | | |
| 2012A | 6/6/2012 | 11/15/2028 | 3.000 | 7,265,000 | 7,265,000 | - | 3/16/2023 | 100 | 89602NYE8 | | |
| 2012A | 6/6/2012 | 11/15/2029 | 4.000 | 7,625,000 | 7,625,000 | - | 3/16/2023 | 100 | 89602NYF5 | | |
| 2012A | 6/6/2012 | 11/15/2030 | 3.250 | 8,005,000 | 8,005,000 | - | 3/16/2023 | 100 | 89602NYG3 | | |
| 2012A | 6/6/2012 | 11/15/2031 | 4.000 | 8,405,000 | 8,405,000 | - | 3/16/2023 | 100 | 89602NYH1 | | |
| 2012A | 6/6/2012 | 11/15/2032 | 4.000 | 8,830,000 | 8,830,000 | - | 3/16/2023 | 100 | 89602NYJ7 | | |
| 2012A | 6/6/2012 | 11/15/2033 | 4.000 | 9,270,000 | 9,270,000 | - | 3/16/2023 | 100 | 89602NYK4 | | |
| 2012A | 6/6/2012 | 11/15/2034 | 4.000 | 9,640,000 | 9,640,000 | - | 3/16/2023 | 100 | 89602NYL2 | | |
| 2012A | 6/6/2012 | 11/15/2035 | 4.000 | 10,025,000 | 10,025,000 | - | 3/16/2023 | 100 | 89602NYM0 | | |
| 2012A | 6/6/2012 | 11/15/2036 | 4.000 | 10,425,000 | 10,425,000 | - | 3/16/2023 | 100 | 89602NYN8 | | |
| 2012A | 6/6/2012 | 11/15/2037 | 4.000 | 10,845,000 | 10,845,000 | - | 3/16/2023 | 100 | 89602NYP3 | | |
| 2012A | 6/6/2012 | 11/15/2042 | 4.000 | 61,080,000 | 23,005,000 | $38,075,000 | 3/16/2023 | 100 | 89602NYQ1 | 89602RJW6 | 89602RJX4 |

| Series | Dated Date | Maturity | Interest Rate | Outstanding Amount | Refunded Amount | Amount Remaining Outstanding | Redemption Date | Redemption Price | CUSIP | Pre-Refunded CUSIP | Unrefunded CUSIP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012B | 8/23/2012 | 11/15/2025 | 4.000% | $20,000,000 | $20,000,000 | - | 3/16/2023 | 100% | 89602NZG2 | | |
| 2012B | 8/23/2012 | 11/15/2025 | 5.000 | 44,060,000 | 44,060,000 | - | 3/16/2023 | 100 | 89602NB37 | | |
| 2012B | 8/23/2012 | 11/15/2026 | 5.000 | 66,910,000 | 66,910,000 | - | 3/16/2023 | 100 | 89602NZH0 | | |
| 2012B | 8/23/2012 | 11/15/2027 | 5.000 | 33,620,000 | 33,620,000 | - | 3/16/2023 | 100 | 89602NZJ6 | | |
| 2012B | 8/23/2012 | 11/15/2028 | 5.000 | 20,700,000 | 20,700,000 | - | 3/16/2023 | 100 | 89602NZK3 | | |
| 2012B | 8/23/2012 | 11/15/2029 | 5.000 | 21,730,000 | 21,730,000 | - | 3/16/2023 | 100 | 89602NZL1 | | |
| 2012B | 8/23/2012 | 11/15/2030 | 5.000 | 12,635,000 | 12,635,000 | - | 3/16/2023 | 100 | 89602NZM9 | | |
| 2012B | 8/23/2012 | 11/15/2031 | 5.000 | 13,260,000 | 13,260,000 | - | 3/16/2023 | 100 | 89602NZN7 | | |
| 2012B | 8/23/2012 | 11/15/2032 | 4.000 | 37,110,000 | 37,110,000 | - | 3/16/2023 | 100 | 89602NZP2 | | |
| 2013C | 4/18/2013 | 11/15/2029 | 5.000 | 6,340,000 | 6,340,000 | - | 5/15/2023 | 100 | 89602NS47 | | |
| 2013C | 4/18/2013 | 11/15/2030 | 5.000 | 6,660,000 | 6,660,000 | - | 5/15/2023 | 100 | 89602NS54 | | |
| 2013C | 4/18/2013 | 11/15/2031 | 5.000 | 6,990,000 | 6,990,000 | - | 5/15/2023 | 100 | 89602NS62 | | |
| 2013C | 4/18/2013 | 11/15/2032 | 5.000 | 7,340,000 | 7,340,000 | - | 5/15/2023 | 100 | 89602NS70 | | |
| 2013C | 4/18/2013 | 11/15/2033 | 5.000 | 7,705,000 | 7,705,000 | - | 5/15/2023 | 100 | 89602NS88 | | |
| 2013C | 4/18/2013 | 11/15/2038 | 5.000 | 83,000,000 | 83,000,000 | - | 5/15/2023 | 100 | 89602NS96 | | |

**Subordinate Revenue Bonds**

| Series | Dated Date | Maturity | Interest Rate | Outstanding Amount | Refunded Amount | Amount Remaining Outstanding | Redemption Date | Redemption Price | CUSIP* | Pre-Refunded CUSIP | Unrefunded CUSIP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2013A | 1/29/2013 | 11/15/2024 | 5.000% | $57,270,000 | $47,270,000 | $10,000,000 | 5/15/2023 | 100% | 89602NE83 | 89602RJY2 | 89602RJZ9 |
| 2013A | 1/29/2013 | 11/15/2025 | 5.000 | 60,465,000 | 60,465,000 | - | 5/15/2023 | 100 | 89602NE91 | | |
| 2013A | 1/29/2013 | 11/15/2026 | 5.000 | 63,460,000 | 63,460,000 | - | 5/15/2023 | 100 | 89602NH31 | | |
| 2013A | 1/29/2013 | 11/15/2027 | 4.000 | 15,010,000 | 15,010,000 | - | 5/15/2023 | 100 | 89602NF25 | | |
| 2013A | 1/29/2013 | 11/15/2027 | 5.000 | 51,905,000 | 51,905,000 | - | 5/15/2023 | 100 | 89602NH49 | | |
| 2013A | 1/29/2013 | 11/15/2028 | 4.000 | 11,175,000 | 11,175,000 | - | 5/15/2023 | 100 | 89602NF33 | | |
| 2013A | 1/29/2013 | 11/15/2028 | 5.000 | 59,130,000 | 59,130,000 | - | 5/15/2023 | 100 | 89602NH56 | | |
| 2013A | 1/29/2013 | 11/15/2029 | 5.000 | 15,000,000 | 15,000,000 | - | 5/15/2023 | 100 | 89602NF41 | | |
| 2013A | 1/29/2013 | 11/15/2030 | 5.000 | 15,000,000 | 15,000,000 | - | 5/15/2023 | 100 | 89602NG73 | | |
| 2013A | 1/29/2013 | 11/15/2031 | 3.125 | 15,000,000 | 15,000,000 | - | 5/15/2023 | 100 | 89602NG81 | | |
| 2013A | 1/29/2013 | 11/15/2032 | 3.125 | 15,000,000 | 15,000,000 | - | 5/15/2023 | 100 | 89602NG32 | | |

☐ Release, substitution or sale of property securing repayment of the securities, if material.

X **Rating changes.**
The following reflects the various changes that occurred between May 1, 2022 and April 28, 2023

- On July 20, 2022, S&P Global Ratings withdrew its joint ratings on MTA's enhanced VRDB TRB Subseries 2005D-2 as a result of its Letter of Credit Provider - Helaba requesting a withdrawal of its long-term and short-term ratings on July 1, 2022 (due to Helaba exiting the letter of credit service for VRDBs generally).

- On October 31, 2022, KBRA revised the outlook on Transportation Revenue Bonds (AA) from negative to stable, while affirming the AA rating.

X **Tender Offers/Secondary Market Purchases.**
The following were mandatory tender notices in conjunction with remarketings due to their related purchase dates between May 1, 2022 and April 23, 2023.

**Transportation Revenue Bonds**

- **TRB Subseries 2005D-2**, Notices of Mandatory Tender on November 1, 2022. The subseries was remarketed with letter of credit substitution in Daily Mode with a new letter of credit by Bank of Montreal, acting through its Chicago Branch.

- **TRB Subseries 2012G-4**, Notices of Mandatory Tender and Mode Change on November 1, 2022. The subseries was converted from LIBOR FRN and remarketed in Daily Mode with a new letter of credit by Bank of Montreal, acting through its Chicago Branch.

- **TRB Series 2011B**, Notice of Mandatory Tender on November 1, 2022. The bonds were refunded with a cross-credit refunding through the Payroll Mobility Tax Senior Lien Variable Rate Refunding Green Bonds, Subseries 2022E-2a (SOFR Tender Notes).

- **TRB Subseries 2014D-2 and TRB Subseries 2018A-2**, Notices of Mandatory Tender on November 15, 2022. The bonds were refunded with a cross-credit refunding through the Payroll Mobility Tax Senior Lien Refunding Green Bonds, Subseries 2022E-2b.

**Dedicated Tax Fund Bonds**

- **DTF Subseries 2008A-2a,** Notice of Mandatory Tender and Mode Change on June 1, 2022. The Subseries 2008A-2a bonds were converted from SIFMA FRNs and remarketed in Daily Mode with a new letter of credit by TD Bank, National Association.

**TBTA General Revenue Bonds**

- **TBTA Series 2018E (Federally Taxable)**, Notice of Mandatory Tender on December 8, 2022. The subseries was remarketed with letter of credit substitution in Weekly Mode with a new letter of credit by USB AG, acting through its Stamford Branch.

☐ Bankruptcy, insolvency, receivership or similar event of the obligated person.

☐ Mergers, consolidations, acquisitions, the sale of all or substantially all of the assets of the obligated person or their termination, if material.

X **Appointment of a successor or additional trustee or the change of the name of a trustee, if material.**

- On September 14, 2022, MTA Bridges and Tunnels appointed, and The Bank of New York Mellon accepted its appointment, to serve as Successor Trustee for its General Revenue Bonds, replacing U.S. Bank Trust National Association.

X **Incurrence of a financial obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, if material.**

**Commercial Lines of Credit**

- On August 2, 2022, MTA entered into a taxable revolving $800 million credit agreement with JPMorgan Chase Bank, National Association, and a taxable revolving $400 million credit agreement with Bank of America, National Association. Both agreements are active until August 1, 2025.

☐ Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the obligated person, any of which reflect financial difficulties

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## Part II. Tab 3b: Notice of Voluntary Disclosures

X **Voluntary Notices.**
The following voluntary notices were published between May 1, 2022 and April 28, 2023.

- Notice of Extension on Letter of Credit Facility for TBTA Subseries 2005B-4c, dated May 20, 2022.
- Notice of Extension on Letter of Credit Facility for TRB Subseries 2012A-2, dated May 26, 2022.
- Notice of Extension on Letter of Credit Facility for DTF Subseries 2008A-1, dated June 1, 2022.
- Notice regarding the resignation of U.S. Bank Trust National Association as Trustee for TBTA General Revenue Bonds, and an anticipated Successor Trustee being finalized, dated August 4, 2022.
- Notice of an Early Mandatory Redemption of Hudson Rail Yard Refunding Trust Obligations, Series 2020A, dated August 16, 2022.
- Notice of Extension on Letter of Credit Facility for TRB Subseries 2015E-3, dated August 31, 2022.
- Notice of Extension of Letter of Credit Facility for DTF Subseries 2008B-3c, dated October 25, 2022.
- Notice of Extension of Letter of Credit Facility for DTF Subseries 2008A-2b, dated October 25, 2022.
- Notice regarding an Early Mandatory Redemption of Hudson Rail Yard Refunding Trust Obligations, Series 2020A, dated November 15, 2022.
- Notice regarding Rescission of the December 21, 2022 Conditional Redemption for certain Dedicated Tax Fund Bonds, dated January 6, 2023.
- Notice regarding Rescission of the December 21, 2022 Conditional Redemption for certain Transportation Revenue Bonds, dated January 6, 2023.

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Grand Central Terminal 110 Year Anniversary (Opened 1913)

# APPENDIX A

Beginning with the *2016 Combined Continuing Disclosure Filings*, the material previously found in **Appendix A** may now be found in **Part I**, which contains **MTA's Annual Disclosure Statement**, and is posted on EMMA under "Annual Financial Information and Operating Data."

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Grand Central Madison, Opened January 25, 2023

# Metropolitan Transportation Authority

(A Component Unit of the State of New York)

Financial Statements as of and
for the Years Ended December 31, 2022 and 2021
Required Supplementary Information,
Supplementary Information and
Independent Auditor's Report

# Table of Contents

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## INDEPENDENT AUDITOR'S REPORT

To the Members of the Board of
Metropolitan Transportation Authority

### Opinions

We have audited the financial statements of the business-type activities and fiduciary activities of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of and for the years ended December 31, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the MTA's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and fiduciary activities of the MTA as of December 31, 2022 and 2021, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

### Basis for Opinions

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the MTA, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

### Emphasis of Matters

As discussed in Note 1 to the financial statements, the MTA is a component unit of the State of New York. The MTA requires significant subsidies from, and has material transactions with, the City of New York, the State of New York, and the State of Connecticut, and depends on certain tax revenues that are economically sensitive. Our opinions are not modified with respect to this matter.

As discussed in Note 2 to the financial statements, the MTA adopted Governmental Accounting Standards Board ("GASB") Statement No. 87, *Leases,* as of January 1, 2021. The adoption of GASB Statement No. 87 resulted in the restatement of the 2021 financial statements. Our opinions are not modified with respect to this matter.

### Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the MTA's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

**Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we

- exercise professional judgment and maintain professional skepticism throughout the audit.
- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the MTA's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the MTA's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audit.

**Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the required supplementary information on pages 6-24 and 109-133, as listed in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

**Supplementary Information**

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the MTA's basic financial statements. The supplementary information on pages 134-140, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information on pages 134-140 are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Deloitte & Touche LLP

June 6, 2023

METROPOLITAN TRANSPORTATION AUTHORITY

**(A Component Unit of the State of New York)**

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021

**($ In Millions, except as noted)**

## FINANCIAL REPORTING ENTITY

The Metropolitan Transportation Authority ("MTA" or "MTA Group") was established under the New York Public Authorities Law and is a public benefit corporation and a component unit of the State of New York whose mission is to continue, develop, and improve public transportation and to develop and implement a unified public transportation policy in the New York metropolitan area. The financial reporting entity consists of subsidiaries and affiliates, considered component units of the MTA, because the Board of the MTA serves as the overall governing body of these related entities.

The Reporting entity includes:

(1) the MTA is comprised of the following:

- Metropolitan Transportation Authority Headquarters ("MTAHQ") provides support in budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services to the related groups listed below.
- The Long Island Rail Road Company ("MTA Long Island Rail Road") provides passenger transportation between New York City ("NYC") and Long Island.
- Metro-North Commuter Railroad Company ("MTA Metro-North Railroad") provides passenger transportation between NYC and the suburban communities in Westchester, Dutchess, Putnam, Orange, and Rockland counties in New York State ("NYS") and New Haven and Fairfield counties in Connecticut.
- Staten Island Rapid Transit Operating Authority ("MTA Staten Island Railway") provides passenger transportation on Staten Island.
- First Mutual Transportation Assurance Company ("FMTAC") provides primary insurance coverage for certain losses, some of which are reinsured, and assumes reinsurance coverage for certain other losses.
- MTA Construction and Development Company ("MTA Construction and Development"), formerly called MTA Capital Construction Company, provides oversight for the planning, design and construction of current and future major MTA system-wide expansion projects.
- MTA Bus Company ("MTA Bus") operates certain bus routes in areas previously served by private bus operators pursuant to franchises granted by the City of New York.
- New York City Transit Authority ("MTA New York City Transit") and its subsidiary, Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA"), provide subway and public bus service within the five boroughs of New York City.
- Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels") operates seven toll bridges, two tunnels, and the Battery Parking Garage, all within the five boroughs of New York City.
- MTA Grand Central Madison Concourse Operating Company ("MTA GCMC") operates and maintains the infrastructure and structures supporting Long Island Rail Road access into Grand Central Terminal.
- MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA Capital Construction, MTA Bus, MTA New York City Transit, MTA Bridges and Tunnels, and MTA GCMC collectively are referred to herein as MTA. MTA Long Island Rail Road and MTA Metro-North Railroad are referred to collectively as the Commuter Railroads.

The MTA provides transportation services in the New York metropolitan area, operations of seven bridges and two tunnels within New York City and primary insurance coverage to the MTA related entities. The MTA engages in Business-Type Activities. The financial results of the MTA are reported as consolidated financial statements.

(2) The Fiduciary Funds are comprised of Pension and Other Employee Benefit Trust Funds:

- Pension Trust Funds:
  - MTA Defined Benefit Pension Plan
  - The Long Island Rail Road Company Plan for Additional Pensions ("Additional Plan")

- Manhattan and Bronx Surface Transit Operating Authority (“MaBSTOA Plan”)
- Metro-North Commuter Railroad Cash Balance Plan (“MNR Cash Balance Plan”)

● Other Employee Benefit Trust Funds

- MTA Other Postemployment Benefits Plan (“OPEB Plan”)

## OVERVIEW OF THE CONSOLIDATED FINANCIAL STATEMENTS

### *Introduction*

This report consists of: Management’s Discussion and Analysis (“MD&A”), Consolidated Financial Statements, Fiduciary Funds Financial Statements, Notes to the Consolidated Financial Statements, Required Supplementary Information, Supplementary Information - Combining Fiduciary Fund Financial Statements, and Supplementary Information.

### *Management’s Discussion and Analysis*

This MD&A provides a narrative overview and analysis of the financial activities of the Metropolitan Transportation Authority and its consolidated subsidiaries and affiliates (the “MTA” or “MTA Group”) as of and for the years ended December 31, 2022 and 2021. For financial reporting purposes, the subsidiaries and affiliates of the MTA are blended component units. This management discussion and analysis is intended to serve as an introduction to the MTA Group’s consolidated financial statements. It provides an assessment of how the MTA Group’s position has improved or deteriorated and identifies the factors that, in management’s view, significantly affected the MTA Group’s overall financial position. It may contain opinions, assumptions, or conclusions by the MTA Group’s management that must be read in conjunction with, and should not be considered a replacement for, the consolidated financial statements.

### *The Consolidated Financial Statements*

The Consolidated Statements of Net Position provide information about the nature and amounts of resources with present service capacity that the MTA Group presently controls (assets), consumption of net assets by the MTA Group that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the MTA Group has little or no discretion to avoid (liabilities), and acquisition of net assets by the MTA Group that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position.

The Consolidated Statements of Revenues, Expenses and Changes in Net Position provide information about the MTA’s changes in net position for the period then ended and accounts for all of the period’s revenues and expenses, measures the success of the MTA Group’s operations during the year and can be used to determine how the MTA has funded its costs.

The Consolidated Statements of Cash Flows provide information about the MTA Group’s cash receipts, cash payments and net changes in cash resulting from operations, noncapital financing, capital and related financing, and investing activities.

### *The Fiduciary Funds Financial Statements*

Fiduciary funds are used to account for resources held in a trustee capacity for the benefit of parties outside of a government entity. Fiduciary funds are not reported in the MTA’s consolidated financial statements because the resources of those funds are not available to support the MTA’s own programs. The MTA’s fiduciary funds are collectively reported as Pension and Other Employee Benefit Trust Funds.

The Statements of Fiduciary Net Position presents financial information about the assets, liabilities, and the fiduciary net position held in trust of the fiduciary funds of the MTA.

The Statements of Changes in Fiduciary Net Position presents fiduciary activities of the fiduciary funds as additions and deductions to the fiduciary net position.

### *Notes to the Consolidated Financial Statements*

The notes provide information that is essential to understanding the consolidated financial statements, such as the MTA Group’s accounting methods and policies, details of cash and investments, employee benefits, long-term debt, lease transactions, future commitments and contingencies of the MTA Group, and information about other events or developing situations that could materially affect the MTA Group’s financial position.

### *Required Supplementary Information*

The required supplementary information provides information about the changes in the net pension liability and net other postemployment benefits (“OPEB”) liability, employer contributions for the OPEB and pension plans, actuarial assumptions used to calculate the net pension liability and net OPEB liability, historical trends, and other required supplementary information related to the MTA Group’s cost-sharing multiple-employer defined benefit pension plans.

### *Supplementary Information - Combining Fiduciary Funds Financial Statements*

The supplementary information combining fiduciary funds financial statements includes the combining statements of fiduciary net position and the combining statements of changes in fiduciary net position which provides financial information on each fiduciary fund in which the MTA is functioning as a trustee for another party. The MTA's fiduciary funds are categorized as Pension and Other Employee Benefit Trust Funds.

### *Supplementary Information*

The supplementary information provides a series of reconciliations between the MTA Group's financial plan and the consolidated statements of revenues, expenses and changes in net position.

## CONDENSED CONSOLIDATED FINANCIAL INFORMATION AND CONDENSED CONSOLIDATED FINANCIAL INFORMATION

The following sections discuss the significant changes in the MTA Group's financial position as of and for the years ended December 31, 2022 and 2021. An analysis of major economic factors and industry trends that have contributed to these changes is provided. It should be noted that for purposes of the MD&A, the information contained within the summaries of the consolidated financial statements and the various exhibits presented were derived from the MTA Group's consolidated financial statements.

### Total Assets and Deferred Outflows of Resources, Distinguishing Between Capital Assets, Other Assets and Deferred Outflows of Resources

Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives. Right-of-use assets for leases on building, office space, storage space, equipment and vehicle have been included as a result of the implementation of GASB Statement No. 87, *Leases* with retroactive effect of this adoption as of January 1, 2021. Refer to footnote 2 for additional information.

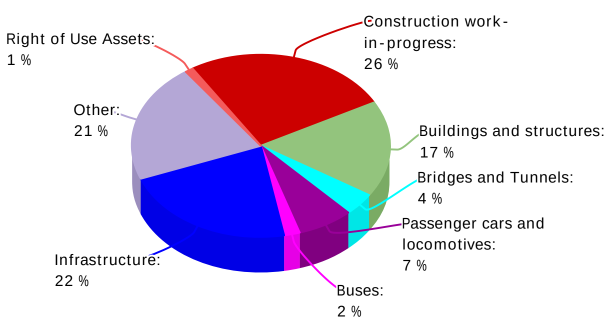
Other assets include, but are not limited to: cash, restricted and unrestricted investments, State and regional mass transit taxes receivables, and receivables from New York State. This also includes the receivable from leases of MTA's land, building, station space, equipment, and right-of-way to third parties as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Deferred outflows of resources reflect: changes in fair market values of hedging derivative instruments that are determined to be effective, unamortized loss on debt refunding, deferred outflows from pension activities, and deferred outflows from OPEB activities.

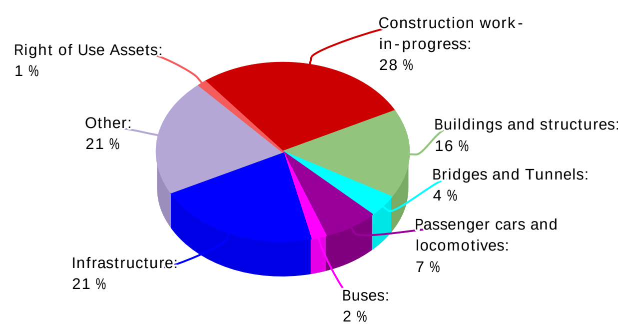
| | December 31, | | | Increase / (Decrease) | |
|---|---|---|---|---|---|
| **(In millions)** | **2022** | **2021** | **2020** | **2022 - 2021** | **2021 - 2020** |
| | | **(Restated)** | | | **(Restated) *** |
| Capital assets — net (see Note 6) | $ 87,506 | $ 84,400 | $ 80,895 | $ 3,106 | $ 3,505 |
| Other assets | 21,138 | 20,355 | 12,899 | 783 | 7,456 |
| Total Assets | 108,644 | 104,755 | 93,794 | 3,889 | 10,961 |
| Deferred outflows of resources | 8,274 | 7,863 | 6,201 | 411 | 1,662 |
| Total assets and deferred outflows of resources | $ 116,918 | $ 112,618 | $ 99,995 | $ 4,300 | $ 12,623 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

Capital Assets, Net - December 31, 2022




Capital Assets, Net - December 31, 2021 (restated)



***Significant Changes in Assets and Deferred Outflows of Resources Include:***

**December 31, 2022 versus December 31, 2021**

- Net capital assets increased at December 31, 2022 by $3,106 or 3.7%. There was an increase in buildings and structures of $2,789, an increase in infrastructure of $2,120, an increase in other capital assets of $1,326, an increase in bridges and tunnels of $253, an increase in passenger cars and locomotives of $155, an increase in buses of $120, an increase in land of $82, and an increase in right-of-use assets of $5. This was offset by a net increase in accumulated depreciation of $2,896, and an increase in amortization of $68 and a decrease in construction in progress of $780. See Note 6 to the MTA's Consolidated Financial Statements for further information. Some of the more significant projects contributing to the net increase included:
  - Continued progress on the East Side Access, Second Avenue Subway and the subway action plan.
  - Infrastructure work including:
    - Repairs and improvements of all MTA Bridge and Tunnels' facilities.
    - Construction of a third track between Floral Park and Hicksville by MTA Long Island Railroad.
    - Improvements to MTA Long Island Railroad's road-assets, replacement of signal power lines, various right-of-way enhancements and upgrades of radio communications.
    - Continued improvements to MTA Metro-North Railroad stations, tracks and structures, power rehabilitation of substations, and security.
    - Subway and bus real-time customer information and communications systems.
    - Continued structural rehabilitation and repairs of the ventilation system at various facilities.
    - Continued passenger station rehabilitation for Penn Station and East Side Access Passenger station.
    - Ongoing work by MTA New York City Transit to make stations fully accessible and structurally reconfigured in accordance with the Americans with Disability Act ("ADA") standards.
- Other assets increased by $783, or 3.8%. The major items contributing to this change include:
  - An increase in cash and investments of $4,172 primarily due to the timing of proceeds received from the American Rescue Plan Assistance grants.
  - An increase in various other current assets and noncurrent assets of $72.

  Offsetting these increases was:

  - A $3,461 net decrease in current receivables, primarily due to Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") funds received during 2022 which were accrued for in 2021.
- Deferred outflows of resources increased by $411, or 5.2%. This was due to an increase of $886 related to OPEB and pensions, primarily due to change in assumptions offset by a decrease in deferred outflows related to pensions based upon the most recent actuarial valuation report in accordance with GASB Statements No. 68, Accounting and Financial Reporting for Pensions, and GASB No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*. Offsetting this increase were decreases in the fair value of derivative instruments of $275 and deferred outflows for unamortized losses on refundings of $200.

**December 31, 2021 versus December 31, 2020**

- Net capital assets increased at December 31, 2021 by $3,505 or 4.3%. There was an increase in construction in progress of $1,602, an increase in other capital assets of $1,160, an increase infrastructure of $1,155, an increase in buildings and structures of $1,225 an increase in right of use assets of $785, of which $97 were new additions during 2021 as a result of the implementation of GASB Statement No. 87, *Leases,* an increase in bridges and tunnels of $195, an increase in passenger cars and locomotives of $127, an increase in buses of $181, and an increase in land of $1. This was offset by a net increase in accumulated depreciation of $2,862, and an increase in amortization of $64. See Note 6 to the MTA's Consolidated Financial Statements for further information. Some of the more significant projects contributing to the net increase included:
  - Continued progress on the East Side Access, Second Avenue Subway and Number 7 Extension Project.
  - Infrastructure work including:
    - Repairs and improvements of all MTA Bridge and Tunnels' facilities.
    - Improvements to MTA Long Island Railroad's road-assets, replacement of signal power lines, various right-of-way

enhancements and upgrades of radio communications.

- ○ Continued improvements to MTA Metro-North Railroad stations, tracks and structures, power rehabilitation of substations, and security.
- ○ Subway and bus real-time customer information and communications systems.
- ○ Continued structural rehabilitation and repairs of the ventilation system at various facilities.

- Continued improvements made to the East River Tunnel Fire and Life Safety project for 1st Avenue, Long Island City and construction of three Montauk bridges.
- Continued passenger station rehabilitations for Penn Station and East Side Access Passenger station.
- Ongoing work by MTA New York City Transit to make stations fully accessible and structurally reconfigured in accordance with the Americans with Disability Act ("ADA") standards.

● Other assets increased by $7,456, or 57.8%. The major items contributing to this change include:

- An increase in investments of $3,432 mainly due to proceeds received from the $4,000 issuance of Grant Anticipation Notes in December 2021.
- An increase in current receivable of $3,820 primarily due to an increase in receivable from the federal government for the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") of $3,523, an increase in State and regional mass transit taxes of $21, an increase in subsidies from New York City for MTA New York City Transit and MTA Bus of $102, an increase in Mortgage Recording Tax of $12, and a decrease in State and local operating assistance of $1. There was also a net increase in various current receivables of $163 partly due to a $33 increase as a result of the adoption of GASB Statement No. 87, *Leases*.
- An increase in non-current receivable of $408 primarily due to the adoption of GASB Statement No. 87, *Leases*.
- An increase in various other current assets of $41, primarily due to an increase in derivative fuel hedge assets of $24.
- A decrease in various other noncurrent assets of $1.
- A decrease in cash of $244 from net cash flow activities.

● Deferred outflows of resources increased by $1,662, or 26.8%. This was due to an increase of $2,216 related to OPEB, primarily due to change in assumptions offset by a decrease in deferred outflows related to pensions of $347 based upon the most recent actuarial valuation report in accordance with GASB Statements No. 68, Accounting and Financial Reporting for Pensions, and GASB No. 71, Pension Transition for Contributions Made Subsequent to the Measurement Date. In addition, there was a decrease in the fair value of derivative instruments of $110 and a decrease in deferred outflows for unamortized losses on refundings of $97.

## Total Liabilities and Deferred Inflows of Resources, Distinguishing Between Current Liabilities, Non-Current Liabilities and Deferred Inflows of Resources

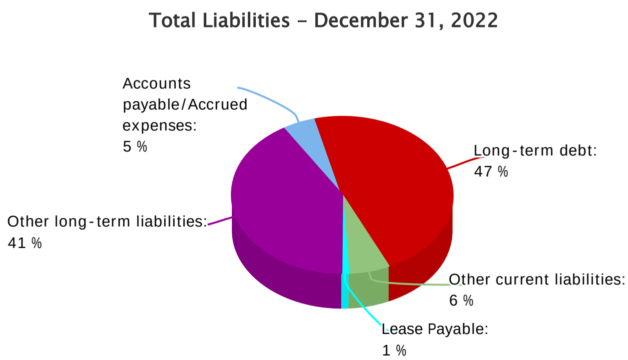
Current liabilities include: accounts payable, accrued expenses, current portion of long-term debt, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities. This also includes the current portion of long-term lease liability as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

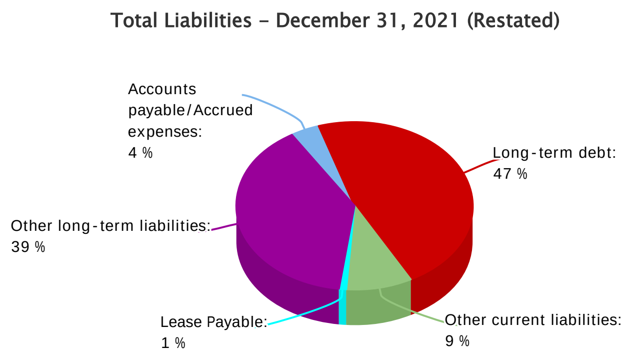
Non-current liabilities include: long-term debt, claims for injuries to persons, post-employment benefits and other non-current liabilities. This also includes the long-term lease liability as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Deferred inflows of resources reflect unamortized gains on debt refunding, pension related deferred inflows, and deferred inflows from OPEB activities. As a result of the implementation of GASB Statement No. 87, *Leases*, a deferred inflow of resources from leases at the amount of the lease receivable was recognized. Refer to footnote 2 for additional information.

| (In millions) | December 31, 2022 | December 31, 2021 (Restated) | December 31, 2020 | Increase/(Decrease) 2022 - 2021 | Increase/(Decrease) 2021 - 2020 (Restated) * |
|---|---|---|---|---|---|
| Current liabilities | $ 10,552 | $ 13,600 | $ 7,184 | $ (3,048) | $ 6,416 |
| Non-current liabilities | 85,375 | 84,775 | 85,263 | 600 | (488) |
| Total liabilities | 95,927 | 98,375 | 92,447 | (2,448) | 5,928 |
| Deferred inflows of resources | 4,074 | 5,102 | 2,565 | (1,028) | 2,537 |
| Total liabilities and deferred inflows of resources | $ 100,001 | $ 103,477 | $ 95,012 | $ (3,476) | $ 8,465 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.




### *Significant Changes in Liabilities and Deferred Inflows of Resources Include:*

**December 31, 2022 versus December 31, 2021**

- Current liabilities decreased by $3,048, or 22.4%. The decrease was primarily due to:
  - A decrease in the current portion of long-term debt of $3,269, primarily from the redemption of MTA Grant Anticipation Notes and MTA Bond Anticipation Notes.
  - Net decreases in accounts payable, accrued expenses and other current liabilities of $150.

  Offsetting increases were:
  - An increase in unearned revenue of $377 due to timing of New York State's funding towards the MTA Capital Program and processing of capital payments.
  - An increase in interest payable of $76, mainly due to timing of interest payments on long-term debt.
- Non-current liabilities increased by $600, or 0.7%. This increase was mainly due to:
  - An increase in net pension liability and post retirement benefits other than pensions of $2,571 due to changes in the actuarial valuation primarily as a result of a decrease in net plan investments.
  - An increase of $311 in estimated liability arising from injuries to persons.

  Offsetting decreases were:
  - A net decrease in the non-current portion of long-term debt of $1,938 due to redemptions and maturities.
  - Decreases in derivative liabilities of $248 resulting mainly from changes in market valuation and a reduction in the notional amount of derivative contracts.
  - A net decrease in other various non-current liabilities of $96.
- Deferred inflows of resources decreased by $1,028, or 20.1%, primarily due to a decrease in deferred inflows related to pensions of $1,939 as a result of changes in the actuarially determined calculations for the pension plans as required by GASB Statement No. 68, an increase in deferred inflows related to OPEB of $962 due to changes in actuarial calculations for OPEB as required by GASB Statement No. 75, and a decrease in other deferred inflows from leases of $44.

**December 31, 2021 versus December 31, 2020**

- Current liabilities increased by $6,416, or 89.3%. The net increase in current liabilities was primarily due to an increase in the current portion of long-term debt of $6,526, due mainly to the issuance of Grant Anticipation Notes of $4,000 in December 2021, which will mature on November 15, 2022, an increase in other accrued expenses of $129, of which $41 relates to GASB 87 implementation, an increase of $65 in employee related accruals, an increase in interest payable of $50, and an increase in financed purchase (see Note 9) of $10. This was offset by a decrease in accounts payable due to vendors of $113, a decrease in unearned premiums of $116, and a decrease in capital accruals of $130, and a decrease in various other current liabilities of $5.
- Non-current liabilities decreased by $488, or 0.6%. This decrease was mainly due to:

- A decrease in the non-current portion of long-term debt of $1,039 primarily due to the movement of early retirement of bond anticipation notes to current liability, as required by GASB Statement No. 62 (see Note 7).
- A decrease in pension liability of $3,460, resulting from actuarial calculations as required by GASB Statement No. 68 (see Note 4).
- A decrease in contract retainage payable of $63.
- A decrease in other long-term liabilities of $73, due to higher employer social security taxes payments in 2021 that were accrued in 2020 under the payroll tax deferral relief offered by the Coronavirus Aid, Relief, and Economic Security (CARES) Act, and a decrease of $21 due the the adoption of GASB Statement No. 87, *Leases* (see Note 2).
- An increase in lease payable and financing agreements of $632, which includes an increase of $636 from the adoption of GASB Statement No. 87, *Leases* (see Note 2).
- An increase in estimated liability arising from injuries to persons (see Note 11) of $373 due to revised actuarial calculations of the workers' compensation reserve.
- A decrease in derivative liability (see Note 8) of $110.
- An increase in net OPEB liability of $3,292 due to changes in actuarial calculations for OPEB as required by GASB Statement No. 75 (see Note 5).

● Deferred inflows of resources increased by $2,537, or 98.9%, primarily due to an increase in deferred inflows related to pensions of $2,198 as a result of changes in the actuarially determined calculations for the pension plans as required by GASB Statement No. 68, an increase in deferred inflows from leases of $342 due to the adoption of GASB Statement No. 87, *Leases* (see Note 2), an increase in deferred inflows related to OPEB of $2 due to changes in actuarial calculations for OPEB as required by GASB Statement No. 75, and a decrease in the gain on refunding of debt of $7.

## Total Net Position, Distinguishing Between Net Investment in Capital Assets, Restricted Amounts, and Unrestricted Amounts

| (In millions) | December 31, 2022 | December 31, 2021 (Restated) | December 31, 2020 | Increase/(Decrease) 2022 - 2021 | Increase/(Decrease) 2021 - 2020 (Restated) * |
|---|---|---|---|---|---|
| Net investment in capital assets | $ 34,886 | $ 29,885 | $ 32,884 | $ 5,001 | $ (2,999) |
| Restricted for debt service | 381 | 1,039 | 480 | (658) | 559 |
| Restricted for claims | 192 | 225 | 287 | (33) | (62) |
| Restricted for other purposes | 4,491 | 1,346 | 1,184 | 3,145 | 162 |
| Unrestricted | (23,033) | (23,354) | (29,852) | 321 | 6,498 |
| Total Net Position | $ 16,917 | $ 9,141 | $ 4,983 | $ 7,776 | $ 4,158 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

### *Significant Changes in Net Position Include:*

**December 31, 2022 versus December 31, 2021**

At December 31, 2022, total net position increased by $7,776, or 85.1%, when compared with December 31, 2021. This change is a result of net non-operating revenues of $14,581 and appropriations, grants and other receipts externally restricted for capital projects of $4,611, which was offset by operating losses of $11,416.

The net investment in capital assets increased by $5,001, or 16.7%. Funds restricted for debt service, claims and other purposes increased by $2,454, or 94.% in the aggregate, mainly due to an increase in funds restricted for other purposes of $3,145, offset by a decrease in funds restricted for debt service of $658. Unrestricted net position increased by $321, or 1.4%.

**December 31, 2021 versus December 31, 2020**

At December 31, 2021, total net position increased by $4,158, or 83.4%, when compared with December 31, 2020. This change is a result of net non-operating revenues of $11,413 and appropriations, grants and other receipts externally restricted for capital projects of $3,789, which was offset by operating losses of $11,044. The total net position includes a restatement of ($2) as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

The net investment in capital assets decreased by $2,999, or 9.1%. Funds restricted for debt service, claims and other purposes increased by $659, or 33.8% in the aggregate, mainly due to a $559 increase in funds restricted for debt service and an increase in funds restricted for other purposes of $162, which was offset by a decrease in funds restricted for claims of $62. Unrestricted net position increased by $6,498, or 21.8%.

### *Condensed Consolidated Statement of Revenues, Expenses and Changes in Net Position*

| (In millions) | December 31, 2022 | December 31, 2021 (Restated) | December 31, 2020 | Increase/(Decrease) 2022 - 2021 | Increase/(Decrease) 2021 - 2020 (Restated) * |
|---|---|---|---|---|---|
| Operating revenues | | | | | |
| Passenger and tolls | $ 6,356 | $ 5,218 | $ 4,265 | $ 1,138 | $ 953 |
| Other | 649 | 561 | 463 | 88 | 98 |
| Total operating revenues | 7,005 | 5,779 | 4,728 | 1,226 | 1,051 |
| Non-operating revenues | | | | | |
| Grants, appropriations and taxes | 8,419 | 7,761 | 6,014 | 658 | 1,747 |
| Other | 8,084 | 5,476 | 4,961 | 2,608 | 515 |
| Total non-operating revenues | 16,503 | 13,237 | 10,975 | 3,266 | 2,262 |
| Total revenues | 23,508 | 19,016 | 15,703 | 4,492 | 3,313 |
| Operating expenses | | | | | |
| Salaries and wages | 6,578 | 6,204 | 6,246 | 374 | (42) |
| Retirement and other employee benefits | 2,890 | 2,264 | 3,054 | 626 | (790) |
| Postemployment benefits other than pensions | 1,892 | 1,865 | 1,677 | 27 | 188 |
| Depreciation and amortization | 3,361 | 3,218 | 3,011 | 143 | 207 |
| Other expenses | 3,700 | 3,272 | 3,030 | 428 | 242 |
| Total operating expenses | 18,421 | 16,823 | 17,018 | 1,598 | (195) |
| Non-operating expenses | | | | | |
| Interest on long-term debt | 1,904 | 1,811 | 1,722 | 93 | 89 |
| Other net non-operating expenses | 18 | 13 | 13 | 5 | - |
| Total non-operating expenses | 1,922 | 1,824 | 1,735 | 98 | 89 |
| Total expenses | 20,343 | 18,647 | 18,753 | 1,696 | (106) |
| Loss before appropriations, grants and other receipts externally restricted for capital projects | 3,165 | 369 | (3,050) | 2,796 | 3,419 |
| Appropriations, grants and other receipts externally restricted for capital projects | 4,611 | 3,789 | 3,582 | 822 | 207 |
| Change in net position | 7,776 | 4,158 | 532 | 3,618 | 3,626 |
| Net position, beginning of year | 9,141 | 4,983 | 4,451 | 4,158 | 532 |
| Restatement of beginning net position - | | | | | |
| Net position, end of year | $ 16,917 | $ 9,141 | $ 4,983 | $ 7,776 | $ 4,158 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

### Revenues and Expenses, by Major Source:

### Years ended December 31, 2022 versus 2021

- Total operating revenues increased by $1,226, or 21.2%. The increase was mainly due to increased ridership on trains and subways, as well as increased tolls from vehicle crossings. Fare and toll revenue had increases of $976 and $162, respectively. Other operating revenues increased by $87 when compared with the same period in 2021 due to higher advertising revenues and higher paratransit reimbursement subsidy.
- Total non-operating revenues increased by $3,266, or 24.7%.
  - Other subsidies increased by $2,608, primarily due to $6,967 from the Federal government's American Rescue Plan Act ("ARPA") to support operations. In 2021, the MTA reported $4,114 from the Federal government's Coronavirus Response and Relief Supplemental Appropriations Act ("CRRSAA"). There was an increase in operating subsidies from New York City of $52. These increases were offset by a decrease in other net non-operating revenues of $249 and a decrease in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of $44.
  - Grants, appropriations, and taxes increased by $658 primarily due to an increase in Metropolitan Mass Transportation Operating Assistance of $354, ,an increase in Urban Tax of $144, an increase in Mansion Tax of $119, an increase in New York City Assistance Fund of $92, an increase in Payroll Mobility Tax of $24, and an increase in Mass Transportation Trust Fund from New York State of $14. This was offset by a decrease in Mortgage Recording Tax of $37, a decrease in Operating Assistance of $37, a decrease in Internet Sales Tax of $14, and a decrease in Build America Bond Subsidy of $1.
- Labor costs increased by $1,027, or 9.9%. The major changes within this category are:

  - Retirement and employee benefits increased by $626 primarily due to changes in the actuarial valuation for pensions under GASB Statement No. 68.
  - Salaries and wages increased by $374 mainly due to an increase in headcount coupled with wage adjustments.
  - Postemployment benefits other than pensions increased by $27 due to changes in the actuarial valuation for OPEB.
- Non-labor operating costs increased by $571, or 8.8%. The variance was primarily due to:
  - An increase in depreciation and amortization of $143, due to more assets placed in service in the current year.
  - An increase in electric power of $126 and fuel of $120 due to higher rates and consumption.
  - An increase in material and supplies of $75, mainly due to higher maintenance and repairs requirements.
  - An increase in paratransit service contracts of $66 primarily due to increased ridership.
  - An increase in maintenance and other operating contracts by $21.
  - A net increase in other various expenses of $21 due to changes in operational requirements.
- Total net non-operating expenses increased by $98, or 5.4% primarily due to an increase in interest on long-term debt and net $15 due to interest on leases from adoption of GASB Statement No. 87, *Leases*.
- Appropriations, grants and other receipts externally restricted for capital projects increased by $822, or 21.7%, mainly due to timing in the availability of Federal and State grants for capital projects.

**Years ended December 31, 2021 versus 2020**

- Total operating revenues increased by $1,051, or 22.2%. This was attributable to the increase in fare and toll revenues of $423 and $530, respectively, mainly due to the lifting of major travel restrictions of the Stay at Home Executive Order issued by New York State governor in March 2020 and a toll increase effective April 11, 2021. Other operating revenues increased by $98 when compared with the same period in 2020 due to higher advertising revenues and higher paratransit reimbursement subsidy.
- Total non-operating revenues increased by $2,262, or 20.6%.
  - The favorable variance of $1,747 in grants, appropriations, and taxes was primarily due to increases in tax-supported subsidies from New York State, New York City and local service areas. There was an increase in Metropolitan Mass Transportation Operating of $683, increase in Payroll Mobility Tax of $247, an increase in Internet Sales Tax of $85, an increase in Mansion Tax of $214, an increase in Mortgage Recording Tax subsidies of $195 due to greater mortgage transactions in the MTA service area, an increase in Urban Tax subsidies of $160, an increase in MTA Aid Trust of $16, an increase in Operating Assistance of $78, an increase in Mass Transportation Trust Fund of $21, and an increase in New York City Assistance Fund $53. The increases were offset by a decrease in Build America Bond subsidy of $5.
  - Other non-operating revenues increased by $515 primarily due to an increase in funds from the Federal government's Coronavirus Response and Relief Supplemental Appropriations Act ("CRRSAA") over CARES funding received in 2020 of $104, an increase in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of $36, an increase in other net non-operating revenues of $276, an increase in Station maintenance of $3, and an increase in subsidies from New York City of $105 for MTA Bus and MTA Staten Island Railway for the deficit funding requirement for MTA Bus.
- Labor costs decreased by $644, or 5.9%. The major changes within this category are:
  - Retirement and employee benefits decreased by $790 primarily due to changes in the actuarial valuation for pensions under GASB Statement No. 68.
  - Salaries and wages decreased by $42 mainly due to a decrease in headcount as a result of retirements and the sustained agency hiring freeze.
  - Postemployment benefits other than pensions increased by $188 due to changes in the actuarial valuation for OPEB.
- Non-labor operating costs increased by $449, or 7.4%. The variance was primarily due to:
  - An increase in claims arising from injuries to persons of $189 based on the most recent actuarial valuations.
  - An increase in depreciation and amortization of $207 (including $64 from the adoption of GASB Statement No. 87, *Leases*) due to more assets placed in service in the current year.
  - An increase in paratransit service contracts of $20 primarily due to increased ridership.

  - An increase in professional service contracts of $65 primarily due to changes in consulting service requirements.
  - An increase in electric power of $45 and fuel of $60 due to higher rates and consumption.
  - An increase in insurance of $31 due to changes in property and liability reserve requirements.
  - A decrease in material and supplies by $57, mainly due to revised maintenance and repairs requirements for transit and commuter systems.
  - A decrease in pollution remediation projects of $86 primarily due to identification of additional areas of exposure requiring environmental remediation in 2020.
  - A decrease in maintenance and other operating contracts by $70, including a decrease of $66 from adoption of GASB Statement No. 87, *Leases*.
  - A net increase in other various expenses of $46 due to changes in operational requirements.
- Total net non-operating expenses increased by $89, or 5.1% primarily due to an increase in interest on long-term debt.
- Appropriations, grants and other receipts externally restricted for capital projects increased by $207, or 5.8%, mainly due to timing in the availability of Federal and State grants for capital projects.

## OVERALL FINANCIAL POSITION AND RESULTS OF OPERATIONS AND IMPORTANT ECONOMIC CONDITIONS

### *Economic Conditions*

Metropolitan New York is the most transit-intensive region in the United States, and a financially sound and reliable transportation system is critical to the region's economic well-being. The MTA consists of urban subway and bus systems, suburban rail systems, and bridge and tunnel facilities, all of which are affected by a myriad of economic forces. To achieve maximum efficiency and success in its operations, the MTA must identify economic trends and continually implement strategies to adapt to changing economic conditions.

MTA system-wide utilization for 2022 exceeded the depths experienced in 2020, with ridership up by 589.3 million trips (61.8%) over the 2020 ridership level. Year-over-year improvements continued, with 2022 exceeding 2021 ridership levels by 332.0 million trips (27.4%), with ridership during the fourth quarter of 2022 up 40.9 million trips (10.9%) compared with the fourth quarter of 2021. For the fourth quarter compared with the fourth quarter of 2021, MTA New York City Transit subway ridership increased by 33.9 million trips (13.9%), MTA New York City Transit bus decreased by 72 thousand trips (-0.1%), MTA Long Island Rail Road ridership increased by 2.9 million trips (25.3%), MTA Metro-North Railroad increased by 3.6 million trips (34.4%), MTA Bus increased by 423 thousand trips (2.0%), and MTA Staten Island Railway increased by 32 thousand trips (6.3%). Vehicle traffic at MTA Bridges and Tunnels facilities in 2022 exceeded 2020 levels by 73.1 million crossings (28.9%), and B&T traffic in the fourth quarter, compared with the fourth quarter of 2021, was up 1.4 million crossings (1.7%).

The Central Business District Tolling Program (CBDTP) was authorized by the MTA Reform and Traffic Mobility Act and enacted in April 2019. The CBDTP will impose a toll for vehicles entering or remaining in the Central Business District (CBD), which is defined as Manhattan south of and inclusive of 60th Street, not including the FDR Drive or the West Side Highway (which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street). If implemented, changes in travel patterns are predicted as drivers to the CBD may avoid the toll by switching to transit or other modes, taking alternative routes, or not making the trip. On August 10, 2022, the Environmental Assessment (EA) was released for public review as part of the formal public comment period, which also included six public hearings, and meetings of the Environmental Justice Technical Advisory Group and Environmental Justice Stakeholder Working Group. Subsequent to the closing of the public comment period on September 23, 2022, the FHWA and MTA began and are currently coordinating to review and respond to each of the thousands of comments received. Taking into account the EA analysis, the comments and responses to them, and any modifications as a result of those comments, FHWA will then determine whether there are no significant effects or whether any significant effects have been mitigated so they are no longer significant. If a favorable decision is issued by FHWA, a Finding of No Significant Impact (FONSI) will be issued and the notice to proceed to our contractor can follow. The contractor will have up to 310 days to complete the design, development, installation, and testing, and then commence toll collection.

Seasonally adjusted non-agricultural employment in New York City for the fourth quarter was higher in 2022 than in 2021 by 215.4 thousand jobs (4.9%). On a quarter-to-quarter basis, New York City employment gained 27.5 thousand jobs (0.6%), the tenth consecutive quarterly increase. These increases were preceded by the steep decline of 891.4 thousand jobs (19.0%) during the second quarter of 2020.

National economic growth, as measured by Real Gross Domestic Product ("RGDP"), increased at an annualized rate of 2.7% in the fourth quarter of 2022, according to the most recent advance estimate released by the Bureau of Economic Analysis; in the third quarter of 2022, the revised RGDP increased 3.2%. The increase in fourth quarter real GDP reflected increases in private inventory investment, consumer spending, nonresidential fixed investment, federal government spending, and state and local government spending. These were partially offset by decreases residential fixed investment and exports. Imports, which are a subtraction in the calculation of GDP, decreased. The increase in private inventory investment was led by manufacturing, mainly petroleum and coal products, as well as mining, utilities, and construction industries. The increase in consumer spending reflected an increase in services that was partly offset by a decrease in goods. Within services, the increase was led by health care as well as housing and utilities. Within goods, the leading contributor to the decrease was “other” durable goods. Within nonresidential fixed investment, increases in intellectual property products and structures were partly offset by a decrease in equipment. Within federal government spending, the increase was led by nondefense spending. The increase in state and local government spending primarily reflected an increase in compensation of state and local government employees. Within residential fixed investment, the leading contributors to the decrease were new single-family construction and brokers’ commissions. Within exports, a decrease in goods was partly offset by an increase in services (led by travel as well as transport). Within imports, a decrease in goods, led by durable consumer goods, was partly offset by an increase in services, led by travel.

The New York City metropolitan area’s price inflation rate, as measured by the Consumer Price Index for All Urban Consumers (“CPI-U”), was lower than the national average in the fourth quarter of 2022, with the metropolitan area index increasing 6.1% while the national index increased 7.1% when compared with the fourth quarter of 2021. Regional prices for energy products increased 15.3%, and national prices of energy products rose 12.7%. In the metropolitan area, the CPI-U exclusive of energy products increased by 5.5%, while nationally, inflation exclusive of energy products increased 6.7%. The New York Harbor spot price for conventional gasoline increased more steeply, by 16.0%, from an average price of $2.36 per gallon to an average price of $2.74 per gallon between the fourth quarters of 2021 and 2022.

In its announcement on February 1, 2023, the Federal Open Market Committee (“FOMC”) raised its target for the Federal Funds rate to the 4.50% to 4.75% range, the seventh increase since March 2022. The Federal Funds rate target had been in the 0.00% to 0.25% range from March 15, 2020 through March 16, 2022, when the FOMC increased the target to the 0.25% to 0.50% range. The target was further increased to the 0.75% to 1.00% range on May 4, 2022, to the 1.50% to 1.75% range on June 15, 2022, to the 2.25% to 2.50% range on July 27, 2022, to the 3.00% to 3.25% range on September 21, 2022, to the 3.75% to 4.00% range on November 2,2022, to the 4.25% to 4.50% range on December 14, 2022, and most recently to the 4.5% to 4.75% range on February 1, 2023. In support of its actions, FOMC noted that job gains have remained robust, the unemployment rate has remained low, and inflation remains elevated and reflects supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures. Russia’s war in Ukraine, in addition to the tremendous human and economic hardship it is causing, has created additional upward pressure on inflation and is weighing on global economic activity. In addition to increases in the Federal Funds rate target, the FOMC since May has been reducing its holdings of Treasury securities and agency mortgage-backed securities. The FOMC seeks to achieve maximum employment, with achieving a two percent inflation rate over the longer term and is prepared to adjust the stance of its monetary policy as appropriate if risks emerge that could impede its employment and inflation goals based on assessments of the economic outlook, considering information on public health, labor market conditions, inflation pressures and expectations, and financial and international developments.

Banking conditions are currently under higher stress as Silicon Valley Bank and Signature Bank have entered receivership and the Federal Reserve has proactively moved to protect the health of the overall system from a contagion event. This situation is being monitored.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (“CARES”) Act was signed into law and provided $4.0 billion in funding to the MTA. The Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (“CRRSAA”) became law on December 27, 2020, and provided the MTA with $4.1 billion in aid. On March 11, 2021, the American Rescue Plan Act of 2021 (“ARPA”) was signed in law, with the MTA receiving $6.9 billion in aid from ARPA.

The influence of the Federal Reserve’s monetary policy on the mortgage market is a matter of interest to the MTA, since variability of mortgage rates can affect real estate transactions and thereby impact receipts from the Mortgage Recording Taxes (“MRT”) and the Urban Taxes, two important sources of MTA revenue. While real estate transaction activity initially was severely impacted by social distancing and the economic disruption caused by the COVID-19 pandemic, demand for suburban residential real estate, along with mortgage rates that were historically low until recently, significantly strengthened mortgage activity and refinancing of existing mortgages. Mortgage Recording Tax collections in the fourth quarter of 2022 were lower than the fourth quarter of 2021 by $52.0 million (32.0%). Average monthly receipts in the fourth quarter of 2022 were $9.6 million (15.1%) lower than the monthly average for 2006, just prior to the steep decline in Mortgage Recording Tax revenues during the Great Recession. MTA’s Urban Tax receipts during the fourth quarter of 2022—which are derived from commercial real estate transactions and mortgage recording activity within New York City and can vary significantly from quarter to quarter based on the timing of exceptionally high-priced transactions—were $9.8 million (7.8%) lower than receipts during the fourth quarter of 2021. Average monthly receipts in the fourth quarter of 2022 were $12.8 million (17.4%) lower than the monthly average for 2007, just prior to the steep decline in Urban Tax revenues during the Great Recession.

***Results of Operations***

*MTA Bridges and Tunnels* - For the twelve months ended December 31, 2022, operating revenue from tolls totaled $2,332, which was $162, or 7.47%, higher than the twelve months of 2021. Total crossings in 2022 were 326.3 million versus 307.3

million crossings in 2021, an increase of 6.2%. Traffic continued to recover from the impacts of the Covid-19 pandemic but is still below pre-pandemic levels.

*MTA New York City Transit* - Total revenue from fares was $2,951 in 2022, an increase of $604 or 25.7% from 2021. Total ridership was 1,334 million, an increase of 254 or 23.5% from 2021. Total operating expenses, including depreciation, other post-employment benefits and environmental remediation expenses, were $11,792 in 2022, an increase of $1,295 or 12.3%.

*MTA Long Island Rail Road* – Total operating revenue for the twelve months ended December 31, 2022 was $492, which was higher by $168, or 51.9%, compared to twelve months ended December 31, 2021. For the same comparative period, operating expenses were higher by $99, or 4.8%, totaling $2,156 for the twelve months ended December 31, 2022.

*MTA Metro-North Railroad* – For the twelve months ended December 31, 2022, operating revenues totaled $487, an increase of $198, or 68.2%, compared to December 31, 2021. During the same period, operating expenses increased by $104, or 6.0%, to $1,839. Passenger fares accounted for 91.97% and 90.65% of operating revenues in 2022 and 2021, respectively. The remaining revenue represents rental income from retail businesses in and around passenger stations and from advertising revenues.

The MTA receives the equivalent of four quarters of Metropolitan Mass Transportation Operating Assistance ("MMTOA") receipts each year, with the state advancing the first quarter of each succeeding calendar year's receipts in the fourth quarter of the current year. This results in little or no Metropolitan Mass Transportation Operating Assistance receipts being received during the first quarter of each calendar year. The MTA has made other provisions to provide for cash liquidity during this period. During April 2022, the State appropriated $2.6 billion in MMTOA funds. There has been no change in the timing of the State's payment of, or MTA's receipt of, Dedicated Mass Transportation Trust Fund ("MTTF") receipts, which MTA anticipates will be sufficient to make monthly principal and interest deposits into the Debt Service Fund for the Dedicated Tax Fund Bonds. The total MRT for the year ended December 31, 2022 was $622.9 compared to $659.7 at December 31, 2021.

### *Capital Programs*

At December 31, 2022, $18,076 had been committed and $4,283 had been expended for the 2020-2024 MTA Bridges and Tunnels Capital Program, $30,606 had been committed and $23,372 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and $29,403 had been committed and $27,477 had been expended for the combined 2010- 2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and $24,117 had been committed and $23,971 had been expended for the combined 2005- 2009 MTA Capital Programs and the 2005-2009 MTA Bridges and Tunnels Capital Program.

The MTA Group has ongoing capital programs, which except for MTA Bridges and Tunnels are subject to the approval of the Metropolitan Transportation Authority Capital Program Review Board ("CPRB"), and are designed to improve public transportation in the New York Metropolitan area.

*2020-2024 Capital Program* – Capital programs totaling $54,799 covering the years 2020-2024 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro- North Railroad (the "2020–2024 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2020–2024 Transit Capital Program") were originally approved by the MTA Board on September 25, 2019. The capital programs were subsequently submitted to the Capital Program Review Board ("CPRB") on October 1, 2019 and approved on January 1, 2020. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the "2020–2024 MTA Bridges and Tunnels Capital Program") was approved by the MTA Board on September 25, 2019 and was not subject to CPRB approval. On December 15, 2021, the MTA Board approved an amendment to increase the 2020-2024 Capital Program by $535 million to support the Penn Station Access project. On July 27, 2022 the MTA Board approved an amendment to increase the 2020-2024 Capital Program by

$108 million to reflect addition of new projects, additional support for existing projects and changes to existing project budgets. The capital programs were subsequently submitted to the CPRB on August 1, 2022 and approved on August 30, 2022. The revised 2020-2024 MTA Bridges and Tunnels Capital Program totaling $3,327 as approved by the MTA Board on July 27, 2022, was not subject to CPRB approval.

By December 31, 2022, the revised 2020-2024 Capital Programs provided $55,442 in capital expenditures. The combined funding sources for the 2020–2024 MTA Capital Programs and the 2020- 2024 MTA Bridges and Tunnels Capital Program, include $15,000 in Central Business District tolling sources, $10,000 in new revenue sources, $8,041 in MTA bonds and PAYGO, $3,327 in MTA Bridges and Tunnels bonds, $12,424 in Federal funds, $3,101 in State of New York funding, $3,007 in City of New York funding, and $542 in other contributions.

*2015-2019 Capital Program* — Capital programs covering the years 2015-2019 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the "2015–2019 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2015–2019 Transit Capital Program") were originally approved by the MTA Board in September 2014. The capital programs were subsequently submitted to the Capital Program Review Board ("CPRB") in October 2014. This plan was disapproved by the CPRB, without prejudice, in October 2014.The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the “2015–2019 MTA Bridges and Tunnels Capital Program”) was approved by the MTA Board in September 2014 and was not subject to CPRB approval.

On April 20, 2016, the MTA Board approved revised capital programs for the years covering 2015-2019. The revised capital programs provided for $29,456 in capital expenditures. On May 23, 2016, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program, was approved by the MTA Board on April 20, 2016. On February 23, 2017, the MTA Board approved a revision to the CPRB portion of the capital programs for the years covering 2015-2019, adding $119 transferred from prior capital programs to support additional investment projects. On March 30, 2017, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. On May 24, 2017, the MTA Board approved a full amendment to the 2015-2019 Capital Programs to reflect updated project estimates and rebalanced programs to address budgetary and funding needs of priority projects that include Second Avenue Subway Phase 2, MTA Long Island Rail Road regional mobility, station enhancement work, investments at Penn Station, and new Open Road Tolling at MTA Bridges and Tunnels. On July 31, 2017, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems totaling $29,517, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling $2,940, as approved by the MTA Board in May 2017, was not subject to CPRB approval. On December 13, 2017, the MTA Board approved an amendment adding $349 to the 2015-2019 Capital Program for the Transit system in support of the NYC Subway Action Plan. On April 25, 2018, the MTA Board approved a full amendment to increase the 2015-2019 Capital Programs to

$33,270 reflecting updated project cost estimates, emerging new needs across the agencies, and reallocation of funds within the East Side Access and Regional Investment programs, among others. On May 31, 2018, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems totaling $30,334, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling $2,936, as approved by the MTA Board in April 2018, was not subject to CPRB approval. On September 25, 2019, the MTA Board approved a full amendment to increase the 2015-2019 Capital Program to $33,913 reflecting updated project timing and cost estimates, new needs, and changing priorities. On February 21, 2020, the CPRB deemed approved the revised 2015-2019 Capital Program for the Transit and Commuter systems totaling $30,977, as submitted. The revised 2015- 2019 MTA Bridges and Tunnels Capital Program totaling $2,936, as approved by the MTA Board in September 2019, was not subject to CPRB approval.

By December 31, 2022, the revised 2015-2019 Capital Programs provided $33,969 in capital expenditures, of which $16,749 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; $6,142 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; $7,507 relates to the expansion of existing rail networks for both the transit and commuter systems; $258 relates to Planning and Customer Service; $376 relates to MTA Bus Company initiatives; and $2,935 in capital expenditures for ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities.

The combined funding sources for the revised 2015–2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, include $8,398 in MTA bonds, $2,942 in MTA Bridges and Tunnels dedicated funds, $9,196 in State of New York funding, $7,638 in Federal funds, $2,669 in City of New York funding, $2,156 in pay-as-you-go (“PAYGO”) capital, $806 from asset sale/leases, and $163 from other sources.

*2010-2014 Capital Program* — Capital programs covering the years 2010-2014 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the “2010–2014 Commuter Capital Program”), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the “2010–2014 Transit Capital Program”) were originally approved by the MTA Board in September 2009.The capital programs were subsequently submitted to the CPRB in October 2009.This plan was disapproved by the CPRB, without prejudice, in December 2009 allowing the State Legislature to review funding issues in their 2010 session. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the “2010–2014 MTA Bridges and Tunnels Capital Program”) was approved by the MTA Board in September 2009 and was not subject to CPRB approval. The MTA Board approved the revised plan for the Transit and Commuter systems on April 28, 2010 and CPRB approval of the five- year program of projects was obtained on June 1, 2010. The approved CPRB program fully funded only the first two years (2010 and 2011) of the plan, with a commitment to come back to CPRB with a funding proposal for the last three years for the Transit and Commuter Programs. On December 21, 2011, the MTA Board approved an amendment to the 2010-2014 Capital Program for the Transit, Commuter, and Bridges and Tunnels systems that fund the last three years of the program through a combination of self-help (efficiency improvements and real estate initiatives), participation by our funding partners, and innovative and pragmatic financing arrangements. On March 27, 2012, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted.

On December 19, 2012, the MTA Board approved an amendment to the 2010-2014 Capital Programs for the Transit, Commuter, and Bridges and Tunnels systems to add projects for the repair/restoration of MTA agency assets damaged as a result of Superstorm Sandy, which struck the region on October 29, 2012. On January 22, 2013, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted. On July 22, 2013, the MTA Board approved a further amendment to the 2010-2014 Capital Programs for the Transit, Commuter, and Bridges and Tunnels systems to include specific revisions to planned projects and to include new resilience/mitigation initiatives in response to Superstorm Sandy.

On August 27, 2013, the CPRB deemed approved those amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved an amendment to select elements of the Disaster Recovery (Sandy) and MTA New York City Transit portions of the 2010- 2014 Capital Programs, and a change in the funding plan. On September 3, 2014, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted.

In May 2017, the MTA Board approved an amendment to the 2010-2014 Capital Programs to reflect scope transfers and consolidation between the approved capital programs, and to reflect reductions to the MTA Superstorm Sandy capital projects to match current funding assumptions. This amendment, which provided $29,237 in capital expenditures for the Transit and Commuter systems, was deemed approved by the CPRB as submitted on July 31, 2017.The amended 2010-2014 MTA Bridges and Tunnels Capital Program, which provided $2,784 in capital expenditures, was not subject to CPRB approval. On September 25, 2019, the MTA Board approved an amendment to decrease the 2010-2014 Capital Programs to $31,704 reflecting administrative budget adjustments and updated project cost and timing assumptions. On February 21, 2020, the CPRB deemed approved the revised 2010-2014 Capital Programs for the Transit and Commuter systems totaling $28,917, as submitted. The revised 2010-2014 MTA Bridges and Tunnels Capital Program totaling $2,787, as approved by the MTA Board in September 2019, was not subject to CPRB approval.

By December 31, 2022, the 2010-2014 MTA Capital provided $31,701 in capital expenditures, of which $11,371 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; $3,921 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; $5,861 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; $256 relates to a multi-faceted security program including MTA Police Department; $216 relates to MTA Interagency; $297 relates to MTA Bus Company initiatives; $2,022 relates to the ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities; and $7,757 relates to Superstorm Sandy recovery/mitigation capital expenditures.

The combined funding sources for the CPRB-approved 2010–2014 MTA Capital Programs and 2010– 2014 MTA Bridges and Tunnels Capital Program include $11,701 in MTA Bonds, $2,025 in MTA Bridges and Tunnels dedicated funds, $7,327 in Federal Funds, $132 in MTA Bus Federal and City Match, $611 from City Capital Funds, and $1,531 from other sources. Also included is $770 in State Assistance funds added to re-establish a traditional funding partnership. The funding strategy for Superstorm Sandy repair and restoration assumes the receipt of $6,698 in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), $18 in pay-as-you- go capital, supplemented, to the extent necessary, by external borrowing of up to $887 in additional MTA and MTA Bridges and Tunnels bonds.

*2005-2009 Capital Program* — Capital programs covering the years 2005-2009 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the “2005–2009 Commuter Capital Program”), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the “2005–2009 Transit Capital Program”) were originally approved by the MTA Board in April 2005 and subsequently by the CPRB in July 2005.The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the “2005–2009 MTA Bridges and Tunnels Capital Program”) was approved by the MTA Board in April 2005 and was not subject to CPRB approval. The 2005–2009 amended Commuter Capital Program and the 2005–2009 Transit Capital program (collectively, the “2005–2009 MTA Capital Programs”) were last amended by the MTA Board in July 2008.This latest 2005-2009 MTA Capital Program amendment was resubmitted to the CPRB for approval in July 2008, and was approved in August 2009.

As last amended by the MTA Board, the 2005–2009 MTA Capital Programs and the 2005–2009 MTA Bridges and Tunnels Capital Program, provided for $24,353 in capital expenditures. By December 31, 2022, the 2005-2009 MTA Capital Programs budget increased by $634 primarily due to the receipt of new American Recovery and Reinvestment Act (“ARRA”) funds and additional New York City Capital funds for MTA Capital Construction work still underway. Of the $24,353 provided in capital expenditures, $11,515 relates to ongoing repairs of, and replacements to the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; $3,723 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; $166 relates to certain interagency projects; $7,671 relates generally to the expansion of existing rail networks for both the transit and commuter systems to be managed by the MTA Capital Construction Company (including the East Side Access, Second Avenue Subway and No.7 subway line) and a security program throughout MTA’s transit network; $1,127 relates to the ongoing repairs of, and replacements to, bridge and tunnel facilities operated by MTA Bridges and Tunnels; and $152 relates to capital projects for the MTA Bus.

The combined funding sources for the MTA Board-approved 2005–2009 MTA Capital Programs and 2005– 2009 MTA Bridges and Tunnels Capital Program include $11,189 in MTA and MTA Bridges and Tunnels Bonds (including funds for LaGuardia

Airport initiative), $1,450 in New York State general obligation bonds approved by the voters in the November 2005 election, $7,776 in Federal Funds, $2,823 in City Capital Funds, and $1,097 from other sources.

## CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

### *The 2022 MTA November Financial Plan*

The 2022 MTA November Financial Plan (the "November Plan"), which includes the 2022 November Forecast, the 2023 Final Proposed Budget and a Financial Plan for the years 2023 to 2026, updates the 2022 July Financial Plan (the "July Plan").

***The July Plan*** - The July Plan projected annual balanced budgets through 2024, with unfunded deficits of approximately $2.5 billion in both 2025 and 2026. The balanced budgets were only achieved with the federal COVID relief funds awarded to the MTA, which totaled $15.1 billion since the start of the pandemic. MTA received $4.0 billion in 2020 from the Coronavirus Aid, Relief and Economic Security (CARES) Act, $4.1 billion in 2021 from the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and $6.9 billion in 2022 from the American Rescue Plan Act of 2021 (ARPA).

This federal funding covers the structural imbalance in MTA's finances in the near-term. Without federal COVID relief funds, each year of the Plan would be in substantial deficit. In addition, the deficits in the July Plan would have been higher without the assumed 4% fare and toll increases in 2023 and 2025 that were built into the Plan. The 2026 annual deficit would have reached approximately $3 billion without such increases being implemented.

Since the July Plan, ridership recovery remained steady at about 61% of the pre-pandemic level through the summer, and then moved upwards to 63% in September and 64% in October and is tracking the midpoint projection based on the recent McKinsey updated analysis.

***The November Plan*** - Before the use of federal COVID relief funds to offset deficits, the July Plan had projected deficits of $2.6 billion in 2022, $2.4 billion in 2023, $2.3 billion in 2024, $2.6 billion in 2025, and $2.6 billion in 2026. These deficits included the favorable impacts from two actions proposed in the July Plan: fare and toll yield increases of four percent effective in both March 2023 and March 2025, which were expected to generate $1.5 billion through 2026; and operating efficiency savings ("Fiscal Baseline Reset") expected to generate $400 million in lower expenses through 2026. The November Plan will use the same ridership forecast that was set forth in the July Plan based on the midpoint ridership recovery derived from the analysis dated July 2022. The November Plan, before the use of federal COVID aid, shows improvement in 2022, but worsening deficits in the out-years of the Plan.

***MTA Operating Efficiencies*** - MTA operating agencies are engaged in an ambitious effort to identify innovative ways of doing business more efficiently and as a result reduce expenses and improve service to customers. Operating Agency and Headquarters leadership have identified concrete initiatives to generate sizeable savings and help address the fiscal cliff. The operating efficiency initiatives will generate $100 million in 2023, increasing to $400 million in 2024, $408 million in 2025 and $416 million in 2026.

***Increase 2023 Fare and Toll Revenue Targets*** - MTA is proposing a 2023 fare and toll increase yielding approximately 5.5% in additional fare and toll revenue. This action is estimated to generate a total of $1,309 million, which includes an additional $350 million over the Plan period and is reflected in Other Below-the-Line Adjustments in the Plan Adjustments section.

***New Government Funding or Additional MTA Actions*** - The 2023 budget assumes $600 million in additional government funding and/or additional MTA actions, both of which have not yet been specified. If no additional government funding is made available, MTA actions could include further expense reduction, additional revenues, or acceleration of federal COVID aid to achieve balance for 2023 that would have otherwise been used to reduce deficits in the years after 2023.

More detailed information on the November Plan can be found in the MTA 2023 Final Proposed Budget – November Financial Plan 2023-2026 Volumes 1 and 2 at www.MTA.info.

### *Impacts from Global Coronavirus Pandemic*

On March 12, 2020, the World Health Organization declared the current novel coronavirus ("COVID-19") outbreak to be a pandemic in the face of the global spread of the virus. By order of Governor Cuomo ("New York State on PAUSE"), effective March 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a severe decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. Social distancing mandates were eased, and the region moved into a late-pandemic phase. A significant development was the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15,2021 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. Ridership levels continue to show improvement, although ridership remains significantly below pre-pandemic levels. MTA New York City Subway resumed 24 hours a day service on May 17, 2021, after subway service was shut down overnight for over a year to allow for thorough disinfecting of the system and other enhancements. MTA Metro-North Railroad currently operates on an 93% pre-pandemic service level during the week and 100% on weekends relative to pre-pandemic levels MTA Long Island Rail Road operated on an 87% pre-pandemic service level through the end of 2022. In January of 2023 the Grand Central Madison terminal was opened for LIRR service. Service was initially run as a shuttle between Jamaica and Grand Central Madison terminals. Full LIRR service to Grand Central Madison began in February. resulting in a 41% increase in overall LIRR service.

- ***Ridership and Traffic Update.*** Daily ridership on MTA facilities continues to be well-below 2019 levels. While ridership has been steadily increasing, ridership compared to the pre-pandemic equivalent day in 2019 is down 32% on the subways, 38% for bus (combined NYCT bus and MTA Bus Company), 36% on MTA Metro-North Railroad, and 38% on the MTA Long Island Rail Road. Traffic crossings at MTA Bridges and Tunnels facilities are closely resembling pre-pandemic levels.
- For additional information, refer to Note 15 to Financial Statements regarding the impact from the COVID-19 pandemic.

### *Tropical Storm Sandy Update*

The total allocation of emergency relief funding from the Federal Transit Administration ("FTA") to MTA in connection with Superstorm Sandy to date is $5.83 billion, including $1.599 billion allocated on September 22, 2014, through a competitive resiliency program. A total of $5.81 billion in FTA Emergency Relief Funding has been executed: seven repair/local priority resiliency grants totaling $4.55 billion and seventeen competitive resiliency grants totaling$1.26 billion. As of December 31, 2022, MTA has drawn down a total of $3.91 billion in grant reimbursement for eligible operating and capital expenses. The balance of funds to be drawn down from all twenty-four grants is available to MTA for reimbursement of eligible expenses as requisitions are submitted by MTA and approved by FTA. Additional requisitions are in process. At MTA and Amtrak's request, in April 2018, FTA transferred $13.5 million of MTA's emergency relief allocation to the Federal Railroad Administration ("FRA") to allow Amtrak to execute a portion of MTA Long Island Rail Road's Competitive Resilience scope.

All MTA-allocated Superstorm Sandy FTA emergency relief funding/grants have been executed.

### *Labor Update*

During the fourth quarter of 2022, the MTA continued to negotiate equitable and financially prudent labor agreements whose economic provisions are patterned after the 2019-2023 agreement reached between New York City Transit and the Transport Workers Union (TWU Local 100). That four-year agreement included wage increases of 2.0% for 2019, 2.25% for 2020, 2.5% for 2021 and 2.75% for 2022 as well as other cost and savings provisions that, together, established the guideposts for collective bargaining with most other unions at all MTA agencies.

The ensuing paragraphs describe in greater detail the terms of new labor agreements, as well as the status of collective bargaining at each MTA agency through December 31, 2022.

***MTA Long Island Rail Road*** – As of December 31, 2022, MTA Long Island Rail Road has approximately 7,229 employees. Approximately 6,433 of the railroad's employees are represented by 8 different unions in 19 bargaining units. Beginning in early 2021, collective bargaining efforts produced several agreements that were ratified and approved by the MTA Board in June of that year. These agreements, reached separately with all MTA Long Island Rail Road unions other than the Brotherhood of Locomotive Engineers and a small group of Supervisors in the International Railway Supervisors Association, covered more than 90% of the represented workforce at MTA Long Island Rail Road. Spanning the two-year period from April 16, 2019 through April 15, 2021, the agreements included identical provisions. They each awarded the same wage increases as the first two years of the current 4-year TWU Local 100 agreement: that is, 2.0% on the first day of the new agreement and an additional 2.25% one year later. They included no other financial terms.

As virtually all these agreements had expired upon ratification by the MTA Board, in the third quarter of 2022 the MTA reached successor deals that mirror the remaining two years of the TWU agreement. All union signatories of the railroad's 2019-2021 agreements, except for the International Brotherhood of Electrical Workers, also signed on for 2021 to 2023. The successor agreements cover the period April 16, 2021 through June 15, 2023 and provide their members the final two wage increases of the TWU pattern: 2.5% for 2021, and 2.75% for 2023. The two-month contract extension is a partial offset to the costs of these increases and has been included to achieve financial consistency with the net cost of the TWU pattern. As such, the recurrent agreement costs are consistent with MTA financial plans.

In December, the MTA Board approved an agreement between LIRR and the Brotherhood of Locomotive Engineers—as mentioned, one of the only unions to decline to sign onto the 2019-2021 agreement. The new agreement provides the terms of the full four-year TWU pattern, covering the period April 16, 2019 through June 15, 2023. Its provisions are identical to those in every other LIRR labor agreement for 2019-2023: wage increases of 2.0% for 2019, 2.25% for 2020, 2.5% for 2021 and 2.75% for 2022. Like all the other agreements, it includes a 2-month contract extension as a partial offset to the cost of the wage increases to maintain consistency with the TWU agreement.

***MTA Metro-North Railroad*** **–** As of December 31, 2022, Metro-North Railroad employs approximately 6,028 people. Among these are approximately 5,222 employees represented by ten different unions.

At the start of the third quarter of 2022, Metro-North Railroad had reached 2-year labor agreements virtually identical to those reached at LIRR with more than 60% of its represented population. These deals, spanning 24-month periods between 2019 and 2021, depending upon varying contract start dates, provided the first two general wage increases common to all earlier railroad agreements: 2.0% for 2019 and 2.25% for 2020. In July 2022, the MTA Board approved another such agreement between Metro-North Railroad and approximately 385 Locomotive Engineers represented by the Association of Commuter Rail Employees Division 9 (ACRE-9). Like most of the other MNR agreements reached between June 2021 and the end of June 2022, the ACRE-9 agreement covered a lapsed period; therefore, around 60% of the railroad's represented population was seeking new agreement terms.

In the third quarter of 2022, the MTA was able to pass five successor agreements with more than 1,700 represented Metro-North employees [1]. These agreements follow the TWU-pattern wage increases (2.5% and 2.75%, respectively, for 2021 and 2022); and they include, as a partial offset, a two-month contract extension. Except for contract start and end dates, the terms of these deals are identical to those reached with the railroad unions at LIRR for 2021-2023.

***MTA Headquarters*** **–** As of December 31, 2022, MTA Headquarters employs approximately 3,358 union members. With the MTA Board's approval of new labor agreements in the fourth quarter, most represented Headquarters employees are currently covered by effective labor agreements.

In October, the Board passed two agreements with the Transportation Communications Union, Local 643, which represents or technically covers approximately 247 Business Service Center employees and Procurement titles. The 50-month agreements, running from April 1, 2020 through March 31, 2024 include the identical wage increase schedule present in the 2019-2023 TWU agreement and in all the pattern-following railroad agreements reached since 2021. The agreements also include, as a partial cost offset, the same two-month contract extension present in the railroad agreements. They are likewise consistent with the net cost of the TWU deal and are anticipated in the MTA financial plan.

The October Board also approved an agreement between MTA Headquarters and the Police Benevolent Association (PBA), representing approximately 1,109 active Police Officers, Sergeants, Lieutenants and Detectives. The previous agreement with PBA expired on October 14, 2018. The new deal will cover the 5 year, 6-month period from October 15, 2018 through April 14, 2014 and conforms to the MTA patterns established in earlier negotiations with TWU Local 100 with respect to long-term net costs and anticipated wage increases [2]. The agreement also provides all incumbent employees a $5,000 adjustment to base pay, effective March 1, 2023. All Police Officers hired after ratification, however, will now be subject to a new 10-step wage progression, which will result in significant savings over time through the inclusion of two additional steps, partly offsetting the cost of the pay adjustment. As distinct from incumbents, new hires will not be eligible to receive the $5,000 adjustment until having completed 10 years of service. The wage progressions of newly promoted Sergeants and Lieutenants will also be lengthened, a further savings provision. Also on the savings side, the agreement includes new work rules designed to produce efficiencies for the Police Department by enhancing deployment flexibilities.

***MTA New York City Transit/Manhattan and Bronx Surface Transit Operating Authority*** **–** As of December 31, 2022, MTA New York City Transit and MaBSTOA currently employ approximately 46,644 people, 45,463 of whom are represented by 12 unions with 19 bargaining units. Aside from the TWU Local 100 agreement, which covers approximately 33,000 current hourly employees, resumption of collective bargaining since 2021 has produced several pattern-following agreements, as detailed in previous editions of this report.

In the fourth quarter, three labor new labor agreements received Board approval. In October, an agreement between New York City Transit/Manhattan and Bronx Surface Transit Operating Authority and the United Federation of Law Enforcement Officers (UFLEO), representing approximately 172 employees, was passed. Covering the four-year period from April 1, 2021 through March 31, 2025, it includes wage increases of 2.0% for 2021, 2.25% for 2022, 2.5% for 2023 and 2.75% for 2024. In accordance with UFLEO's collective bargaining agreement, members participate for the first 10 years in the bargaining unit in the hourly health benefits package, and they have consented to the same package of plan changes that was part of the TWU Local 100 agreement. The UFLEO membership has also agreed to the elimination of NYSHIP upon reaching 10 years of service, a concession that affects all current UFLEO members and future retirees. These savings measures offset the costs from new longevity payments and uniform allowances-- provisions that are not directly analogous to those in the most recent TWU deal-- and they thereby ensure that the agreement's net cost matches that of TWU.

In December, the Board ratified two agreements with separate bargaining units of TWU Local 106, the Transit Supervisors Organization ("TSO"), covering: a) eight Station Supervisors, Level II, for the 50-month, 10-day period from April 16, 2020 through October 25, 2024; and b) seventeen Transit Support Coordinators, Levels I and II, for the 50-month, 16-day period from July 14, 2019 through September 30, 2023. The agreements with these 25 employees both include the schedule of wage increases present in the 2019-2023 TWU agreement and also include certain provisions that were included in prior TWU Agreements that the Union sought to extend to its members, such as an enhanced death benefit for Station Supervisors and the provision of Maternity/Paternity leave for the Transit Support Coordinators; in exchange for these provisions the bargaining units have individually agreed to extend their contracts beyond the 2-months common to virtually all other pattern-followers over the period. As such, the agreements maintain consistency with the TWU deal and with the MTA Financial Plan.

In 2020, in response to the COVID-related necessity of delaying collective bargaining, the Amalgamated Transit Unions (Locals 726 and 1056), which represent approximately 3,400 operational employees at MTA New York City Transit, began impasse mediation proceedings to compel a new agreement [3]. The union sought delivery of a full four-year agreement matching the 2019-23 TWU pattern. The Arbitrator of the case issued a decision that upholds the economic provisions of the full four-year TWU agreement. Accordingly, approximately 3,400 members of ATU's 1056 and 726 will receive annual wage increases, retroactive to 2019, of 2.0%, 2.25%, 2.50% and 2.75%. At the end of the fourth quarter, it remained to negotiate the other costs and savings of the TWU-based settlement.

***MTA Bus Company*** – As of December 31, 2022, MTA Bus Company has 3,846 employees, approximately 3,727 of whom are represented by three different unions (now including UTLO) and five bargaining units. The largest of these is TWU Local 100, whose members were co-parties to the agreement approved by the MTA Board in January 2020 and whose current agreement will run through May 14, 2023.

In October, an agreement between MTA Bus Company and the Amalgamated Transit Union, Local 1181 ("ATU-Local 1181") was approved. The four-year agreement will run from November 1, 2019 to October 31, 2023 and will cover approximately 259 hourly employees. The deal includes many of the terms that were present in the 2019 to 2023 TWU Local 100 compact, as most of those provisions are directly applicable to members of ATU Local 1181 members. Its general wage increases are 2.0% for 2019; 2.25% for 2020; 2.5% for 2021; and 2.75% for 2022.

The operational employees represented by the Amalgamated Transit Union ("ATU Local 1179") were party to the arbitration proceedings that included bargaining the ATU bargaining units at NYCT, as described above. As a result of the arbitration ruling, they will also be covered by a TWU-based agreement that will run through October 31, 2023.

***MTA Bridges and Tunnels*** – As of December 31, 2022, MTA Bridges and Tunnels has 905 employees, approximately 718 of whom were represented by three different labor unions (four bargaining units).

As described in the previous edition, after arduous collective bargaining, a settlement was finally reached this year between MTA Bridges and Tunnels and the Superior Officers Benevolent Association, and it was approved by the September 2022 Board. The agreement covers the 126-month (ten and a half year) period from March 15, 2012 through September 14, 2022. During this timeframe, New York City Transit has enacted three agreements with its largest, pattern-setting union, TWU Local 100. The SOBA agreement includes the same schedule of wage increases that were present in these TWU covenants. Members' wages will increase by a compounded 21.6%, relative to 2012 levels: 1.0% for 2012; 1.0% for 2013; 2.0% for 2014; 2.0% for 2015; 2.0% for 2016; 2.5% for 2017; 2.5% for 2018; 2.0% for 2019; 2.25% for 2020; and 2.5% for 2021. Because the three TWU agreements reached since 2012 have covered 136 months, whereas the proposed SOBA agreement covers 126 months, the SOBA deal does not include the final TWU wage increase of 2.75%.

In recognition that the Superior Officers will now principally perform Law Enforcement duties, the new agreement also includes the $6,033 wage adjustment that was provided in the agreement between the Authority and BTOBA members. Accordingly, the parties have agreed on the functional and geographic expansion of law enforcement duties, including whatever enforcement duties are assumed by the Employer as part of the imposition of a congestion zone, subject to 'impact' bargaining obligations imposed by the law. The agreement provides that the employer may assign up to 50% of Sergeants and 50% of Lieutenants to the Fare Evasion Task Force and allows Sergeants and Lieutenants the flexibility to be deployed to different locations from where they start tours. Also included are other measures designed to produce savings: new entrant contributions to health care coverage and a newly structured wage progression for new entrants to the bargaining unit.

At the end of the fourth quarter, labor negotiations continued with B&T's other unions.

***MTA Staten Island Railway*** – As of the fourth quarter of 2022, MTA Staten Island Railway has 349 employees, approximately 332 of whom are represented by four different unions. Three of the four are now covered under effective labor agreements.

In October, the MTA Board ratified an agreement between Staten Island Railway and approximately 25 employees represented by the Transportation Communications Union. Like all the railroad agreements that have covered the 2021-2023 portion of the TWU Local 100 agreement, it provides wage increases 2.5% for 2021 and 2.75% for 2022; and it also includes a 2-month contract extension as a partial savings offset to the agreement's costs. Because members of this bargaining unit were eligible for certain cost and savings provisions that were present in the TWU agreement, this deal includes many of those same provisions. The agreement runs from April 17, 2021 to June 16, 2023.

This financial report is designed to provide our customers and other interested parties with a general overview of MTA finances and to demonstrate MTA's accountability for the funds it receives. If you have any questions about this report or need additional financial information, contact Metropolitan Transportation Authority, Deputy Chief, Controller's Office, 2 Broadway, New York, NY 10004.

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[1] These agreements were with approximately 600 members of the Transportation Communications Union (TCU); approximately 200 employees in the American Airway and Railway Supervisor Association, Maintenance of Equipment Division (ARSA MoE); approximately 70 employees represented by the American Airway and Railway Supervisor Association, Maintenance of Equipment Division (ARSA MoW); approximately 750 employees represented by the International Brotherhood of Teamsters, (IBT Local 808); and approximately 90 employees represented by the National Conference of Firemen and Oilers (NCF&O).

[2] The wage increases are a subset of the increases provided in the 2017-2019 and the 2019-2023 TWU agreements and, as such, have been anticipated in MTA's financial plans.

[3] The Amalgamated Transit Union Local 1179, representing employees at MTA Bus Company, is also a party to the arbitration proceedings.

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**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF NET POSITION

**AS OF DECEMBER 31, 2022 AND 2021**

**($ in millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| **ASSETS AND DEFERRED OUTFLOWS OF RESOURCES** | | |
| CURRENT ASSETS: | | |
| Cash unrestricted (Note 3) | $ 403 | $ 526 |
| Cash restricted (Note 3) | 537 | 256 |
| Unrestricted investments (Note 3) | 9,559 | 6,111 |
| Restricted investments (Note 3) | 1,682 | 5,451 |
| Restricted investments held under financed purchase obligations (Notes 3 and 8) | 101 | 151 |
| Receivables: | | |
| Station maintenance, operation, and use assessments | 113 | 116 |
| State and regional mass transit taxes | 158 | 167 |
| Mortgage Recording Tax receivable | 39 | 63 |
| State and local operating assistance | 10 | 11 |
| Other receivable from New York City and New York State | 180 | 244 |
| Due from Build America Bonds | 3 | 1 |
| Receivable from federal and state government | 81 | 3,555 |
| Other | 904 | 753 |
| Less allowance for doubtful accounts | (372) | (333) |
| Total receivables — net | 1,116 | 4,577 |
| Materials and supplies | 681 | 675 |
| Prepaid expenses and other current assets (Note 2) | 217 | 173 |
| Total current assets | 14,296 | 17,920 |
| NON-CURRENT ASSETS: | | |
| Capital assets (Note 6): | | |
| Land and construction work-in-progress | 22,928 | 23,626 |
| Other capital assets (net of accumulated depreciation and amortization) | 64,578 | 60,774 |
| Unrestricted investments (Note 3) | 2,496 | 1,001 |
| Restricted investments (Note 3) | 3,623 | 739 |
| Restricted investments held under financed purchase obligations (Notes 3 and 8) | 258 | 252 |
| Other non-current receivables | 384 | 424 |
| Receivable from New York State | 10 | 10 |
| Other non-current assets | 71 | 9 |
| Total non-current assets | 94,348 | 86,835 |
| TOTAL ASSETS | 108,644 | 104,755 |
| DEFERRED OUTFLOWS OF RESOURCES: | | |
| Accumulated decreases in fair value of derivative instruments (Note 7) | 109 | 384 |
| Loss on debt refunding (Note 7) | 540 | 740 |
| Deferred outflows related to pensions (Note 4) | 3,181 | 2,706 |
| Deferred outflows related to OPEB (Note 5) | 4,444 | 4,033 |
| TOTAL DEFERRED OUTFLOWS OF RESOURCES | 8,274 | 7,863 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | $ 116,918 | $ 112,618 |

See notes to the consolidated financial statements.

(Continued)

**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF NET POSITION

**AS OF DECEMBER 31, 2022 AND 2021**

**($ in millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| **LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION** | | |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 480 | $ 378 |
| Accrued expenses: | | |
| Interest | 393 | 317 |
| Salaries, wages and payroll taxes | 525 | 575 |
| Vacation and sick pay benefits | 1,106 | 1,113 |
| Current portion — retirement and death benefits | 31 | 37 |
| Current portion — estimated liability from injuries to persons (Note 11) | 567 | 543 |
| Capital accruals | 554 | 511 |
| Other Accrued expenses | 796 | 1,129 |
| Total accrued expenses | 3,972 | 4,225 |
| Current portion — loan payable (Note 7) | 12 | 14 |
| Current portion — long-term debt (Note 7) | 4,800 | 8,069 |
| Current portion — financed purchase (Note 9) | - | 14 |
| Current portion — pollution remediation projects (Note 13) | 40 | 29 |
| Unearned revenues | 1,248 | 871 |
| Total current liabilities | 10,552 | 13,600 |
| NON-CURRENT LIABILITIES: | | |
| Net pension liability (Note 4) | 6,923 | 4,899 |
| Estimated liability arising from injuries to persons (Note 11) | 4,868 | 4,557 |
| Net OPEB liability (Note 5) | 24,956 | 24,409 |
| Loan payable (Note 7) | 71 | 82 |
| Long-term debt (Note 7) | 46,493 | 48,431 |
| Lease Payable (Note 8) | 833 | 881 |
| Financed Purchase (Note 9) | 170 | 178 |
| Pollution remediation projects (Note 13) | 116 | 116 |
| Contract retainage payable | 435 | 416 |
| Derivative liabilities (Note 7) | 144 | 392 |
| Other long-term liabilities | 366 | 414 |
| Total non-current liabilities | 85,375 | 84,775 |
| TOTAL LIABILITIES | 95,927 | 98,375 |
| DEFERRED INFLOWS OF RESOURCES: | | |
| Gain on debt refunding | 24 | 31 |
| Deferred inflows related to leases (Note 8) | 300 | 344 |
| Deferred inflows related to pensions (Note 4) | 1,055 | 2,994 |
| Deferred inflows related to OPEB (Note 5) | 2,695 | 1,733 |
| TOTAL DEFERRED INFLOWS OF RESOURCES | 4,074 | 5,102 |
| NET POSITION: | | |
| Net investment in capital assets | 34,886 | 29,885 |
| Restricted for debt service | 381 | 1,039 |
| Restricted for claims | 192 | 225 |
| Restricted for other purposes (Note 2) | 4,491 | 1,346 |
| Unrestricted | (23,033) | (23,354) |
| TOTAL NET POSITION | 16,917 | 9,141 |
| TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | $ 116,918 | $ 112,618 |

See notes to the consolidated financial statements. (Concluded)

**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

**YEARS ENDED DECEMBER 31, 2022 AND 2021**

**($ in millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| OPERATING REVENUES: | | |
| Fare revenue | $ 4,024 | $ 3,048 |
| Vehicle toll revenue | 2,332 | 2,170 |
| Rents, freight, and other revenue | 649 | 561 |
| Total operating revenues | 7,005 | 5,779 |
| OPERATING EXPENSES: | | |
| Salaries and wages | 6,578 | 6,204 |
| Retirement and other employee benefits | 2,890 | 2,264 |
| Postemployment benefits other than pensions (Note 5) | 1,892 | 1,865 |
| Electric power | 556 | 430 |
| Fuel | 283 | 163 |
| Insurance | 9 | 26 |
| Claims | 374 | 426 |
| Paratransit service contracts | 412 | 346 |
| Maintenance and other operating contracts | 680 | 660 |
| Professional service contracts | 554 | 503 |
| Pollution remediation projects (Note 12) | 26 | 37 |
| Materials and supplies | 561 | 486 |
| Depreciation and amortization (Note 2) | 3,361 | 3,218 |
| Other | 245 | 195 |
| Total operating expenses | 18,421 | 16,823 |
| OPERATING LOSS | (11,416) | (11,044) |
| NON-OPERATING REVENUES (EXPENSES): | | |
| Grants, appropriations and taxes: | | |
| Tax-supported subsidies — NYS: | | |
| Mass Transportation Trust Fund subsidies | 597 | 583 |
| Metropolitan Mass Transportation Operating Assistance subsidies | 2,601 | 2,247 |
| Payroll Mobility Tax subsidies | 2,032 | 2,008 |
| MTA Aid Trust Account subsidies | 264 | 264 |
| Internet sales tax subsidies | 331 | 345 |
| Tax-supported subsidies — NYC and Local: | | |
| Mortgage Recording Tax subsidies | 623 | 660 |
| Urban Tax subsidies | 657 | 513 |
| Mansion Tax | 513 | 394 |
| Other subsidies: | | |
| Operating Assistance - 18-B program | 373 | 410 |
| Build America Bond subsidy | 83 | 84 |
| New York City Assistance Fund | 345 | 253 |
| Total grants, appropriations and taxes | $ 8,419 | $ 7,761 |

See notes to the consolidated financial statements. (Continued)

**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

**YEARS ENDED DECEMBER 31, 2022 AND 2021**

**($ In millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| NON-OPERATING REVENUES (EXPENSES): | | |
| Connecticut Department of Transportation | $ 248 | $ 292 |
| Subsidies paid to Dutchess, Orange, and Rockland Counties | (18) | (13) |
| Interest on long-term debt (Note 2) | (1,904) | (1,811) |
| Station maintenance, operation and use assessments | 188 | 177 |
| Operating subsidies recoverable from NYC | 535 | 483 |
| Federal Transit Administration reimbursement related to ARPA and CRRSAA | 6,967 | 4,114 |
| Other net non-operating revenues | 146 | 410 |
| Net non-operating revenues | 14,581 | 11,413 |
| GAIN BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS | 3,165 | 369 |
| APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS | 4,611 | 3,789 |
| CHANGE IN NET POSITION | 7,776 | 4,158 |
| NET POSITION— Beginning of year | 9,141 | 4,983 |
| NET POSITION — End of year | $ 16,917 | $ 9,141 |

See notes to the consolidated financial statements.

(Concluded)

**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF CASH FLOWS

**YEARS ENDED DECEMBER 31, 2022 AND 2021**

**($ In millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Passenger receipts/tolls | $ 6,351 | $ 5,219 |
| Rents and other receipts | 830 | 226 |
| Payroll and related fringe benefits | (10,113) | (10,334) |
| Other operating expenses | (2,996) | (3,073) |
| Net cash used by operating activities | (5,928) | (7,962) |
| CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES: | | |
| Grants, appropriations, and taxes | 8,552 | 7,837 |
| Operating subsidies from CDOT | 246 | 285 |
| Subsidies paid to Dutchess, Orange, and Rockland Counties | (21) | (13) |
| Federal Transit Administration reimbursement related to COVID-19 | 9,805 | 593 |
| Other non-capital financing activities | (5) | 1 |
| Internet and Mansion Tax | 853 | 719 |
| Net cash provided by noncapital financing activities | 19,430 | 9,422 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| MTA bond proceeds | 820 | 1,648 |
| MTA Bridges and Tunnels bond proceeds | 7,413 | 3,595 |
| MTA bonds refunded/reissued | (2,686) | (1,770) |
| MTA Bridges and Tunnels bonds refunded/reissued | (330) | - |
| MTA anticipation notes proceeds | - | 4,000 |
| MTA anticipation notes redeemed | (8,089) | (1,250) |
| MTA credit facility proceeds | - | 720 |
| MTA credit facility refunded | (1,196) | (1) |
| Federal and local grants | 2,775 | 1,700 |
| Other capital financing activities | 957 | 1,498 |
| Payment for capital assets | (6,231) | (5,223) |
| Debt service payments | (2,906) | (3,136) |
| Receipts from leases | 42 | 40 |
| Payments from leases | (94) | (82) |
| Net cash (used by) / provided by capital and related financing activities | (9,525) | 1,739 |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Purchase of long-term securities | (18,106) | (12,297) |
| Sales or maturities of long-term securities | 9,554 | 10,604 |
| Net sales (purchases) or maturities of short-term securities | 4,619 | (1,802) |
| Earnings on investments | 114 | 52 |
| Net cash used by investing activities | (3,819) | (3,443) |
| NET INCREASE / (DECREASE) IN CASH | 158 | (244) |
| CASH — Beginning of year | 782 | 1,026 |
| CASH — End of year | $ 940 | $ 782 |

See notes to the consolidated financial statements.

(Continued)

**(A Component Unit of the State of New York)**

## CONSOLIDATED STATEMENTS OF CASH FLOWS

**YEARS ENDED DECEMBER 31, 2022 AND 2021**

**($ In millions)**

| | Business-Type Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021 (Restated)** |
| RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES: | | |
| Operating loss (Note 2) | $ (11,416) | $ (11,044) |
| Adjustments to reconcile to net cash used in operating activities: | | |
| Depreciation and amortization | 3,361 | 3,218 |
| Net increase in payables, accrued expenses, and other liabilities | 2,048 | 855 |
| Net increase / (decrease) in deferred outflows related to pensions | 475 | (347) |
| Net increase in deferred outflows related to OPEB | 411 | 2,216 |
| Net increase / (decrease) in deferred inflows related to pensions | 1,938 | (2,197) |
| Net decrease in deferred inflows related to OPEB | (962) | (3) |
| Net (decrease) / increase in net pension liability and related accounts | (2,023) | 3,460 |
| Net decrease in net OPEB liability and related accounts | (547) | (3,293) |
| Net increase / (decrease) in receivables | 861 | (809) |
| Net decrease in materials and supplies and prepaid expenses | (74) | (18) |
| NET CASH USED BY OPERATING ACTIVITIES | $ (5,928) | $ (7,962) |
| NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Noncash investing activities: | | |
| Interest expense includes amortization of net (premium) / discount (Note 2) | $ 202 | $ 251 |
| Noncash capital and related financing activities: | | |
| Capital assets related liabilities | 1,432 | 1,433 |
| Interest expense for leases | 48 | 44 |
| Interest income from leases | 9 | 9 |
| Total Noncash capital and related financing activities | 1,489 | 1,486 |
| TOTAL NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES | $ 1,691 | $ 1,737 |

See notes to the consolidated financial statements.

(Concluded)

(A Component Unit of the State of New York)

## STATEMENTS OF FIDUCIARY NET POSITION PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS AS OF DECEMBER 31, 2022 AND 2021 ($ In thousands)

| | Fiduciary Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021** |
| **ASSETS:** | | |
| Cash | $ 10,985 | $ 39,379 |
| Receivables: | | |
| Employee loans | 26,521 | 26,082 |
| Participant and union contributions | - | (20) |
| Investment securities sold | 1,810 | 5,671 |
| Accrued interest and dividends | 6,011 | 4,882 |
| Other receivables | 2,680 | 3,770 |
| Total receivables | 37,022 | 40,385 |
| Investments at fair value | 9,319,985 | 10,144,509 |
| Total assets | $ 9,367,992 | $ 10,224,273 |
| **LIABILITIES:** | | |
| Accounts payable and accrued liabilities | $ 6,319 | $ 8,315 |
| Payable for investment securities purchased | 9,992 | 14,759 |
| Accrued benefits payable | 76 | 74 |
| Accrued postretirement death benefits (PRDB) payable | 5,719 | 5,405 |
| Accrued 55/25 Additional Members Contribution (AMC) payable | 2,527 | 3,847 |
| Other liabilities | 1,082 | 2,987 |
| Total liabilities | 25,715 | 35,387 |
| **NET POSITION:** | | |
| Restricted for pensions | 9,330,542 | 10,188,803 |
| Restricted for postemployment benefits other than pensions | 11,735 | 83 |
| Total net position | 9,342,277 | 10,188,886 |
| Total liabilities and net position | $ 9,367,992 | $ 10,224,273 |

See notes to the consolidated financial statements.

(A Component Unit of the State of New York)

## STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
## PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS
## FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021
## ($ In thousands)

| | Fiduciary Activities | |
|---|---|---|
| | **December 31, 2022** | **December 31, 2021** |
| **ADDITIONS:** | | |
| Contributions: | | |
| Employer contributions | $ 1,418,340 | $ 1,362,952 |
| Implicit rate subsidy contribution | 57,989 | 52,933 |
| Member contributions | 60,069 | 58,840 |
| Total contributions | 1,536,398 | 1,474,725 |
| Investment income: | | |
| Net in fair value of investments | (872,844) | 1,112,770 |
| Dividend income | 126,737 | 115,369 |
| Interest income | 29,151 | 20,453 |
| Less: | | |
| Investment expenses | 60,081 | 85,192 |
| Investment income, net | (777,037) | 1,163,400 |
| Other additions: | | |
| Total additions | 759,361 | 2,638,125 |
| **DEDUCTIONS:** | | |
| Benefit payments and withdrawals | 1,541,904 | 1,456,931 |
| Implicit rate subsidy payments | 57,989 | 52,933 |
| Transfer to other plans | - | 474 |
| Distribution to participants | - | 2,175 |
| Administrative expenses | 6,077 | 4,434 |
| Total deductions | 1,605,970 | 1,516,947 |
| Net (decrease) / increase in fiduciary net position | (846,609) | 1,121,178 |
| **NET POSITION:** | | |
| Restricted for Benefits: | | |
| Beginning of year | 10,188,886 | 9,067,708 |
| End of year | $ 9,342,277 | $ 10,188,886 |

See notes to the consolidated financial statements.

**(A Component Unit of the State of New York)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**

**($ In millions, except as noted)**

## 1. BASIS OF PRESENTATION

**Reporting Entity —** The Metropolitan Transportation Authority ("MTA") was established in 1965, under Section 1263 of the New York Public Authorities Law, and is a public benefit corporation and a component unit of the State of New York ("NYS") whose mission is to continue, develop and improve public transportation and to develop and implement a unified public transportation policy in the New York metropolitan area.

These consolidated financial statements are of the Metropolitan Transportation Authority ("MTA"), including its related groups (collectively, the "MTA Group"), which are listed below. The Business-Type activities in these consolidated financial statements purport the operations of the MTA Group.

**Metropolitan Transportation Authority and Related Groups (Component Units)**

- Metropolitan Transportation Authority Headquarters ("MTAHQ") provides support in budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services to the related groups listed below.
- The Long Island Rail Road Company ("MTA Long Island Rail Road") provides passenger transportation between New York City ("NYC") and Long Island.
- Metro-North Commuter Railroad Company ("MTA Metro-North Railroad") provides passenger transportation between NYC and the suburban communities in Westchester, Dutchess, Putnam, Orange, and Rockland counties in NYS and New Haven and Fairfield counties in Connecticut.
- Staten Island Rapid Transit Operating Authority ("MTA Staten Island Railway") provides passenger transportation on Staten Island.
- First Mutual Transportation Assurance Company ("FMTAC") provides primary insurance coverage for certain losses, some of which are reinsured, and assumes reinsurance coverage for certain other losses.
- MTA Construction and Development ("MTA Construction and Development") provides oversight for the planning, design and construction of current and future major MTA system-wide expansion projects.
- MTA Bus Company ("MTA Bus") operates certain bus routes in areas previously served by private bus operators pursuant to franchises granted by the City of New York.
- MTA Grand Central Madison Concourse Operating Company ("MTA GCMC") operates and maintains the infrastructure and structures supporting Long Island Rail Road access into Grand Central Terminal.
- MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA Capital Construction, MTA Bus, and MTA GCMC collectively are referred to herein as MTA. MTA Long Island Rail Road and MTA Metro-North Railroad are referred to collectively as the Commuter Railroads.
- New York City Transit Authority ("MTA New York City Transit") and its subsidiary, Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA"), provide subway and public bus service within the five boroughs of New York City.
- Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels") operates seven toll bridges, two tunnels, and the Battery Parking Garage, all within the five boroughs of New York City.

The subsidiaries and affiliates, considered component units of the MTA, are operationally and legally independent of the MTA. These related groups enjoy certain rights typically associated with separate legal status including, in some cases, the ability to issue debt. However, they are included in the MTA's consolidated financial statements as blended component units because of the MTA's financial accountability for these entities and they are under the direction of the MTA Board (a reference to "MTA Board" means the board of MTAHQ and/or the boards of the other MTA Group entities that apply in the specific context, all of which are comprised of the same persons). Under accounting principles generally accepted in the United States of America ("GAAP"), the MTA is required to include these related groups in its financial statements. While certain units are separate legal entities, they do have legal capital requirements and the revenues of all of the related groups of the MTA are used to support the organizations as a whole. The components do not constitute a separate accounting entity (fund) since there is no legal requirement to account for the activities of the components as discrete accounting entities. Therefore, the MTA financial statements are presented on a consolidated basis with segment disclosure for each distinct operating activity. All of the component units publish separate annual financial statements, which are available by writing to the MTA Comptroller, 2 Broadway, 15th Floor, New York, New York 10004.

Although the MTA Group collects fares for the transit and commuter service, they provide and receive revenues from other sources, such as the leasing out of real property assets, and the licensing of advertising. Such revenues, including anticipated revenues from fare increases, are not sufficient to cover all operating expenses associated with such services. Therefore, to maintain a balanced budget, the members of the MTA Group providing transit and commuter service rely on operating surpluses transferred from MTA Bridges and Tunnels, operating subsidies provided by NYS and certain local governmental entities in the MTA commuter district, and service reimbursements from certain local governmental entities in the MTA commuter district and from the State of Connecticut. Non-operating subsidies to the MTA Group for transit and commuter service for the year ended December 31, 2022 and 2021 totaled $8.4 billion and $7.8 billion, respectively.

**Basis of Presentation - Fiduciary Funds** – The fiduciary fund financial statements provide information about the funds that are used to report resources held in trust for retirees and beneficiaries covered by pension plans and other employee benefit trust funds of the MTA. Separate financial statements are presented for the fiduciary funds.

The following MTA fiduciary component units comprise the fiduciary activities of the MTA and are categorized within Pension and Other Employee Benefit Trust Funds.

- Pension Trust Funds
  - MTA Defined Benefit Plan
  - The Long Island Rail Road Company Plan for Additional Pensions (“Additional Plan”)
  - Manhattan and Bronx Surface Transit Operating Authority (“MaBSTOA Plan”)
  - Metro-North Commuter Railroad Company Cash Balance Plan (“MNR Cash Balance Plan”)
- Other Employee Benefit Trust Funds
  - MTA Other Postemployment Benefits Plan (“OPEB” Plan)

These fiduciary statements of the fiduciary funds are prepared using the accrual basis of accounting and a measurement focus on the periodic determination of additions, deductions, and net position restricted for benefits. For reporting purposes, the financial results of the MNR Cash Balance Plan are not material and therefore not included in the fiduciary statements.

## 2. SIGNIFICANT ACCOUNTING POLICIES

**Basis of Accounting** — The accompanying consolidated financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

The MTA applies Governmental Accounting Standards Board (“GASB”) Codification of Governmental Accounting and Financial Reporting Standards (“GASB Codification”) Section P80, Proprietary Accounting and Financial Reporting.

**New Accounting Standards** —The MTA adopted the following GASB Statement for the year ended December 31, 2022, with retroactive effect of this adoption as of January 1, 2021:

GASB Statement No. 87, *Leases*, was issued to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments’ financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments’ leasing activities.

The MTA evaluated all the requirements under GASB Statement No. 87, *Leases*, and adopted this Statement for the year ended December 31, 2022, and applied the retroactive effect of this adoption by the recognition and measurement of lease assets and liabilities as of January 1, 2021. Net position as of and for the year ended December 31, 2021, was restated and decreased by $2.

The following schedule summarizes the net effect of adopting GASB Statement No. 87, *Leases*, in the Consolidated Statement of Net Position as of December 31, 2021 (in millions):

| | As Previously Stated | GASB 87 Impact | Restated |
|---|---|---|---|
| CURRENT ASSETS: | | | |
| Other Receivables | $ 720 | $ 33 | $ 753 |
| Total receivables — net | 4,544 | 33 | 4,577 |
| Total current assets | 17,887 | 33 | 17,920 |
| NONCURRENT ASSETS: | | | |
| Other capital assets (net of accumulated depreciation and amortization)* | 60,133 | 641 | 60,774 |
| Other non-current receivables | 100 | 324 | 424 |
| Total non-current assets | 85,870 | 965 | 86,835 |
| TOTAL ASSETS | 103,757 | 998 | 104,755 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | 111,620 | 998 | 112,618 |
| CURRENT LIABILITIES: | | | |
| Other Accrued Expenses | 1,088 | 41 | 1,129 |
| Total accrued expenses | 4,184 | 41 | 4,225 |
| Total current liabilities | 13,559 | 41 | 13,600 |
| NON-CURRENT LIABILITIES: | | | |
| Lease payable | - | 881 | 881 |
| Financed purchase | 423 | -245 | 178 |
| Other long-term liabilities | 435 | -21 | 414 |
| Total non-current liabilities | 84,160 | 615 | 84,775 |
| TOTAL LIABILITIES | 97,719 | 656 | 98,375 |
| DEFFERED INFLOWS OF RESOURCES: | | | |
| Deferred inflows related to leases | - | 344 | 344 |
| TOTAL DEFERRED INFLOWS OF RESOURCES | 4,758 | 344 | 5,102 |
| NET POSITION: | | | |
| Net investment in capital assets | 29,899 | -14 | 29,885 |
| Unrestricted | -23,366 | 12 | -23,354 |
| TOTAL NET POSITION | 9,143 | -2 | 9,141 |
| TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | 111,620 | 998 | 112,618 |

**Right of Use Assets and Accumulated Amortization are included in Other Capital Assets, net of accumulated depreciation and amortization on the Statement of Net Position.*

In addition, revenues, expenses and changes in net position for the year ended December 31, 2021 were required to be restated by GASB Statement 87 as follows (in millions):

| | As Previously Stated | GASB 87 Impact | Restated |
|---|---|---|---|
| OPERATING REVENUES: | | | |
| Rents, freight, and other revenue | $557 | $4 | $561 |
| Total operating revenues | 5,775 | 4 | 5,779 |
| OPERATING EXPENSES: | | | |
| Maintenance and other operating contracts | 726 | -66 | 660 |
| Depreciation and amortization * | 3,158 | 60 | 3,218 |
| Other | 196 | -1 | 195 |
| Total operating expenses | 16,830 | -7 | 16,823 |
| OPERATING LOSS | -11,055 | 11 | -11,044 |
| NON-OPERATING REVENUES (EXPENSES) | | | |
| Interest on long-term debt | -1,813 | 2 | -1,811 |
| Other net non-operating revenues / (expenses) | 425 | -15 | 410 |
| Net non-operating revenues | 11,426 | -13 | 11,413 |
| GAIN BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS | 371 | -2 | 369 |
| CHANGE IN NET POSITION | 4,160 | -2 | 4,158 |
| NET POSITION — End of year | 9,143 | -2 | 9,141 |

*Amortization of Right of Use Assets are included in depreciation and amortization on the Statement of Net Position and Statement of Revenues, Expenses and Changes in Net Position.

The following schedule summarizes the cash flow impact of adopting GASB Statement No. 87, Leases in the consolidated statement of cash flows (in millions) for certain leases previously classified as operating and capital leases:

| **Year-ended December 31, 2021** | **As Previously Stated** | **GASB 87 Impact** | **Restated** |
|---|---|---|---|
| **CASH FLOWS FROM OPERATING ACTIVITIES:** | | | |
| Rents and other receipts | $233 | -7 | $226 |
| Other operating expenses | -3,122 | 49 | -3,073 |
| Net cash used by operating activities | -8,004 | 42 | -7,962 |
| **CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:** | | | |
| Other non-capital financing activities | - | 1 | 1 |
| Net cash provided by noncapital financing activities | 9,421 | 1 | 9,422 |
| **CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:** | | | |
| Receipts from leases | - | 40 | 40 |
| Payments from leases | - | -82 | -82 |
| Payment for capital assets | -5,222 | -1 | -5,223 |
| Net cash (used by) / provided by capital and related financing activities | 1,782 | -43 | 1,739 |
| **RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:** | | | |
| Operating loss | -11,055 | 11 | -11,044 |
| Depreciation and amortization | 3,158 | 60 | 3,218 |
| Net (decrease) / increase in receivables | -807 | -2 | -809 |
| Net increase (decrease ) in payables | 882 | -27 | 855 |
| NET CASH USED BY OPERATING ACTIVITIES | -8,004 | 42 | -7,962 |
| **NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:** | | | |
| Capital assets related liabilities | 511 | 922 | 1,433 |
| Interest expense for leases | - | 44 | 44 |
| Interest income from leases | - | 9 | 9 |
| Total Noncash capital and related financing activities | 511 | 975 | 1,486 |

GASB Statement No. 91, *Conduit Debt Obligations*. The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This Statement achieves those objectives by clarifying the existing definition of a conduit debt obligations; establishing that a conduit debt is not a liability of the issuer; establishing standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improving required note disclosures. The adoption of this Statement did not have a material impact on the financial position, results of operations or cash flows of the MTA.

GASB Statement No. 92, *Omnibus 2020*. The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics and includes specific provisions about the following:

- The effective date of Statement No. 87, Leases, and Implementation Guide No. 2019-3, Leases, for interim financial reports
- Reporting of intra-entity transfers of assets between a primary government employer and a component unit defined benefit pension plan or defined benefit other postemployment benefit (OPEB) plan
- The applicability of Statements No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68, as amended, and No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, as amended, to reporting assets accumulated for postemployment benefits
- The applicability of certain requirements of Statement No. 84, Fiduciary Activities, to postemployment benefit arrangements
- Measurement of liabilities (and assets, if any) related to asset retirement obligations (AROs) in a government acquisition
- Reporting by public entity risk pools for amounts that are recoverable from reinsurers or excess insurers

- Reference to nonrecurring fair value measurements of assets or liabilities in authoritative literature
- Terminology used to refer to derivative instruments.

The adoption of this Statement has no material impact on the financial position, results of operations or cash flows of the MTA.

GASB Statement No. 93, *Replacement of Interbank Offered Rates*. Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate (IBOR)—most notably, the London Interbank Offered Rate (LIBOR). As a result of global reference rate reform, LIBOR ceased to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate.The objective of this Statement is to address those and other accounting and financial reporting implications from the replacement of an IBOR.

The adoption of this Statement did not have a material impact on the financial position, results of operations or cash flows of the MTA.

**Accounting Standards Issued but Not Yet Adopted**

GASB has issued the following pronouncements that may affect the future financial position, results of operations, cash flows, or financial presentation of the MTA upon implementation. Management has not yet evaluated the effect of implementation of these standards.

| GASB Statement No. | GASB Accounting Standard | MTA Required Year of Adoption |
|---|---|---|
| 94 | *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* | 2023 |
| 96 | *Subscription-based Information Technology Arrangements* | 2023 |
| 99 | *Omnibus 2022* | 2023 |
| 100 | *Accounting Changes and Error Corrections* | 2024 |
| 101 | *Compensated Absences* | 2024 |

**Use of Management Estimates** — The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the fair value of investments, allowances for doubtful accounts, valuation of derivative instruments, incremental borrowing rate, arbitrage rebate liability, accrued expenses and other liabilities, depreciable lives of capital assets, estimated liability arising from injuries to persons, pension benefits and other postemployment benefits. Actual results could differ significantly from those estimates.

**Principles of Consolidation** — The consolidated financial statements consist of MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, GCMC, FMTAC, MTA Bus, MTA Construction and Development, MTA New York City Transit (including its subsidiary MaBSTOA), and MTA Bridges and Tunnels for years presented in the financial statements. All related group transactions have been eliminated for consolidation purposes.

**Net Position – Restricted for Other Purposes** – This category is classified within net position and includes net investments restricted for financed purchases and MTA Bridges and Tunnels necessary reconstruction reserve.

**Investments** — The MTA Group's investment policies comply with the New York State Comptroller's guidelines for such operating and capital policies. Those policies permit investments in, among others, obligations of the U.S. Treasury, its agencies and instrumentalities, and repurchase agreements secured by such obligations. FMTAC's investment policies comply with New York State Comptroller guidelines and New York State Department of Insurance guidelines.

Investments expected to be utilized within a year of December 31st have been classified as current assets in the consolidated financial statements.

In accordance with the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, investments are recorded on the consolidated statements of net position at fair value, except for commercial paper, certificates of deposit, and repurchase agreements, which are recorded at amortized cost or contract value. All investment income, including changes in the fair value of investments, is reported as revenue on the consolidated statements of revenues, expenses and changes in net position. Fair values have been determined using quoted market values at December 31, 2022 and 2021.

Investment derivative contracts are reported at fair value using the income approach.

**Materials and Supplies** — Materials and supplies are valued at average cost, net of obsolescence reserve at December 31, 2022 and 2021 of $231 and $213, respectively.

**Prepaid Expenses and Other Current Assets** — Prepaid expenses and other current assets reflect advance payment of insurance premiums as well as farecard media related with ticket machines, WebTickets and AirTrain tickets.

**Capital Assets —** Properties and equipment are carried at cost and are depreciated on a straight-line basis over their estimated useful lives. Expenses for maintenance and repairs are charged to operations as incurred. Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA having a minimum useful life of two years and having a cost of more than $25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. Leases recorded under GASB Statement No. 87, *Leases,*are classified as right-of-use assets. Accumulated depreciation and amortization are reported as reductions of capital and right-of-use assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment and 25 to 100 years for infrastructure. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

**Leases** – as a result of the adoption of GASB Statement No. 87, certain lease agreements are classified as financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. Lease receivables and liabilities are measured at the present value of payments expected to be made during the lease term, using an applicable discount rate stated or implicit in the lease and if not available, using incremental borrowing rate at the time of valuation. Lease assets and deferred inflows are amortized on a straight-line basis over the term of the lease.

**Operating and Non-operating Expenses** — Operating and non-operating expenses are recognized in the accounting period in which the liability is incurred. All expenses related to operating the MTA (e.g. salaries, insurance, depreciation, lease amortization, etc.) are reported as operating expenses. All other expenses (e.g. interest on long-term debt, interest on leases, subsidies paid to counties, etc.) are reported as non-operating expenses.

**Pollution remediation projects** —Pollution remediation costs have been expensed in accordance with the provisions of GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (See Note 12). An operating expense provision and corresponding liability measured at current value using the expected cash flow method has been recognized for certain pollution remediation obligations, which previously may not have been required to be recognized, have been recognized earlier than in the past or are no longer able to be capitalized as a component of a capital project. Pollution remediation obligations occur when any one of the following obligating events takes place: the MTA is in violation of a pollution prevention-related permit or license; an imminent threat to public health due to pollution exists; the MTA is named by a regulator as a responsible or potentially responsible party to participate in remediation; the MTA voluntarily commences or legally obligates itself to commence remediation efforts; or the MTA is named or there is evidence to indicate that it will be named in a lawsuit that compels participation in remediation activities.

**Operating Revenues** — Passenger Revenue and Tolls — Revenues from the sale of tickets, tokens, electronic toll collection system, and farecards are recognized as income when tickets or farecards are used. Tickets are assumed to be used in the month of purchase, with the exception of advance purchases of monthly and weekly tickets. When the farecards expire, revenue is recorded for the unused value of the farecards.

MTA Bridges and Tunnel has two toll rebate programs at the Verrazano-Narrows Bridge: the Staten Island Resident (“SIR”) Rebate Program, available for residents of Staten Island participating in the SIR E-ZPass toll discount plan, and the Verrazano-Narrows Bridge Commercial Rebate Program (“VNB Commercial Rebate Program”), available for commercial vehicles making more than ten trips per month using the same New York Customer Service Center (“NYCSC”) E-ZPass account. The VNB Commercial Rebate Program and SIR Rebate Program are funded by the State and MTA.

**Capital Financing** — The MTA has ongoing programs on behalf of its subsidiaries and affiliates, subject to approval by the New York State Metropolitan Transportation Authority Capital Program Review Board (the “State Review Board”), which are intended to improve public transportation in the New York Metropolitan area.

The federal government has a contingent equity interest in assets acquired by the MTA with federal funds and upon disposal of such assets, the federal government may have a right to its share of the proceeds from the sale. This provision has not been a substantial impediment to the MTA’s operations.

**Federal Transit Administration CARES Act —** On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act, also known as the CARES Act, was signed into law in response to the economic fallout of the COVID-19 pandemic. The CARES Act through the Federal Transit Administration’s (“FTA”) formula funding provisions provided the MTA with $4.010 billion of operating assistance. More detailed information about the CARES Act is presented in Note 14 to the consolidated financial statements.

**Coronavirus Response and Relief Supplemental Appropriations Act of 2021** — On December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") was signed into law in response to the economic fallout of the COVID-19 pandemic. CRRSAA, through the FTA's formula funding provision provided the MTA with $4.1 billion of operating assistance. Additional information about the CRRSAA is presented in Note 14 to the consolidated financial statements.

**American Rescue Plan Act ("ARPA") -** On March 11, 2021, President Biden signed into law the American Rescue Plan Act of 2021 ("ARPA"). The $1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. The MTA received $6.1 billion in aid from ARPA in 2022. In September of 2022, Additional Assistance Funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received approximately $769 million in such additional aid.

**Non-operating Revenues**

*Operating Assistance* — The MTA Group receives, subject to annual appropriation, NYS operating assistance funds that are recognized as revenue after the NYS budget is approved and adopted. Generally, funds received under the NYS operating assistance program are fully matched by contributions from NYC and the seven other counties within the MTA's service area.

*Mortgage Recording Taxes ("MRT")* — Under NYS law, the MTA receives capital and operating assistance through a Mortgage Recording Tax ("MRT-1"). MRT-1 is collected by NYC and the seven other counties within the MTA's service area, at the rate of 0.25% of the debt secured by certain real estate mortgages. Effective September 2005, the rate was increased from 25 cents per 100 dollars of recorded mortgage to 30 cents per 100 dollars of recorded mortgage. The MTA also receives an additional Mortgage Recording Tax ("MRT-2") of 0.25% of certain mortgages secured by real estate improved or to be improved by structures containing one to nine dwelling units in the MTA's service area. MRT-1 and MRT-2 taxes are recognized as revenue based upon reported amounts of taxes collected.

- MRT-1 proceeds are initially used to pay MTAHQ's operating expenses. Remaining funds, if any, are allocated 55% to certain transit operations and 45% to the commuter railroads operations. The commuter railroad portion is first used to fund the NYS Suburban Highway Transportation Fund in an amount not to exceed $20 annually (subject to the monies being returned under the conditions set forth in the governing statute if the Commuter Railroads are operating at a deficit).
- The first $5 of the MRT-2 proceeds is transferred to the MTA Dutchess, Orange, and Rockland ("DOR") Fund ($1.5 each for Dutchess and Orange Counties and $2 for Rockland County). Additionally, the MTA must transfer to each County's fund an amount equal to the product of (i) the percentage by which each respective County's mortgage recording tax payments (both MRT-1 and MRT-2) to the MTA increased over such payments in 1989 and (ii) the base amount received by each county as described above. The counties do not receive any portion of the September 1, 2005 increase in MRT-1 from 25 cents per $100 of recorded mortgage to 30 cents. As of December 31, 2022, the MTA paid to Dutchess, Orange and Rockland Counties the 2021 excess amounts of MRT-1 and MRT-2 totaling $7.5.
- In addition, MTA New York City Transit receives operating assistance directly from NYC through a mortgage recording tax at the rate of 0.625% of the debt secured by certain real estate mortgages and through a property transfer tax at the rate of one percent of the assessed value (collectively referred to as "Urban Tax Subsidies") of certain properties.

*Mobility Tax* — In June of 2009, Chapter 25 of the NYS Laws of 2009 added Article 23, which establishes the Metropolitan Commuter Transportation Mobility Tax ("MCTMT"). The proceeds of this tax, administered by the New York State Tax Department, are to be distributed to the Metropolitan Transportation Authority. This tax is imposed on certain employers and self-employed individuals engaging in business within the metropolitan commuter transportation district which includes New York City, and the counties of Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester. This Tax is imposed on certain employers that have payroll expenses within the Metropolitan Commuter Transportation District, to pay at a rate of 0.34% of an employer's payroll expenses for all covered employees for each calendar quarter. The employer is prohibited from deducting from wages or compensation of an employee any amount that represents all or any portion of the MCTMT. The effective date of this tax was March 1, 2009 for employers other than public school district; September 1, 2009 for Public school districts and January 1, 2009 for individuals.

*Supplemental Aid* — In 2009, several amendments to the existing tax law provided the MTA supplemental revenues to be deposited into the AID Trust Account of the Metropolitan Transportation Authority Financial Assistance Fund established pursuant to Section 92 of the State Finance law. These supplemental revenues relate to: 1) supplemental learner permit/license fee in the Metropolitan Commuter Transportation District, 2) supplemental registration fee, 3) supplemental tax on every taxicab owner per taxicab ride on every ride that originated in the City of New York and terminates anywhere within the territorial boundaries of the Metropolitan Commuter Transportation District, and 4) supplemental tax on passenger car rental. This Supplemental Aid Tax is provided to the MTA in conjunction with the Mobility Tax.

*Dedicated Taxes* — Under NYS law, subject to annual appropriation, the MTA receives operating assistance through a portion of the Dedicated Mass Transportation Trust Fund ("MTTF") and Metropolitan Mass Transportation Operating Assistance

Fund ("MMTOA"). The MTTF receipts consist of a portion of the revenues derived from certain business privilege taxes imposed by the State on petroleum businesses, a portion of the motor fuel tax on gasoline and diesel fuel, and a portion of certain motor vehicle fees, including registration and non-registration fees. Effective October 1, 2005, the State increased the amount of motor vehicle fees deposited into the MTTF for the benefit of the MTA. MTTF receipts are applied first to meet certain debt service requirements or obligations and second to the Transit System (defined as MTA New York City Transit and MaBSTOA), MTA Staten Island Railway and the Commuter Railroads to pay operating and capital costs. The MMTOA receipts are comprised of 0.375% regional sales tax, regional franchise tax surcharge, a portion of taxes on certain transportation and transmission companies, and an additional portion of the business privilege tax imposed on petroleum businesses. MMTOA receipts, to the extent that MTTF receipts are not sufficient to meet debt service requirements, will also be applied to certain debt service obligations, and secondly to operating and capital costs of the Transit System, and the Commuter Railroads.

The State Legislature enacts in an annual budget bill for each state fiscal year an appropriation to the MTA Dedicated Tax Fund for the then-current state fiscal year and an appropriation of the amounts projected by the Director of the Budget of the State to be deposited in the MTA Dedicated Tax Fund for the next succeeding state fiscal year. The assistance deposited into the MTTF is required by law to be allocated, after provision for debt service on Dedicated Tax Fund Bonds (See Note 7), 85% to certain transit operations (not including MTA Bus) and 15% to the commuter railroads operations. Revenues from this funding source are recognized based upon amounts of tax reported as collected by NYS, to the extent of the appropriation.

*Build America Bond Subsidy* — The MTA is receiving cash subsidy payments from the United States Treasury equal to 35% of the interest payable on the Series of Bonds issued as "Build America Bonds" and authorized by the Recovery Act. The Internal Revenue Code of 1986 imposes requirements that MTA must meet and continue to meet after the issuance in order to receive the cash subsidy payments. The interest on these bonds is fully subject to Federal income taxation to the bondholder.

*Congestion Zone Surcharges* – In April 2018, the approved 2018-2019 New York State Budget enacted legislation that provided additional sources of revenue, in the form of surcharges and fines, as defined by Article 29-C, Chapter 59 of the Tax Law, to address the financial needs of the MTA. Beginning on January 1, 2019, the legislation imposed the following:

- A surcharge of $2.75 on for-hire transportation trips provided by motor vehicles carrying passengers for hire (or $2.50 in the case of taxicabs that are subject to the $0.50 cents tax on hailed trips that are part of the MTA Aid Trust Account Receipts), other than pool vehicles, ambulance and buses, on each trip that (1) originates and terminates south of and excluding 96th Street in the City of New York, in the Borough of Manhattan (the "Congestion Zone"), (2) originates anywhere in NYS and terminates within the Congestion Zone, (3) originates in the Congestion Zone and terminates anywhere in NYS, or (4) originates anywhere in NYS, enters into the Congestion Zone while in transit, and terminates anywhere in NYS.
- A surcharge of $0.75 cents for each person who both enters and exits a pool vehicle in NYS and who is picked up in, dropped off in, or travels through the Congestion Zone.

The Congestion Zone Surcharges do not apply to transportation services administered by or on behalf of MTA, including paratransit services.

The April 2018 legislation also created the New York City Transportation Assistance Fund, held by MTA. The fund consists of the three sub-accounts, the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account.

- **Subway Action Plan Account –** Funds in this account may be used exclusively for funding the operating and capital costs, and debt service associated with the Subway Action Plan.
- **Outer Borough Transportation Account -** Funds in this account may be used exclusively for funding (1) the operating and capital costs of, and debt service associated with, the MTA facilities, equipment and services in the counties of Bronx, Kings, Queens and Richmond, and any projects improving transportation connections from such counties to Manhattan, or (2) a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels.
- **General Transportation Account -** Funds in this account may be used exclusively for funding the operating and capital costs of MTA. In each case, funds may be used for various operations and capital needs or for debt service and reserve requirements.

*Dedicated Revenues* - In April 2019, the approved 2019-2020 New York State Budget enacted legislation that included new, dedicated revenue streams for the MTA. The additional sources of revenue include a Central Business District Tolling Program. The Central Business District Tolling Program will assess a toll for vehicles entering the Central Business District, defined as south of 60th Street in Manhattan, but will exclude vehicles traveling on the FDR Drive or the West Side Highway, which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street. The Federal Highway Administration has provided MTA guidance to proceed with an environmental assessment, which will allow for the congestion pricing program to proceed.

The enacted State Budget also included provisions for a new Real Property Transfer Tax Surcharge (referred to as the "Mansion Tax") on high-priced residential property sales in New York City and an Internet Marketplace Sales Tax. The Mansion Tax went into effect on July 1, 2019 and increases the transfer tax on a sliding scale by a quarter percent starting at $2, with a combined top rate of 4.15%, on the sale of New York City residential properties valued at $25 or above. The Internet Marketplace Sales Tax went into effect on June 1, 2019 and requires internet marketplace providers to collect and remit sales tax from out of state retailers on their sites that have gross receipts exceeding $500,000 (dollars) and delivering more than one hundred sales into New York State in the previous four quarters. The sales tax will be collected at the normal rate of 4% plus local sales tax.

The proceeds from the Central Business District Tolling Program, the Internet Marketplace Sales Tax and the Real Property Transfer Tax Surcharge will be deposited into the MTA's Central Business District Tolling Program capital lock box and may only be used to support financing of the 2020-2024 Capital Program.

*Operating Subsidies Recoverable from Connecticut Department of Transportation ("CDOT")* — A portion of the deficit from operations relating to MTA Metro-North Railroad's New Haven line is recoverable from CDOT. Under the terms of a renewed Service Agreement, which began on January 1, 2015, and the 1998 resolution of an arbitration proceeding initiated by the State of Connecticut, CDOT pays 100.0% of the net operating deficit of MTA Metro-North Railroad's branch lines in Connecticut (New Canaan, Danbury, and Waterbury), 65.0% of the New Haven mainline operating deficit, and 54.3% of the Grand Central Terminal ("GCT") operating deficit. The New Haven line's share of the net operating deficit for the use of GCT is comprised of a fixed fee, calculated using several years as a base, with annual increases for inflation, and the actual cost of operating GCT's North End Access beginning in 1999. The Service Agreement also provides that CDOT pay 100% of the cost of non-movable capital assets located in Connecticut, 100% of movable capital assets to be used primarily on the branch lines and 65% of the cost of other movable capital assets allocated to the New Haven line. Remaining funding for New Haven line capital assets is provided by the MTA. Capital assets completely funded by CDOT are not reflected in these financial statements, as ownership is retained by CDOT. The Service Agreement provides that final billings for each year be subject to audit by CDOT. The audits of 2021 and 2020 billings are still open.

*Reimbursement of Expenses* — The cost of operating and maintaining the passenger stations of the Commuter Railroads in NYS is assessable by the MTA to New York City and the other counties in which such stations are located for each NYS fiscal year ending December 31, under provisions of the NYS Public Authorities Law. This funding is recognized as revenue based upon an amount, fixed by statute, for the costs to operate and maintain passenger stations and is revised annually by the increase or decrease of the regional Consumer Price Index.

In 1995, New York City ceased reimbursing the MTA for the full costs of the free/reduced fare program for students. Beginning in 1996, New York State and New York City each began paying $45 per annum to the MTA toward the cost of the program. In 2009, New York State reduced their $45 reimbursement to $6.3. Beginning in 2010, New York State increased their annual commitment to $25.3 while New York City's annual commitment remained at $45. These commitments have been met by both New York State and New York City for both 2021 and 2022. For the year ended December 31, 2021, the MTA received $90.3 from New York State and New York City combined. For the year ended December 31, 2022, the MTA received $100.3 from New York State and New York City combined, which include $30.0 prepayment for the year 2023 from The City.

Prior to April 1995, New York City was obligated to reimburse MTA New York City Transit for the transit police force. As a result of the April 1995 merger of the transit police force into the New York City Police Department, New York City no longer reimburses MTA New York City Transit for the costs of policing the Transit System on an ongoing basis since policing of the Transit System is being carried out by the New York City Police Department at New York City's expense. MTA New York City Transit continues to be responsible for certain capital costs and support services related to such police activities, a portion of which is reimbursed by New York City. MTA New York City Transit received approximately $4.5 and $2.1 for the years ended December 31, 2022 and 2021, respectively, from New York City for the reimbursement of transit police costs.

MTAHQ bills MTA Metro-North Railroad through its consolidated services for MTA police costs in the New Haven line of which MTA Metro-North Railroad recovers approximately 65% from Connecticut Department of Transportation. The amounts billed for the years ended December 31, 2022 and 2021 were $24.4 and $23.4, respectively. The amounts recovered for the years ended December 31, 2022 and 2021 were approximately $15.9 and $15.2, respectively.

Federal law and regulations require a paratransit system for passengers who are not able to ride the buses and trains because of their disabilities. Pursuant to an agreement between New York City and the MTA, MTA New York City Transit, effective July 1, 1993, assumed operating responsibility for all paratransit service required by the Americans with Disability Act of 1990. Services are provided by private vendors under contract with MTA New York City Transit. New York City reimburses MTA New York City Transit for the lesser of 33% of net paratransit operating expenses defined as labor, transportation, and administrative costs less fare revenues and 6% of gross urban tax proceeds as described above or, an amount that is 20% greater than the amount paid by New York City for the preceding calendar year. Fare revenues and New York City reimbursement aggregated approximately $268.5 in the year ended December 31, 2022, and $226.5 in the year ended

December 31, 2021. Total paratransit expenses, including paratransit service contracts, were $486.9 and $415.6 in 2022 and 2021, respectively.

*Grants and Appropriations* — Grants and appropriations for capital projects are recorded when requests are submitted to the funding agencies for reimbursement of capital expenditures meeting eligibility requirements. These amounts are reported separately after Net Non-operating Revenues in the Statements of Revenues, Expenses, and Changes in Net Position.

**Operating and Non-operating Expenses —** Operating and non-operating expenses are recognized in the accounting period in which the liability is incurred. All expenses related to operating the MTA (e.g. salaries, insurance, depreciation, and amortization, etc.) are reported as operating expenses. All other expenses (e.g. interest on long-term debt, subsidies paid to counties, etc.) are reported as non-operating expenses.

**Liability Insurance —** FMTAC, an insurance captive subsidiary of MTA, operates a liability insurance program ("ELF") that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. For claims arising from incidents that occurred on or after November 1, 2006, but before November 1, 2009, the self-insured retention limits are: $8 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road, and MTA Metro-North Railroad; $2.3 for MTA Long Island Bus and MTA Staten Island Railway; and $1.6 for MTAHQ and MTA Bridges and Tunnels. For claims arising from incidents that occurred on or after November 1, 2009, but before November 1, 2012, the self-insured retention limits are: $9 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $2.6 for MTA Long Island Bus and MTA Staten Island Railway; and $1.9 for MTAHQ and MTA Bridges and Tunnels. Effective November 1, 2012, the self-insured retention limits for ELF were increased to the following amounts: $10 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $3 for MTA Staten Island Railway; and $2.6 for MTAHQ and MTA Bridges and Tunnels. Effective October 31, 2015, the self-insured retention limits for ELF were increased to the following amounts: $11 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $3.2 for MTA Staten Island Railway, MTAHQ and MTA Bridges and Tunnels. The maximum amount of claims arising out of any one occurrence is the total assets of the program available for claims, but in no event greater than $50. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF program for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying the other MTA Group entities above their specifically assigned self-insured retention with a limit of $50 per occurrence with a $50 annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. On December 31, 2022 and December 31, 2021, the balance of the assets in this program was $174.04 and $192.67, respectively.

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords the MTA Group additional coverage limits of $357.5 for a total limit of $407.5 ($357.5 excess of $50). In certain circumstances, when the assets in the program described in the preceding paragraph are exhausted due to payment of claims, the All-Agency Excess Liability Insurance will assume the coverage position of $50.

On March 1, 2022, the "nonrevenue fleet" automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for MTA Long Island Rail Road, MTA Staten Island Railway, MTA Police, MTA Metro-North Railroad, MTA Inspector General, MTA Construction & Development Company and MTA Headquarters. The program limit is $11 per occurrence on a combined single limit with a $1 per occurrence deductible. Primary limits of $6 were procured through the commercial marketplace. Excess limits of $5 were procured through FMTAC. FMTAC renewed its deductible buy back policy, where it assumes the liability of the agencies for their deductible.

On March 1, 2022, the "Access-A-Ride" automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA New York City Transit's Access-A-Ride program, including the contracted operators. This policy provides a $1 per occurrence limit excess of a $2 self-insured retention.

On December 15, 2022, FMTAC renewed the primary coverage on the Station Liability and Force Account liability policies $11 per occurrence loss for MTA Metro-North Railroad and MTA Long Island Rail Road.

**Property Insurance —** Effective May 1, 2022, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2022, FMTAC directly insures property damage claims of the Related Entities in excess of a $25 per occurrence deductible, subject to an annual $75 aggregate deductible. The total All Risk program annual limit is $500 per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of $7.5 per occurrence. In addition to the noted $25 per occurrence self-insured deductible, MTA self-insures above that deductible for $85.731 within the overall $500 per occurrence property program as follows: $13.296 (or 26.59%) of the primary $50 layer, plus $17.127 (or 34.25%) of the $50 excess $50 layer, plus $8.08 (or (16.16%) of the $50 excess $100 layer, plus $2.845 (or 5.69%) of the $50 excess $150 layer, plus $1.398 (or 2.79%) of the $50 excess $200 layer, plus $10.559 (or 21.11%) of the $50 excess $250 layer, plus $9.182 (or 18.36%) of the $50 excess $300 layer, plus $6.247 (or 12.49%) of the $50 excess $350 layer, plus $8.747 (or 17.49%) of the $50 excess $400 layer, and $8.247 (or 16.49%) of the $50 excess $450 layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the $500 per occurrence noted above, FMTAC's property insurance program has been expanded to include a further layer of $100 of fully collateralized earthquake coverage for an event of a certain index value and for storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three year period from May 12, 2020 to April 30, 2023. The expanded protection is reinsured by MetroCat Re Ltd. 2020-1, a Bermuda special purpose insurer independent from the MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2020-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values, and also for an earthquake event of a certain index value.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act ("TRIPRA") of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of $200. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of $215 for any one occurrence and in the annual aggregate (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds $5 and less than the $200 TRIPRA trigger up to a maximum recovery of $200 for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of $215. Recovery under the terrorism policy is subject to a deductible of $25 per occurrence and $75 in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed $75 future losses in that policy year are subject to a deductible of $7.5. The terrorism coverage expired at midnight on May 1, 2023. The policy was renewed through May 1, 2025.

**Pension Plans** — In accordance with the provisions of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, the MTA recognizes a net pension liability for each qualified pension plan in which it participates, which represents the excess of the total pension liability over the fiduciary net position of the qualified pension plan, or the MTA's proportionate share thereof in the case of a cost-sharing multiple-employer plan, measured as of the measurement date of each of the qualified pension plans. Changes in the net pension liability during the year are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the year incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the respective qualified pension plan and recorded as a component of pension expense beginning with the year in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

**Postemployment Benefits Other Than Pensions** — In accordance with the provisions of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* and GASB Statement No. 85, *Omnibus* for the OPEB Plan, the MTA recognizes a net OPEB liability, which represents the excess of the total OPEB liability over the fiduciary net position of the OPEB Plan, measured as of the measurement date of the plan.

Changes in the net OPEB liability during the year are recorded as OPEB expense, or as deferred outflows of resources or deferred inflows of resources relating to OPEB depending on the nature of the change, in the year incurred. Changes in net OPEB liability that are recorded as deferred outflows of resources or deferred inflows of resources that arise from changes in actuarial assumptions and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the OPEB plan and recorded as a component of OPEB expense beginning with the year in which they are incurred. Projected earnings on qualified OPEB plan investments are recognized as a component of OPEB expenses. Differences between projected and actual investment earnings are reported as deferred outflows of resources or deferred inflow of resources as a component of OPEB expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

## 3. CASH AND INVESTMENTS

***Cash*** **-** The Bank balances are insured up to $250 thousand in the aggregate by the Federal Deposit Insurance Corporation ("FDIC") for each bank in which funds are deposited. As of December 31, 2022, restricted cash represents $537 received by the MTA from the State of New York and New York City for the Subway Action Plan and other capital projects.

Cash, including deposits in transit, consists of the following at December 31, 2022 and 2021 (in millions):

| | 2022 | | 2021 | |
|---|---|---|---|---|
| | Carrying Amount | Bank Balance | Carrying Amount | Bank Balance |
| **FDIC insured or collateralized deposits** | $ 117 | $ 116 | $ 281 | $ 280 |
| **Uninsured and not collateralized** | 823 | 801 | 501 | 482 |
| **Total Balance** | $ 940 | $ 917 | $ 782 | $ 762 |

All collateralized deposits are held by the MTA or its agent in the MTA's name.

The MTA, on behalf of itself, its affiliates and subsidiaries, invests funds which are not immediately required for the MTA's operations in securities permitted by the New York State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero coupon bonds.

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the MTA will not be able to recover the value of its deposits. While the MTA does not have a formal deposit policy for custodial credit risk, New York State statues govern the MTA's investment policies. The MTA's uninsured and uncollateralized deposits are primarily held by commercial banks in the metropolitan New York area and are subject to the credit risks of those institutions.

***Investments*** - MTA holds most of its investments at a custodian bank. The custodian must meet certain banking institution criteria enumerated in MTA's Investment Guidelines. The Investment Guidelines also require the Treasury Division to hold at least $100 of its portfolio with a separate emergency custodian bank. The purpose of this deposit is in the event that the MTA's main custodian cannot execute transactions due to an emergency outside of the custodian's control, the MTA has an immediate alternate source of liquidity.

The MTA categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The MTA had the following recurring fair value measurements as of December 31, 2022 and 2021 (in millions):

| **Investments by fair value level** | **December 31, 2022** | **Fair Value Measurements** | | **December 31, 2021** | **Fair Value Measurements** | |
|---|---|---|---|---|---|---|
| | | **Level 1** | **Level 2** | | **Level 1** | **Level 2** |
| Debt Securities: | | | | | | |
| U.S. treasury securities | $ 16,093 | $ 12,063 | $ 4,030 | $ 10,695 | $ 10,327 | $ 368 |
| U.S. government agency | 367 | - | 367 | 325 | - | 325 |
| Commercial paper | 300 | - | 300 | 1,615 | - | 1,615 |
| Asset backed securities | 48 | - | 48 | 23 | - | 23 |
| Commercial mortgage backed securities | 159 | - | 159 | 166 | - | 166 |
| Foreign bonds | 15 | 15 | - | 20 | 20 | - |
| Corporate bonds | 124 | 124 | - | 135 | 135 | - |
| U.S. treasury securities | 144 | 127 | 17 | 197 | 197 | - |
| U.S. government agency | 116 | 64 | 52 | 141 | 76 | 65 |
| Repurchase agreements | 249 | 217 | 32 | 274 | 274 | - |
| Equity securities | - | - | - | 1 | 1 | - |
| **Total investments by fair value level** | 17,615 | $ 12,610 | $ 5,005 | 13,592 | $ 11,030 | $ 2,562 |
| Financed Purchases | 104 | | | 113 | | |
| **Total Investments** | $ 17,719 | | | $ 13,705 | | |

Investments classified as Level 1 of the fair value hierarchy, totaling $12,610 and $11,030 as of December 31, 2022 and 2021, respectively, are valued using quoted prices in active markets. Fair values include accrued interest to the extent that interest is included in the carrying amounts. Accrued interest on investments other than Treasury bills and coupons is included in other receivables on the statement of net position. The MTA's investment policy states that securities underlying repurchase agreements must have a fair value at least equal to the cost of the investment.

U.S. Government agency securities totaling $419 and $390, U.S. treasury securities totaling $4,047 and $368, commercial paper totaling $300 and $1,615, asset-backed securities totaling $48 and $23, and commercial mortgage-backed securities totaling $159 and $166, as of December 31, 2022 and 2021, respectively, classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by a third party pricing service. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices and indices. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from a third party pricing service or our custodian bank.

In connection with certain financed purchase transactions described in Note 9, the MTA has purchased securities or entered into payment undertaking, letter of credit, or similar type agreements or instruments (guaranteed investment contracts) with financial institutions, which generate sufficient proceeds to make basic rent and purchase option payments under the terms of the transactions. If the obligors do not perform, the MTA may have an obligation to make the related rent payments.

All investments, other than the investments restricted for financed purchase obligations, are either insured or registered and held by the MTA or its agent in the MTA's name. Investments restricted for financed purchases are either held by MTA or its agent in the MTA's name or held by a custodian as collateral for MTA's obligation to make rent payments under financed purchase obligations. Investments had weighted average yields of 2.78% and 1.14% for the years ended December 31, 2022 and 2021, respectively.

**Credit Risk** — At December 31, 2022 and 2021, the following credit quality rating has been assigned to MTA investments by a nationally recognized rating organization (in millions):

| Quality Rating Standard & Poor's | December 31, 2022 | Percent of Portfolio | December 31, 2021 | Percent of Portfolio |
|---|---|---|---|---|
| A-1+ | $ 153 | 1% | $ 45 | 0% |
| A-1 | 300 | 2% | 1,615 | 12% |
| AAA | 217 | 1% | 303 | 2% |
| AA+ | 52 | 0% | 65 | 1% |
| AA | 33 | 0% | 29 | 0% |
| A | 69 | 1% | 72 | 1% |
| A- | 122 | 1% | 147 | 1% |
| BBB | 47 | 0% | 60 | 0% |
| Not rated | 322 | 2% | 286 | 2% |
| U.S. Government | 16,300 | 92% | 10,969 | 81% |
| Total | 17,615 | 100% | 13,591 | 100% |
| Financed Purchases | 104 | | 114 | |
| Total investment | $ 17,719 | | $ 13,705 | |

**Interest Rate Risk** — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. While the MTA does not have a formal policy for interest rate risk, New York State statutes govern the MTA's investment policy. Duration is a measure of interest rate risk. The greater the duration of a bond or portfolio of bonds, the greater its price volatility will be in response to a change in interest rate risk and vice versa. Duration is an indicator of a bond price's sensitivity to a 100 basis point change in interest rates.

| | December 31, 2022 | | December 31, 2021 | |
|---|---|---|---|---|
| (In millions) | Fair Value | Duration (in years) | Fair Value | Duration (in years) |
| U.S. treasury securities | $ 16,093 | 4.95 | $ 10,697 | 5.14 |
| U.S. government agency | 367 | 5.75 | 324 | 5.67 |
| Tax benefit financed purchase investments | 259 | 5.89 | 337 | - |
| Repurchase agreement | 250 | - | 274 | - |
| Commercial paper | 300 | - | 1,615 | - |
| Asset-backed securities (1) | 48 | 3.59 | 23 | 3.83 |
| Commercial mortgage-backed securities (1) | 159 | 5.07 | 166 | 4.29 |
| Foreign bonds (1) | 15 | 5.77 | 20 | 7.08 |
| Corporates (1) | 124 | 5.81 | 135 | 6.92 |
| Total fair value | 17,615 | | 13,591 | |
| Modified duration | | 4.83 | | 4.32 |
| Equities (1) | - | | 1 | |
| Investments with no duration reported | 104 | | 113 | |
| Total investments | $ 17,719 | | $ 13,705 | |

(1) These securities are only included in the FMTAC portfolio.

MTA is a public benefit corporation established under the New York Public Authorities Law. MTA's Treasury Division is responsible for the investment management of the funds of the component units. The investment activity covers all operating and capital funds, including bond proceeds, and the activity is governed by State statutes, bond resolutions and the Board-adopted investment guidelines (the "Investment Guidelines"). The MTA Act currently permits the Related Entities to invest in the following general types of obligations:

- obligations of the State or the United States Government;
- obligations of which the principal and interest are guaranteed by the State or the United States government;
- obligations issued or guaranteed by certain Federal agencies;
- repurchase agreements fully collateralized by the obligations of the foregoing United States Government and Federal agencies;
- certain certificates of deposit of banks or trust companies in the State;
- certain banker's acceptances with a maturity of 90 days or less;
- certain commercial paper;
- certain municipal obligations; and
- certain mutual funds up to $10 in the aggregate.

The MTA adopted NYS Statutory Requirements with respect to credit risk of its investments, which include, but are not limited to the following sections:

i. Public Authorities Law Sections 1265(4) (MTA), 1204(19) (MTA New York City Transit Authority) and 553(21) (MTA Bridges and Tunnels);

ii. Public Authorities Law Section 2925 Investment of funds by public authorities and public benefit corporations; general provisions; and

iii. State Finance Law Article 15 – EXCELSIOR LINKED DEPOSIT ACT.

MTA Investment Guidelines limit the dollar amount invested in banker acceptances, commercial paper, and obligations issued or guaranteed by certain Federal agencies to $250 at cost. There are no dollar limits on the purchase of obligations of the United States government, the State or obligations the principal and interest of which are guaranteed by the State or the United States government. Investments in collateralized repurchase agreements are limited by dealer or bank's capital. MTA can invest no greater than $300 with a bank or dealer rated in Tier 1 (i.e. $1 billion or more of capital).

FMTAC is created as a MTA subsidiary and is licensed as a captive direct insurer and reinsurer by the New York State Department of Insurance. As such, FMTAC is responsible for the investment management of its funds. The investment activity is governed by State statutes and the FMTAC Board adopted investment guidelines. The minimum surplus to policyholders and reserve instruments are invested in the following investments:

- obligations of the United States or any agency thereof provided such agency obligations are guaranteed as to principal and interest by the United States;
- direct obligations of the State or of any county, district or municipality thereof;
- any state, territory, possession or any other governmental unit of the United States;
- certain bonds of agencies or instrumentalities of any state, territory, possession or any other governmental unit of the United States;
- the obligations of a solvent American institution which are rated investment grade or higher (or the equivalent thereto) by a securities rating agency; and
- certain mortgage backed securities in amounts no greater than five percent of FMTAC's admitted assets.

FMTAC may also invest non-reserve instruments in a broader range of investments including the following general types of obligations:

- certain equities; and
- certain mutual funds.

FMTAC is prohibited from making the following investments:

- investment in an insolvent entity;

- any investment as a general partner; and
- any investment found to be against public policy.

FMTAC investment guidelines do include other investments, but FMTAC has limited itself to the above permissible investments at this time.

## 4. EMPLOYEE BENEFITS

**Pensions** — The MTA Related Groups sponsor and participate in several defined benefit pension plans for their employees, the Long Island Railroad Company Plan for Additional Pensions (the "Additional Plan"), the Manhattan and Bronx Surface Transit Operating Authority Pension Plan (the "MaBSTOA Plan"), the Metro-North Commuter Railroad Company Cash Balance Plan (the "MNR Cash Balance Plan"), the Metropolitan Transportation Authority Defined Benefit Plan (the "MTA Defined Benefit Plan"), the New York City Employees' Retirement System ("NYCERS"), and the New York State and Local Employees' Retirement System ("NYSLERS"). A brief description of each of these pension plans follows:

### *Plan Descriptions*

#### *1. Additional Plan —*

The Additional Plan is a single-employer defined benefit pension plan that provides retirement, disability and survivor benefits to members and beneficiaries. The Additional Plan covers MTA Long Island Rail Road employees hired effective July 1, 1971 and prior to January 1, 1988. The Additional Plan's activities, including establishing and amending contributions and benefits are administered by the Board of Managers of Pensions. The Additional Plan is a governmental plan and accordingly, is not subject to the funding and other requirements of the Employee Retirement Income Security Act of 1974 ("ERISA"). The Additional Plan is a closed plan.

The Board of Managers of Pensions is comprised of the Chairman of the MTA, MTA Chief Financial Officer, MTA Director of Labor Relations and the agency head of each participating Employer or the designee of a member of the Board of Managers. The Additional Plan for Additional Pensions may be amended by action of the MTA Board. The Additional Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan has a separately issued financial statement that is publicly available and contains required descriptions and supplemental information regarding the employee benefit plan. The financial statements may be obtained at www.mta.info or by writing to, MTA Deputy Chief, Controller's Office, 2 Broadway, 15th Floor New York, NY 10004 or at www.mta.info.

#### *2. MaBSTOA Plan —*

The MaBSTOA Plan is a multi-employer defined benefit retirement plan administered by MTA New York City Transit covering employees of MaBSTOA and MTA Headquarters. Prior to January 1, 2020, this was a single employer defined benefit retirement plan covering only MaBSTOA employees. Employees of MaBSTOA and MTA Headquarters are specifically excluded from participating in the New York City Employees' Retirement System (NYCERS). The Plan provides retirement as well as death, accident and disability benefits. Effective January 1, 1999, in order to afford managerial and non-represented MaBSTOA employees the same pension rights as like title employees in the MTA New York City Transit Authority, membership in the MaBSTOA Plan is optional.

The Board of Administration, established in 1963, determines the eligibility of employees and beneficiaries for retirement and death benefits. The MaBSTOA Plan assigns authority to the MaBSTOA Board to modify, amend or restrict the MaBSTOA Plan or to discontinue it altogether, subject, however, to the obligations under its collective bargaining agreements. The Board is composed of five members: two representatives from the Transport Workers Union, Local 100 ("TWU") and three employer representatives. The MaBSTOA Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained by writing to, MTA Deputy Chief, Controller's Office, 2 Broadway, 15th Floor New York, NY 10004 or at www.mta.info.

#### *3. MNR Cash Balance Plan —*

The MNR Cash Balance Plan is a single employer, defined benefit pension plan administered by MTA Metro-North Railroad. The MNR Cash Balance Plan covers non-collectively bargained employees, formerly employed by Conrail, who joined MTA Metro-North Railroad as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these management employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees (the "Management Plan") and the MNR Cash Balance Plan was closed to new participants. The assets of the Management Plan were merged with the Metropolitan Transportation Authority Defined Benefit Plan for Non-Represented Employees (now titled as the Metropolitan Transportation Authority Defined Benefit Pension Plan) as of the asset transfer date of July 14, 1995. The MNR Cash Balance Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) and 501(a) of the Internal Revenue Code. Accordingly, the MNR Cash Balance Plan is tax-exempt and is not subject to the provisions of ERISA.

The MTA Board of Trustees appoints a Board of Managers of Pensions consisting of five individuals who may, but need not, be officers or employees of the company. The Board of Managers control and manage the operation and administration of the MNR Cash Balance Plan's activities, including establishing and amending contributions and benefits.

Further information about the MNR Cash Balance Plan is more fully described in the separately issued financial statements that can be obtained by writing to, MTA Deputy Chief, Controller's Office, 2 Broadway, 15th Floor New York, NY 10004 or at www.mta.info.

### *4. MTA Defined Benefit Plan —*

The MTA Defined Benefit Pension Plan (the "MTA Plan" or the "Plan") is a cost sharing, multiple-employer defined benefit pension plan. The Plan covers certain MTA Long Island Railroad non-represented employees hired after January 1, 1988, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 24, 1983, MTA Police, MTA Long Island Railroad represented employees hired after December 31, 1987, certain MTA Metro-North Railroad represented employees, MTA Staten Island Railway represented and non-represented employees and certain employees of the MTA Bus Company ("MTA Bus"). The MTA, MTA Long Island Railroad, MTA Metro-North Railroad, MTA Staten Island Railway and MTA Bus contribute to the MTA Plan, which offers distinct retirement, disability retirement, and death benefit programs for their covered employees and beneficiaries.

The MTA Defined Benefit Plan is administered by the Board of Managers of Pensions. The MTA Plan, including benefits and contributions, may be amended by action of the MTA Board. The MTA Defined Benefit Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained by writing to the MTA Deputy Chief, Controller's Office, 2 Broadway, 15th Floor New York, NY 10004 or at www.mta.info.

### *5. NYCERS —*

NYCERS is a cost-sharing, multiple-employer retirement system for employees of The City of New York ("The City") and certain other governmental units whose employees are not otherwise members of The City's four other pension systems. NYCERS administers the New York City Employees Retirement System qualified pension plan.

NYCERS was established by an act of the Legislature of the State of New York under Chapter 427 of the Laws of 1920. NYCERS functions in accordance with the governing statutes contained in the New York State Retirement and Social Security Law ("RSSL"), and the Administrative Code of the City of New York ("ACNY"), which are the basis by which benefit terms and employer and member contribution requirements are established and amended. The head of the retirement system is the Board of Trustees. NYCERS is a fiduciary component unit of The City and is in the Pension and Other Employee Benefit Trust Funds section of The City's Annual Comprehensive Financial Report ("ACFR").

NYCERS issues a publicly available comprehensive annual financial. This report may be obtained by writing to the New York City Employees' Retirement System at 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3724 or at www.nycers.org.

All employees of the Related Group holding permanent civil service positions in the competitive or labor class are required to become members of NYCERS six months after their date of appointment, but may voluntarily elect to join NYCERS prior to their mandated membership date. All other eligible employees have the option of joining NYCERS upon appointment or anytime thereafter. NYCERS members are assigned to a "tier" depending on the date of their membership.

| | |
|---|---|
| Tier 1 | All members who joined prior to July 1, 1973. |
| Tier 2 | All members who joined on or after July 1, 1973 and before July 27, 1976. |
| Tier 3 | Only certain members who joined on or after July 27, 1976 and prior to April 1, 2012 |
| Tier 4 | All members (with certain member exceptions) who joined on or after July 27, 1976 but prior to April 1, 2012. Members who joined on or after July 27, 1976 but prior to September 1, 1983 retain all rights and benefits of Tier 3 membership. |

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|---|---|
| Tier 6 | Members who joined on or after April 1, 2012. |

### *6. NYSLERS —*

NYSLERS is a cost-sharing, multiple-employer defined benefit retirement system. The New York State Comptroller's Office administers the NYSLERS' plan. The net position of NYSLERS is held in the New York State Common Retirement Fund (the "Fund"), which was established to hold all assets and record changes in fiduciary net position allocated to the plan. The Comptroller of the State of New York serves as the trustee of the Fund and is the administrative head of NYSLERS. NYSLERS' benefits are established under the provisions of the New York State RSSL. Once a public employer elects to participate in NYSLERS, the election is irrevocable. The New York State Constitution provides that pension membership is a contractual relationship and plan benefits cannot be diminished or impaired. Benefits can be changed for future members only by enactment of a State statute.

NYSLERS is included in New York State's financial report as a pension trust fund. The report can be accessed on the New York State Comptroller's website at: www.osc.state.ny.us/retire/about_us/financial_statements_index.php or obtained by writing to the New York State and Local Retirement System, 110 State Street, Albany, NY 12244-001.

Pension legislation enacted in 1973, 1976, 1983, 2009 and 2012 established distinct classes of tier membership.

| | |
|---|---|
| Tier 1 | All members who joined prior to July 1, 1973. |
| Tier 2 | All members who joined on or after July 1, 1973 and before July 27, 1976. |
| Tier 3 | Generally, certain members who joined on or after July 27, 1976 but before January 1, 2010 and all other members who joined on or after July 27, 1976, but before September 1, 1983. |
| Tier 4 | Generally, members (with certain member exceptions) who joined on or after September 1, 1983, but before January 1, 2010. |
| Tier 5 | Members who joined on or after January 1, 2010, but before April 1, 2012. |
| Tier 6 | Members who joined on or after April 1, 2012. |

## *Benefits Provided*

### *1. Additional Plan —*

*Pension Benefits* — An employee who retires under the Additional Plan, either: (a) after completing at least 20 years of credited service, or (b) after both attaining age 65 while in service and completing at least five years of credited service, or in the case of those who were active employees on January 1, 1988, after completing at least 10 years of credited service, is entitled to an annual retirement benefit, payable monthly for life. Payments commence to an employee referred to in: (a) only after attaining age 50, or (b) only after attaining age 65.

Benefit and contribution provisions, which are based on the point in time at which participants last entered qualifying service and their length of credited service, are established by, and may only be amended by the MTA Long Island Rail Road, subject to the obligations of the MTA Long Island Rail Road under its collective bargaining agreements.

The Additional Plan has both contributory and non-contributory requirements, with retirement ages varying from 50 to 65 depending upon a participant's length of credited service. Pension benefits payable to age 65, where eligible, are calculated as 2% of the employee's applicable final average earnings for each year of qualifying service up to 25 years plus 1.5% of applicable final average earnings for each year of qualifying service in excess of 25 years. For pension benefits payable at and after age 65, regardless of whether benefits commenced before or after the employee attained age 65, benefits are calculated in the same manner as pension benefits payable prior to age 65 except that the amount so determined is reduced by a percentage of the employee's annuity (not including any supplemental annuity) value at age 65 under the Federal Railroad Retirement Act.

Participants who entered qualifying service before July 1, 1978 are not required to contribute. Participants who entered qualifying service on or after July 1, 1978, are required to contribute 3% of their wages. The MTA Long Island Railroad contributes additional amounts based on actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due.

*Death and Disability Benefits* — Participants who become disabled after accumulating 10 years of credited service and who meet the requirements as described in the Additional Plan receive a disability benefit. Disability pension benefits are calculated based on the participant's qualifying service and a percentage of final average compensation reduced by the full amount of benefit under the Federal Railroad Retirement Act. Survivorship benefits are paid to the participant's spouse when a survivorship option is elected or when an active participant has not divested his or her spouse of benefits. The survivorship benefit is payable at the time of death or when the vested participant would have attained an eligible age. The amount payable is in the form of an annuity. A lump sum death benefit no greater than five thousand dollars is payable upon death on behalf of a non-vested participant or vested participant whose pension rights were waived.

Retirement benefits establishment and changes for representative employees are collectively bargained and must be ratified by the respective union and the MTA Board. For non-represented employees, amendments must be approved by the MTA Board.

***2. MaBSTOA Plan —***

The MaBSTOA Plan provides retirement as well as death, accident, and disability benefits. The benefits provided by the MaBSTOA Plan are generally similar to the benefits provided to MTA New York City Transit participants in NYCERS. Benefits vest after either 5, 10, or 20 years of credited service, depending on the date of membership.

In 2008, NYCERS had determined that Tier 4 employees are and have been eligible for a post retirement death benefit retroactive to 1986. In June 2012, the MTA Board approved an amendment to the MaBSTOA Plan to provide for incorporation of this benefit.

***Tier 1 —***

*Eligibility and Benefit Calculation:* Tier 1 members must be at least age 50 with the completion of 20 years of service to be eligible to collect a service retirement benefit. Generally, the benefit is 1.50% for service before March 1, 1962, plus 2.0% for service from March 1, 1962 to June 30, 1970, plus 2.5% for service after June 30, 1970. The accumulated percentage, up to a maximum of 50%, is multiplied by the member's compensation, which is the greater of earned salary during the year prior to retirement. Once the accumulated reaches 50%, the percentage for each further year of service reverts back to 1.5%. The percentage in excess of 50% is multiplied by the final compensation, which is the highest average earnings over five consecutive years.

*Ordinary Disability Benefits* — Generally, ordinary disability benefits, are provided to eligible Tier 1 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by final compensation.

*Accidental Disability Benefits* — The accidental disability benefit to eligible Tier 1 members is equal to 75% of final compensation reduced by 100% of any worker's compensation payments.

*Ordinary Death Benefits* — For Tier 1 members the amount of the death benefit is a lump sum equal to six months' pay for members with less than 10 years of service; a lump sum equal to a 12 months of pay for members with more than 10 but less than 20 years of service, and a lump sum equal to two times 12 months of pay for members with more than 20 years of service.

***Tier 2 —***

*Eligibility and Benefit Calculation:* Tier 2 members must be at least age 55 with the completion of 25 years of service to be eligible to collect a service retirement benefit. Generally, the benefit equals 50% of final 3-year average compensation, defined as the highest average earnings over three consecutive years, plus 1% of final 5-year average compensation, defined as the highest average earnings over five consecutive years, per year of credited service in excess of 20 years. For early retirement, members must be at least age 50 with the completion of at least 20 years of service. The benefit is determined in the same manner as the service retirement but not greater than 2.0% of final 3-year average compensation per year of service.

*Ordinary Disability Benefits* — Generally, ordinary disability benefits, are provided to eligible Tier 2 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by the final 5- year average compensation.

*Accidental Disability Benefits* — The accidental disability benefit to eligible Tier 2 members is equal to 75% of the final 5-year average compensation reduced by any worker's compensation payments.

*Ordinary Death Benefits* — Tier 2 members require the completion of 90 days of service to receive a lump sum equal to 3 times salary, raised to the next multiple of $1,000 dollars.

***Tiers 3, 4—***

*Eligibility and Benefit Calculation:* Tier 3 and 4 members in the Regular 62 and 5 Plan must be at least age 62 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of Final Average Compensation ("FAC") for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. FAC is defined as the highest average earnings over three consecutive years, of which earnings in a year cannot exceed 110% of the average of the two preceding years. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service. For early retirement, members must be at least age 55 with the completion of at least 5 years of service. The benefit equals the service retirement benefit reduced by 6% for each of the first two years prior to age 62, and by 3% for years prior to age 60.

Tier 3 and 4 members in the basic 55/25Plan must be at least age 55 with the completion of at least 25 years of service, or be at least age 62 with the completion of at least 5 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of FAC for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. If the member completes less than 25 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service.

Tier 4 members in the 57/5 Plan must be at least age 57 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of FAC for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service.

*Ordinary and Accidental Disability Benefits* — For eligible members of the Regular 62/5 Plan, 57/25Plan and 57/5 Plan, ordinary and accidental disability benefits, are provided after 10 years of service for ordinary and no service required for accidental disability benefit. The benefit equals the greater of 1-2/3% of FAC per year of service and 1/3 of FAC.

*Ordinary Death Benefits* — For eligible members of the Regular 62/5 Plan, 55/25 Plan, 57/5 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement. After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

***Tier 6 —***

*Eligibility and Benefit Calculation:* Tier 6 members in the 55/25 Special Plan must be at least age 55 with the completion of at least 25 years, or at least age 63 with the completion of at least 10 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of Final Average Salary ("FAS") for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30.
If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable compensation over five consecutive years.

Tier 6 members in the Basic 63/10 Plan must be at least age 63 with the completion of at least 10 years to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 35% of FAS plus 2.0% of FAS for years of service in excess of 20. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable earnings over five consecutive years. For early retirement, members must be at least age 55 with the completion of at least 10 years of service. The benefit equals the service retirement benefit reduced by 6.5% for each year early retirement precedes age 63.

*Ordinary and Accidental Disability Benefits* — For eligible members of the 55/25 Special Plan and the Basic 63/10 Plan, ordinary and accidental disability benefits, are provided after 10 years of credited service for ordinary disability benefit. There is no service requirement for accidental disability benefit. The benefit equals the greater of 1-2/3% of FAS per year of service and 1/3 of FAS.

*Ordinary Death Benefits* — For eligible members of the 55/25 Special Plan and the Basic 63/10 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement. After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

***3. MNR Cash Balance Plan —***

*Pension Benefits* — Participants of the MNR Cash Balance Plan are vested in their benefit upon the earlier of (a) the completion of 5 years of service with MTA Metro-North Railroad or (b) the attainment of age 62. The accrued benefit is a participant's Initial Account Balance increased each month by the benefit escalator. The benefit escalator is defined as the Pension Benefit Guaranty Corporation ("PBGC") immediate annuity rate in effect for December of the year preceding the year for which the determination is being made) divided by 180. The accrued benefit is paid as an escalating annuity. Vested participants are entitled to receive pension benefits commencing at age sixty-five. Participants may elect to receive the value of their accumulated plan benefits as a lump-sum distribution upon retirement or they may elect a monthly life annuity. Participants may elect to receive their pension in the form of a joint and survivor annuity.

Participants of the MNR Cash Balance Plan are eligible for early retirement benefits upon termination of employment, the attainment of age 62, or age 60 and completion of 15 years of service, or age 55 and the completion of 30 years of service. The early retirement benefits paid is the normal retirement pension deferred to age 65 or an immediate pension equal to the life annuity actuarial equivalent of a participant's escalating annuity at normal retirement date indexed by the Initial Benefit Escalator from early retirement date to normal retirement date and reduced by 5/9 of 1% for each month retirement precedes age 65 up to 60 months and 5/18 of 1% for each month after 60 months.

For members with cash balances who are currently members of the Metropolitan Transportation Authority Defined Benefit Pension Plan, an additional benefit is provided equal to the amount needed to bring their total benefits (i.e., Railroad Retirement Tier I and II benefits, Conrail Plan benefits, Cash Balance Plan benefits, and MTA Defined Benefit Pension Plan benefits) up to a minimum of 65% of their 3-year final average pay under the MTA Defined Benefit Plan. In no event will the Additional Benefit exceed 2% of 3-year final average pay multiplied by the Conrail Management Service prior to July 1, 1983. This benefit is payable as a life annuity and is reduced for commencement prior to age 65 in the same manner as the regular cash balance benefit. This additional benefit is payable only in the form of a life annuity or 100% or 50% contingent annuity

*Death Benefits* — Benefits are paid to vested participants' beneficiaries in the event of a participants' death. The amount of benefits payable is the participant's account balance at the date of his or her death. Pre-retirement death benefits paid for a participant's death after 55 is equal to the amount the spouse would have received had the participant elected retirement under the normal form of payment on the day preceding his death. Pre-retirement death benefits paid for a participant's death before 55 is equal to the amount the spouse would have received had the participant survived to age 55 and retired under the normal form of payment on that date. The benefit is based on service to the participant's date of death and is payable beginning on the date the participant would have attained age 55.

In lieu of the above benefit, the surviving spouse can elect to receive the participant's account balance in a single lump sum payment immediately. If the participant was not married, the participant's beneficiary is entitled to receive the participant's Account Balance as of the participant's date of death in a single lump sum payment.

### 4. *MTA Defined Benefit Plan*

*Pension Benefits* — Retirement benefits are paid from the Plan to covered MTA Metro-North Railroad, MTA Staten Island Railway and post - 1987 MTA Long Island Rail Road employees as service retirement allowances or early retirement allowances. A participant is eligible for a service retirement allowance upon termination if the participant satisfied both age and service requirements. A participant is eligible for an early retirement allowance upon termination if the participant has attained age 55 and completed at least 10 years of credited service. Terminated participants with 5 or more years of credited service are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on the first day of the month following the participant's 62nd birthday.

Certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad continue to make contributions to the Plan for 15 years. Certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad are eligible for an early retirement allowance upon termination if the participant has attained age 60 and completed at least 5 years of credited service, or has attained age 55 and completed at least 30 years of credited service. The early retirement allowance is reduced one-quarter of 1% per month for each full month that retirement predates age 60 for certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad.

Effective in 2007, members and certain former members who become (or became) employed by another MTA agency which does not participate in the Plan continue to accrue service credit based on such other employment. Upon retirement, the member's vested retirement benefit from the Plan will be calculated on the final average salary of the subsequent MTA agency, if higher. Moreover, the Plan benefit will be reduced by the benefit, if any, payable by the other plan based on such MTA agency employment. Such member's disability and ordinary death benefit will be determined in the same way.

Retirement benefits are paid from the Plan under the MTA 20-Year Police Retirement Program. A participant is eligible for service retirement at the earlier of completing twenty years of credited Police service or attainment of age 62. Terminated participants with five years of credited police service, who are not eligible for retirement, are eligible for a deferred benefit. Deferred vested benefits are payable on the first of the month following the participant's attainment of age 55.

Retirement benefits paid from the Plan to covered represented MTA Bus employees include service retirement allowances or early retirement allowances. Under the programs covering all represented employees at Baisley Park, Eastchester, La Guardia, Spring Creek, and Yonkers Depots and the represented employees at College Point Depot, JFK, Far Rockaway a participant is eligible for a service retirement allowance upon termination if the participant has attained age sixty-five and completed at least five years of credited service or if the participant has attained age 57 and completed at least 20 years of credited service. A participant hired prior to June 2009 from Baisley Park, College Point, and La Guardia Depots is eligible for an early retirement allowance if the participant has attained age 55 and completed 20 years of credited service. Terminated participants with five or more years of credited service who are not eligible to receive a service retirement allowance or early retirement allowance are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on or after the participant attains age 65.

At Baisley Park, Far Rockaway, JFK, La Guardia and Spring Creek Depots, a participant who is a non-represented employee is eligible for an early retirement allowance upon termination if the participant has attained age 55 and completed 15 years of service. Terminated participants with five or more years of credited service who are not eligible to receive a service retirement allowance or early retirement allowance are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on or after the participant attains age 62.

The MTA Bus retirement programs covering represented and non-represented employees at Eastchester and Yonkers and covering the represented employees at Baisley Park, College Point, Far Rockaway, JFK, La Guardia and Spring Creek are fixed dollar plans, i.e., the benefits are a product of credited service and a specific dollar amount.

The retirement benefits for certain non-represented employees at Baisley Park, Far Rockaway, JFK, La Guardia and Spring Creek are based on final average salary. Certain participants may elect to receive the retirement benefit as a single life annuity or in the form of an unreduced 75% joint and survivor benefit.

Pre-1988 MTA Long Island Rail Road participants are eligible for a service retirement allowance upon termination if the participants has either: (a) attained age sixty-five and completed at least five years of credited service, or if an employee on January 1, 1988 completed at least 10 years of credited service, or (b) attained age fifty and has completed at least 20 years of credited service. Terminated participants who were not employees on January 1, 1988 with five or more years of credited service are eligible for a deferred vested benefit. Pension benefits payable to age 65, where eligible, are calculated as 2% of the employee's applicable final average earnings for each year of qualifying service up to 25 years plus 1.5% of applicable final average earning of each year of qualifying service in excess of 25 years. For pension benefits payable at and after age 65 regardless of whether benefits commenced before or after the employee attained age 65, benefits are calculated in the same manner as pension benefits payable prior to age 65 except that the amount so determined is reduced by a percentage of the employee's annuity (not including supplemental annuity) value at age 65 under the Federal Railroad Retirement Act. The reduction of pension benefits for amounts payable under the Federal Railroad Retirement Act is 50%.

*Death and Disability Benefits* — In addition to service retirement benefits, participants of the Plan are eligible to receive disability retirement allowances and death benefits. Participants who become disabled may be eligible to receive disability retirement allowances after 10 years of covered MTA Bus service; 10 years of credited service for covered MTA Metro-North Railroad and MTA Long Island Rail Road management and represented employees, covered MTA Staten Island Railway employees and covered MTA police participants.

The disability retirement allowance for covered MTA Metro-North Railroad and MTA Long Island Rail Road management and represented covered MTA Staten Island Railway employees is calculated based on the participant's credited service and final average salary ("FAS") but not less than ⅓ of FAS. Under the MTA 20 Year Police Retirement Program, a disabled participant may be eligible for one of three forms of disability retirement: (a) ordinary disability which is payable if a participant has ten years of credited Police service and is calculated based on the participant's credited Police service and FAS but not less than ⅓ of FAS; (b) performance of duty, which is payable if a participant is disabled in the performance of duty and is ½ of FAS, and (c) accidental disability, which is payable if a participant is disabled as the result of an on-the-job accidental injury and is ¾ of FAS subject to an offset of Workers' Compensation benefits. Pursuant to the MTA Bus programs, the disability benefit is the same as the service retirement benefit.

Pre -1988 MTA Long Island Rail Road participants who become disabled after accumulating 10 years of credited service and who meet the requirements as described in the Plan may be eligible to receive a disability benefit. Disability pension benefits are based on the participant's qualified service and a percentage of final average compensation reduced by the full amount of the disability benefit under the Federal Railroad Retirement Act. Survivorship benefits for pre-1988 MTA Long Island Rail Road participants are paid to the spouse when a survivorship option is elected or when an active participant has not divested their spouse of benefits.

The survivorship benefit is payable at the time of death or when the vested participant would have attained an eligible age. The amount payable is in the form of an annuity. A lump sum death benefit no greater than $5,000 (whole dollars) is payable upon death on behalf of a non-vested participant or vested participant whose pension rights were waived.

Death benefits are paid to the participant's beneficiary in the event of the death of a covered MTA Metro-North Railroad, post-1987 MTA Long Island Rail Road or MTA Staten Island Railway employee after completion of one year of credited service. The death benefit payable is calculated based on a multiple of a participant's salary based on years of credited service up to three years and is reduced beginning at age 61. There is also a post-retirement death benefit which, in the 1st year of retirement, is equal to 50% of the pre-retirement death benefit amount, whichever is greater, 25% the 2nd year and 10% of the death benefit payable at age 60 for the 3rd and later years. For the Police 20 Year Retirement Program, the death benefit is payable after ninety days of credited MTA Police service, and is equal to three times their salary. For non-Police groups, this death benefit is payable in a lump sum distribution while for Police, the member or the beneficiary can elect to have it paid as an annuity. The MTA Police do not have a post retirement benefit.

In the MSBA Employees' Pension Plan, there are special spousal benefits payable upon the death of a participant who is eligible for an early retirement benefit, or a normal service retirement benefit, or who is a vested participant or vested former participant. To be eligible, the spouse and participant must have been married at least one year at the time of death. Where the participant was eligible for an early service retirement benefit or was a vested participant or former participant, the benefit is a pension equal to 40% of the benefit payable to the participant as if the participant retired on the date of death. Where the participant was eligible for a normal service retirement benefit, the eligible spouse can elect either the benefit payable as a pension, as described in the prior sentence, or a lump sum payment based on an actuarially determined pension reserve. If there is no eligible spouse for this pension reserve benefit, a benefit is payable to the participant's beneficiary or estate.

Moreover, an accidental death benefit is payable for the death of a participant who is a covered MTA Metro-North Railroad or post-1987 MTA Long Island Rail Road employee, a covered MTA Staten Island Railway employee or a covered MTA Police member and dies as the result of an on-the-job accidental injury. This death benefit is paid as a pension equal to 50% of the participant's salary and is payable to the spouse for life, or, if none, to children until age eighteen (or twenty-three, if a student), or if none, to a dependent parent.

For MTA Bus employees, there is varied death benefit coverage under the Plan. For all represented and non-represented MTA Bus employees at Eastchester and Yonkers Depots and represented MTA Bus employees at Baisley Park, College Point, Far Rockaway, JFK, La Guardia and Spring Creek Depots, if a participant dies prior to being eligible for a retirement benefit, the participant's beneficiary may elect to receive a refund of the participant's contributions plus interest.

Moreover, the spouses of the above employees who are vested are entitled to a presumed retirement survivor annuity which is based on a 50% Joint and Survivor annuity. The date as of which such annuity is determined and on which it commences varies among the different programs depending on whether the participants are eligible for retirement and for payment of retirement benefits.

In addition, the spouse of a non-represented MTA Bus employee at Spring Creek, JFK, La Guardia, Baisley Park and Far Rockaway, if such employee is age 55 and has 15 years of service and is a terminated member with a vested benefit which is not yet payable, may elect the presumed retirement survivor annuity or 1/2 the participant's accrued benefit paid monthly and terminating on the 60th payment or the spouse's death. The spouse of a non-represented MTA Bus employee at Yonkers Depot may also receive a pre-retirement survivor annuity from the supplemental plan. If there is no such spouse, the actuarial equivalent of such annuity is payable.

Dependent children of MTA Bus employees are also entitled to an annuity based on the spouse's pre-retirement survivor annuity (1/2 of the spouse's annuity is payable to each child, but no more than 100% of the spouse's annuity is payable). In addition, the dependent children of retirees who were MTA Bus employees at these Depots are entitled to an annuity based on the presumed retirement survivor's annuity (25% of the spouse's annuity; but no more than 50% of the spouse's annuity is payable).

Retirement benefits establishment and changes for represented employees are collectively bargained and must be ratified by the respective union and the MTA Board. For non-represented employees, retirement benefits establishment and changes are presented to the MTA Board and must be accepted and approved by the MTA Board.

***5. NYCERS —***

NYCERS provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (non-job-related disabilities) and Accident Disability Retirements (job-related disabilities) to participants generally based on salary, length of service, and member Tiers.

The Service Retirement benefits provided to Tier 1 participants fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of final salary. The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of final salary.

Tier 2 participants have provisions similar to Tier 1, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit.

Tier 3 participants were later mandated into Tier 4, but could retain their Tier 3 rights. The benefits for Tier 3 participants are reduced by one half of the primary Social Security benefit attributable to service, and provides for an automatic annual cost-of- living escalator in pension benefits of not more than 3.0%.

Tier 4 participants upon satisfying applicable eligibility requirements may be mandated or elected, as applicable, into the Basic 62/5 Retirement Plan, the 57/5 Plan, the 55/25 Plan, the Transit 55/25 Plan, the MTA Triborough Bridge and Tunnel Authority 50/20 Plan, and the Automotive Member 25/50 Plan. These plans provide annual benefits of 40% to 50% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.5% to 2%) of final salary.

Chapter 18 of the Laws of 2012 created Tier 6. These changes increase the retirement age to 63, require member contributions for all years of service, institute progressive member contributions, and lengthen the final average salary period from 3 to 5 years.

NYCERS also provides automatic Cost-of-Living Adjustments ("COLA") for certain retirees and beneficiaries, death benefits; and certain retirees also receive supplemental benefits. Subject to certain conditions, members generally become fully vested as to benefits upon the completion of 5 years of service.

### *6. NYSLERS —*

NYSLERS provides retirement benefits as well as death and disability benefits. Members who joined prior to January 1, 2010 need 5 years of service to be fully vested. Members who joined on or after January 1, 2010 need 10 years of service to be fully vested. Subsequent to March 31, 2022, legislation was passed that reduced the number of years of service credit from ten years to five years. Therefore, all Members are vested when they reach five years of service credit.

### *Tiers 1 and 2 —*

*Eligibility:* Tier 1 members generally must be at least age 55 to be eligible for a retirement benefit. There is no minimum service requirement for Tier 1 members. Generally, Tier 2 members must have 5 years of service and be at least age 55 to be eligible for a retirement benefit. The age at which full benefits may be collected for Tier 1 is 55, and the full benefit age for Tier 2 is 62.

*Benefit Calculation:* Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If the member retires with 20 or more years of service, the benefit is 2 percent of final average salary for each year of service. Tier 2 members with five or more years of service can retire as early as age 55 with reduced benefits. Tier 2 members age 55 or older with 30 or more years of service can retire with no reduction in benefits. As a result of Article 19 of the RSSL, Tier 1 and Tier 2 members who worked continuously from April 1, 1999 through October 1, 2000 received an additional month of service credit for each year of credited service they have at retirement, up to a maximum of 24 additional months. Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 1 members who joined on or after June 17, 1971, each year's compensation used in the final average salary calculation is limited to no more than 20 percent greater than the previous year. For Tier 2 members, each year of final average salary is limited to no more than 20 percent greater than the average of the previous two years.

### *Tiers 3, 4, and 5 —*

*Eligibility:* Most Tier 3 and 4 members must have 5 years of service and be at least age 55 to be eligible for a retirement benefit. Tier 5 members, must have 10 years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tiers 3, 4 and 5 is 62.

*Benefit Calculation:* Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If a member retires with between 20 and 30 years of service, the benefit is 2 percent of final average salary for each year of service. If a member retires with more than 30 years of service, an additional benefit of 1.5% of final average salary is applied for each year of service over 30 years. Tier 3 and 4 members with five or more years of service and Tier 5 members with 10 or more years of service can retire as early as age 55 with reduced benefits. Tier 3 and 4 members age 55 or older with 30 or more years of service can retire with no reduction in benefits. Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 3, 4 and 5 members, each year's compensation used in the final average salary calculation is limited to no more than 10% greater than the average of the previous two years.

### *Tier 6 —*

*Eligibility:* Generally, Tier 6 members must have 10 years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tier 6 is 63.

*Benefit Calculation:* Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If a member retires with 20 years of service, the benefit is 1.75% of final average salary for each year of service. If a member retires with more than 20 years of service, an additional benefit of 2% of final average salary is applied for each year of service over 20 years. Tier 6 members with 10 or more years of service can retire as early as age 55 with reduced benefits. Final average salary is the average of the wages earned in the five highest consecutive years of employment. For Tier 6 members, each year's compensation used in the final average salary calculation is limited to no more than 10% greater than the average of the previous four years.

*Disability Benefits*— Generally, disability retirement benefits are available to members unable to perform their job duties because of permanent physical or mental incapacity. There are three general types of disability benefits: ordinary, performance of duty, and accidental disability benefits. Eligibility, benefit amounts, and other rules such as any offsets of other benefits depend on a member's tier, years of service, and plan. Ordinary disability benefits, usually one-third of salary, are provided to eligible members after ten years of service; in some cases, they are provided after five years of service. For all eligible Tier 1 and Tier 2 members, the accidental disability benefit is a pension of 75 percent of final average salary, with an offset for any Workers' Compensation benefits received. The benefit for eligible Tier 3, 4, 5 and 6 members is the ordinary disability benefit with the years-of-service eligibility requirement dropped.

*Ordinary Death Benefits* — Death benefits are payable upon the death, before retirement, of a member who meets eligibility requirements as set forth by law. The first $50,000 (whole dollars) of an ordinary death benefit is paid in the form of group term life insurance. The benefit is generally three times the member's annual salary. For most members, there is also a reduced post-retirement ordinary death benefit available.

*Post-Retirement Benefit Increases* — A cost-of-living adjustment is provided annually to: (i) all retirees who have attained age 62 and have been retired for five years; (ii) all retirees who have attained age 55 and have been retired for ten years; (iii) all disability retirees, regardless of age, who have been retired for five years; (iv) recipients of an accidental death benefit, regardless of age, who have been receiving such benefit for five years and (v) the spouse of a deceased retiree receiving a lifetime benefit under an option elected by the retiree at retirement. An eligible spouse is entitled to one-half the cost-of-living adjustment amount that would have been paid to the retiree when the retiree would have met the eligibility criteria. This cost-of-living adjustment is a percentage of the annual retirement benefit of the eligible member as computed on a base benefit amount not to exceed $18,000 (whole dollars) of the annual retirement benefit. The cost-of-living percentage shall be 50 percent of the annual Consumer Price Index as published by the U.S. Bureau of Labor, but cannot be less than 1 percent or exceed 3 percent.

### *Membership*

As of January 1, 2021 and January 1, 2020, the dates of the most recent actuarial valuations, membership data for the following pension plans are as follows:

| **Membership at:** | **January 1, 2021** | | | | |
|---|---|---|---|---|---|
| | **MNR Cash Balance Plan** | **Additional Plan** | **MaBSTOA Plan** | **MTA Defined Benefit Plan** | **TOTAL** |
| Active Plan Members | - | 23 | 8,533 | 18,556 | 27,112 |
| Retirees and beneficiaries receiving benefits | 23 | 5,298 | 6,020 | 11,788 | 23,129 |
| Vested formerly active members not yet receiving benefits | 5 | 19 | 1,125 | 1,541 | 2,690 |
| Total | 28 | 5,340 | 15,678 | 31,885 | 52,931 |

| **Membership at:** | **January 1, 2020** | | | | |
|---|---|---|---|---|---|
| | **MNR Cash Balance Plan** | **Additional Plan** | **MaBSTOA Plan** | **MTA Defined Benefit Plan** | **TOTAL** |
| Active Plan Members | 2 | 34 | 8,795 | 18,960 | 27,791 |
| Retirees and beneficiaries receiving benefits | 24 | 5,483 | 5,944 | 11,468 | 22,919 |
| Vested formerly active members not yet receiving benefits | 15 | 19 | 1,040 | 1,519 | 2,593 |
| Total | 41 | 5,536 | 15,779 | 31,947 | 53,303 |

## *Contributions and Funding Policy*

### *1. Additional Plan —*

Employer contributions are actuarially determined on an annual basis and are recognized when due. The Additional Plan is a defined benefit plan administered by the Board of Pension Managers and is a governmental plan and accordingly, is not subject to the funding and other requirements of ERISA.

Upon termination of employment before retirement, vested participants who have been required to contribute must choose to: (1) receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2021 and 2020), or (2) leave their contributions in the

Additional Plan until they retire and become entitled to the pension benefits. Non-vested participants who have been required to contribute will receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2021 and 2020).

Funding for the Additional Plan by the MTA Long Island Railroad is provided by MTA. Certain funding by MTA is made to the MTA Long Island Railroad on a discretionary basis. The continuance of the MTA Long Island Railroad's funding for the Additional Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

### *2. MaBSTOA Plan —*

The contribution requirements of MaBSTOA Plan members are established and may be amended only by the MaBSTOA Board in accordance with Article 10.01 of the MaBSTOA Plan. MaBSTOA's funding policy for periodic employer contributions is to provide for actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due. It is MaBSTOA's policy to fund, at a minimum, the current year's normal pension cost plus amortization of the unfunded actuarial accrued liability.

The MaBSTOA Pension Plan includes the following plans, including the 2000 amendments which are all under the same terms and conditions as NYCERS:

i. Tier 1 and 2 - Basic Plans;

ii. Tier 3 and 4 - 55 and 25 Plan;

iii. Tier 3 and 4 - Regular 62 and 5 Plan;

iv. Tier 4 - 57 and 5 Plan

v. Tier 6 - 55 and 25 Special Plan

vi. Tier 6 - Basic 63 and 10 Plan

For employees, the MaBSTOA Plan has both contributory and noncontributory requirements depending on the date of entry into service. Employees entering qualifying service on or before July 26, 1976, are non-contributing (Tiers 1 and 2). Certain employees entering qualifying service on or after July 27, 1976, are required to contribute 3% of their salary (Tiers 3 and 4).

In March 2012, pursuant to Chapter 18 of the Laws of 2012, individuals joining NYCERS or the MaBSTOA Pension Plan on or after April 1, 2012 are subject to the provisions of Tier 6. The highlights of Tier 6 include:

- Increases in employee contribution rates. The rate varies depending on salary, ranging from 3% to 6% of gross wages. Contributions are made until retirement or separation from service.
- The retirement age increases to 63 and includes early retirement penalties, which reduce pension allowances by 6.5 percent for each year of retirement prior to age 63.
- Vesting after 10 years of credited service; increased from 5 years of credited service under Tier 3 and Tier 4.
- Adjustments of the Pension Multiplier for calculating pension benefits (excluding Transit Operating Employees): the multiplier will be 1.75% for the first 20 years of service, and 2% starting in the 21st year; for an employee who works 30 years, their pension will be 55% of Final Average Salary under Tier 4, instead of 60% percent under Tier 4.
- Adjustments to the Final Average Salary Calculation; the computation changed from an average of the final 3 years to an average of the final 5 years. Pensionable overtime will be capped at $15,000 dollars per year plus an inflation factor.
- Pension buyback in Tier 6 will be at a rate of 6% of the wages earned during the period of buyback, plus 5% compounded annually from the date of service until date of payment.

Pursuant to Section 7.03 of the MaBSTOA Plan, active plan members are permitted to borrow up to 75% of their contributions with interest. Their total contributions and interest remain intact and interest continues to accrue on the full balance. The participant's accumulated contribution account is used as collateral against the loan.

### *3. MNR Cash Balance Plan —*

Funding for the MNR Cash Balance Plan is provided by MTA Metro-North Railroad, a public benefit corporation that receives funding for its operations and capital needs from the MTA and the Connecticut Department of Transportation ("CDOT"). Certain funding by MTA is made to the MTA Metro-North Railroad on a discretionary basis. The continuance of funding for the MNR Cash Balance Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

MTA Metro-North Railroad's funding policy with respect to the MNR Cash Balance Plan was to contribute the full amount of the pension benefit obligation ("PBO") of approximately $2.977 to the trust fund in 1989. As participants retire, the Trustee has made distributions from the MNR Cash Balance Plan. MTA Metro-North Railroad anticipated that no further contributions would be made to the MNR Cash Balance Plan. However, due to changes in actuarial assumptions and market performance, additional contributions were made to the MNR Cash Balance Plan in several subsequent years. Per the January 1, 2020 valuation, there is no unfunded accrued liability and the actuarially determined contribution is $0. Per the January 1, 2021 valuation, there is no unfunded accrued liability and the actuarially determined contribution is $0.

*4. MTA Defined Benefit Plan —*

Employer contributions are actuarially determined on an annual basis. Amounts recognized as receivables for contributions include only those due pursuant to legal requirements. Employee contributions to the MTA Defined Benefit Plan are recognized in the period in which the contributions are due. There are no contributions required under the Metropolitan Suburban Bus Authority Employee's Pension Plan.

The following summarizes the employee contributions made to the MTA Defined Benefit Plan:

Effective January 1, 1994, covered MTA Metro-North Railroad and MTA Long Island Railroad non-represented employees are required to contribute to the MTA Plan to the extent that their Railroad Retirement Tier II employee contribution is less than the pre-tax cost of the 3% employee contributions. Effective October 1, 2000, employee contributions, if any, were eliminated after ten years of making contributions to the MTA Plan. MTA Metro-North Railroad employees may purchase prior service from January 1, 1983 through December 31, 1993 and MTA Long Island Railroad employees may purchase prior service from January 1, 1988 through December 31, 1993 by paying the contributions that would have been required of that employee for the years in question, calculated as described in the first sentence, had the MTA Plan been in effect for those years.

Police Officers who become participants of the MTA Police Program prior to January 9, 2010 contribute to that program at various rates. Police Officers who become participants on or after January 9, 2010, but before April 1, 2012 contribute 3% up to the completion of 30 years of service, the maximum amount of service credit allowed. Police Officers who become participants on or after April 1, 2012 contribute 3%, with additional new rates starting April 2013, ranging from 3.5%, 4.5%, 5.75%, to 6%, depending on salary level, for their remaining years of service.

Covered MTA Metro-North Railroad represented employees and MTA Long Island Railroad represented employees who first became eligible to be MTA Plan participants prior to January 30, 2008 contribute 3% of salary. MTA Staten Island Railway employees contribute 3% of salary except for represented employees hired on or after June 1, 2010 who contribute 4%. MTA Long Island Railroad represented employees who became participants after January 30, 2008 contribute 4% of salary. For the MTA Staten Island Railway employees, contributions are not required after the completion of ten years of credited service. MTA Long Island Railroad represented employees are required to make the employee contributions for ten years, or fifteen years if hired after certain dates in 2014 as per collective bargaining agreements. Certain Metro-North represented employees, depending on their collective bargaining agreements, are required to make the employee contributions until January 1, 2014, January 1, 2017, June 30, 2017, or the completion of required years of credited service as per the relevant collective bargaining agreements.

Covered MTA Bus represented employees and certain non-represented employees are required to contribute a fixed dollar amount, which varies, by depot. Currently, non-represented employees at certain Depots, contribute $21.50 (whole dollars) per week. Non-represented employees at Eastchester hired prior to 2007 contribute $25 (whole dollars) per week. Represented employees at Baisley Park, College Point, Eastchester, Far Rockaway, JFK, LaGuardia and Yonkers Depots contribute $29.06 (whole dollars) per week; Spring Creek represented employees contribute $32.00 (whole dollars) per week. Certain limited number of represented employees promoted prior to the resolution of a bargaining impasse continue to participate in the MTA Defined Benefit Plan that was in effect before their promotion. Certain MTA Bus non-represented employees who are formerly employed by the private bus companies (Jamaica, Green, Triboro and Command) at Baisley Park, Far Rockaway, JFK, LaGuardia and Spring Creek Depots who are in the pension program covering only such employees make no contributions to the program. (Note: the dollar figures in this paragraph are in dollars, not in millions of dollars).

*5. NYCERS —*

NYCERS funding policy is to contribute statutorily-required contributions ("Statutory Contributions"), determined by the Chief Actuary for the New York City Retirement Systems, in accordance with State statutes and City laws, and are generally funded by employers within the appropriate Fiscal Year. The Statutory Contributions are determined under the One-Year Lag Methodology ("OYLM"). Under OYLM, the actuarial valuation date is used for calculating the Employer Contributions for the second following Fiscal Year. Statutory Contributions are determined annually to be an amount that, together with member contributions and investment income, provides for NYCERS' assets to be sufficient to pay benefits when due.

Member contributions are established by law. NYCERS has both contributory and noncontributory requirements, with retirement age varying from 55 to 70 depending upon when an employee last entered qualifying service.

In general, Tier 1 and Tier 2 member contribution rates are dependent upon the employee's age at membership and retirement plan election. In general, Tier 3 and Tier 4 members make basic contributions of 3.0% of salary, regardless of age at membership. Effective October 1, 2000, in accordance with Chapter 126 of the Laws of 2000, these members, except for certain MTA New York City Transit Authority employees enrolled in the Transit 20-Year Plan, are not required to make basic contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, members who meet certain eligibility requirements will receive one month's additional service credit for each completed year of service up to a maximum of two additional years of service credit. Effective December 2000, certain MTA New York City Transit Authority Tier 3 and Tier 4 members make basic member contributions of 2.0% of salary, in accordance with Chapter 10 of the Laws of 2000. Certain Tier 2, Tier 3 and Tier 4 members who are participants in special retirement plans are required to make additional member contributions of 1.85%, in addition to their base membership contribution. Tier 6 members are mandated to contribute between 3.0% and 6.0% of salary, depending on salary level, until they separate from City service or until they retire.

NYCERS established a "special program" for employees hired on or after July 26, 1976. A plan for employees, who have worked 20 years, and reached age 50, is provided to Bridge and Tunnel Officers, Sergeants and Lieutenants and Maintainers. Also, an age 57 retirement plan is available for all other such MTA Bridges and Tunnels employees. Both these plans required increased employee contributions.

Certain retirees also receive supplemental benefits from MTA Bridges and Tunnels. Certain participants are permitted to borrow up to 75% of their own contributions including accumulated interest. These loans are accounted for as reductions in such participants' contribution accounts. Upon termination of employment before retirement, certain members are entitled to refunds of their own contributions, including accumulated interest, less any outstanding loan balances.

MTA New York City Transit and MTA Bridges and Tunnels are required to contribute at an actuarially determined rate. The contribution requirements of plans members, MTA New York City Transit and MTA Bridges and Tunnels are established and amended by law.

### *6. NYSLERS —*

*Employer Contributions* - Under the authority of the RSSL, the Comptroller annually certifies the actuarially determined rates expressly used in computing the employers' contributions based on salaries paid during the NYSLERS fiscal year ending June 30.

*Member Contributions* - NYSLERS is noncontributory except for employers who joined the plan after July 27, 1976. Generally, Tier 3, 4, and 5 members must contribute 3% of their salary to NYSLERS. As a result of Article 19 of the RSSL, eligible Tier 3 and 4 employees, with a membership date on or after July 27, 1976, who have ten or more years of membership or credited service with NYSLERS, are not required to contribute. Members cannot be required to begin making contributions or to make increased contributions beyond what was required when membership began. For Tier 6 members, the contribution rate varies from 3% to 6% depending on salary. Generally, Tier 5 and 6 members are required to contribute for all years of service.

MTAHQ, MTA Construction and Development and MTA Long Island Bus are required to contribute at an actuarially determined rate.

A summary of the aggregate actual contributions made to each pension plan for the years ended December 31, 2022 and 2021 are as follows:

| **Year-ended December 31,** | **2022** | **2021** |
|---|---|---|
| ($ in millions) | Actual Employer Contributions | Actual Employer Contributions |
| Additional Plan | $ 70.8 | $ 70.6 |
| MaBSTOA Plan | 158.6 | 156.2 |
| MNR Cash Balance Plan | -* | - * |
| MTA Defined Benefit Plan | 404.2 | 396.1 |
| NYCERS | 797.3 | 842.2 |
| NYSLERS | 11.2 | 16.3 |
| Total | $ 1,442.1 | $ 1,481.4 |

*MNR Cash Balance Plan's actual employer contribution for the years ended December 31, 2022 and 2021 was $0 and $0, respectively.

### *Net Pension Liability*

The MTA's net pension liabilities for each of the pension plans reported at December 31, 2022 and 2021 were measured as of the fiscal year-end dates for each respective pension plan. The total pension liabilities used to calculate those net pension liabilities were determined by actuarial valuations as of each pension plan's valuation date, and rolled forward to the respective year-ends for each pension plan. Information about the fiduciary net position of each qualified pension plan's fiduciary net position has been determined on the same basis as reported by each respective qualified pension plan. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the respective qualified pension plan, and investments are reported at fair value. The following table provides the measurement and valuation dates used by each pension plan to calculate the MTA's aggregate net pension liability.

| Pension Plan | Plan Measurement Date | Plan Valuation Date | Plan Measurement Date | Plan Valuation Date |
|---|---|---|---|---|
| **Additional Plan** | December 31, 2021 | January 1, 2021 | December 31, 2020 | January 1, 2020 |
| **MaBSTOA Plan** | December 31, 2021 | January 1, 2021 | December 31, 2020 | January 1, 2020 |
| **MNR Cash Balance Plan** | December 31, 2021 | January 1, 2021 | December 31, 2020 | January 1, 2020 |
| **MTA Defined Benefit Plan** | December 31, 2021 | January 1, 2021 | December 31, 2020 | January 1, 2020 |
| **NYCERS** | June 30, 2022 | June 30, 2021 | June 30, 2021 | June 30, 2020 |
| **NYSLERS** | March 31, 2022 | April 1, 2021 | March 31, 2021 | April 1, 2020 |

### *Pension Plan Fiduciary Net Position*

Detailed information about the fiduciary net position of the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan, MTA Defined Benefit Plan, NYCERS plan and the NYSLERS plan is available in the separately issued pension plan financial reports for each respective plan.

### *Actuarial Assumptions*

The total pension liabilities in each pension plan's actuarial valuation dates were determined using the following actuarial assumptions for each pension plan, applied to all periods included in the measurement date:

| | Additional Plan | | MaBSTOA Plan | | MNR Cash Balance Plan | |
|---|---|---|---|---|---|---|
| **Valuation Date:** | **January 1, 2021** | **January 1, 2020** | **January 1, 2021** | **January 1, 2020** | **January 1, 2021** | **January 1, 2020** |
| Investment Rate of Return | 6.50%, net of investment expenses. | 6.50% per annum, net of investment expenses. | 6.50%, net of investment expenses. | 6.50% per annum, net of investment expenses. | 3.00%, net of investment expenses. | 3.00% per annum, net of investment expenses. |
| Salary Increases | 3.00% | 3.00% | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. | Reflecting general wage, merit and promotion increses of 3.5% to 4.0% for operating and non-operating employees per year. Larger increases are assumed in the first 5 years of a member's career. | Not applicable | Not applicable |
| Inflation | 2.25%; 3.25% for Railroad Retirement Wage Base. | 2.25%; 3.25% for Railroad Retirement Wage Base. | 2.25% | 2.25%. | 2.25% | 2.25% |
| Cost-of Living Adjustments | Not applicable | Not applicable | 60% of inflation assumption or 1.35%, if applicable. | 1.35% per annum. | Not applicable | Not applicable |

| | MTA Defined Benefit Plan | | NYCERS | | NYSLERS | |
|---|---|---|---|---|---|---|
| **Valuation Date:** | **January 1, 2021** | **January 1, 2020** | **June 30, 2021** | **June 30, 2020** | **April 1, 2021** | **April 1, 2020** |
| Investment Rate of Return | 6.50%, net of investment expenses | 6.50% per annum, net of investment expenses. | 7.0% per annum, net of Investment Expenses | 7.00% per annum, net of expenses. | 5.90% per annum, including inflation, net of investment expenses. | 5.90% per annum, including inflation, net of investment expenses. |
| Salary Increases | Varies by years of employment, and employee group; 2.75% GWI increases for TWU Local 100 MTA Bus hourly | Varies by years of employment, and employee group; 2.75% General Wage Increases for TWU Local 100 MTA Bus hourly employees. | In general, Merit and Promotion Increases plus assumed General Wage Increase of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. | 4.4% in ERS, 6.2 % in PFRS | 4.4% in ERS, 6.2 % in PFRS |
| Inflation | 2.25%; 3.25% for Railroad Retirement Wage Base. | 2.25%; 3.25% for Railroad Retirement Wage Base. | 2.50% | 2.50% | 2.70% | 2.70% |
| Cost-of Living Adjustments | 60% of inflation assumption or 1.35%, if applicable. | 60% of inflation assumption or 1.35%, if applicable. | AutoCOLA – 1.5% per year Escalation – 2.5% per year | 1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees. | 1.40% per annum. | 1.40% per annum. |

### *Mortality*

**Additional Plan / MaBSTOA Plan/ MNR Cash Balance Plan and MTA Defined Benefit Plan:**

The actuarial assumptions used in the January 1, 2021 and 2020 valuations for the MTA plans are based on an experience study covering the period from January 1, 2012 to December 31, 2017, with certain assumptions modified subsequently. The mortality assumption used in the January 1, 2021 and 2020 valuations are based on an experience study for all MTA plans covering the period from January 1, 2011 to December 31, 2015. The pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA, as recommended by the Society of Actuaries Retirement Plans Experience Committee. As generational tables, they reflect mortality improvements both before and after the measurement date.

Pre-retirement: The MTA plans utilized RP-2000 Employee Mortality Table for Males and Females with Blue collar adjustments.

Post-retirement Healthy Lives: Assumption utilized 95% of RP-2000 Healthy Annuitant mortality table for males with Blue Collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.

Post-retirement Disabled Lives: Assumption utilized in the January 1, 2021 and 2020 valuation was the RP-2014 Disabled Annuitant mortality table for males and females. This assumption was not applicable for the Additional Plan and the MNR Cash Balance Plan.

**NYCERS:**

Pursuant to Section 96 of the New York City Charter, an independent actuarial firm conducts studies of the actuarial assumptions used to value liabilities of the NYCERS pension plan every two years. In accordance, with the Administrative Code of the City of New York ("ACNY"), the Board of Trustees of NYCERS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions, which are also generally used to determine the total pension liability, as applicable.

Mortality tables for service and disability pensioners were developed from experience studies of the NYCERS Plan. The mortality tables for beneficiaries were developed from an experience review.

The actuarial assumptions used in the June 2020 valuation is based on the most recent actuarial experience study and recommendations prepared by Bolton, Inc. for the four-year and ten-year periods ended June 30, 2017. Based, in part, on this report issued in June 2019, the Actuary proposed and the Board of Trustees of NYCERS adopted changes in actuarial assumptions including a change to Mortality Improvement Scale MP-2018 beginning in Fiscal Year 2019. The actuarial assumptions used in the June 2018 valuation was based on the previous study by Gabriel, Roeder, Smith & Company ('GRS") published in October 2015 for the four-year and ten-year periods ended June 30, 2013. Based, in part, on the GRS Report, the Actuary proposed, and the Boards of Trustees of the NYCERS adopted, new post-retirement mortality tables including the application of Mortality Improvement Scale MP-2015 for use in determining employer contributions beginning in Fiscal Year 2016. Scale MP-2015 replaced Mortality Improvement Scale AA.

**NYSLERS:**

The actuarial assumptions used in the April 1, 2021 valuation are based on the results of an actuarial experience study for the period April 1, 2015 – March 31, 2020. Annuitant mortality rates are based on April 1, 2015 – March 31, 2020 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2020. The previous actuarial valuation as of April 1, 2020 used the same assumptions for the measure of total pension liability.

### *Expected Rate of Return on Investments*

The long-term expected rate of return on pension plan investments for each pension plan is presented in the following table.

| Pension Plan | Plan Measurement Date | Rate |
|---|---|---|
| **Additional Plan** | December 31, 2021 | 6.50% |
| **MaBSTOA Plan** | December 31, 2021 | 6.50% |
| **MNR Cash Balance Plan** | December 31, 2021 | 3.00% |
| **MTA Defined Benefit Plan** | December 31, 2021 | 6.50% |
| **NYCERS** | June 30, 2022 | 7.00% |
| **NYSLERS** | March 31, 2022 | 5.90% |

For the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan, MTA Defined Benefit Plan, NYCERS plan and NYSLERS plan, the long-term expected rate of return on investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocation of each of the funds and the expected real rate of returns ("RROR") for each of the asset classes are summarized in the following tables for each of the pension plans:

| | Additional Plan | | MaBSTOA Plan | |
|---|---|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** |
| US Core Fixed Income | 10.50% | 1.39% | 10.50% | 1.39% |
| US Long Bonds | 2.00% | 1.16% | 2.00% | 1.16% |
| US Bank / Leveraged Loans | 1.50% | 3.49% | 1.50% | 3.49% |
| US Inflation-Indexed Bonds | 2.00% | 0.60% | 2.00% | 0.60% |
| US High Yield Bonds | 3.00% | 3.92% | 3.00% | 3.92% |
| Emerging Markets Bonds | 2.00% | 3.98% | 2.00% | 3.98% |
| US Large Caps | 18.00% | 4.94% | 18.00% | 4.94% |
| US Small Caps | 7.00% | 6.73% | 7.00% | 6.73% |
| Foreign Developed Equity | 12.00% | 6.27% | 12.00% | 6.27% |
| Emerging Markets Equity | 4.50% | 8.82% | 4.50% | 8.82% |
| Emerging Markets Small Cap Equity | 1.50% | 8.89% | 1.50% | 8.89% |
| Global REITs | 1.00% | 5.60% | 1.00% | 5.60% |
| Private Real Estate Property | 4.00% | 4.61% | 4.00% | 4.61% |
| Private Equity | 7.00% | 10.36% | 7.00% | 10.36% |
| Private Credit | 7.00% | 6.93% | 7.00% | 6.93% |
| Commodities | 4.00% | 1.99% | 4.00% | 1.99% |
| Hedge Funds - MultiStrategy | 13.00% | 3.73% | 13.00% | 3.73% |
| | 100.00% | | 100.00% | |
| Assumed Inflation - Mean | | 2.30% | | 2.30% |
| Assumed Inflation - Standard Deviation | | 1.23% | | 1.23% |
| Portfolio Nominal Mean Return | | 7.39% | | 7.39% |
| Portfolio Standard Deviation | | 12.15% | | 12.15% |
| **Long Term Expected Rate of Return selected by MTA** | | **6.50%** | | **6.50%** |

| | MTA Defined Benefit Plan | | MNR Cash Balance Plan | |
|---|---|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** |
| US Core Fixed Income | 10.50% | 1.39% | 100.00% | 1.03% |
| US Long Bonds | 2.00% | 1.16% | - | - |
| US Bank / Leveraged Loans | 1.50% | 3.49% | - | - |
| US Inflation-Indexed Bonds | 2.00% | 0.60% | - | - |
| US High Yield Bonds | 3.00% | 3.92% | - | - |
| Emerging Markets Bonds | 2.00% | 3.98% | - | - |
| US Large Caps | 18.00% | 4.94% | - | - |
| US Small Caps | 7.00% | 6.73% | - | - |
| Foreign Developed Equity | 12.00% | 6.27% | - | - |
| Emerging Markets Equity | 4.50% | 8.82% | - | - |
| Emerging Markets Small Cap Equity | 1.50% | 8.89% | - | - |
| Global REITs | 1.00% | 5.60% | - | - |
| Private Real Estate Property | 4.00% | 4.61% | - | - |
| Private Equity | 7.00% | 10.36% | | |
| Private Credit | 7.00% | 6.93% | - | - |
| Commodities | 4.00% | 1.99% | - | - |
| Hedge Funds - MultiStrategy | 13.00% | 3.73% | - | - |
| | 100.00% | | 100.00% | |
| Assumed Inflation - Mean | | 2.30% | | 2.34% |
| Assumed Inflation - Standard Deviation | | 1.23% | | 1.23% |
| Portfolio Nominal Mean Return | | 7.39% | | 3.37% |
| Portfolio Standard Deviation | | 12.15% | | 4.06% |
| **Long Term Expected Rate of Return selected by MTA** | | **6.50%** | | **3.00%** |

| | NYCERS | | NYSLERS | |
|---|---|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** | **Target Asset Allocation** | **Long - Term Expected Real Rate of Return** |
| U.S. Public Market Equities | 27.00% | 7.00% | 32.00% | 3.30% |
| International Public Market Equities | 0.00% | 0.00% | 15.00% | 5.85% |
| Developed Public Market Equities | 12.00% | 7.20% | 0.00% | 0.00% |
| Emerging Public Market Equities | 5.00% | 9.00% | 0.00% | 0.00% |
| Fixed Income | 30.50% | 2.50% | 23.00% | 0.00% |
| Private Equities | 8.00% | 11.30% | 10.00% | 6.50% |
| Alternatives (Real Assets, Hedge Funds) | 0.00% | 0.00% | 3.00% | 5.58% |
| Real Estate | 7.50% | 6.70% | 9.00% | 5.00% |
| Infrastructure | 4.00% | 6.00% | 0.00% | 0.00% |
| Absolute Return Strategies | 0.00% | 0.00% | 0.00% | 0.00% |
| Opportunistic Portfolio | 6.00% | 7.40% | 3.00% | 4.10% |
| Cash | 0.00% | 0.00% | 1.00% | -1.00% |
| Credit | 0.00% | 0.00% | 4.00% | 3.78% |
| | 100.00% | | 100.00% | |
| Assumed Inflation - Mean | | 2.50% | | 2.50% |
| **Long Term Expected Rate of Return** | | **7.00%** | | **5.90%** |

### *Discount rate*

The discount rate used to measure the total pension liability of each pension plan is presented in the following table:

| **Year ended December 31,** | **Discount Rate** | | | |
|---|---|---|---|---|
| | **2022** | | **2021** | |
| **Pension Plan** | **Plan Measurement Date** | **Rate** | **Plan Measurement Date** | **Rate** |
| **Additional Plan** | December 31, 2021 | 6.50% | December 31, 2020 | 6.50% |
| **MaBSTOA Plan** | December 31, 2021 | 6.50% | December 31, 2020 | 6.50% |
| **MNR Cash Balance Plan** | December 31, 2021 | 3.00% | December 31, 2020 | 3.00% |
| **MTA Defined Benefit Plan** | December 31, 2021 | 6.50% | December 31, 2020 | 6.50% |
| **NYCERS** | June 30, 2022 | 7.00% | June 30, 2021 | 7.00% |
| **NYSLERS** | March 31, 2022 | 5.90% | March 31, 2021 | 5.90% |

The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable for each pension plan and that employer contributions will be made at the rates determined by each pension plan's actuary. Based on those assumptions, each pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current and inactive plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### *Changes in Net Pension Liability – Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan*

Changes in the MTA's net pension liability for the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan for the year ended December 31, 2022, based on the December 31, 2021 measurement date, and for the year ended December 31, 2021, based on the December 31, 2020 measurement date, were as follows:

| | Additional Plan | | | MaBSTOA Plan | | |
|---|---|---|---|---|---|---|
| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
| | (in thousands) | | | | | |
| **Balance as of December 31, 2020** | $ 1,357,323 | $ 760,690 | $ 596,633 | $ 4,246,386 | $ 3,306,616 | $ 939,770 |
| **Changes for fiscal year 2021:** | | | | | | |
| Service Cost | 260 | - | 260 | 93,934 | - | 93,934 |
| Interest on total pension liability | 83,489 | - | 83,489 | 274,270 | - | 274,270 |
| Effect of economic /demographic (gains) or losses | 3,729 | - | 3,729 | (19,177) | - | (19,177) |
| Effect of assumption changes or inputs | 26,300 | - | 26,300 | 72,032 | - | 72,032 |
| Benefit payments | (148,630) | (148,630) | - | (245,427) | (245,427) | - |
| Administrative expense | - | (610) | 610 | - | (264) | 264 |
| Member contributions | - | 73 | (73) | - | 24,935 | (24,935) |
| Net investment income | - | 95,247 | (95,247) | - | 416,287 | (416,287) |
| Employer contributions | - | 70,553 | (70,553) | - | 156,204 | (156,204) |
| **Balance as of December 31, 2021** | $ 1,322,471 | $ 777,323 | $ 545,148 | $ 4,422,018 | $ 3,658,351 | $ 763,667 |

| | Additional Plan | | | MaBSTOA Plan | | |
|---|---|---|---|---|---|---|
| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
| | (in thousands) | | | | | |
| **Balance as of December 31, 2019** | $ 1,411,570 | $ 840,460 | $ 571,110 | $ 4,122,934 | $ 3,300,268 | $ 822,666 |
| **Changes for fiscal year 2020:** | | | | | | |
| Service Cost | 453 | - | 453 | 95,514 | - | 95,514 |
| Interest on total pension liability | 86,918 | - | 86,918 | 266,588 | - | 266,588 |
| Effect of economic /demographic (gains) or losses | 10,428 | - | 10,428 | (720) | - | (720) |
| Benefit payments | (152,046) | (152,046) | - | (237,930) | (237,930) | - |
| Administrative expense | - | (612) | 612 | - | (244) | 244 |
| Member contributions | - | 140 | (140) | - | 24,709 | (24,709) |
| Net investment income | - | 4,024 | (4,024) | - | 60,327 | (60,327) |
| Employer contributions | - | 68,724 | (68,724) | - | 159,486 | (159,486) |
| **Balance as of December 31, 2020** | $ 1,357,323 | $ 760,690 | $ 596,633 | $ 4,246,386 | $ 3,306,616 | $ 939,770 |

| | MNR Cash Balance Plan | | | MTA Defined Benefit Plan | | |
|---|---|---|---|---|---|---|
| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
| | (in thousands) | | | | | |
| **Balance as of December 31, 2020** | $ 378 | $ 394 | $ (16) | $ 6,950,035 | $ 5,012,765 | $ 1,937,270 |
| **Changes for fiscal year 2021:** | | | | | | |
| Service Cost | - | - | - | 213,675 | - | 213,675 |
| Interest on total pension liability | 11 | - | 11 | 455,230 | - | 455,230 |
| Effect of economic / demographic (gains) or losses | (11) | - | (11) | 20,656 | - | 20,656 |
| Effect of assumption changes or inputs | 15 | - | 15 | 113,662 | - | 113,662 |
| Benefit payments | (38) | (38) | - | (325,473) | (325,473) | - |
| Administrative expense | - | - | - | - | (3,513) | 3,513 |
| Member contributions | - | - | - | - | 33,832 | (33,832) |
| Net investment income | - | (5) | 5 | - | 639,374 | (639,374) |
| Employer contributions | - | - | - | - | 396,144 | (396,144) |
| **Balance as of December 31, 2021** | $ 355 | $ 351 | $ 4 | $ 7,427,785 | $ 5,753,129 | $ 1,674,656 |

| | MNR Cash Balance Plan | | | MTA Defined Benefit Plan | | |
|---|---|---|---|---|---|---|
| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
| | (in thousands) | | | | | |
| **Balance as of December 31, 2019** | $ 448 | $ 455 | $ (7) | $ 6,510,686 | $ 4,784,224 | $ 1,726,462 |
| **Changes for fiscal year 2020:** | | | | | | |
| Service Cost | - | - | - | 213,494 | - | 213,494 |
| Interest on total pension liability | 14 | - | 14 | 427,672 | - | 427,672 |
| Effect of economic / demographic (gains) or losses | 10 | - | 10 | 92,019 | - | 92,019 |
| Effect of assumption changes or inputs | 11 | - | 11 | - | - | - |
| Benefit payments | (105) | (105) | - | (293,836) | (293,836) | - |
| Administrative expense | - | 3 | (3) | - | (3,660) | 3,660 |
| Member contributions | - | - | - | - | 32,006 | (32,006) |
| Net investment income | - | 32 | (32) | - | 99,045 | (99,045) |
| Employer contributions | - | 9 | (9) | - | 394,986 | (394,986) |
| **Balance as of December 31, 2020** | $ 378 | $ 394 | $ (16) | $ 6,950,035 | $ 5,012,765 | $ 1,937,270 |

### *Sensitivity of the Net Pension Liability to Changes in the Discount Rate*

The following presents the MTA's net pension liability calculated for the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan using the discount rate as of each measurement date, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for each measurement date:

| **Measurement Date:** | **December 31, 2021** | | | **December 31, 2020** | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (5.5%) | Discount Rate (6.5%) | 1% Increase (7.5%) | 1% Decrease (5.5%) | Discount Rate (6.5%) | 1% Increase (7.5%) |
| | (in thousands) | | | (in thousands) | | |
| Additional Plan | $ 648,472 | $ 545,148 | $ 455,156 | $ 702,167 | $ 596,633 | $ 504,666 |
| MaBSTOA Plan | 1,269,779 | 763,667 | 335,356 | 1,421,343 | 939,770 | 531,498 |
| MTA Defined Benefit Plan | 2,615,168 | 1,674,656 | 884,831 | 2,812,063 | 1,937,270 | 1,200,642 |

| | 1% Decrease (2.0%) | Discount Rate (3.0%) | 1% Increase (4.0%) | 1% Decrease (2.0%) | Discount Rate (3.0%) | 1% Increase (4.0%) |
|---|---|---|---|---|---|---|
| | (in whole dollars) | | | (in whole dollars) | | |
| MNR Cash Balance Plan | $ 26,611 | $ 3,865 | $ (16,181) | $ 7,343 | $ (15,852) | $ (36,311) |

### *The MTA's Proportion of Net Pension Liability – NYCERS and NYSLERS*

The following table presents the MTA's proportionate share of the net pension liability of NYCERS based on the June 30, 2021 and June 30, 2020 actuarial valuations, rolled forward to June 30, 2022 and June 30, 2021, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

| | NYCERS | |
|---|---|---|
| | June 30, 2022 | June 30, 2021 |
| | ($ in thousands) | |
| MTA's proportion of the net pension liability | 21.900% | 22.218% |
| MTA's proportionate share of the net pension liability | $ 3,964,996 | $ 1,424,952 |

The following table presents the MTA's proportionate share of the net pension liability of NYSLERS based on the April 1, 2021 and April 1, 2020 actuarial valuations, rolled forward to March 31, 2022 and March 31, 2021, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

| | NYSLERS | |
|---|---|---|
| | March 31, 2022 | March 31, 2021 |
| | ($ in thousands) | |
| MTA's proportion of the net pension liability | 0.316% | 0.314% |
| MTA's proportionate share of the net pension liability | $ (25,856) | $ 313 |

The MTA's proportion of each respective Plan's net pension liability was based on the MTA's actual required contributions made to NYCERS for the plan's fiscal year-end June 30, 2022 and 2021 and to NYSLERS for the plan's fiscal year-end March 31, 2022 and 2021, relative to the contributions of all employers in each plan.

### *Sensitivity of the MTA's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate*

The following presents the MTA's proportionate share of the net pension liability for NYCERS and NYSLERS calculated using the discount rate as of each measurement date, as well as what the proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used as of each measurement date ($ in thousands):

| **Measurement Date:** | **June 30, 2022** | | | **June 30, 2021** | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (6.0%) | Discount Rate (7.0%) | 1% Increase (8.0%) | 1% Decrease (6.0%) | Discount Rate (7.0%) | 1% Increase (8.0%) |
| NYCERS | $ 6,309,639 | $ 3,964,996 | $ 1,984,590 | $ 3,738,910 | $ 1,424,952 | $ (538,293) |

| **Measurement Date:** | **March 31, 2022** | | | **March 31, 2021** | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (4.9%) | Discount Rate (5.9%) | 1% Increase (6.9%) | 1% Decrease (4.9%) | Discount Rate (5.9%) | 1% Increase (6.9%) |
| NYSLERS | $ 66,552 | $ (25,856) | $ (103,150) | $ 86,873 | $ 313 | $ (79,515) |

### *Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions*

For the years ended years ended December 31, 2022 and 2021, the MTA recognized pension expense related to each pension plan as follows (in $ thousands):

| | **December 31,** | |
|---|---|---|
| **Pension Plan** | **2022** | **2021** |
| Additional Plan | $ 63,224 | $ 50,360 |
| MaBSTOA Plan | 132,278 | 140,280 |
| MNR Cash Balance plan | 3 | 7 |
| MTA Defined Benefit Plan | 385,288 | 413,652 |
| NYCERS | 453,150 | (47,824) |
| NYSLERS | 2,312 | 8,189 |
| **Total** | **$ 1,036,255** | **$ 564,664** |

For the years ended years ended December 31, 2022 and 2021, the MTA reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows (in $ thousands):

| For the Year Ended December 31, 2022 | Additional Plan | | MaBSTOA Plan | | MNR Cash Balance Plan | | MTA Defined Benefit Plan | |
|---|---|---|---|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ - | $ - | $ 10,906 | $ 16,683 | $ - | $ - | $ 185,955 | $ 10,359 |
| Changes in assumptions | - | - | 156,544 | - | - | - | 554,001 | 7,813 |
| Net difference between projected and actual earnings on pension plan investments | - | 16,341 | - | 111,214 | - | 3 | - | 178,327 |
| Changes in proportion and differences between contributions and proportionate share of contributions | - | - | - | - | - | - | 66,655 | 66,655 |
| Employer contributions to the plan subsequent to the measurement of net pension liability | 70,764 | - | 158,618 | - | 4 | - | 391,041 | |
| Total | $ 70,764 | $ 16,341 | $ 326,068 | $ 127,897 | $ 4 | $ 3 | $ 1,197,652 | $ 263,154 |

| For the Year Ended December 31, 2022 | NYCERS | | NYSLERS | | TOTAL | |
|---|---|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ 343,902 | $ 87,149 | $ 1,958 | $ 2,540 | $ 542,721 | $ 116,731 |
| Changes in assumptions | 653 | 126,839 | 43,150 | 728 | 754,348 | 135,380 |
| Net difference between projected and actual earnings on pension plan investments | 724,648 | - | - | 84,666 | 724,648 | 390,551 |
| Changes in proportion and differences between contributions and proportionate share of contributions | 51,026 | 343,882 | 3,726 | 2,117 | 121,407 | 412,654 |
| Employer contributions to the plan subsequent to the measurement of net pension liability | 406,565 | - | 11,155 | - | 1,038,147 | - |
| Total | $ 1,526,794 | $ 557,870 | $ 59,989 | $ 90,051 | $ 3,181,271 | $ 1,055,316 |

| **For the Year Ended December 31, 2021** | **Additional Plan** | | **MaBSTOA Plan** | | **MNR Cash Balance Plan** | | **MTA Defined Benefit Plan** | |
|---|---|---|---|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ - | $ - | $ 17,004 | $ 3,896 | $ - | $ - | $ 218,415 | $ 13,714 |
| Changes in assumptions | - | - | 121,560 | - | - | - | 535,702 | 17,580 |
| Net difference between projected and actual earnings on pension plan investments | 27,816 | - | 57,062 | - | - | 19 | 72,382 | - |
| Changes in proportion and differences between contributions and proportionate share of contributions | - | - | - | - | - | - | 78,760 | 78,760 |
| Employer contributions to the plan subsequent to the measurement of net pension liability | 70,553 | - | 156,204 | - | - | - | 396,144 | - |
| Total | $ 98,369 | $ - | $ 351,830 | $ 3,896 | $ - | $ 19 | $ 1,301,403 | $ 110,054 |

| **For the Year Ended December 31, 2021** | **NYCERS** | | **NYSLERS** | | **TOTAL** | |
|---|---|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ 365,770 | $ 164,835 | $ 3,822 | $ - | $ 605,011 | $ 182,445 |
| Changes in assumptions | 1,318 | 176,775 | 57,548 | 1,085 | 716,128 | 195,440 |
| Net difference between projected and actual earnings on pension plan investments | - | 2,091,098 | - | 89,908 | 157,260 | 2,181,025 |
| Changes in proportion and differences between contributions and proportionate share of contributions | 55,095 | 353,104 | 3,424 | 2,823 | 137,279 | 434,687 |
| Employer contributions to the plan subsequent to the measurement of net pension liability | 451,816 | - | 16,284 | - | 1,091,001 | - |
| Total | $ 873,999 | $ 2,785,812 | $ 81,078 | $ 93,816 | $ 2,706,679 | $ 2,993,597 |

The annual differences between the projected and actual earnings on investments are amortized over a five-year closed period beginning the year in which the difference occurs.

The following table presents the recognition periods used by each pension plan to amortize the annual differences between expected and actual experience, changes in proportion and differences between employer contributions and proportionate share of contributions, and changes in actuarial assumptions, beginning the year in which the deferred amount occurs.

| | Recognition Period (in years) | | |
|---|---|---|---|
| **Pension Plan** | **Differences between expected and actual experience** | **Changes in proportion and differences between employer contributions and proportionate share of contributions** | **Changes in actuarial assumptions** |
| Additional Plan | 1.00 | N/A | 1.00 |
| MaBSTOA Plan | 6.40 | N/A | 6.40 |
| MNR Cash Balance Plan | 1.00 | N/A | 1.00 |
| MTA Defined Benefit Plan | 8.30 | 8.30 | 8.30 |
| NYCERS | 5.79 | 5.79 | 5.79 |
| NYSLERS | 5.00 | 5.00 | 5.00 |

For the years ended December 31, 2022 and 2021, $1,038.1 and $1,091.0 were reported as deferred outflows of resources related to pensions resulting from the MTA's contributions subsequent to the measurement date which will be recognized as a reduction of the net pension liability in the year ending December 31, 2023 and December 31, 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2022 will be recognized as pension expense as follows:

| | Additional Plan | MaBSTOA Plan | MNR Cash Balance plan | MTA Defined Benefit Plan (in thousands) | NYCERS | NYSLERS | Total |
|---|---|---|---|---|---|---|---|
| Year Ending December 31: | | | | | | | |
| 2023 | $ 6,195 | $ 37,990 | $ (1) | $ 129,154 | $ 27,732 | $ (5,818) | $ 195,252 |
| 2024 | (12,635) | (23,044) | (5) | 36,940 | 99,838 | (9,235) | 91,859 |
| 2025 | (188) | 24,723 | - | 100,670 | (58,363) | (21,989) | 44,853 |
| 2026 | (9,713) | (11,613) | 3 | 58,386 | 489,105 | (4,175) | 521,993 |
| 2027 | - | 8,193 | - | 113,253 | 4,047 | - | 125,493 |
| Thereafter | - | 3,304 | - | 105,054 | - | - | 108,358 |
| | $ (16,341) | $ 39,553 | $ (3) | $ 543,457 | $ 562,359 | $ (41,217) | $ 1,087,808 |

## *Deferred Compensation Program*

*Description* - The Deferred Compensation Program consists of two defined contribution plans that provide benefits based solely on the amount contributed to each participant's account(s), plus or minus any income, expenses and gains/losses. The Deferred Compensation Program is comprised of the Deferred Compensation Plan For Employees of the Metropolitan Transportation Authority ("MTA"), its Subsidiaries and Affiliates ("457 Plan") and the Thrift Plan For Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates ("401(k) Plan"). Certain MTA Related Groups employees are eligible to participate in both deferred compensation plans. Both Plans are designed to have participant charges, including investment and other fees, cover the costs of administering the Deferred Compensation Program.

Participation in the 401(k) Plan is now available to non-represented employees and, after collective bargaining, most represented employees. All amounts of compensation deferred under the 401(k) Plan, and all income attributable to such compensation, less expenses and fees, are held in trust for the exclusive benefit of the participants and their beneficiaries. Accordingly, the 401(k) Plan is not reflected in the accompanying consolidated statements of net position.

The Deferred Compensation Program is administered and may be amended by the Deferred Compensation Committee.

As the Deferred Compensation Program's asset base and contribution flow increased, participants' investment options were expanded by the Deferred Compensation Committee with the advice of its Financial Advisor to provide greater diversification and flexibility. In 1988, after receiving an IRS determination letter for the 401(k) Plan, the MTA offered its managers the choice of either participating in the 457 Plan or the 401(k) Plan. By 1993, the MTA offered eight investment funds: a Guaranteed Interest Account Fund, a Money Market Fund, a Common Stock Fund, a Managed Fund, a Stock Index Fund, a Government Income Fund, an International Fund and a Growth Fund.

In 1998, the Deferred Compensation Committee approved the unbundling of the Plans. In 2008, the Plans' investment choices were restructured to set up a four-tier strategy:

- Tier 1 – The MTA Asset Allocation Programs offer two options for those participants who would like to make retirement investing easy – the MTA Target Year Funds and Goal maker. Investments will be automatically diversified among a range of investment options.
- Tier 2 – The MTA Index Funds offer a tier of index funds, which invest in the securities of companies that are included in a selected index, such as the Standard & Poor's 500 (large cap) Index or Barclays Capital U.S. Aggregate (bond) index. The typical objective of an index fund is to achieve approximately the same return as that specific market index. Index funds provide investors with lower-cost investments because they are less expensive to administer than actively managed funds.
- Tier 3 – The MTA Actively Managed Portfolios, which are comprised of actively managed portfolios that are directed by one or a team of professional managers who buy and sell a variety of holdings in an effort to outperform selected indices. The funds provide a diversified array of distinct asset classes, with a single option in each class. They combine the value and growth disciplines to create a "core" portfolio for the mid-cap and international categories.Tier 4 – The Self-Directed Mutual Fund Option is designed for the more experienced investors. The fund offers access to an expanded universe of mutual funds from hundreds of well-known mutual fund families. Participants may invest only a portion of their account balances in this Tier.

In 2011, the Deferred Compensation Program began offering Roth contributions. Employees can elect after-tax Roth contributions and before-tax contributions in both the 401(k) Plan and the 457 Plan. The total combination of Roth after-tax contributions and regular before-tax contributions cannot exceed the IRS maximum of $20,500 dollars or $27,000 dollars for those over age 50 for the year ended December 31, 2021. The total combination of Roth after-tax contributions and regular before-tax contributions cannot exceed the IRS maximum of $22,500 dollars or $30,000 dollars for those over age 50 for the year ended December 31, 2022.

The two Plans offer the same array of investment options to participants. Eligible participants in the Deferred Compensation Program include employees (and in the case of MTA Long Island Bus, former employees) of:

- MTA
- MTA Long Island Rail Road
- MTA Bridges and Tunnels
- MTA Long Island Bus
- MTA Metro-North Railroad
- MTA New York City Transit
- MTA Staten Island Rapid Transit
- MTA Construction and Development
- MTA Bus

**Employer Contributions -** MTA Bus on behalf of certain MTA Bus employees, MTA Metro-North Railroad on behalf of certain MNR employees who opted-out of participation in the MTA Defined Benefit Pension Plan and MTA on behalf of certain represented MTA Business Service Center employees and on behalf of certain MTA Police Officers, make contributions to the 401(k) Plan. The rate for the employer contribution varies.

**MTA Bus –** Effective in 2019, there are no employees receiving these employer contributions. Prior to 2019, certain members who were employed by Queens Surface Corporation on February 26, 2005, and who became employees of MTA Bus on February 27, 2005, receive a matching contribution equal to 50% of member's before-tax contributions provided that the maximum matching contribution shall not exceed 3% of the member's base pay. MTA Bus also makes a basic contribution equal to 2% of the member's compensation. These contributions vest as follows:

| Years of Service | Vested Percentage |
|---|---|
| Less than 2 | 0% |
| 2 | 20% |
| 3 | 40% |
| 4 | 60% |
| 5 | 80% |
| 6 or more | 100% |

**MTA Metro-North Railroad –** MNR employees represented by certain unions and who elected to opt-out of participation in the MTA Defined Benefit Pension Plan receive an annual employer contribution equal to 4% of the member's compensation. Effective on the first full pay period following the nineteenth anniversary date of an eligible MNR member's continuous employment, MTA Metro-North Railroad contributes an amount equal to 7% of the member's compensation. Eligible MNR members vest in these employer contributions as set forth below:

| Years of Service | Vested Percentage |
|---|---|
| Less than 5 | 0% |
| 5 or more | 100% |

**MTA Headquarters - Police -** For each plan year, the MTA shall make contributions to the account of each eligible MTA Police Benevolent Association member in the amounts required by the collective bargaining agreement ("CBA") and subject to the contribution limits set forth in the CBA. These contributions shall be made monthly and shall be considered MTA Police contributions. Members are immediately 100% vested in these employer contributions.

**MTA Headquarters – Commanding Officers -** In addition, for each plan year, the MTA shall make contributions to the account of each eligible MTA Police Department Commanding Officers Benevolent Association member in the amounts required by the CBA and subject to the contribution limits set forth in the CBA. These contributions shall be made monthly and shall be considered MTA Police contributions. These members are immediately 100% vested in these employer contributions.

**MTA Headquarters – Business Services -** Effective January 1, 2011, all newly hired MTA Business Services Center employees represented by the Transportation Communications Union are eligible to receive a matching contribution up to a maximum of 3% of the participant's compensation. A participant's right to the balance in his or her matching contributions shall vest upon the first of the following to occur:

1. Completing 5 years of service,
2. Attaining the Normal Retirement Age of 62 while in continuous employment, or
3. Death while in continuous employment.

**Additional Deposits (Incoming Rollover or Transfers) -** Participants in the Deferred Compensation Program are eligible to roll over both their before-tax and after-tax assets from other eligible retirement plans into the 401(k) and 457 Plans. Under certain conditions, both Plans accepts rollovers from all eligible retirement plans (as defined by the Code), including 401(a), 457, 401(k), 403(b), and rollover IRAs.

**Forfeitures –** Non vested contributions are forfeited upon termination of employment. Such forfeitures are used to cover a portion of the pension plan's administrative expenses.

| | **December 31, 2022** | **December 31, 2021** |
|---|---|---|
| | (In thousands) | |
| Employer 401K contributions | $3,833 | $3,939 |

## 5. OTHER POSTEMPLOYMENT BENEFITS

The MTA participates in a defined benefit other postemployment benefits ("OPEB") plan for its employees, the Metropolitan Transportation Authority Retiree Welfare Benefits Plan ("OPEB Plan"). A description of the Plan follows:

### *(1) Plan Description*

The MTA Retiree Welfare Benefits Plan ("OPEB Plan") and the related Trust Fund ("Trust") was established on January 1, 2009 for the exclusive benefit of MTA retired employees and their eligible spouses and dependents, to fund some of the OPEB provided in accordance with the MTA's various collective bargaining agreements. Postemployment benefits are part of an exchange of salaries and benefits for employee services rendered. Amounts contributed to the OPEB Plan are held in an irrevocable trust and may not be used for any other purpose than to fund the costs of health and welfare benefits of its eligible participants.

The OPEB Plan and the Trust are exempt from federal income taxation under Section 115(1) of the Internal Revenue Code. The OPEB Plan is classified as a single-employer plan.

The OPEB Plan Board of Managers, comprised of the MTA Chairman, MTA Chief Financial Officer and MTA Director of Labor Relations, are the administrators of the OPEB Plan. The MTA Board has the right to amend, suspend or terminate the

OPEB Plan. The OPEB Plan is a fiduciary component unit of the MTA and is in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The separate annual financial statements of the OPEB Plan may be obtained by writing to MTA Deputy Chief, Controller's Office, 2 Broadway, 15th Floor New York, NY 10004 or at www.mta.info.

**Benefits Provided** — The benefits provided by the OPEB Plan include medical, pharmacy, dental, vision, life insurance and a Medicare supplemental plan. The different types of benefits provided vary by agency, employee type (represented employees versus non-represented) and the relevant collective bargaining agreements. Certain benefits are provided upon retirement as defined in the applicable pension plan. Certain agencies provide benefits to certain former employees if separated from service within 5 years of attaining retirement eligibility. Employees of the MTA are members of the following pension plans: the MTA Defined Benefit Plan, the Additional Plan, the MNR Cash Balance Plan, the MaBSTOA Plan, NYCERS, and NYSLERS. Certain represented employees of MTA Metro-North Railroad participate in the 401(k) Plan. Eligible employees of the MTA may elect to join the New York State Voluntary Defined Contribution Plan ("VDC").

The MTA participates in the New York State Health Insurance Program ("NYSHIP") and provides medical and prescription drug benefits, including Medicare Part B reimbursements, to many of its retirees. NYSHIP offers a Preferred Provider Organization ("PPO") plan and several Health Maintenance Organization ("HMO") plans. Represented MTA New York City Transit employees, other MTA New York City Transit former employees who retired prior to January 1, 1996 or January 1, 2001, MTA Staten Island Railway represented employees as of March 1, 2010, June 1, 2010 or January 1, 2013 depending on the union and MTA Bus retirees do not participate in NYSHIP. These benefits are provided either through a self-insured health plan, a fully insured health plan or an HMO.

The MTA is a participating employer in NYSHIP. The NYSHIP financial report can be obtained by writing to NYS Department of Civil Service, Employee Benefits Division, Alfred E. Smith Office Building, 805 Swan Street, Albany, NY 12239.

**OPEB Plan Eligibility** — To qualify for benefits under the OPEB Plan, a former employee of the MTA must:

i. have retired;

ii. be receiving a pension (except in the case of the 401(k) Plan);

iii. have at least 10 years of credited service as a member of NYCERS, NYSLERS, the MTA Defined Benefit Plan, the Additional Plan, the MaBSTOA Plan, the MNR Cash Balance Plan, the 401(k) Plan or the VDC; and

iv. have attained the minimum age requirement (unless within 5 years of commencing retirement for certain members). A represented retired employee may be eligible only pursuant to the relevant collective bargaining agreement.

Surviving Spouse and Other Dependents —

- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of retired managers and certain non-represented retired employees.
- Represented retired employees must follow the guidelines of their collective bargaining agreements regarding continued health coverage for a surviving spouse or domestic partner and surviving dependents. The surviving spouse coverage continues until spouse is eligible for Medicare for represented employees of MTA New York City Transit and MTA Staten Island Railway, retiring on or after:
  - May 21, 2014 for Transport Workers Union ("TWU") Local 100;
  - September 24, 2014 for Amalgamated Transit Union ("ATU") Local 726;
  - October 29, 2014 for ATU Local 1056;
  - March 25, 2015 for Transportation Communication Union ("TCU"); and
  - December 16, 2015 for United Transportation Union ("UTU") and American Train Dispatchers Association ("ATDA").
- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependents of retired uniform members of the MTA Police Department.
- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of uniformed members of the MTA Police Department whose death was sustained while in performance of duty.

The OPEB Plan Board of Managers has the authority to establish and amend the benefits that will be covered under the OPEB Plan, except to the extent that they have been established by collective bargaining agreement.

**Employees Covered by Benefit Terms** — As of July 1, 2021 and July 1, 2019, the date of the most recent actuarial valuation, the following classes of employees were covered by the benefit terms:

| | Number of Participants | |
|---|---|---|
| | July 1, 2021 | July 1, 2019 |
| Active plan members | 68,672 | 73,588 |
| Inactive plan members currently receiving benefit payments | 48,888 | 46,994 |
| Inactive plan members entitled to but not yet receiving benefit payments | 131 | 186 |
| Total | 117,691 | 120,768 |

**Contributions** — The MTA is not required by law or contractual agreement to provide funding for the OPEB Plan, other than the "pay-as-you-go" ("PAYGO") amounts. PAYGO is the cost of benefits necessary to provide the current benefits to retirees and eligible beneficiaries and dependents. Employees are not required to contribute to the OPEB Plan. The OPEB Plan Board has the authority for establishing and amending the funding policy. For the years ended December 31, 2022 and 2021, the MTA paid $846.3 and $813.2 of PAYGO to the OPEB Plan, respectively. The PAYGO amounts include an implicit rate subsidy adjustment of $58 and $53 for the years ended December 31, 2022 and 2021, respectively. For the 2021 plan year, the OPEB Plan paid $337.6 in OPEB benefits, reducing the employer contributions to $387.3.

The discount rate estimates investment earnings for assets earmarked to cover retiree health benefits. Under GASB Statement No. 75, the discount rate depends on the nature of underlying assets for funded plans. Since the amount of benefits paid in 2020 exceeded the current market value of the assets, a depletion date is assumed to occur immediately. Therefore, the discount rate is set equal to the municipal bond index. The MTA elected the Bond Buyer General Obligation 20-Bond Municipal Bond Index. As a result, the discount rates as of December 31, 2021 and December 31, 2020, the measurement dates, are 2.06% and 2.12%, respectively.

Employer contributions include the implicit subsidy, or age-related subsidy inherent in the healthcare premiums structure. The implicit subsidy arises when an employer allows a retiree and their dependents to continue on the active plans and pay the active premiums. Retirees are not paying the true cost of their benefits because they have higher utilization rates than actives and therefore, are partially subsidized by the active employees. As shown in the following table, for the years ended December 31, 2021 and 2020, the employer made a cash payment for retiree healthcare of $52,933 and $69,472, respectively, as part of the employer's payment for active-employee healthcare benefits. For purposes of GASB Statement No. 75, this payment made on behalf of the active employees should be reclassified as benefit payments for retiree health care to reflect the retirees' underlying age-adjusted, retiree benefit costs.

| **Blended and Age-adjusted Premium** (in thousands) | **2021 Retirees** | **2020 Retirees** |
|---|---|---|
| Total blended premiums | $740,051 | $655,269 |
| Employment payment for retiree healthcare | 52,933 | 69,472 |
| **Net Payments** | $792,984 | $724,741 |

### *(2) Actuarial Assumptions*

Actuarial valuation involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future, such as future employment, mortality and health care cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan, which refers to the plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees. The projections include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members at that time. The MTA may not be obligated to provide the same types or levels of benefits to retirees in the future.

The total OPEB liability was determined by an actuarial valuation performed on July 1, 2021 and July 1, 2019. Update procedures were used to roll forward the total OPEB liability to the measurement dates of December 31, 2021, and December 31, 2020, respectively. The actuarial valuations were performed using the following actuarial assumptions, applied to all periods included in the measurement, unless specified:

| | | |
|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 |
| Measurement date | December 31, 2021 | December 31, 2020 |
| Discount rate | 2.06%, net of expenses | 2.12%, net of expenses |
| Inflation | 2.30% | 2.25% |
| Actuarial cost method | Entry Age Normal | Entry Age Normal |
| Amortization method | Level percentage of payroll | Level percentage of payroll |
| Normal cost increase factor | 4.25% | 4.25% |
| Salary increases | Varies by years of service and differs for members of the various pension plans | Varies by years of service and differs for members of the various pension plans |
| Investment rate of return | 2.06% | 2.12% |

**Healthcare Cost Trend** — The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2021 utilizing the baseline assumptions included in the model, except inflation of 2.25% for medical and pharmacy benefits. Further adjustments apply based on percentage of costs associated with administrative expenses, inflation on administrative costs, and aging factors. For NYSHIP benefits, trends are multiplied by 90% to reflect that NYSHIP trends have been generally lower than trends projected by the Getzen model over the past 10 years. Separate long-term trends are used for Medicare Part B reimbursements and for dental and vision benefits (3.5% per year). The self-insured trend is applied directly for represented employees of NYC Transit, SIRTOA and MTA Bus Company. No self-insured post-65 trend is assumed during 2021 to reflect the approximately 90% reduction in the contracted Medicare Advantage plan premiums for 2022.

**Healthcare Cost Trend Rates —** The following lists illustrative rates for the NYSHIP and self-insured trend assumptions (all amounts are in percentages).

| | NYSHIP | | TBTA | | Self-Insured | | Medicare |
|---|---|---|---|---|---|---|---|
| **Fiscal Year** | **< 65** | **> = 65** | **< 65** | **> = 65** | **< 65** | **> = 65** | **Part B Trend** |
| 2021 | 5.30% | 4.60% | 5.20% | 3.60% | 5.90% | 0.00% | 14.50% |
| 2022 | 5.10% | 4.60% | 5.00% | 3.90% | 5.60% | 5.10% | 5.40% |
| 2023 | 4.80% | 4.60% | 4.80% | 4.30% | 5.40% | 5.10% | 5.40% |
| 2024 | 4.60% | 4.60% | 4.60% | 4.60% | 5.10% | 5.10% | 5.40% |
| 2025 | 4.50% | 4.50% | 4.50% | 4.50% | 5.00% | 5.00% | 5.40% |
| 2026 | 4.40% | 4.40% | 4.40% | 4.40% | 4.90% | 4.80% | 5.40% |
| 2027 | 4.30% | 4.30% | 4.30% | 4.30% | 4.70% | 4.70% | 5.40% |
| 2028 | 4.20% | 4.20% | 4.20% | 4.20% | 4.60% | 4.60% | 5.40% |
| 2029 | 4.00% | 4.00% | 4.00% | 4.00% | 4.50% | 4.50% | 5.40% |
| 2039 | 3.90% | 3.90% | 3.90% | 3.90% | 4.40% | 4.40% | 5.40% |
| 2049 | 3.90% | 3.90% | 3.90% | 3.90% | 4.30% | 4.30% | 4.00% |
| 2059 | 3.80% | 3.80% | 3.80% | 3.80% | 4.20% | 4.20% | 3.80% |
| 2069 | 3.80% | 3.80% | 3.80% | 3.80% | 4.20% | 4.20% | 3.70% |
| 2079 | 3.50% | 3.50% | 3.50% | 3.50% | 3.90% | 3.90% | 3.70% |
| 2089 | 3.30% | 3.30% | 3.30% | 3.30% | 3.70% | 3.70% | 3.70% |
| 2099 | 3.30% | 3.30% | 3.30% | 3.30% | 3.70% | 3.70% | 3.60% |
| 2100 | 3.30% | 3.30% | 3.30% | 3.30% | 3.70% | 3.70% | 3.60% |

For purposes of applying the Entry Age Normal cost method, the healthcare trend prior to the valuation date is based on the ultimate rates, which are 3.3% for NYSHIP costs, 3.7% for self-insured medical and pharmacy costs, and 3.6% for Medicare Part B costs.

**Mortality —** All mortality rates (except accidental death for active police members) are projected on a generational basis using the Society of Actuaries Mortality Improvement Scale MP-2021. As generational tables, they reflect mortality improvement both before and after the measurement date. The post-retirement mortality assumption is based on an experience analysis covering the period from January 1, 2015 to December 31, 2020 for the MTA-sponsored pension plans. The mortality rates vary by employee type:

- Headquarters Non-Police Members: PubG.H-2010 Mortality Table, headcount weighted for general employees for males and females with separate rates for employees, healthy annuitants and disabled annuitants.

- Headquarters Police Members: Rates from the June 30, 2019 (Lag) Actuarial Valuation for NYCERS dated December 29, 2021 as follows: Service Retirees for Housing Police and Transit Police (Table XII-5), Disabled Retirees for Housing Police and Transit Police (Table XII-6) and Active Members for Transit and TBTA Ordinary Death and Accidental Death (Table XII-4). No adjustments were made to convert from lives-weighted to amounts-weighted. Base year is 2012 for mortality improvement purposes.
- Rail Members (LI Bus, LIRR, Metro-North, and SIRTOA): Pri.H-2012(BC) Mortality Table, headcount weighted with blue collar adjustments for males and females with separate rates for employees, healthy annuitants and disabled annuitants. Employee and healthy annuitant male rates are multiplied by 97%.
- Transit Members (Bridges and Tunnels, MTA Bus, and Transit): Pri.H-2012(BC) Mortality Table, headcount weighted with blue collar adjustments for males and females with separate rates for employees, healthy annuitants and disabled annuitants. Employee and healthy annuitant male rates are multiplied by 92%.

**(*3) Net OPEB Liability***

At December 31, 2022 and 2021, the MTA reported a net OPEB liability of $24,956 and $24,409, respectively. The MTA's net OPEB liability was measured as of December 31, 2021 and December 31, 2020, respectively. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation date of July 1, 2021 and July 1, 2019 and rolled forward to December 31, 2021 and December 31, 2020, respectively.

**OPEB Plan Fiduciary Net Position** — The fiduciary net position has been determined on the same basis used by the OPEB plan. The OPEB plan uses the accrual basis of accounting under which contributions from the employer are recognized when paid. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Investments are reported at fair value based on quoted market prices or Net Asset Value. Detailed information about the OPEB plan's fiduciary net position is available in the separately issued financial report or at www.mta.info.

**Expected Rate of Return on Investments —** The best-estimate range for the long-term expected rate of return was determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are as of December 31, 2021.

| Asset Class | Index | Target Allocation | Long-Term Expected Arithmetic Real Rate of Return |
|---|---|---|---|
| U.S. cash | BAML 3-Month T-Bill | 100.00% | -0.26% |
| Assumed Inflation - Mean | | | 2.30% |
| Assumed Inflation - Standard Deviation | | | 1.23% |
| Portfolio Nominal Mean return | | | 2.03% |
| Portfolio Standard Deviation | | | 1.11% |
| **Long Term Expected Rate of Return selected by MTA** | | | **2.06%** |

**Discount Rate —** The discount rate used in this valuation to measure the total OPEB liability was updated to incorporate GASB Statement No. 75 guidance.

The plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total OPEB liability is equal to the single equivalent rate that results in the same actuarial present value as the long-term expected rate of return applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payments, to the extent that the plan's fiduciary net position is not projected to be sufficient. Therefore, the discount rate is set equal to the Bond Buyer General Obligation 20-Bond Municipal Bond Index as of December 31, 2021 of 2.06% and as of December 31, 2020 of 2.12%.

Changes in Net OPEB Liability — Changes in the MTA's net OPEB liability for the year ended December 31, 2022 based on the December 31, 2021 measurement date, and for the year ended December 31, 2021, based on the December 31, 2020 measurement date, were as follows:

| | Total OPEB Liability | Plan Fiduciary Net Position (in thousands) | Net OPEB Liability |
|---|---|---|---|
| **Balance as of December 31, 2020** | $ 24,409,581 | $ 130 | $ 24,409,451 |
| **Changes for the year:** | | | |
| Service Cost | 1,250,950 | - | 1,250,950 |
| Interest on total OPEB liability | 535,642 | - | 535,642 |
| Effect of economic/demographic gains or losses | 292,154 | - | 292,154 |
| Effect of assumptions changes or inputs | (738,829) | - | (738,829) |
| Benefit payments | (792,984) | (792,984) | - |
| Employer contributions | - | 792,984 | (792,984) |
| Administrative expenses | - | (46) | 46 |
| **Net changes** | 546,933 | (46) | 546,979 |
| **Balance as of December 31, 2021** | $ 24,956,514 | $ 84 | $ 24,956,430 |

| | Total OPEB Liability | Plan Fiduciary Net Position (in thousands) | Net OPEB Liability |
|---|---|---|---|
| **Balance as of December 31, 2019** | $ 21,531,473 | $ 414,827 | $ 21,116,646 |
| **Changes for the year:** | | | |
| Service Cost | 1,097,051 | - | 1,097,051 |
| Interest on total OPEB liability | 610,160 | - | 610,160 |
| Effect of economic/demographic gains or losses | (43,890) | - | (43,890) |
| Effect of assumptions changes or inputs | 1,939,528 | - | 1,939,528 |
| Benefit payments | (724,741) | (724,741) | - |
| Employer contributions | - | 387,371 | (387,371) |
| Net investment income | - | (77,118) | 77,118 |
| Administrative expenses | - | (209) | 209 |
| **Net changes** | 2,878,108 | (414,697) | 3,292,805 |
| **Balance as of December 31, 2020** | $ 24,409,581 | $ 130 | $ 24,409,451 |

**Sensitivity of the Net OPEB Liability to Changes in the Discount Rate —** The following presents the net OPEB liability of the MTA, calculated using the discount rate as of each measurement date, as well as what the MTA's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for the measurement date:

| **Measurement Date:** | | **December 31, 2021** | |
|---|---|---|---|
| | **1% Decrease (1.06%)** | **Discount Rate (2.06%)** | **1% Increase (3.06%)** |
| Net OPEB liability | $28,857,427 | $24,956,431 | $21,790,175 |

| **Measurement Date:** | | **December 31, 2020** | |
|---|---|---|---|
| | **1% Decrease (1.12%)** | **Discount Rate (2.12%)** | **1% Increase (3.12%)** |
| Net OPEB liability | $28,098,117 | $24,409,451 | $21,392,425 |

**Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates —** The following presents the net OPEB liability of the MTA, calculated using the healthcare cost trend rates as of each measurement date, as well as what the MTA's net OPEB liability would be if it were calculated using trend rates that are 1-percentage point lower or 1-percentage point higher than the actual healthcare trend rate used for the measurement date:

| **Measurement Date:** | | **December 31, 2021** | |
|---|---|---|---|
| | **1% Decrease** | **Healthcare Cost Current Trend Rate*** | **1% Increase** |
| Net OPEB liability | $21,198,435 | $24,956,431 | $29,769,162 |

| **Measurement Date:** | | **December 31, 2020** | |
|---|---|---|---|
| | **1% Decrease** | **Healthcare Cost Current Trend Rate*** | **1% Increase** |
| Net OPEB liability | $20,595,637 | $24,409,451 | $29,295,102 |

*For further details, refer to the Health Care Cost Trend Rates tables in the Actuarial Assumptions section of this Note Disclosure

### *(4) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB*

For the years ended December 31, 2022 and 2021, the MTA recognized OPEB expense of $1.89 billion and $1.87 billion, respectively.

At December 31, 2022 and 2021, the MTA reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows ($ in thousands)

| | **December 31, 2022** | | **December 31, 2021** | |
|---|---|---|---|---|
| | **Deferred Outflows of Resources** | **Deferred Inflows of Resources** | **Deferred Outflows of Resources** | **Deferred Inflows of Resources** |
| Differences between expected and actual experience | $ 414,192 | $ 41,967 | $ 192,919 | $ 50,007 |
| Changes of assumptions | 1,952,237 | 1,468,704 | 2,353,287 | 1,070,351 |
| Net difference between projected and actual earnings on OPEB plan investments | 47,114 | - | 60,552 | - |
| Changes in proportion and differences between contributions and proportionate share of contributions | 1,184,355 | 1,184,355 | 612,892 | 612,892 |
| Employer contributions to the plan subsequent to the measurement of net OPEB liability | 846,299 | - | 813,195 | - |
| Total | **$ 4,444,197** | **$ 2,695,026** | **$ 4,032,845** | **$ 1,733,250** |

The annual differences between the projected and actual earnings on investments are amortized over a 5-year closed period beginning the year in which the difference occurs. The annual differences between expected and actual experience and changes in assumptions are amortized over a 7.6-year closed period, beginning the year in which the deferred amount occurs.

For the years ended December 31, 2022 and 2021, $846.3 and $813.2 were reported as employer contributions subsequent to measurement date. This amount includes both MTA's contributions subsequent to the measurement date and an implicit rate subsidy adjustment that will be recognized as a reduction of the net OPEB liability in the year ending December 31, 2023 and December 31, 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2022 will be recognized in OPEB expense as follows:

| | | |
|---|---|---|
| Year ending December 31: | 2023 | $ 142,130 |
| | 2024 | 133,532 |
| | 2025 | 66,689 |
| | 2026 | 145,935 |
| | 2027 | 244,288 |
| | Thereafter | 170,298 |
| | | $ 902,872 |

## 6. CAPITAL ASSETS

Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA having a minimum useful life of two years and having a cost of more than $25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. GASB 87 leases are classified as right-of-use assets and measured at the present value of the initial measurement of the lease liability, plus any payments made to the lessor at or before the commencement of the lease term and certain direct costs. Accumulated depreciation and amortization are reported as reductions of fixed assets and right-of-use assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment, and 25 to 100 years for infrastructure. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less. Capital and right-of-use assets consist of the following at January 1, 2021, December 31, 2021 and December 31, 2022 (in millions):

| | Balance January 1, 2021 (Restated) | Additions / Reclassifications (Restated) | Deletions / Reclassifications (Restated) | Balance December 31, 2021 (Restated) | Additions / Reclassifications | Deletions / Reclassifications | Balance December 31, 2022 |
|---|---|---|---|---|---|---|---|
| Capital assets not being depreciated: | | | | | | | |
| Land | $ 248 | $ 2 | $ 1 | $ 249 | $ 82 | $ - | $ 331 |
| Construction work-in-progress | 21,775 | 5,556 | 3,954 | 23,377 | 6,415 | 7,195 | 22,597 |
| Total capital assets not being depreciated | 22,023 | 5,558 | 3,955 | 23,626 | 6,497 | 7,195 | 22,928 |
| Capital assets being depreciated: | | | | | | | |
| Buildings and structures | 21,260 | 1,650 | 425 | 22,485 | 2,794 | 5 | 25,274 |
| Bridges and tunnels | 3,973 | 195 | - | 4,168 | 253 | - | 4,421 |
| Equipment: | | | | | | | |
| Passenger cars and locomotives | 14,197 | 149 | 22 | 14,324 | 197 | 42 | 14,479 |
| Buses | 3,688 | 317 | 136 | 3,869 | 456 | 336 | 3,989 |
| Infrastructure | 29,365 | 1,177 | 22 | 30,520 | 2,134 | 14 | 32,640 |
| Other | 27,864 | 1,321 | 125 | 29,060 | 1,332 | 6 | 30,386 |
| Total capital assets being depreciated | 100,347 | 4,809 | 730 | 104,426 | 7,166 | 403 | 111,189 |
| Less accumulated depreciation: | | | | | | | |
| Buildings and structures | 8,677 | 607 | 25 | 9,259 | 632 | 2 | 9,889 |
| Bridges and tunnels | 700 | 40 | - | 740 | 43 | - | 783 |
| Equipment: | | | | | | | |
| Passenger cars and locomotives | 7,753 | 413 | 22 | 8,144 | 403 | 42 | 8,505 |
| Buses | 2,200 | 251 | 135 | 2,316 | 257 | 336 | 2,237 |
| Infrastructure | 11,718 | 903 | 23 | 12,598 | 981 | 12 | 13,567 |
| Other | 10,445 | 932 | 61 | 11,316 | 977 | 5 | 12,288 |
| Total accumulated depreciation | 41,493 | 3,146 | 266 | 44,373 | 3,293 | 397 | 47,269 |
| Total capital assets being depreciated - net | 58,854 | 1,663 | 464 | 60,053 | 3,873 | 6 | 63,920 |
| Capital assets - net | $ 80,877 | $ 7,221 | $ 4,419 | $ 83,679 | $ 10,370 | $ 7,201 | $ 86,848 |

| | Balance January 1, 2021 (Restated) | Additions / Reclassifications (Restated) | Deletions / Reclassifications (Restated) | Balance December 31, 2021 (Restated) | Additions / Reclassifications | Deletions / Reclassifications | Balance December 31, 2022 |
|---|---|---|---|---|---|---|---|
| Right of Use Assets being amortized: | | | | | | | |
| Leased buildings and structures | $ 656 | $ 89 | $ - | $ 745 | $ - | $ - | $ 745 |
| Leased equipment and vehicles | 28 | 8 | - | 36 | 5 | - | 41 |
| Leased other | 4 | - | - | 4 | - | - | 4 |
| Total Right of Use Assets being amortized | 688 | 97 | - | 785 | 5 | - | 790 |
| Less accumulated amortization: | | | | | | | |
| Leased buildings and structures | - | 52 | - | 52 | 53 | - | 105 |
| Leased equipment and vehicles | - | 12 | - | 12 | 14 | - | 26 |
| Leased other | - | - | - | - | 1 | - | 1 |
| Total accumulated amortization | - | 64 | - | 64 | 68 | - | 132 |
| Right of Use Assets being amortized – net | 688 | 33 | - | 721 | (63) | - | 658 |
| Total Capital Assets, including Right of Use Asset, net of depreciation and amortization | $ 81,565 | $ 7,254 | $ 4,419 | $ 84,400 | $ 10,307 | $ 7,201 | $ 87,506 |

In 2021, MTA Long Island Rail Road obtained legal title to a newly constructed rail yard on its property in accordance to an agreement with the developer. The agreement provides for the developer to construct a rail yard for MTA Long Island Rail Road to store and service trains in a new location in exchange for development rights. A gain of $266.6 for the fair market value of the assets were recognized at the date of conveyance.

In December 2021, MTA obtained legal title to the wireless telecommunications equipment installed on its property according to the network license agreement entered into with the licensee. The license agreement provides for the licensee to construct, operate, and maintain the wireless network. This asset was transferred by MTA to MTA Long Island Rail Road as a non-cash capital contribution recorded at $27.3 representing the fair market value at the date of conveyance. In addition, in December 2021, MTA obtained legal title to work in process wireless telecommunications equipment to be installed on its property according to the network license agreement entered into with the licensee. The work in process assets were transferred by MTA to MTA Long Island Rail Road as a non-cash capital contribution recorded at $33.2 representing the fair market value at the date of conveyance.

In December 2021, MTA obtained legal title to the wireless telecommunications equipment installed on the MTA New York City Transit Authority's property according to the network license agreement that MTA entered into with the licensee. The license agreement provides for the licensee to construct, operate, and maintain the wireless network. This asset was transferred by MTA to the MTA New York City Transit Authority as a non-cash capital contribution recorded at $73.3 representing the fair market value at the date of conveyance.

Capital assets acquired prior to April 1982 for MTA New York City Transit were funded primarily by New York City with capital grants made available to MTA New York City Transit. New York City has title to a substantial portion of such assets and, accordingly, these assets are not recorded on the books of the MTA. Subsequent acquisitions, which are part of the MTA Capital Program, are recorded at cost by MTA New York City Transit. In certain instances, title to MTA Bridges and Tunnels' real property may revert to New York City in the event the MTA determines such property is unnecessary for its corporate purpose. With respect to MTA Metro-North Rail Road, capital assets completely funded by CDOT are not reflected in MTA's financial statements, as ownership is retained by CDOT.

For certain construction projects, the MTA holds in a trust account marketable securities pledged by third-party contractors in lieu of cash retainages. At December 31, 2022 and 2021, these securities, which are not included in these consolidated financial statements, totaled $155.0 and $153.1, respectively, and had a market value of $131.1 and $130.2, respectively.

As of December 31, 2022, $66.6 billion is unexpended from the MTA's Capital Program (2005-2024) and $22.9 billion has been committed.

As of December 31, 2021, $72.8 billion is unexpended from the MTA's Capital Program and $16.9 billion has been committed.

### 7. LONG-TERM DEBT

| (In millions) | Original Issuance | December 31, 2021 | Issued | Retired | December 31, 2022 |
|---|---|---|---|---|---|
| **MTA:** | | | | | |
| Transportation Revenue Bonds | | | | | |
| 1.43%-5.15% due through 2057 | $ 44,080 | $ 23,950 | $ 311 | $ 2,978 | $ 21,283 |
| Bond Anticipation Notes | | | | | |
| 1.33% due through 2023 | 23,635 | 13,004 | 0 | 9,297 | 3,707 |
| Dedicated Tax Fund Bonds | | | | | |
| 1.86%-5.00% due through 2057 | 11,527 | 4,681 | 436 | 329 | 4,788 |
| | 79,242 | 41,635 | 747 | 12,604 | 29,778 |
| Net unamortized bond premium | - | 1,158 | 74 | 387 | 845 |
| | **79,242** | **42,793** | **821** | **12,991** | **30,623** |
| **TBTA:** | | | | | |
| General Revenue Bonds | | | | | |
| 1%–5.5% due through 2057 | 10,314 | 8,165 | 400 | 245 | 8,320 |
| Payroll Mobility Tax Senior Lien Obligations | | | | | |
| 2%-5.5% due through 2057 | 2,464 | 2,464 | 5,704 | 9 | 8,159 |
| Subordinate Revenue Bonds | | | | | |
| 1%-5.5% due through 2032 | 1,832 | 795 | - | 76 | 719 |
| Sales Tax Revenue Bonds | | | | | |
| 3.73%-5.5% due through 2057 | 700 | - | 700 | - | 700 |
| Bond Anticipation Notes | | | | | |
| 5.0% due through 2025 | 193 | 193 | 0 | - | 193 |
| | 15,503 | 11,617 | 6,804 | 330 | 18,091 |
| Net unamortized bond premium | - | 1,173 | 673 | 157 | 1,689 |
| | **15,503** | **12,790** | **7,477** | **487** | **19,780** |
| **MTA Hudson Rail Yards Trust:** | | | | | |
| MTA Hudson Rail Yards Trust Obligations | | | | | |
| 1.88%–2.65% due through 2056 | 1,220 | 830 | - | 26 | 804 |
| Net unamortized bond premium | - | 87 | - | 1 | 86 |
| | **1,220** | **917** | **-** | **27** | **890** |
| Total | **$ 95,965** | **$ 56,500** | **$ 8,298** | **$ 13,505** | **$ 51,293** |
| | | | | | |
| Current portion | | $ 8,069 | | | $ 4,800 |
| Long-term portion | | $ 48,431 | | | $ 46,493 |

| (In millions) | | Original Issuance | | December 31, 2020 | | Issued | | Retired | | December 31, 2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| **MTA:** | | | | | | | | | | |
| Transportation Revenue Bonds | | | | | | | | | | |
| 1.43%–5.15% due through 2057 | $ | 44,080 | $ | 24,701 | $ | 1,415 | $ | 2,166 | $ | 23,950 |
| Bond Anticipation Notes* | | | | | | | | | | |
| 1.33% due through 2023 | | 23,635 | | 9,536 | | 4,720 | | 1,252 | | 13,004 |
| Dedicated Tax Fund Bonds | | | | | | | | | | |
| 1.86%–4.89% due through 2057 | | 11,149 | | 4,857 | | 110 | | 286 | | 4,681 |
| | | 78,864 | | 39,094 | | 6,245 | | 3,704 | | 41,635 |
| Net unamortized bond premium | | - | | 1,403 | | 122 | | 367 | | 1,158 |
| | | **78,864** | | **40,497** | | **6,367** | | **4,071** | | **42,793** |
| **TBTA:** | | | | | | | | | | |
| General Revenue Bonds | | | | | | | | | | |
| 1.81%–4.18% due through 2047 | | 18,121 | | 8,040 | | 365 | | 240 | | 8,165 |
| Payroll Mobility Tax Senior Lien Obligations | | | | | | | | | | |
| 1.36%-2.02% due through 2051 | | 2,464 | | - | | 2,464 | | - | | 2,464 |
| Subordinate Revenue Bonds | | | | | | | | | | |
| 3.13%-5.34% due through 2032 | | 4,066 | | 867 | | - | | 72 | | 795 |
| Bond Anticipation Notes | | | | | | | | | | |
| 0.69% due through 2025 | | 193 | | - | | 193 | | - | | 193 |
| | | 24,844 | | 8,907 | | 3,022 | | 312 | | 11,617 |
| Net unamortized bond premium | | - | | 676 | | 578 | | 81 | | 1,173 |
| | | **24,844** | | **9,583** | | **3,600** | | **393** | | **12,790** |
| **MTA Hudson Rail Yards Trust:** | | | | | | | | | | |
| MTA Hudson Rail Yards Trust Obligations | | | | | | | | | | |
| 1.88%–2.65% due through 2056 | | 1,220 | | 845 | | - | | 15 | | 830 |
| Net unamortized bond premium | | - | | 88 | | - | | 1 | | 87 |
| | | **1,220** | | **933** | | **-** | | **16** | | **917** |
| Total | **$** | **104,928** | **$** | **51,013** | **$** | **9,967** | **$** | **4,480** | **$** | **56,500** |
| | | | | | | | | | | |
| Current portion** | | | $ | 1,543 | | | | | $ | 8,069 |
| Long-term portion | | | $ | 49,470 | | | | | $ | 48,431 |

* Includes draws on a $800 taxable revolving credit agreement with JPMorgan Chase Bank, National Association, which is active through August 24, 2022, and a $400 taxable revolving credit agreement with Bank of America, National Association, which is active through August 24, 2022. Draws under the JPMorgan Chase Agreement and the Bank of America agreement are evidenced by revenue anticipation notes ("RANs"). As of December 31, 2021 and 2020, the outstanding RAN was $1,196 and $477, respectively.

**MTA Transportation Revenue Bonds** — Prior to 2022, MTA issued sixty-nine Series of Transportation Revenue Bonds secured under its General Resolution Authorizing Transportation Revenue Obligations adopted on March 26, 2002 in the aggregate principal amount of $36,956. The Transportation Revenue Bonds are MTA's special obligations payable solely from transit and commuter systems revenues and certain state and local operating subsidies.

On February 1, 2022, MTA effectuated a mandatory tender and remarketed $32.475 of Transportation Revenue Variable Rate Refunding Bonds, Subseries 2002G-1h and $50.000 of Transportation Revenue Variable Rate Bonds, Subseries 2012A-3 because their respective current interest rate periods were expiring by their terms. The Subseries 2002G-1h and Subseries 2012A-3 bonds were remarketed in Term Rate Mode as Secured Overnight Financing Rate (SOFR) Notes as follows:

| Quantity | Subseries | Delivery Date | Purchase Date | Interest Rate |
|---|---|---|---|---|
| 13.725 | TRB 2002G-1h | N/A | November 1, 2023 | 67% of SOPR plus 0.40% |
| 18.750 | TRB 2002G-1h | N/A | November 1, 2026 | 67% of SOPR plus 0.60% |
| 50.000 | TRB 2012A 3 | April 1, 2026 | November 15, 1942 | 67% of SOPR plus 0.65% |

On March 24, 2022, MTA effectuated a mandatory tender and remarketed $82.660 of Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-2 because the Continuing Covenant Agreement (CCA), between MTA and Bank of America, N.A., was expiring by its terms. The CCA associated with Subseries 2020B-2 was replaced with an irrevocable direct-pay Letter of Credit (LOC) issued by PNC Bank, National Association. The LOC will expire on March 22, 2024. PNC Capital Markets LLC will serve as remarketing agent.

On March 24, 2022, MTA extended its irrevocable direct-pay LOC issued by PNC Bank, National Association that is associated with Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-1 for two years to March 22, 2024.

On May 26, 2022, MTA extended its irrevocable direct-pay LOC issued by Bank of Montreal that is associated with Transportation Revenue Variable Rate Bonds, Subseries 2012A-2 for three years to June 2, 2025.

On August 31, 2022, MTA extended its irrevocable direct-pay Letter of Credit issued by Bank of America, N.A. that is associated with Transportation Revenue Variable Rate Bonds, Subseries 2015E-3 for three years to September 2, 2025.

On November 1, 2022, MTA effectuated a mandatory tender and remarketed $75.100 Transportation Revenue Variable Rate Bonds, Subseries 2005D-2 because its irrevocable direct-pay LOC issued by Landesbank Hessen-Thuringen Girozentrale (Helaba) was expiring by its terms and $70.625 Transportation Revenue Variable Rate Bonds, Subseries 2012G-4 because its respective current interest rate period was expiring by its terms. Both Subseries 2005D-2 and Subseries 2012G-4 Bonds were remarketed as Variable Rate Demand Bonds in Daily Rate Mode and supported with irrevocable direct-pay LOCs issued by BMO Harris Bank, N.A. Both LOCs will expire on October 31, 2025.

**MTA Bond Anticipation Notes** — From time to time, MTA issues Transportation Revenue Bond Anticipation Notes in accordance with the terms and provisions of the General Resolution described above in the form of commercial paper to fund its transit and commuter capital needs. The interest rate payable on the notes depends on the maturity and market conditions at the time of issuance. The MTA Act requires MTAHQ to periodically (at least each five years) refund its bond anticipation notes with bonds.

**MTA Revenue Anticipation Notes —** On March 21, 2022 and March 24, 2022, MTA prepaid the outstanding $300 on the 2021A RAN (with Bank of America) and $420 on the 2021B RAN (with JP Morgan), respectively.

On March 31, 2022 and April 1, 2022, MTA prepaid the outstanding $95.3 on the 2021C RAN and $2.5 million on the 2021D RAN, both with Bank of America, respectively.

On April 11, 2022, MTA prepaid the outstanding $378.5 on the 2021E RAN, with JP Morgan.

On August 2, 2022, MTA entered into new $800 and $400 revolving credit agreements with JP Morgan Chase Bank, National Association and Bank of America, National Association, respectively. These agreements replace the existing agreements with JP Morgan (dated August 24, 2017, as amended) and Bank of America (dated August 16, 2019, as amended), which were for the same amounts and terminated pursuant to their terms. The new agreements are active until August 1, 2025.

**MTA State Service Contract Bonds** — Prior to 2022, MTA issued two Series of State Service Contract Bonds secured under its State Service Contract Obligation Resolution adopted on March 26, 2002, in the aggregate principal amount of $2,395. Currently, there are no outstanding bonds. The State Service Contract Bonds are MTA's special obligations payable solely from certain payments from the State of New York under a service contract.

**MTA Dedicated Tax Fund Bonds** — Prior to 2022, MTA issued twenty-two Series of Dedicated Tax Fund Bonds secured under its Dedicated Tax Fund Obligation Resolution adopted on March 26, 2002, in the aggregate principal amount of $9,769. The Dedicated Tax Fund Bonds are MTA's special obligations payable solely from monies held in the Pledged Amounts Account of the MTA Dedicated Tax Fund. State law requires that the MTTF revenues and MMTOA revenues (described above in Note 2 under "Nonoperating Revenues") be deposited, subject to appropriation by the State Legislature, into the MTA Dedicated Tax Fund.

On March 1, 2022, MTA issued $377.955 of Dedicated Tax Fund Bonds, Series 2022A to retire outstanding MTA Transportation Revenue Bond Anticipation Notes (BANs), Series 2020B (note that those BANs were purchased, pursuant to a Note Purchase Agreement, between MTA and Municipal Liquidity Facility LLC). The Series 2022A bonds were issued as fixed-rate tax-exempt bonds with a final maturity of November 15, 2052.

On June 1, 2022, MTA extended its irrevocable direct-pay LOC issued by TD Bank, N.A. which is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-1 for three years to June 13, 2025.

On June 1, 2022, MTA effectuated a mandatory tender and remarketed $58.015 Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-2a because its current interest rate period was set to expire by its terms. The Subseries 2008A-2a bonds were remarketed as Variable Interest Rate Obligations in Daily Mode supported by an irrevocable direct-pay LOC issued by TD Bank, N.A. The new LOC will expire on November 1, 2026.

On October 27, 2022, MTA extended its irrevocable direct-pay LOC issued by PNC Bank, National Association that is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-2b for three years to October 24, 2025.

On October 27, 2022, MTA extended its irrevocable direct-pay LOC issued by PNC Bank, National Association that is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008B-3c for three years to October 24, 2025.

**MTA Certificates of Participation** — Prior to 2022, MTA (solely on behalf of MTA Long Island Rail Road and MTA Metro-North Railroad), MTA New York City Transit and MTA Bridges and Tunnels executed and delivered three Series of Certificates of Participation in the aggregate principal amount of $807 to finance certain building and leasehold improvements to an office building at Two Broadway in Manhattan occupied principally by MTA New York City Transit, MTA Bridges and Tunnels, MTA Construction and Development, and MTAHQ. The Certificates of Participation represented proportionate interests in the principal and interest components of Base Rent paid severally, but not jointly, in their respective proportionate shares by MTA New York City Transit, MTA, and MTA Bridges and Tunnels, pursuant to a Leasehold Improvement Sublease Agreement.

**MTA Bridges and Tunnels General Revenue Bonds** — Prior to 2022, MTA Bridges and Tunnels issued thirty-five Series of General Revenue Bonds, secured under its General Resolution Authorizing General Revenue Obligations adopted on March 26, 2002, in the aggregate principal amount of $14,174. The General Revenue Bonds are MTA Bridges and Tunnels' general obligations payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels.

On January 19, 2022, MTA effectuated a mandatory tender and remarketed $96.335 of Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Subseries 2003B-1 because its irrevocable direct-pay LOC issued by Bank of America, N.A. was expiring by its terms and was substituted with an irrevocable direct-pay LOC issued by U.S. Bank, N.A. The new LOC will expire on January 17, 2025.

On May 20, 2022, MTA extended its irrevocable direct-pay LOC issued by U.S. Bank National Association that is associated with Triborough Bridge and Tunnel Authority General Revenue Variable Rate Refunding Bonds, Subseries 2005B-4c for three years to May 23, 2025.

On August 18, 2022, MTA issued $400 Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2022A. Proceeds from the transaction will be used to finance existing approved bridge and tunnel capital projects. The Series 2022A bonds were issued as fixed-rate tax-exempt bonds with a final maturity of November 15, 2057.

On December 8, 2022, MTA effectuated a mandatory tender and remarketed $148.470 Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Series 2018E as the irrevocable direct-pay LOC issued by Bank of America, N.A. was expiring by its terms. The Series 2018E Bonds were remarketed as Variable Rate Demand Bonds in Weekly Rate Mode and supported with an irrevocable direct-pay LOC issued by UBS AG. The new LOC will expire on December 5, 2025.

**MTA Bridges and Tunnels Subordinate Revenue Bonds** — Prior to 2022, MTA Bridges and Tunnels issued twelve Series of Subordinate Revenue Bonds secured under its 2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations adopted on March 26, 2002, in the aggregate principal amount of $4,066.The Subordinate Revenue Bonds are MTA Bridges and Tunnels' special obligations payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels after the payment of debt service on the MTA Bridges and Tunnels General Revenue Bonds described in the preceding paragraph.

**MTA Bridges and Tunnels Second Subordinate Bond Anticipation Notes** — On June 10, 2021, MTA issued $192.835 of Triborough Bridge and Tunnel Authority Second Subordinate Bond Anticipation Notes, Series 2021A. Proceeds from the transaction will be used to finance costs related to the design, build, and installation of infrastructure, tolling systems and allowable implementation expenses necessary for the operation of the Central Business District Tolling Program. The Series 2021A notes were issued as fixed rate tax-exempt notes with a final maturity of November 1, 2025.

**MTA Bridges and Tunnels Payroll Mobility Tax Senior Lien Bonds** — Prior to 2022, MTA issued three Series of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds secured under its 2021 TBTA PMT Resolution adopted on March 17, 2021 in the aggregate principal amount of $1,679. Each of the TBTA PMT Senior Lien Obligations and any MTA PMT Senior Lien Obligations issued pursuant to the MTA PMT Resolution, adopted by the Board on November 18, 2020, are secured by a first lien on, and parity pledge of, the PMT Receipts, consisting of two distinct revenue streams: Mobility Tax Receipts and MTA Aid Trust Account Receipts (also referred to as "ATA Receipts"). MTA and MTA Bridges and Tunnels have entered into the Financing Agreement, dated as of April 9, 2021, to provide the mechanism by which MTA and MTA Bridges and Tunnels share PMT Receipts on a parity basis (i) first with respect to the PMT Senior Lien and then (ii) with respect to PMT Second Lien. Under State law, the MTA PMT Senior Lien Indebtedness and the MTA Bridges and Tunnels PMT Senior Lien Indebtedness are special obligations of MTA and MTA Bridges and Tunnels, respectively, which means that they are payable solely from a gross lien on the money pledged for payment under the MTA Payroll Mobility Tax Obligation Resolution and the MTA Bridges and Tunnels Payroll Mobility Tax Obligation Resolution. Such bonds are not general obligations of MTA or MTA Bridges and Tunnels.

On February 10, 2022, MTA issued $592.680 of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022A. Proceeds from the transaction were used to retire $750.000 Dedicated Tax Fund Bond Anticipation Notes, Series 2019A. The Series 2022A bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2057.

On April 5, 2022, MTA priced, subject to a Forward Delivery Bond Purchase Agreement, $1,000.015 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022B. MTA expects to issue and deliver the Series 2022B Bonds on August 18, 2022. Proceeds from the transaction will be used to retire: $75.235 MTA Transportation Revenue Variable Rate Refunding Bonds, Subseries 2002D-1; $174.050 MTA Transportation Revenue Bonds, Series 2012C; $406.730 MTA Transportation Revenue Refunding Bonds, Series 2012D; $350.280 MTA Transportation Revenue Refunding Bonds, Series 2012F; and $112.655 MTA Transportation Revenue Bonds, Series 2012H. The refunding resulted in a net present value savings of $135.306 or 12.09% of the par amount of the refunded bonds. The Series 2022B bonds were priced as fixed rate tax-exempt bonds with a final maturity of May 15, 2042.

On August 18, 2022, MTA issued and delivered $1,000.015 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022B.

On May 12, 2022, MTA issued $927.950 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022C. Proceeds from the transaction were used to retire outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2019B-1. The Series 2022C bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2057.

On September 15, 2022, MTA issued $748.682 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds, Series 2022D (Climate Bond Certified). Proceeds from the transaction will be used to finance existing approved transit and commuter projects and to refund the following MTA Transportation Revenue Bonds: $41.730 Series 2012B; $102.440 Series 2012C; $32.830 Series 2012E; $76.360 Series 2012F; and $19.495 Series 2012H. The refunding resulted in a net present value savings of $21.134 or 7.75% of the par amount of the refunded bonds. The Series 2022D bonds were issued as: $230.745 Subseries 2022D-1a; $20.202 Subseries 2022D-1b; and $497.735 Subseries 2022D-2. The Subseries 2022D-1a bonds were issued as fixed rate tax-exempt refunding bonds with a final maturity of November 15, 2042. The Subseries 2022D-1b bonds were issued as fixed rate tax-exempt refunding Capital Appreciation Bonds (CABs) with a final maturity of November 15, 2039. The Subseries 2022D-2 bonds were issued as fixed-rate tax-exempt bonds with a final maturity of May 15, 2052.

On November 1, 2022, MTA issued $700.200 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds, Series 2022E (Climate Bond Certified). Proceeds from the transaction will be used to refund outstanding Transportation Revenue Variable Rate Bonds, Series 2011B (LIBOR FRNs), Transportation Revenue Bonds, Subseries 2014D-2 (SIFMA FRNs), Transportation Revenue Bonds, Subseries 2018A-2 (Mandatory Tender Bonds), and to retire the Transportation Revenue Bond Anticipation Notes, Series 2019F that mature on November 15, 2022. The Series 2022E bonds were issued as: $188.630 Subseries 2022E-1; $99.560 Subseries 2022E-2a; and $412.010 Subseries 2022E-2b. The Subseries 2022E-1 bonds were issued as fixed-rate tax-exempt bonds with a final maturity of November 15, 2027. The Subseries 2022E-2a bonds were issued as variable rate tax-exempt refunding Secured Overnight Financing Rate (SOFR) Notes with a final maturity of April 1, 2026, and with an interest rate of 67% of SOFR plus 1.05%. The Subseries 2022E-2b bonds were issued as fixed-rate tax-exempt refunding bonds with a final maturity of November 15, 2032.

**MTA Bridges and Tunnels Sales Tax Revenue Bonds —** On July 20, 2022, MTA issued $700 Triborough Bridge and Tunnel Authority Sales Tax Revenue Bonds, Series 2022A (TBTA Capital Lockbox – City Sales Tax). This was the inaugural issuance for this credit. Proceeds from the transaction were used to generate new money proceeds to finance approved 2020-2024 Capital Program transit and commuter projects. The Series 2022A bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2062.

**MTA Payroll Mobility Tax Bond Anticipation Notes -** On September 1, 2022, MTA issued $951.370 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Bond Anticipation Notes, Series 2022A. Proceeds from the transaction were used to refinance outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2019D-1 as they were set to mature on September 1, 2022. The Series 2022A Notes were issued as fixed rate tax-exempt notes with a final maturity of August 15, 2024.

On December 15, 2022, MTA issued $766.540 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Bond Anticipation Notes, Series 2022B. Proceeds from the transaction were used to refinance outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2020A-1 which were maturing on February 1, 2023. The Series 2022B Notes were issued as fixed rate tax-exempt notes with a final maturity of December 16, 2024.

**MTA Hudson Rail Yards Trust Obligations** — The MTA Hudson Rail Yards Trust Obligations, Series 2016A ("Series 2016A Obligations") were executed and delivered on September 22, 2016 by Wells Fargo Bank National Association, as Trustee ("Trustee"), to (i) retire the outstanding Transportation Revenue Bond Anticipation Notes, Series 2016A of the MTA, which were issued to provide interim financing of approved capital program transit and commuter projects, (ii) finance approved capital program transit and commuter projects of the affiliates and subsidiaries of the MTA, (iii) fund an Interest Reserve Requirement in an amount equal to one-sixth (1/6) of the greatest amount of Interest Components (as hereinafter defined) in the current or any future year, (iv) fund a portion of the Capitalized Interest Fund requirement, and (v) finance certain costs of issuance.

Pursuant to the Financing Agreement (as hereinafter defined), the MTA has agreed to pay to, or for the benefit of, the Trustee the "MTA Financing Agreement Amount," consisting of principal and interest components. The Series 2016A Obligations evidence the interest of the Owners thereof in such MTA Financing Agreement Amount payable by the MTA pursuant to the Financing Agreement. The principal amount of the Series 2016A Obligations represent the principal components of the MTA Financing Agreement Amount ("Principal Components") and the interest represent the interest components of the MTA Financing Agreement Amount ("Interest Components").The Series 2016A Obligations (and the related Principal Components and Interest Components) are special limited obligations payable solely from the Trust Estate established under the MTA Hudson Rail Yards Trust Agreement, dated as of September 1, 2016 ("Trust Agreement"), by and between the MTA and the Trustee.

The Trust Estate consists principally of the regularly scheduled rent, options to purchase the fee interest and other related payments to be paid by the tenants of certain parcels being developed on and above the Eastern Rail Yard and Western Rail Yard portions of the West Side Yards ("Hudson Rail Yards") currently operated by The Long Island Rail Road Company ("LIRR").

Refer to Note 9 for further information on Financed Purchases.

**MTA Grant Anticipation Notes -** On December 9, 2021, MTA issued $4,000.000 of Grant Anticipation Notes, Series 2021A. Proceeds from the transaction were used to reimburse MTA for certain operating expenses and lost revenues since January 20, 2020, due to the COVID-19 public health emergency. The Series 2021A Notes were priced as fixed rate federally taxable notes with a final maturity of November 15, 2022.

On February 10, 2022, the Grant Anticipation Notes, Series 2021A were called for redemption prior to maturity.

**Debt Limitation** — The New York State Legislature has imposed limitations on the aggregate amount of debt that the MTA and MTA Bridges and Tunnels can issue to fund the approved transit and commuter capital programs. The current aggregate ceiling, subject to certain exclusions, is $90,100 compared with issuances totaling approximately $43,578. The MTA expects that the current statutory ceiling will allow it to fulfill the bonding requirements of the approved Capital Programs.

**Bond Refundings** — From time to time, the MTA and MTA Bridges and Tunnels issue refunding bonds to achieve debt service savings or other benefits. The proceeds of refunding bonds are generally used to purchase U.S. Treasury obligations that are placed in irrevocable trusts. The principal and interest within the trusts will be used to repay the refunded debt. The trust account assets and the refunded debt are excluded from the consolidated statements of net position.

At December 31, 2022 and 2021, the following amounts of MTA bonds, which have been refunded, remain valid debt instruments and are secured solely by and payable solely from their respective irrevocable trusts.

| **(In millions)** | **December 31, 2022** | **December 31, 2021** |
|---|---|---|
| **MTA Transit and Commuter Facilities:** | | |
| Transit Facilities Revenue Bonds | $ 79 | $ 104 |
| Commuter Facilities Revenue Bonds | 76 | 102 |
| **MTA Bridges and Tunnels:** | | |
| General Purpose Revenue Bonds | 160 | 458 |
| Special Obligation Subordinate Bonds | 43 | 59 |
| **Total** | $ 358 | $ 723 |

For the year ended December 31, 2022, MTA refunding transactions decreased aggregate debt service payments by $592 and provided an economic gain of $221. For the year ended December 31, 2021, MTA refunding transactions increased aggregate debt service payments by $66 and provided an economic gain of $44. Details of bond refunding savings for December 31, 2022 and December 31, 2021 are as follows:

| **Refunding Bonds Issued in 2022** | **Series** | **Date issued** | **Par value Refunded** | **Debt Service Savings (Increase)** |
|---|---|---|---|---|
| Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Refunding Bonds | 2022B | 8/18/2022 | $ 1,119 | $ 174 |
| Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds | 2022D | 9/15/2022 | 273 | 27 |
| Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds | 2022E | 11/1/2022 | 742 | 391 |
| Total Bond Refunding Savings | | | $ 2,134 | $ 592 |

| **Refunding Bonds Issued in 2021** | **Series** | **Date issued** | **Par value Refunded** | **Debt Service Savings (Increase)** |
|---|---|---|---|---|
| Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds | 2021A | 5/5/2021 | $ 631 | $ (103) |
| | 2021C | 9/30/2021 | 207 | 37 |
| **Total Bond Refunding Savings** | | | $ 838 | $ (66) |

For the year ended December 31, 2022, the accounting loss on bond refundings totaled $111. For the year ended December 31, 2021, the accounting loss on bond refundings totaled $2.

Unamortized gains and losses related to bond refundings were as follows:

| | **December 31, 2020** | **(Gain)/ loss on refunding** | **2021 amortization** | **December 31, 2021** | **(Gain)/ loss on refunding** | **Current year amortization** | **December 31, 2022** |
|---|---|---|---|---|---|---|---|
| **MTA:** | | | | | | | |
| Transportation Revenue Bonds | $ 443 | $ 2 | $ (58) | $ 387 | $ (109) | $ (55) | $ 223 |
| State Service Contract Bonds | (12) | - | - | (12) | - | - | (12) |
| Dedicated Tax Fund Bonds | 206 | - | (17) | 189 | (2) | (16) | 171 |
| | 637 | 2 | (75) | 564 | (111) | (71) | 382 |
| **TBTA:** | | | | | | | |
| General Revenue Bonds | 175 | - | (21) | 154 | - | (16) | 138 |
| Subordinate Revenue Bonds | 25 | - | (3) | 22 | - | (2) | 20 |
| | 200 | - | (24) | 176 | - | (18) | 158 |
| Total | $ 837 | $ 2 | $ (99) | $ 740 | $ (111) | $ (89) | $ 540 |

**Debt Service Payments —** Future principal and interest debt service payments at December 31, 2022 are as follows (in millions):

| | MTA | | MTA BRIDGES AND TUNNELS | | Debt Service | |
|---|---|---|---|---|---|---|
| **Year** | **Principal** | **Interest** | **Principal** | **Interest** | **Principal** | **Interest** |
| 2023 | $ 4,420 | $ 1,287 | $ 380 | $ 817 | $ 4,800 | $ 2,104 |
| 2024 | 944 | 1,177 | 2,100 | 792 | 3,044 | 1,969 |
| 2025 | 966 | 1,076 | 607 | 697 | 1,573 | 1,773 |
| 2026 | 860 | 958 | 682 | 664 | 1,542 | 1,622 |
| 2027 | 851 | 951 | 862 | 636 | 1,713 | 1,587 |
| 2028-2032 | 5,402 | 3,949 | 3,606 | 2,744 | 9,008 | 6,693 |
| 2033-2037 | 5,003 | 3,189 | 1,645 | 2,279 | 6,648 | 5,468 |
| 2038-2042 | 4,478 | 2,163 | 1,986 | 1,805 | 6,464 | 3,968 |
| 2043-2047 | 3,628 | 1,212 | 2,451 | 1,260 | 6,079 | 2,472 |
| 2048-2052 | 2,967 | 470 | 2,727 | 625 | 5,694 | 1,095 |
| 2053-2057 | 1,062 | 79 | 924 | 171 | 1,986 | 250 |
| Thereafter | - | - | 121 | 17 | 121 | 17 |
| | $ 30,581 | $ 16,511 | $ 18,091 | $ 12,507 | $ 48,672 | $ 29,018 |

The above interest amounts include both fixed-rate and variable-rate calculations. The interest rate assumptions for variable rate bonds are as follows:

- *Transportation Revenue Refunding Bonds, Series 2002D* — 4.45% per annum taking into account the interest rate swap plus the current fixed floating rate note spread.
- *Transportation Revenue Refunding Bonds, Series 2002G* — 3.542% per annum taking into account the interest rate swap plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
- *Transportation Revenue Bonds, Series 2005D* — 3.561% per annum taking into account the interest rate swaps.
- *Transportation Revenue Bonds, Series 2005E* — 3.561% per annum taking into account the interest rate swaps and 4.00% per annum on the unhedged portion.
- *Transportation Revenue Bonds, Series 2011B* — 3.542% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
- *Transportation Revenue Bonds, Series 2012A* — 4.00% per annum plus the current fixed floating rate note spread.
- *Transportation Revenue Bonds, Series 2012G* — 3.563% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread.
- *Transportation Revenue Bonds, Series 2014D-2* — 4.00% per annum plus the current fixed floating rate note spread.
- *Transportation Revenue Bonds, Series 2015A-2*— 4.00% per annum plus the current fixed floating rate note spread.
- *Transportation Revenue Bonds, Series 2015E* — 4.00% per annum.
- *Dedicated Tax Fund Bonds, Series 2002B* — 4.00% per annum on Subseries 2002B-1; and 4.00% per annum plus the current fixed floating rate note spread.
- *Dedicated Tax Fund Variable Rate Refunding Bonds, Series 2008A* — 3.316% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
- *Dedicated Tax Fund Refunding Bonds, Subseries 2008B-3a and 2008B-3c*— 4.00% per annum plus the current fixed floating rate note spread.
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2001C* — 4.00% per annum.
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2002F* — 5.404% and 3.076% per annum taking into account the interest rate swaps and 4.00% per annum on portions not covered by the interest rate swaps.
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2003B* — 4.00% per annum; and 4.00% per annum plus the current fixed floating rate note spread on Subseries 2003B-2.
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2005A* — 4.00% per annum except from November 1, 2027 through November 1, 2030, 3.076% per annum taking into account the interest rate swap.

- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2005B* — 3.076% per annum based on the Initial Interest Rate Swaps plus the current fixed floating rate note spread.
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2008B-2* — 4.00% per annum plus the current fixed floating rate note spread.
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2018E* — 4.00% per annum.

**Loans Payable –** The MTA and the New York Power Authority ("NYPA") entered into an updated Energy Services Program Agreement ("ESP Agreement"). The ESP Agreement authorized MTA affiliates and subsidiaries to enter into a Customer Installation Commitment ("CIC") with NYPA for turn-key, energy efficiency projects, which would usually be long-term funded and constructed by NYPA. The repayment period for the NYPA loan can be up to 20 years, but can be repaid at any time without penalty.

The debt service requirements at December 31, 2022 are as follows (in millions):

| Year | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 12 | $ 3 | $ 15 |
| 2024 | 11 | 2 | 13 |
| 2025 | 11 | 2 | 13 |
| 2026 | 9 | 2 | 11 |
| 2027 | 9 | 1 | 10 |
| 2028-2032 | 27 | 3 | 30 |
| 2033-2037 | 4 | 1 | 5 |
| **Total** | $ 83 | $ 14 | $ 97 |
| Current portion | $ 12 | | |
| Long-term portion | 71 | | |
| Total NYPA Loans Payable | $ 83 | | |

The above interest amounts include both fixed and variable rate calculations. Interest on the variable-rate loan is paid at the Securities Industry and Financial Markets Association Municipal Swap Index ("SIFMA") rate and is reset annually. The SIFMA rate at December 31, 2022 was 3.66%.

**Tax Rebate Liability** — Under the Internal Revenue Code of 1986, the MTA may accrue a liability for an amount of rebateable arbitrage resulting from investing low-yielding, tax-exempt bond proceeds in higher-yielding, taxable securities. The arbitrage liability is payable to the federal government every five years. No accruals or payments were made during the years ended December 31, 2022 and 2021.

**Liquidity Facility** — MTA and MTA Bridges and Tunnels have entered into several Standby Bond Purchase Agreements ("SBPA") and Letter of Credit Agreements ("LOC") as listed on the table below.

| Resolution | Series | Swap | Provider (Insurer) | Type of Facility | Exp. Date |
|---|---|---|---|---|---|
| Transportation Revenue | 2002G-1g | Y | TD Bank, N.A. | LOC | 11/1/2024 |
| Transportation Revenue | 2005D-2 | Y | BMO Harris Bank, N.A. | LOC | 10/31/2025 |
| Transportation Revenue | 2005E-1 | Y | Barclays Bank | LOC | 8/18/2025 |
| Transportation Revenue | 2005E-2 | Y | Bank of America, N.A. | LOC | 12/8/2023 |
| Transportation Revenue | 2012A-2 | N | Bank of Montreal | LOC | 6/2/2025 |
| Transportation Revenue | 2012G-1 | Y | Barclays Bank | LOC | 10/31/2023 |
| Transportation Revenue | 2012G-2 | Y | TD Bank, N.A. | LOC | 11/1/2024 |
| Transportation Revenue | 2012G-4 | Y | BMO Harris Bank, N.A. | LOC | 10/31/2025 |
| Transportation Revenue | 2015E-1 | N | Barclays Bank | LOC | 8/18/2025 |
| Dedicated Tax Fund | 2008A-1 | Y | TD Bank, N.A. | LOC | 6/13/2025 |
| MTA Bridges and Tunnels General Revenue | 2001C | Y | State Street | LOC | 6/26/2023 |
| MTA Bridges and Tunnels General Revenue | 2003B-1 | N | Bank of America, N.A. | LOC | 1/17/2025 |
| MTA Bridges and Tunnels General Revenue | 2005A | Y | Barclays Bank | LOC | 1/24/2024 |
| MTA Bridges and Tunnels General Revenue | 2005B-2 | Y | State Street | LOC | 1/21/2026 |
| MTA Bridges and Tunnels General Revenue | 2005B-3 | Y | State Street | LOC | 6/26/2023 |
| MTA Bridges and Tunnels General Revenue | 2005B-4c | Y | U.S. Bank National Association | LOC | 5/23/2025 |
| MTA Bridges and Tunnels General Revenue | 2018E | N | Bank of America, N.A. | LOC | 12/5/2025 |

**Derivative Instruments** — Fair value for the swaps is calculated in accordance with GASB Statement No. 72, utilizing the income approach and Level 2 inputs. It incorporates the mid-market valuation, nonperformance risk of either MTA/MTA Bridges and Tunnels or the counterparty, as well as bid/offer. The fair values were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swap.

The fair value balances and notional amounts of derivative instruments outstanding at December 31, 2022 and 2021, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2021 are as follows (in $ millions):

### Derivative Instruments - Summary Information as of December 31, 2022

| Bond Resolution Credit | Underlying Bond Series | Type of Derivative | Cash Flow or Fair Value Hedge | Effective Methodology | Trade/Hedge Association Date | Notional Amount | Fair Value |
|---|---|---|---|---|---|---|---|
| **Cashflow Hedges** | | | | | | | |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2018E & 2003B (Citi 2005B) | Libor Fixed Payer | Cash Flow | Synthetic Instrument/ Dollar Offset | 6/2/2005 | $ 186.100 | $ (6.851) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2005B-2,3,4 | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 6/2/2005 | 558.300 | (20.553) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2005A (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 4/1/2016 | 17.690 | (0.459) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2001C (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 12/5/2016 | 8.000 | (0.226) |
| MTA Dedicated Tax Fund Bonds | 2008A | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 3/8/2005 | 257.495 | (8.948) |
| MTA Transportation Revenue Bonds | 2002D-2 | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 7/11/2002 | 200.000 | (26.627) |
| MTA Transportation Revenue Bonds | 2005D & 2005E | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 9/10/2004 | 300.300 | (18.473) |
| MTA Transportation Revenue Bonds | 2012G | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 12/12/2007 | 355.075 | (26.709) |
| MTA Transportation Revenue Bonds | 2002G-1 (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 4/1/2016 | 64.270 | (0.448) |
| MTA Transportation Revenue Bonds | 2022E | Libor Fixed Payer | Cash Flow | Regression | 4/1/2016 | 89.765 | (3.551) |
| | | | | | Total | $ 2,036.995 | $ (112.845) |

### Derivative Instruments - Summary Information as of December 31, 2021

| Bond Resolution Credit | Underlying Bond Series | Type of Derivative | Cash Flow or Fair Value Hedge | Effective Methodology | Trade/Hedge Association Date | Notional Amount | Fair Value |
|---|---|---|---|---|---|---|---|
| **Cashflow Hedges** | | | | | | | |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2018E & 2003B (Citi 2005B) | Libor Fixed Payer | Cash Flow | Synthetic Instrument/ Dollar Offset | 6/2/2005 | $ 187.200 | $ (30.789) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2005B-2,3,4 | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 6/2/2005 | 561.600 | (92.368) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2005A (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 4/1/2016 | 19.775 | (2.043) |
| MTA Bridges and Tunnels Senior Revenue Bonds | 2001C (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 12/5/2016 | 9.000 | (0.963) |
| MTA Dedicated Tax Fund Bonds | 2008A | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 3/8/2005 | 281.450 | (37.600) |
| MTA Transportation Revenue Bonds | 2002D-2 | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 7/11/2002 | 200.000 | (62.934) |
| MTA Transportation Revenue Bonds | 2005D & 2005E | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 9/10/2004 | 317.660 | (60.799) |
| MTA Transportation Revenue Bonds | 2012G | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 12/12/2007 | 355.525 | (82.754) |
| MTA Transportation Revenue Bonds | 2002G-1 (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 4/1/2016 | 81.065 | (4.481) |
| MTA Transportation Revenue Bonds | 2011B (COPS 2004A) | Libor Fixed Payer | Cash Flow | Synthetic Instrument | 4/1/2016 | 91.135 | (13.305) |
| | | | | | Total | $ 2,104.410 | $ (388.036) |

| | Changes In Fair Value | | Fair Value at December 31, 2022 | | |
|---|---|---|---|---|---|
| | Classification | Amount (in millions) | Classification | Amount (in millions) | Notional (in millions) |
| **Government activities** | | | | | |
| Cash Flow hedges: | | | | | |
| Pay-fixed interest rate swaps | Deferred outflow of resources | $275.191 | Debt | $(112.845) | $2,036.995 |

## Swap Agreements Relating to Synthetic Fixed Rate Debt

*Board-adopted Guidelines.* The Related Entities adopted guidelines governing the use of swap contracts on March 26, 2002. The guidelines were amended and approved by the MTA Board on March 13, 2013. The guidelines establish limits on the amount of interest rate derivatives that may be outstanding and specific requirements that must be satisfied for a Related Entity to enter into a swap contract, such as suggested swap terms and objectives, retention of a swap advisor, credit ratings of the counterparties, collateralization requirements and reporting requirements.

*Objectives of synthetic fixed rate debt.* To achieve cash flow savings through a synthetic fixed rate, MTA and MTA Bridges and Tunnels have entered into separate pay-fixed, receive-variable interest rate swaps at a cost anticipated to be less than what MTA and MTA Bridges and Tunnels would have paid to issue fixed-rate debt, and in some cases where Federal tax law prohibits an advance refunding to synthetically refund debt on a forward basis

*Terms and Fair Values.* The terms, fair values and counterparties of the outstanding swaps of MTA and MTA Bridges and Tunnels are reflected in the following tables (as of December 31, 2022).

| Metropolitan Transportation Authority | | | | | | |
|---|---|---|---|---|---|---|
| **Related Bonds** | **Notional Amount as of 12/31/22** | **Effective Date** | **Maturity Date** | **Terms** | **Counterparty and Ratings(S&P / Moody's / Fitch)** | **Fair Value as of 12/31/22** |
| TRB 2002D-2 | $ 200.000 | 01/01/07 | 11/01/32 | Pay 4.45%; receive 69% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | $ (26.627) |
| TRB 2005D & 2005E | 225.225 | 11/02/05 | 11/01/35 | Pay 3.561%; receive 67% 1M LIBOR | UBS AG (A+ / Aa3 / AA-) | (13.855) |
| TRB 2005E | 75.075 | 11/02/05 | 11/01/35 | Pay 3.561%; receive 67% 1M LIBOR | AIG Financial Products [1] (BBB+ / Baa2 / BBB+) | (4.618) |
| TRB 2012G | 355.075 | 11/15/12 | 11/01/32 | Pay 3.563%; receive 67% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | (26.709) |
| DTF 2008A | 257.495 | 03/24/05 | 11/01/31 | Pay 3.3156%; receive 67% 1M LIBOR | Bank of New York Mellon (AA- / Aa2 / AA) | (8.948) |
| Total | $ 1,112.870 | | | | | $ (80.757) |

1 Guarantor: American International Group, Inc., parent of AIG Financial Products.

| MTA Bridges and Tunnels | | | | | | |
|---|---|---|---|---|---|---|
| Related Bonds | Notional Amount as of 12/31/22 | Effective Date | Maturity Date | Terms | Counterparty and Ratings (S&P / Moody's / Fitch) | Fair Value as of 12/31/22 |
| TBTA 2018E & 2003B | $ 186.100 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | Citibank, N.A. (A+ / Aa3 / A+) | $ (6.851) |
| TBTA 2005B-2 | 186.100 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | JPMorgan Chase Bank, NA (A+ / Aa2 / AA) | (6.851) |
| TBTA 2005B-3 | 186.100 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | BNP Paribas North America (A+ / Aa3 / AA-) | (6.851) |
| TBTA 2005B-4 | 186.100 | 07/07/05 | 01/01/32 | Pay 3.076%; receive 67% 1M LIBOR | UBS AG (A+ / Aa3 / AA-) | (6.851) |
| TRB 2002G-1 & 2022E TBTA 2005A & 2001C [2] | 89.863 [3] | 04/01/16 | 01/01/30 | Pay 3.52%; receive 67% 1M LIBOR | U.S. Bank N.A. (AA- / A1 / AA-) | (2.342) [3] |
| TRB 2002G-1 & 2022E TBTA 2005A & 2001C [2] | 89.862 [3] | 04/01/16 | 01/01/30 | Pay 3.52%; receive 67% 1M LIBOR | Wells Fargo Bank, N.A. (A+ / Aa2 / AA-) | (2.342) [3] |
| Total | $ 924.125 | | | | | $ (32.088) |

1 Guarantor: BNP Paribas.

2 Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C.

3 Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and TBTA is responsible for 10.3% of the transaction. On November 1, 2022 the 2011B were refunded with 2022E -2a bonds. The portion of the U.S. Bank and Wells Fargo Swap associated with 2011B bonds were allocated to the 2022E-2a bonds.

4 On October 27, 2021 the 2002F bonds were changed to fixed-rate mode and a portion of the Citi swap was reassigned to the 2018E bonds.

LIBOR: London Interbank Offered Rate
TRB: Transportation Revenue Bonds
DTF: Dedicated Tax Fund Bonds

## Risks Associated with the Swap Agreements

From MTA's and MTA Bridges and Tunnels' perspective, the following risks are generally associated with swap agreements:

*Credit Risk*. The risk that a counterparty becomes insolvent or is otherwise not able to perform its financial obligations. To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings. Generally, MTA and MTA Bridges and Tunnels' swap agreements contain netting provisions under which transactions executed with a single counterparty are netted to determine collateral amounts. Collateral may be posted with a third-party custodian in the form of cash, U.S. Treasury securities, or certain Federal agency securities. MTA and MTA Bridges and Tunnels require its counterparties to fully collateralize if ratings fall below certain levels (in general, at the Baa1/BBB+ or Baa2/BBB levels), with partial posting requirements at higher rating levels (details on collateral posting discussed further under "Collateralization/Contingencies"). As of December 31, 2022, all of the valuations were in liability positions to MTA and MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

The following table shows, as of December 31, 2022, the diversification, by percentage of notional amount, among the various counterparties that have entered into ISDA Master Agreements with MTA and/or MTA Bridges and Tunnels. The notional amount totals below include all swaps.

| **Counterparty** | **S&P** | **Moody's** | **Fitch** | **Notional Amount (in thousands)** | **% of Total Notional Amount** |
|---|---|---|---|---|---|
| JPMorgan Chase Bank, NA | A+ | Aa2 | AA | $741,175 | 36.39% |
| UBS AG | A+ | Aa3 | AA- | 411,325 | 20.19 |
| The Bank of New York Mellon | AA- | Aa2 | AA | 257,495 | 12.64 |
| Citibank, N.A. | A+ | Aa3 | A+ | 186,100 | 9.14 |
| BNP Paribas US Wholesale Holdings, Corp. | A+ | Aa3 | AA- | 186,100 | 9.14 |
| U.S. Bank National Association | AA- | A1 | AA- | 89,863 | 4.41 |
| Wells Fargo Bank, N.A. | A+ | Aa2 | AA- | 89,863 | 4.41 |
| AIG Financial Products Corp. | BBB+ | Baa2 | BBB+ | 75,074 | 3.69 |
| **Total** | | | | **$2,036,995** | **100.00%** |

*Interest Rate Risk.* MTA and MTA Bridges and Tunnels are exposed to interest rate risk on the interest rate swaps. On the pay-fixed, receive variable interest rate swaps, as LIBOR or SIFMA (as applicable) decreases, MTA and MTA Bridges and Tunnels' net payments on the swaps increase.

*Basis Risk.* The risk that the variable rate of interest paid by the counterparty under the swap and the variable interest rate paid by MTA or MTA Bridges and Tunnels on the associated bonds may not be the same. If the counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under the swap agreement does not fully reimburse MTA or MTA Bridges and Tunnels for its interest payment on the associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there is a net benefit to MTA or MTA Bridges and Tunnels.

*Termination Risk.* The risk that a swap agreement will be terminated and MTA or MTA Bridges and Tunnels will be required to make a swap termination payment to the counterparty and, in the case of a swap agreement which was entered into for the purpose of creating a synthetic fixed rate for an advance refunding transaction may also be required to take action to protect the tax-exempt status of the related refunding bonds.

The ISDA Master Agreement sets forth certain termination events applicable to all swaps entered into by the parties to that ISDA Master Agreement. MTA and MTA Bridges and Tunnels have entered into separate ISDA Master Agreements with each counterparty that govern the terms of each swap with that counterparty, subject to individual terms negotiated in a confirmation. MTA and MTA Bridges and Tunnels are subject to termination risk if its credit ratings fall below certain specified thresholds or if MTA/MTA Bridges and Tunnels commits a specified event of default or other specified event of termination. If, at the time of termination, a swap were in a liability position to MTA or MTA Bridges and Tunnels, a termination payment would be owed by MTA or MTA Bridges and Tunnels to the counterparty, subject to applicable netting arrangements.

The following tables set forth the Additional Termination Events for MTA/MTA Bridges and Tunnels and its counterparties.

| MTA Transportation Revenue | | |
|---|---|---|
| **Counterparty Name** | **MTA** | **Counterparty** |
| AIG Financial Products Corp.;<br>JPMorgan Chase Bank, NA;<br>UBS AG | Below Baa3 (Moody's) or BBB- (S&P)* | Below Baa3 (Moody's) or BBB- (S&P)* |

**Note: Equivalent Fitch rating is replacement for Moody's or S&P.*

| MTA Dedicated Tax Fund | | |
|---|---|---|
| **Counterparty Name** | **MTA** | **Counterparty** |
| Bank of New York Mellon | Below BBB (S&P) or BBB (Fitch)* | Below A3 (Moody's) or A- (S&P)** |

**Note: Equivalent Moody's rating is replacement for S&P or Fitch.*
***Note: Equivalent Fitch rating is replacement for Moody's or S&P.*

| MTA Bridges and Tunnels Senior Lien | | |
|---|---|---|
| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
| BNP Paribas US Wholesale Holdings, Corp.;<br>Citibank, N.A.;<br>JPMorgan Chase Bank, NA;<br>UBS AG | Below Baa2 (Moody's) or BBB (S&P)* | Below Baa1 (Moody's) or BBB+ (S&P)* |

**Note: Equivalent Fitch rating is replacement for Moody's or S&P.*

| MTA Bridges and Tunnels Subordinate Lien | | |
|---|---|---|
| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
| U.S. Bank National Association;<br>Wells Fargo Bank, N.A. | BelowBaa2 (Moody's) or BBB (S&P)* | Below Baa2 (Moody's) or BBB (S&P)** |

**Note: Equivalent Fitch rating is replacement for Moody's or S&P. If not below Investment Grade, MTA Bridges and Tunnels may cure such Termination Event by posting collateral at a Zero threshold.*

***Note: Equivalent Fitch rating is replacement for Moody's or S&P.*

MTA and MTA Bridges and Tunnels' ISDA Master Agreements provide that the payments under one transaction will be netted against other transactions entered into under the same ISDA Master Agreement. Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.

*Rollover Risk.* The risk that the swap agreement matures or may be terminated prior to the final maturity of the associated bonds on a variable rate bond issuance, and MTA or MTA Bridges and Tunnels may be exposed to then market rates and cease to receive the benefit of the synthetic fixed rate for the duration of the bond issue. The following debt is exposed to rollover risk:

| Associated Bond Issue | Bond Maturity Date | Swap Termination Date |
|---|---|---|
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells Fargo) | January 1, 2032 | January 1, 2030 |
| MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2018E (swap with Citibank, N.A.) | November 15, 2032 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.) | January 1, 2033 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.) | November 1, 2041 | January 1, 2030 (U.S. Bank/Wells Fargo)<br>January 1, 2032 (Citibank) |
| MTA Transportation Revenue Variable Rate Bonds, Series 2022E (swaps with U.S. Bank/Wells Fargo) | November 15, 2041 | January 1, 2030 |

*Collateralization/Contingencies.* Under the majority of the swap agreements, MTA and/or MTA Bridges and Tunnels is required to post collateral in the event its credit rating falls below certain specified levels. The collateral posted is to be in the form of cash, U.S. Treasury securities, or certain Federal agency securities, based on the valuations of the swap agreements in liability positions and net of the effect of applicable netting arrangements. If MTA and/or MTA Bridges and Tunnels do not post collateral, the swap(s) may be terminated by the counterparty(ies).

As of December 31, 2022, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was negative $89.831; as of this date, the MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of December 31, 2022, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was negative $32.4; as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

The following tables set forth the ratings criteria and threshold amounts applicable to MTA/MTA Bridges and Tunnels and its counterparties.

| MTA Transportation Revenue | | |
|---|---|---|
| **Counterparty** | **MTA Collateral Thresholds (based on highest rating)** | **Counterparty Collateral Thresholds (based on highest rating)** |
| AIG Financial Products Corp.;<br>JPMorgan Chase Bank, NA;<br>UBS AG | Baa1/BBB+: $10 million<br>Baa2/BBB & below: Zero | Baa1/BBB+: $10 million<br>Baa2/BBB & below: Zero |

*Note: Based on Moody's and S&P ratings. In all cases except JPMorgan counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.*

| MTA Dedicated Tax Fund | | |
|---|---|---|
| **Counterparty** | **MTA Collateral Thresholds** | **Counterparty Collateral Thresholds (based on highest rating)** |
| Bank of New York Mellon | N/A–MTA does not post collateral | Aa3/AA- & above: $10 million<br>A1/A+: $5 million<br>A2/A: $2 million<br>A3/A-: $1 million<br>Baa1/BBB+ & below: Zero |

*Note: Counterparty thresholds based on Moody's and S&P ratings. Fitch rating is replacement for either Moody's or S&P.*

| MTA Bridges and Tunnels Senior Lien | | |
|---|---|---|
| **Counterparty** | **MTA Bridges and Tunnels Collateral Thresholds (based on highest rating)** | **Counterparty Collateral Thresholds (based on highest rating)** |
| BNP Paribas US Wholesale Holdings, Corp.;<br>Citibank, N.A.;<br>JPMorgan Chase Bank, NA;<br>UBS AG | Baa1/BBB+: $30 million<br>Baa2/BBB: $15 million<br>Baa3/BBB- & below: Zero | A3/A-: $10 million<br>Baa1/BBB+ & below: Zero |

*Note: MTA Bridges and Tunnels thresholds based on Moody's, S&P, and Fitch ratings. Counterparty thresholds based on Moody's and S&P ratings; Fitch rating is replacement for Moody's or S&P.*

| MTA Bridges and Tunnels Subordinate Lien | | |
|---|---|---|
| **Counterparty** | **MTA Bridges and Tunnels Collateral Thresholds (based on lowest rating)** | **Counterparty Collateral Thresholds (based on lowest rating)** |
| U.S. Bank National Association;<br>Wells Fargo Bank, N.A. | Baa3/BBB- & below: Zero<br>(*note: only applicable as cure for Termination Event*) | Aa3/AA- & above: $15 million<br>A1/A+ to A3/A-: $5 million<br>Baa1/BBB+ & below: Zero |

*Note: Thresholds based on Moody's and S&P ratings. Fitch rating is replacement for Moody's or S&P.*

*Swap payments and Associated Debt*. The following tables contain the aggregate amount of estimated variable- rate bond debt service and net swap payments during certain years that such swaps were entered into in order to: protect against the potential of rising interest rates; achieve a lower net cost of borrowing; reduce exposure to changing interest rates on a related bond issue; or, in some cases where Federal tax law prohibits an advance refunding, achieve debt service savings through a synthetic fixed rate. As rates vary, variable-rate bond interest payments and net swap payments will vary. Using the following assumptions, debt service requirements of MTA's and MTA Bridges and Tunnels' outstanding variable-rate debt and net swap payments are estimated to be as follows:

- It is assumed that the variable-rate bonds would bear interest at a rate of 4.0% per annum.
- The net swap payments were calculated using the actual fixed interest rate on the swap agreements.

| MTA<br>(in millions) | | | | |
|---|---|---|---|---|
| Year Ended | Variable-Rate Bonds | | | |
| December 31, 2022 | Principal | Interest | Net Swap Payments | Total |
| 2023 | 65.7 | 40.1 | (4.1) | 101.7 |
| 2024 | 68.2 | 37.5 | (3.8) | 101.9 |
| 2025 | 70.8 | 34.8 | (3.4) | 102.2 |
| 2026 | 63.6 | 32.0 | (3.1) | 92.5 |
| 2027 | 55.9 | 29.6 | (2.8) | 82.7 |
| 2028-2032 | 827.6 | 454.7 | (8.3) | 1,274.0 |
| 2033-2037 | 122.7 | 27.5 | (1.6) | 148.6 |
| 2038-2041 | 81.2 | 7.7 | (0.1) | 88.8 |

| MTA Bridges and Tunnels<br>(in millions) | | | | |
|---|---|---|---|---|
| Year Ended | Variable-Rate Bonds | | | |
| December 31, 2022 | Principal | Interest | Net Swap Payments | Total |
| 2023 | 28.6 | 33.8 | (6.8) | 55.6 |
| 2024 | 57.2 | 31.5 | (6.4) | 82.3 |
| 2025 | 30.4 | 30.3 | (6.4) | 54.3 |
| 2026 | 31.5 | 29.1 | (6.3) | 54.3 |
| 2027 | 32.9 | 27.8 | (6.5) | 54.2 |
| 2028-2032 | 681.8 | 68.5 | (16.5) | 733.8 |
| 2033-2037 | 12.4 | 2.5 | - | 14.9 |
| 2038-2041 | - | 0.5 | - | 0.5 |

## 8. LEASES

MTA entered into various lease agreements that convey control of the right to use other entities' nonfinancial assets. Lease receivables and lease liabilities are measured at the present value of payments expected to be received during the lease term, using MTA's incremental borrowing rate at the time of valuation ranging from 0.72% to 5.64% if an applicable stated or implicit rate is not available.

The initial measurement of MTA's leased asset and lease liability for those agreements was as of January 1, 2021. The lease liability was reduced as payments were made, and an outflow of resources for interest on the liability was recognized. The lease asset is amortized on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset.

For lessor leases, a lease receivable and deferred inflow of resources were measured as of January 1, 2021. Interest revenues are recognized on the lease receivable and an inflow of resources from the deferred inflow of resources are recognized on a straight-line basis over the term of the lease.

**As Lessor**

MTA leases its land, buildings, station space, equipment, and right of way to other entities. These leases have terms between 1 year to 90 years, with payments required monthly, quarterly, semi-annually, or annually. In addition, MTA also receives payments for variable leases and operating expenses associated with spaces that are not included in the measurement of lease receivable.

The total amount of inflows of resources recognized for the years ended December 31, 2022 and 2021 is presented below (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease Revenue | $ 47,079 | $ 46,505 |
| Interest Revenue | 8,652 | 8,492 |
| Other Variable Revenue | 7,351 | 7,159 |

The balance of lease receivable as of December 31, 2022 and December 31, 2021 are as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease Receivable – current | $ 41,470 | $ 33,445 |
| Lease Receivable – noncurrent | 284,778 | 323,510 |
| Total Lease Receivable | $ 326,248 | $ 356,955 |

MTA recognized $43 and $0 revenue associated with residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021.

The principal and interest requirements to maturity for the lease receivable subsequent to December 31, 2022, are as follows (in thousands):

| Yeard Ended December 31, | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 41,471 | $ 8,113 | $ 49,584 |
| 2024 | 39,785 | 7,228 | 47,013 |
| 2025 | 38,530 | 6,347 | 44,877 |
| 2026 | 36,889 | 5,471 | 42,360 |
| 2027 | 33,723 | 4,630 | 38,353 |
| 2028-2032 | 66,003 | 15,438 | 81,441 |
| 2033-2037 | 9,241 | 12,019 | 21,260 |
| 2038-2042 | 2,737 | 11,137 | 13,874 |
| Thereafter | 57,869 | 64,955 | 122,824 |
| Total | $ 326,248 | $ 135,338 | $ 461,586 |

**As Lessee**

MTA leases buildings, office space, storage space, equipment, vehicles, and cell tower space from other entities. These leases have terms between 1 year to 67 years, with payments required monthly, quarterly, or annually.

The amount of lease expense recognized for variable payments not included in the measurement of lease liability were $3,864 and $5,161 for the years ended December 31, 2022 and 2021. MTA recognized $0 expense attributable to residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021.

The balance of lease payable as of December 31, 2022 and December 31, 2021 are as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease Payable – current | $44,607 | $40,976 |
| Lease Payable– noncurrent | 833,357 | 880,385 |
| Total Lease Payable | $877,964 | $921,361 |

The principal and interest requirements to maturity for the lease liability subsequent to December 31, 2022, are as follows (in thousands):

| Yeard Ended December 31, | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 43,608 | $ 47,108 | $ 90,716 |
| 2024 | 36,825 | 46,367 | 83,192 |
| 2025 | 33,415 | 45,597 | 79,012 |
| 2026 | 34,202 | 44,840 | 79,042 |
| 2027 | 28,054 | 44,120 | 72,174 |
| 2028-2032 | 156,791 | 207,298 | 364,089 |
| 2033-2037 | 138,936 | 174,185 | 313,121 |
| 2038-2042 | 117,691 | 134,814 | 252,505 |
| Thereafter | 288,442 | 123,340 | 411,782 |
| Total | $ 877,964 | $ 867,669 | $ 1,745,633 |

**Significant Lease Transactions -** On July 29, 1998 the MTA, (solely on behalf of MTA Long Island Rail Road and MTA Metro- North Railroad, MTA New York City Transit, and MTA Bridges and Tunnels) entered into a lease and related agreements whereby each agency, as sublessee, will rent, an office building at Two Broadway in lower Manhattan. The triple-net-lease has an initial stated term of approximately 50 years, with the right to extend the lease for two successive 15-year periods at a rental of at least 95% of fair market rent. Remaining payments under the lease approximate $996 million.Under the subleases, the lease is apportioned as follows: MTA New York City Transit, 68.7%, MTA, 21%; and MTA Bridges and Tunnels, 10.3%.However, the involved agencies have agreed to sub-sublease space from one another as necessary to satisfy actual occupancy needs. The agencies will be responsible for obligations under the lease based on such actual occupancy percentages. Actual occupancy percentages at December 31, 2022, for the MTA New York City Transit, MTA Bridges and Tunnels and MTA (including MTA Bus, MTA Construction and Development and MTA Business Service Center) were 48.7%, 7.4% and 43.9%, respectively. MTAs' sublease is for a year-to-year term, automatically extended, except upon the giving of a non-extension notice by MTA. The total annual rental payments over the initial lease term are $1,602 with rent being abated from the commencement date through June 30, 1999. The office building at 2 Broadway, is principally occupied by MTA New York City Transit, MTA Bridges and Tunnels, MTA Construction and Development, MTAHQ, and MTA Bus.

MTA pays the lease payments on behalf of MTA New York City Transit and MTA Bridges and Tunnels and subsequently makes monthly chargebacks in the form of rental payments treated as management fees.

## 9. FINANCED PURCHASES

MTA made an assessment of its existing sale/leaseback transactions and determined that these transactions are not eligible to be treated as leases but as financed purchases under GASB Statement No. 87, *Leases*. Accordingly, under GASB Statement No. 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements, a sale-leaseback is required to include a transaction that qualifies as a sale under the guidance for sales of real estate. The sales-of-real estate criteria include the provision that an option or requirement for a seller to repurchase the asset would preclude a sale treatment. Furthermore, a qualifying sale should occur for a transaction to be accounted for as a sale-leaseback and that the sales-of-real-estate criteria should be used to determine whether a sale has occurred, regardless of whether a leaseback is involved. The transaction should be accounted for as financing, leasing or profit-sharing arrangement rather than a sale when the seller has an obligation to repurchase the property, or the terms of the transaction allow the buyer to compel the seller or give an option to the seller to repurchase the property.

**Subway Cars** — On September 3, 2003, the MTA entered into a sale/leaseback transaction whereby MTA New York City Transit transferred ownership of certain MTA New York City Transit subway cars to the MTA, the MTA sold those cars to a third party, and the MTA leased those cars back from such third party. The MTA subleased the cars to MTA New York City

Transit. The lease expires in 2033. At the lease expiration, the MTA has the option of either exercising a fixed-price purchase option for the cars or returning the cars to the third-party owner.

Under the terms of the sale/leaseback agreement, the MTA initially received $168.1, which was utilized as follows: The MTA paid $126.3 to an affiliate of one of the lenders to the third party, which affiliate has the obligation to pay to the MTA an amount equal to the rent obligations under the lease attributable to the debt service on such loan from such third party's lender. The obligations of the affiliate of the third party's lender are guaranteed by American International Group, Inc. The MTA also purchased the Federal National Mortgage Association ("FNMA") and U.S. Treasury securities in amounts and with maturities which are sufficient to make the lease rent payments equal to the debt service on the loans from the other lender to the third party and to pay the remainder of the regularly scheduled rent due under that lease and the purchase price due upon exercise by the MTA of the fixed price purchase option if exercised. The amount remaining after payment of transaction expenses, $7.4, was the MTA's benefit from the transaction.

**Subway Cars** — On September 25, 2003 and September 29, 2003, the MTA entered into two sale/leaseback transactions whereby MTA New York City Transit transferred ownership of certain MTA New York City Transit subway cars to the MTA, the MTA sold those cars to third parties, and the MTA leased those cars back from such third parties. The MTA subleased the cars to MTA New York City Transit. Both leases expire in 2033. At the lease expiration, MTAHQ has the option of either exercising a fixed-price purchase option for the cars or returning the cars to the third-party owner.

Under the terms of the sale/leaseback agreements, the MTA initially received $294, which was utilized as follows: In the case of one of the leases, the MTA paid $97 to an affiliate of one of the lenders to the third party, which affiliate has the obligation to pay to the MTA an amount equal to the rent obligations under the lease attributable to the debt service on the loan from such third party's lender. The obligations of the affiliate of such third party's lender are guaranteed by American International Group, Inc. In the case of the other lease, the MTA purchased US Treasury debt securities in amounts and with maturities, which are sufficient for the MTA to make the lease rent payments equal to the debt service on the loan from the lender to that third party. In the case of both of the leases, the MTA also purchased Resolution Funding Corporation ("REFCO") debt securities that mature in 2030. Under an agreement with AIG Matched Funding Corp(guaranteed by American International Group, Inc.), AIG Matched Funding Corp. receives the proceeds from the REFCO debt securities at maturity and is obligated to pay to the MTA amounts sufficient for the MTA to pay the remainder of the regularly scheduled lease rent payments under those leases and the purchase price due upon exercise by the MTA of the purchase options if exercised. The amount remaining after payment of transaction expenses, $24, was the MTA's net benefit from these two transactions.

On December 17, 2008, MTA terminated the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 25, 2003 and since then MTA has provided short-term U.S. Treasury debt obligations as replacement collateral. As of December 31, 2022, the fair value of total collateral funds was $39.5.

On January 12, 2009, MTA provided a short-term U.S.Treasury debt obligation as additional collateral in addition to the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 29, 2003. As of December 31, 2022, the fair value of total collateral funds was $55.7.

As a result of the implementation of GASB Statement No. 87, *Leases*, the Two Broadway office building lease in lower Manhattan has been reclassified as a right-of-use asset with its corresponding lease liability and excluded from the schedule below. See footnote 8 for additional information.

### Financed Purchase Schedule

**For the Year Ended December 31, 2022**
**(in millions)**

| Description | December 31, 2021 (Restated) | Increase | Decrease | December 31, 2022 |
|---|---|---|---|---|
| Sumitomo | $ 15 | $ - | $ 15 | $ - |
| Met Life | 7 | - | - | 7 |
| Met Life Equity | 19 | - | - | 19 |
| Bank of New York | 22 | - | - | 22 |
| Bank of America | 35 | 3 | - | 38 |
| Bank of America Equity | 16 | - | - | 16 |
| Sumitomo | 14 | - | 14 | - |
| Met Life Equity | 64 | 4 | - | 68 |
| **Total MTA Financed Purchase** | 192 | $ 7 | $ 29 | 170 |
| Current Portion Obligations under Financed Purchase | 14 | | | - |
| Long Term Portion Obligations under Financed Purchase | $ 178 | | | $ 170 |

### Financed Purchase Schedule

**For the Year Ended December 31, 2021**
**(in millions)**

| Description | December 31, 2020 | Increase | Decrease (Restated) | December 31, 2021 (Restated) |
|---|---|---|---|---|
| Sumitomo | $ 15 | $ - | $ - | $ 15 |
| Met Life | 6 | 1 | - | 7 |
| Met Life Equity | 19 | - | - | 19 |
| Bank of New York | 22 | - | - | 22 |
| Bank of America | 33 | 2 | - | 35 |
| Bank of America Equity | 16 | - | - | 16 |
| Sumitomo | 18 | 1 | 5 | 14 |
| Met Life Equity | 61 | 3 | - | 64 |
| 2 Broadway Lease Improvement | 182 | 3 | 185 | - |
| 2 Broadway | 59 | 1 | 60 | - |
| **Total MTA Financed Purchase** | $ 431 | $ 11 | $ 250 | $ 192 |
| Current Portion Obligations under Financed Purchase | 4 | | | 14 |
| Long Term Portion Obligations under Financed Purchase | $ 427 | | | $ 178 |

**MTA Hudson Rail Yards Air Rights Leases –** MTA assessed the MTA Hudson Rail Yards Leases and associated air rights and determined that these are intangible assets and excluded as leases under GASB Statement No. 87, *Leases*.

In the 1980's, the MTA developed a portion of the Hudson Rail Yards as a storage yard, car wash and repair facility for the Long Island Railroad Company ("LIRR") rail cars entering Manhattan. It was anticipated that, eventually, the air rights above the Hudson Rail Yards would be developed to meet the evolving needs for high-quality commercial, retail, residential and public space in Manhattan.

To undertake the development of the Hudson Rail Yards, the MTA entered into two 99-year leases for the airspace within the boundary of the Hudson Rail Yards, one for the Eastern Rail Yards ("ERY") beginning December 3, 2012, and the other for the Western Rail Yards ("WRY") beginning December 3, 2013.

As of April 10, 2013, the ERY Lease was terminated and substituted with separate Severed Parcel Leases. Several Tenants under the Severed Parcel Leases have exercised their options to purchase fee title, as well as numerous condominium owners in residential buildings. The WRY Lease is also expected to be severed into separate parcels as development progresses.

The Severed Parcel Leases in the ERY, fee title for which has not been purchased, and the WRY Lease (until any severed parcel leases are purchased) are pledged as security for the Series 2016A Hudson Yards Trust Obligations.

Minimum rent receipts for ERY and WRY Leases are as follows as of December 31, 2022 (in $ millions):

| Year | ERY | WRY | Total |
|---|---|---|---|
| 2023 | $9 | $33 | $42 |
| 2024 | 9 | 36 | 45 |
| 2025 | 9 | 36 | 45 |
| 2026 | 9 | 36 | 45 |
| 2027 | 9 | 36 | 45 |
| Thereafter | 3,307 | 14,207 | 17,514 |
| Total | **$3,352** | **$14,384** | **$17,736** |

## 10. FUTURE OPTION

In 2010, MTA and MTA Long Island Railroad entered into an Air Space Parcel Purchase and Sale Agreement ("Agreement") with Atlantic Yards Development Company, LLC ("AADC") pursuant to which AADC has obtained an exclusive right to purchase fee title to a parcel (subdivided into six sub-parcels) of air space above the MTA Long Island Railroad Vanderbilt Yard in Brooklyn, New York. Initial annual payments of $2 (covering all six sub-parcels) commenced on June 1, 2012 and were paid on the following three anniversaries of that date. Starting on June 1, 2016, and continuing on each anniversary thereof through and including June 1, 2031, an annual option payment in the amount of $11 is due. The Agreement provides that all such payments are (i) fully earned by MTA as of the date due in consideration of the continuing grant to AADC of the rights to purchase the air space sub-parcels, (ii) are non-refundable except under certain limited circumstances and (iii) shall be deemed to be payments on account of successive annual options granted to AADC.

After AADC and its affiliates have completed the new yard and transit improvements to be constructed by them at and in the vicinity of the site, AADC has the right from time to time until June 1, 2031, to close on the purchase of any or all of the six air rights sub-parcels. The purchase price for the six sub-parcels is an amount, when discounted at 6.5% per annum from the date of each applicable payment that equals a present value of $80 as of January 1, 2010. The purchase price of any particular air space sub-parcel is equal to a net present value as of January 1, 2010 (calculated based on each applicable payment) of the product of that sub-parcel's percentage of the total gross square footage of permissible development on all six air space sub-parcels multiplied by $80.

## 11. ESTIMATED LIABILITY ARISING FROM INJURIES TO PERSONS

A summary of activity in estimated liability as computed by actuaries arising from injuries to persons, including employees, and damage to third-party property for the years ended December 31, 2022 and 2021 is presented below (in millions):

| | December 31, 2022 | December 31, 2021 |
|---|---|---|
| Balance - beginning of year | $ 5,100 | $ 4,675 |
| Activity during the year: | | |
| Current year claims and changes in estimates | 867 | 817 |
| Claims paid | (532) | (392) |
| Balance - end of year | 5,435 | 5,100 |
| Less current portion | (567) | (543) |
| Long-term liability | $ 4,868 | $ 4,557 |

See Note 2 for additional information on MTA's liability and property disclosures.

## 12. COMMITMENTS AND CONTINGENCIES

The MTA Group monitors its properties for the presence of pollutants and/or hazardous wastes and evaluates its exposure with respect to such matters. When the expense, if any, to clean up pollutants and/or hazardous wastes is estimable it is accrued by the MTA (see Note 13).

Management has reviewed with counsel all actions and proceedings pending against or involving the MTA Group, including personal injury claims. Although the ultimate outcome of such actions and proceedings cannot be predicted with certainty at this time, management believes that losses, if any, in excess of amounts accrued resulting from those actions will not be material to the financial position, results of operations, or cash flows of the MTA.

Under the terms of federal and state grants, periodic audits are required and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursements to the grantor agencies. While there have been some questioned costs in recent years, ultimate repayments required of the MTA have been infrequent.

*Moynihan Station Development Project* - On May 22, 2017, the MTA Board approved entering into various agreements, including a Joint Services Agreement ("JSA"), necessary to effectuate Phase 2 of the Moynihan Station Development Project (the "Project"), which will entail the redevelopment of the James A. Farley Post Office Building to include a new world-class train hall to be shared by National Railroad Passenger Corporation ("Amtrak"), the Long Island Rail Road and Metro-North Commuter Railroad (the "Train Hall"), as well as retail and commercial space (Retail and Commercial Space).

On July 21, 2017, New York State Urban Development Corporation d/b/a Empire State Development ("ESD") executed a TIFIA Loan Agreement with the United States Department of Transportation (the "TIFIA Lender") in an amount of up to $526 (the "TIFIA Loan"), with a final maturity date of the earlier of (1) October 30, 2055 and (2) the last semi-annual payment date occurring no later than the date that is thirty-five (35) years following the date on which the Train Hall is substantially completed. The proceeds of the TIFIA Loan are being used to pay for costs of the construction of the Train Hall. The TIFIA Loan is secured by a mortgage on the Train Hall property. The principal and interest on the TIFIA Loan is payable from a pledged revenue stream that primarily consists of PILOT payments to be paid by certain tenants in the Retail and Commercial Space. The amount of the PILOT payments is fixed through September, 2030 and is thereafter calculated based upon the assessed value of the properties as determined by the City. The TIFIA Loan is further supported by a TIFIA Debt Service Reserve Account, which is funded in an amount equal to the sum of the highest aggregate TIFIA debt service amounts that will become due and payable on any two consecutive semi-annual payment dates in a five-year prospective period.

Simultaneously with the execution of the TIFIA Loan Agreement, the JSA was entered into by and among the MTA, the TIFIA Lender, ESD, and Manufacturers and Traders Trust Company (as Pilot trustee). Under the JSA, MTA is obligated to satisfy semi-annual deficiencies in the TIFIA Debt Service Reserve Account. MTA's obligations under the JSA are secured by the same moneys available to MTA for the payment of the operating and maintenance expenses of the operating agencies.

MTA's obligation under the JSA remains in effect until the earliest to occur of (a) the MTA JSA Release Date (as defined in the JSA and generally summarized below), (b) the date on which the TIFIA Loan has been paid in full and (c) foreclosure by the TIFIA Lender under the Mortgage (as defined in the TIFIA Loan Agreement).

The obligations of the MTA under the JSA will be terminated and released on the date (the "MTA JSA Release Date") on which each of the following conditions have been satisfied: (a) substantial completion of (1) the Train Hall Project and initiation by LIRR and Amtrak of transportation operations therein, and (2) the Retail and Commercial Space; (b) all material construction claims have been discharged or settled; (c) the PILOT payments have been calculated based upon assessed value for at least three years (i.e., 2033); (d) certain designated defaults or events of default under the TIFIA Loan Agreement have not occurred and are continuing; and (e) either of the following release tests shall have been satisfied:

- Release Test A: (a) certain debt service coverage ratios have equaled or exceeded levels set forth in the JSA, taking into consideration assessment appeals; (b) occupancy levels have equaled or exceeded levels set forth in the JSA; and (c) the TIFIA Loan is rated no lower than "BBB-" or "Baa3" by one rating agency, all as more fully described in the JSA; or

- Release Test B: the TIFIA Loan is rated no lower than "A-" or "A3" by two rating agencies, all as more fully described in the JSA.

On the date the JSA was executed and delivered, MTA deposited $20 into an account, which MTA invests, to be used in accordance with the JSA to reimburse MTA in the event it is obligated under the JSA to make semi-annual deficiency payments to the TIFIA Debt Service Reserve Account.

On June 12, 2017, the MTA entered into a Memorandum of Understanding with ESD and the New York State Division of the Budget (the "Division") whereby the Division agreed that in the event in any given year during the term of the JSA (i) the MTA is required to make a semi-annual deficiency payment to the TIFIA Debt Service Reserve Account, and (ii) the Division has determined that the MTA has incurred an expense that would otherwise have been incurred by the State of New York (the "State Expense"), the Division will consider entering into a cost recovery agreement with the MTA pursuant to subdivision 4 of Section 2975 of the Public Authorities Law (the "PAL") for such year that will provide that in lieu of paying the full assessment pursuant to subdivisions 2 and 3 of Section 2975 of the PAL in any such year, any such assessment shall be reduced by the State Expense.

## 13. POLLUTION REMEDIATION COST

In accordance with GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, an operating expense provision and corresponding liability measured at its current value using the expected cash flow method is recognized when an obligatory event occurs. Pollution remediation obligations are estimates and subject to changes resulting from price increase or reductions, technology, or changes in applicable laws or regulations. The MTA does not expect any recoveries of cost that would have a material effect on the recorded obligations.

The MTA recognized pollution remediation expenses of $26 and $37 for the years ended December 31, 2022 and 2021, respectively. A summary of the activity in pollution remediation liability at December 31, 2022 and 2021 were as follows:

| | December 31, 2022 | December 31, 2021 |
|---|---|---|
| Balance at beginning of year | $ 145 | $ 152 |
| Current year expenses/changes in estimates | 26 | 37 |
| Current year payments | (15) | (44) |
| Balance at end of year | 156 | 145 |
| Less current portion | 40 | 29 |
| Long-term liability | $ 116 | $ 116 |

The MTA's pollution remediation liability primarily consists of future remediation activities associated with asbestos removal, lead abatement, ground water contamination, arsenic contamination and soil remediation.

## 14. NON-CURRENT LIABILITIES

Changes in the activity of non-current liabilities for the years ended December 31, 2022 and 2021 are presented below:

| | Balance December 31, 2020 | Additions | Reductions | Balance December 31, 2021 | Additions | Reductions | Balance December 31, 2022 |
|---|---|---|---|---|---|---|---|
| **Non-current liabilities:** | | | | **(Restated) *** | | | |
| Contract retainage payable | $ 479 | $ - | $ (63) | $ 416 | $ 19 | $ - | $ 435 |
| Other long-term liabilities | 508 | - | (94) | 414 | - | (48) | 366 |
| **Total non-current liabilities** | **$ 987** | **$ -** | **$ (157)** | **$ 830** | **$ 19** | **$ (48)** | **$ 801** |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

## 15. NOVEL CORONAVIRUS (COVID-19)

On March 12, 2020, the World Health Organization declared the COVID-19 outbreak to be a pandemic in the face of the global spread of the virus. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was first detected in China, and has since spread globally, including to the United States and to New York State. On March 7, 2020, Governor Cuomo declared a Disaster Emergency in the State of New York. On March 13, 2020, President Trump declared a national state of emergency as a result of the COVID-19 pandemic. By order of Governor Cuomo ("New York State on PAUSE"), effective March 22, 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The PAUSE order was lifted on May 15, 2020 for five New York regions that met the requirements to start opening. However, a new order was signed by Governor Cuomo on May 15, 2020 extending the PAUSE to June 13, 2020 for New York City, Long Island, and the Hudson Valley. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a sharp decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. A significant development was the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15, 2021 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. MTA has seen ridership steadily improve since the low point of ridership during the pandemic in 2020; but continues to be well-below 2019 levels.

***Coronavirus Aid, Relief and Economic Security Ac ("CARES Act').*** The CARES Act is a $2.2 trillion economic stimulus bill passed by Congress and signed into law by the President on March 27, 2020 in response to the economic fallout of the COVID-19 pandemic in the United States. The CARES Act through the Federal Transit Administration's ("FTA") formula funding provisions provided approximately $4 billion to MTA. Funding was provided at a 100 percent Federal share, with no local match required, and is available to support operating, and other expenses generally eligible under those programs and incurred beginning on January 20, 2020, to prevent, prepare for, and respond to the COVID-19 pandemic, including operating service for essential workers, such as medical personnel and first responders. On May 8, 2020, the FTA approved MTA's initial grant application of $3.9 billion. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately $98 million in additional formula grant allocations to MTA for a CARES Act grant total of $4.0 billion. As of December 31, 2020, a total of $4.0 billion was released to MTA for operating assistance that occurred from January 20, 2020, through July 31, 2020. The MTA has received all CARES Act funding as provided in the first congressional relief package.

***Federal Reserve Bank of New York's Municipal Liquidity Facility LLC ("MLF").*** Due to the COVID-19 pandemic, the Federal Reserve established the MLF in April 2020 as a source of emergency financing by being available to purchase up to $500 billion of short-term notes from state and local governments and certain public entities to ensure they had access to credit during the COVID-19 pandemic. MTA was able to utilize the MLF twice before the MLF window closed at the end of December 2020. On August 26, 2020, MTA directly placed with the MLF $450.72 million Transportation Revenue BANs, Series 2020B, which were issued to retire existing Transportation Revenue BANs maturing on September 1, 2020. The MTA subsequently retired the MLF $450.72 million Transportation Revenue BANs, Series 2020B, with an issuance of Dedicated Tax Funds bonds on March 1, 2022. MTA issued into the MLF a second time by directly placing $2.907 billion Payroll Mobility Tax BANs issued for working capital on December 17, 2020. The $2.907 billion MLF loan matures in December, 2023. In December 2022, the MTA Board authorized the MTA to place MTA funds and unspent proceeds in an Interim Redemption Subaccount, for the purpose of redeeming the BANs at or before maturity. Subsequently, MTA transferred $2.907 billion into the Interim Redemption Subaccount pursuant to such Board approval.

***Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA").*** On December 27, 2020, the President signed into law the Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA") that includes $900 billion for various COVID-19 economic relief programs to address hardships caused by the coronavirus pandemic and a $1.4 trillion government funding package to fund the government through September 30, 2021. Included in the legislation's $45 billion in financial assistance to the transportation industry, including $16 billion for another round of airline employee and contractor payroll support: $14 billion for transit; $10 billion for highways; $2 billion for intercity buses; $2 billion for airports; and $1 billion for Amtrak. The MTA received $4.1 billion in aid from the CRRSAA between December 2021 ($0.6 billion) and January 2022 ($3.5 billion).

***American Rescue Plan Act ("ARPA").*** On March 11, 2021, President Biden signed into law the American Rescue Plan Act of 2021 ("ARPA"). The $1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. The package includes $30 billion of direct federal aid to transportation agencies. The MTA received $6.1 billion in aid from ARPA in 2022. In September of 2022, Additional Assistance Funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received $769 million in additional aid in the fourth quarter of 2022.

***Federal Emergency Management Agency ("FEMA") Reimbursement.*** The MTA is eligible for FEMA payments which are expected to cover expenses related to the COVID-19 pandemic, over and above normal emergency costs that are not covered by other federal funding An estimated $783.4 of direct COVID-19-related expenses incurred from the start of the pandemic through July 1, 2022 was submitted by MTA to the New York State Department of Budget (DOB), which is the agency managing COVID-19-related expense reimbursement from FEMA.

## 16. FUEL HEDGE

MTA partially hedges its fuel cost exposure using financial hedges. All MTA fuel hedges provide for up to 24 monthly settlements. The table below summarizes the active ultra-low sulfur diesel ("ULSD") hedges in whole dollars:

| Counterparty | JPMorgan | Goldman Sachs | JPMorgan | Goldman Sachs | BOA_ Merrill | Goldman Sachs | JPMorgan | BOA_ Merrill |
|---|---|---|---|---|---|---|---|---|
| Trade Date | 1/26/2021 | 2/23/2021 | 3/31/2021 | 4/29/2021 | 6/2/2021 | 6/29/2021 | 7/27/2021 | 8/31/2021 |
| Effective Date | 1/1/2022 | 2/1/2022 | 3/1/2022 | 4/1/2022 | 5/1/2022 | 6/1/2022 | 7/1/2022 | 8/1/2022 |
| Termination Date | 12/31/2022 | 1/31/2023 | 2/28/2023 | 3/31/2023 | 4/30/2023 | 5/31/2023 | 6/30/2023 | 7/31/2023 |
| Price/Gal | $1.6051 | $1.7845 | $1.8072 | $1.9360 | $2.0495 | $2.0610 | $2.0505 | $2.0345 |
| Original Notional Quantity | 2,862,779 | 2,826,759 | 2,826,761 | 2,826,752 | 2,826,757 | 2,826,738 | 2,826,751 | 2,826,725 |

| Counterparty | BOA_ Merrill | BOA_ Merrill | Cargill | Goldman Sachs | Goldman Sachs | Cargill | Cargill | Cargill |
|---|---|---|---|---|---|---|---|---|
| Trade Date | 9/29/2021 | 10/25/2021 | 11/30/2021 | 12/28/2021 | 1/25/2022 | 2/28/2022 | 3/31/2022 | 4/28/2022 |
| Effective Date | 9/1/2022 | 10/1/2022 | 11/1/2022 | 12/1/2022 | 1/1/2023 | 2/1/2023 | 3/1/2023 | 4/1/2023 |
| Termination Date | 8/31/2023 | 9/30/2023 | 10/31/2023 | 11/30/2023 | 12/31/2023 | 1/31/2024 | 2/29/2024 | 3/31/2024 |
| Price/Gal | $2.1459 | $2.2879 | $2.0100 | $2.2227 | $2.3615 | $2.5015 | $2.7469 | $2.8675 |
| Original Notional Quantity | 2,826,740 | 2,826,749 | 2,826,751 | 2,826,765 | 2,826,779 | 2,826,759 | 2,826,761 | 2,826,752 |

| Counterparty | Goldman Sachs | Goldman Sachs | BOA_ Merrill | BOA_ Merrill | Cargill | BOA_ Merrill | BOA_ Merrill | Goldman Sachs |
|---|---|---|---|---|---|---|---|---|
| Trade Date | 5/31/2022 | 6/27/2022 | 7/25/2022 | 8/29/2022 | 9/29/2022 | 10/25/2022 | 11/30/2022 | 12/28/2022 |
| Effective Date | 5/1/2023 | 6/1/2023 | 7/1/2023 | 8/1/2023 | 9/1/2023 | 10/1/2023 | 11/1/2023 | 12/1/2023 |
| Termination Date | 4/30/2024 | 5/31/2024 | 6/30/2024 | 7/31/2024 | 8/31/2024 | 9/30/2024 | 10/31/2024 | 11/1/2024 |
| Price/Gal | $2.9450 | $3.0195 | $2.8739 | $2.9620 | $2.6846 | $2.7422 | $2.7624 | $2.7030 |
| Original Notional Quantity | 2,826,757 | 2,826,738 | 2,826,751 | 2,826,725 | 2,826,740 | 2,826,749 | 2,826,751 | 2,826,765 |

The monthly settlements are based on the daily prices of the respective commodities whereby MTA will either receive a payment, or make a payment to the various counterparties, depending on the average monthly price of the commodities in relation to the contract prices. At a contract's termination date, cash settlement will take place. As of December 31, 2022, the total outstanding notional value of the ULSD contracts was 52.1 million gallons with a positive fair market value of $19.2. The valuation of each trade was based on discounting future net cash flows to a single current amount (the income approach) using observable commodity futures prices (Level 2 inputs).

## 17. CONDENSED COMPONENT UNIT INFORMATION

The following tables present condensed financial information for MTA's component units (in millions).

| December 31, 2022 | MTA | Metro - North Railroad | Long Island Railroad | New York City Transit Authority | Triborough Bridge and Tunnel Authority | Eliminations | Consolidated Total |
|---|---|---|---|---|---|---|---|
| Current assets | $ 12,148 | $ 251 | $ 281 | $ 608 | $ 2,446 | $ (1,438) | $ 14,296 |
| Capital assets | 14,014 | 6,915 | 10,557 | 48,226 | 7,794 | - | 87,506 |
| Other Assets | 32,131 | 111 | 76 | 49 | 16 | (25,541) | 6,842 |
| Intercompany receivables | 522 | 736 | 1,126 | 5,678 | 8,682 | (16,744) | - |
| Deferred outflows of resources | 1,382 | 740 | 919 | 4,840 | 464 | (71) | 8,274 |
| **Total assets and deferred outflows of resources** | **$ 60,197** | **$ 8,753** | **$ 12,959** | **$ 59,401** | **$ 19,402** | **$ (43,794)** | **$ 116,918** |
| Current liabilities | $ 6,843 | $ 399 | $ 331 | $ 2,084 | $ 1,023 | $ (128) | $ 10,552 |
| Non-current liabilities | 31,794 | 2,698 | 3,993 | 26,264 | 20,647 | (21) | 85,375 |
| Intercompany payables | 15,900 | 202 | 244 | - | 269 | (16,615) | - |
| Deferred inflows of resources | 584 | 492 | 824 | 1,939 | 235 | - | 4,074 |
| **Total liabilities and deferred inflows of resources** | **$ 55,121** | **$ 3,791** | **$ 5,392** | **$ 30,287** | **$ 22,174** | **$ (16,764)** | **$ 100,001** |
| Net investment in capital assets | $ (24,729) | $ 6,678 | $ 10,536 | $ 47,783 | $ 2,105 | $ (7,487) | $ 34,886 |
| Restricted | 4,788 | - | - | - | 2,410 | (2,134) | 5,064 |
| Unrestricted | 25,017 | (1,716) | (2,969) | (18,669) | (7,287) | (17,409) | (23,033) |
| **Total net position** | **$ 5,076** | **$ 4,962** | **$ 7,567** | **$ 29,114** | **$ (2,772)** | **$ (27,030)** | **$ 16,917** |
| **For the year ended December 31, 2022** | | | | | | | |
| Fare revenue | $ 167 | $ 448 | $ 458 | $ 3,286 | $ - | $ (335) | $ 4,024 |
| Vehicle toll revenue | - | - | - | - | 2,332 | - | 2,332 |
| Rents, freight and other revenue | 200 | 39 | 35 | 183 | 24 | 168 | 649 |
| **Total operating revenue** | **367** | **487** | **493** | **3,469** | **2,356** | **(167)** | **7,005** |
| Total labor expenses | 1,297 | 1,089 | 1,219 | 7,530 | 225 | - | 11,360 |
| Total non-labor expenses | 711 | 415 | 420 | 2,082 | 239 | (167) | 3,700 |
| Depreciation and amortization | 123 | 335 | 517 | 2,180 | 206 | - | 3,361 |
| **Total operating expenses** | **2,131** | **1,839** | **2,156** | **11,792** | **670** | **(167)** | **18,421** |
| **Operating (deficit) surplus** | **(1,764)** | **(1,352)** | **(1,663)** | **(8,323)** | **1,686** | **-** | **(11,416)** |
| Subsidies and grants | 1,171 | 805 | - | 617 | 9 | (1,036) | 1,566 |
| Tax revenue | 6,933 | - | - | 4,426 | 841 | (4,582) | 7,618 |
| Interagency subsidy | 1,211 | 494 | 2,794 | 538 | (2,319) | (2,718) | - |
| Interest expense | (1,476) | - | - | - | (535) | 107 | (1,904) |
| Other | (2,339) | (5) | (4) | 4,818 | 184 | 4,647 | 7,301 |
| **Total non-operating revenues (expenses)** | **5,500** | **1,294** | **2,790** | **10,399** | **(1,820)** | **(3,582)** | **14,581** |
| **Loss before appropriations** | 3,736 | (58) | 1,127 | 2,076 | (134) | (3,582) | 3,165 |
| **Appropriations, grants and other receipts externally restricted for capital projects** | 10,120 | 912 | - | 2,389 | - | (8,810) | 4,611 |
| **Change in net position** | 13,856 | 854 | 1,127 | 4,465 | (134) | (12,392) | 7,776 |
| **Net position, beginning of year** | (8,780) | 4,108 | 6,440 | 24,649 | (2,638) | (14,638) | 9,141 |
| **Net position, end of year** | $ 5,076 | $ 4,962 | $ 7,567 | $ 29,114 | $ (2,772) | $ (27,030) | $ 16,917 |
| **For the year ended December 31, 2022** | | | | | | | |
| **Net cash (used by) / provided by operating activities** | $ (890) | $ (725) | $ (759) | $ (5,431) | $ 1,877 | $ - | $ (5,928) |
| **Net cash provided by / (used by) non-capital financing activities** | 19,086 | 793 | 785 | 6,149 | 4,952 | (12,335) | 19,430 |
| **Net cash (used by) / provided by capital and related financing activities** | (13,465) | (66) | (26) | (1,116) | (665) | 5,813 | (9,525) |
| **Net cash (used by) / provided by investing activities** | (4,364) | - | - | 395 | (6,372) | 6,522 | (3,819) |
| **Cash at beginning of year** | 515 | 17 | 5 | 28 | 217 | - | 782 |
| **Cash at end of year** | **$ 882** | **$ 19** | **$ 5** | **$ 25** | **$ 9** | **$ -** | **$ 940** |

| December 31, 2021 Restated | MTA | Metro-North Railroad | Long Island Railroad | New York City Transit Authority | Triborough Bridge and Tunnel Authority | Eliminations | Consolidated Total |
|---|---|---|---|---|---|---|---|
| Current assets | $ 15,728 | $ 246 | $ 256 | $ 646 | $ 1,837 | $ (792) | $ 17,921 |
| Capital assets | 13,650 | 6,315 | 9,936 | 46,869 | 7,631 | - | 84,401 |
| Other Assets | 15,924 | 130 | 86 | 57 | 18 | (13,781) | 2,434 |
| Intercompany receivables | 708 | 333 | 349 | 1,814 | 2,874 | (6,078) | - |
| Deferred outflows of resources | 1,912 | 849 | 1,047 | 3,646 | 580 | (171) | 7,863 |
| **Total assets and deferred outflows of resources** | **$ 47,922** | **$ 7,873** | **$ 11,674** | **$ 53,032** | **$ 12,940** | **$ (20,822)** | **$ 112,619** |
| | | | | | | | |
| Current liabilities | $ 9,907 | $ 378 | $ 282 | $ 2,154 | $ 938 | $ (59) | $ 13,600 |
| Non-current liabilities | 41,043 | 3,003 | 4,501 | 22,565 | 13,787 | (123) | 84,776 |
| Intercompany payables | 5,268 | 117 | 22 | - | 595 | (6,002) | - |
| Deferred inflows of resources | 484 | 267 | 429 | 3,664 | 257 | - | 5,101 |
| **Total liabilities and deferred inflows of resources** | **$ 56,702** | **$ 3,765** | **$ 5,234** | **$ 28,383** | **$ 15,577** | **$ (6,184)** | **$ 103,477** |
| | | | | | | | |
| Net investment in capital assets | $ (33,970) | $ 6,081 | $ 9,865 | $ 46,405 | $ 2,147 | $ (643) | $ 29,885 |
| Restricted | 2,351 | - | - | - | 1,606 | (1,347) | 2,610 |
| Unrestricted | 22,839 | (1,973) | (3,425) | (21,756) | (6,390) | (12,648) | (23,353) |
| **Total net position** | **$ (8,780)** | **$ 4,108** | **$ 6,440** | **$ 24,649** | **$ (2,637)** | **$ (14,638)** | **$ 9,142** |
| | | | | | | | |
| **For the year ended December 31, 2021 Restated** | | | | | | | |
| Fare revenue | $ 142 | $ 263 | $ 296 | $ 2,347 | $ - | $ - | $ 3,048 |
| Vehicle toll revenue | - | - | - | - | 2,170 | - | 2,170 |
| Rents, freight and other revenue | 51 | 27 | 28 | 468 | 25 | (37) | 562 |
| **Total operating revenue** | **193** | **290** | **324** | **2,815** | **2,195** | **(37)** | **5,780** |
| | | | | | | | |
| Total labor expenses | 1,239 | 1,069 | 1,245 | 6,545 | 235 | - | 10,333 |
| Total non-labor expenses | 586 | 332 | 343 | 1,834 | 215 | (37) | 3,273 |
| Depreciation and amortization | 93 | 335 | 469 | 2,119 | 202 | - | 3,218 |
| **Total operating expenses** | **1,918** | **1,736** | **2,057** | **10,498** | **652** | **(37)** | **16,824** |
| | | | | | | | |
| **Operating (deficit) surplus** | **(1,725)** | **(1,446)** | **(1,733)** | **(7,683)** | **1,543** | **-** | **(11,044)** |
| | | | | | | | |
| Subsidies and grants | 1,070 | 292 | - | 585 | 9 | (447) | 1,509 |
| Tax revenue | 6,266 | - | - | 3,796 | 739 | (3,787) | 7,014 |
| Interagency subsidy | 1,037 | 590 | 2,322 | 457 | - | (4,406) | - |
| Interest expense | (1,450) | - | - | (25) | (357) | 21 | (1,811) |
| Other | (2,749) | 359 | 621 | 3,202 | 5 | 3,264 | 4,702 |
| **Total non-operating revenues (expenses)** | **4,174** | **1,241** | **2,943** | **8,015** | **396** | **(5,355)** | **11,414** |
| | | | | | | | |
| **Loss before appropriations** | 2,449 | (205) | 1,210 | 332 | 1,939 | (5,355) | 370 |
| **Appropriations, grants and other receipts externally restricted for capital projects** | (940) | 545 | - | 2,493 | (2,133) | 3,824 | 3,789 |
| **Change in net position** | 1,509 | 340 | 1,210 | 2,825 | (194) | (1,531) | 4,159 |
| **Net position, beginning of the year** | (10,289) | 3,768 | 5,230 | 21,824 | (2,443) | (13,107) | 4,983 |
| | | | | | | | |
| **Net position, end of year** | $ (8,780) | $ 4,108 | $ 6,440 | $ 24,649 | $ (2,637) | $ (14,638) | $ 9,142 |
| | | | | | | | |
| **For the year ended December 31, 2021 Restated** | | | | | | | |
| **Net cash (used in) / provided by operating activities** | $ (1,642) | $ (1,070) | $ (1,251) | $ (5,983) | $ 1,784 | $ 200 | $ (7,962) |
| **Net cash provided by / (used in) non-capital financing activities** | 7,092 | 1,130 | 1,241 | 6,633 | 1,529 | (8,203) | 9,422 |
| **Net cash (used in) / provided by capital and related financing activities** | (2,802) | (66) | 10 | (1,076) | (561) | 6,234 | 1,739 |
| **Net cash provided by / (used in) investing activities** | (2,603) | - | - | 433 | (3,042) | 1,769 | (3,443) |
| **Cash at beginning of year** | 471 | 23 | 5 | 20 | 507 | - | 1,026 |
| **Cash at end of year** | **$ 516** | **$ 17** | **$ 5** | **$ 27** | **$ 217** | **$ -** | **$ 782** |

## 18. SUBSEQUENT EVENTS

On January 12, 2023, MTA issued $764.950 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Refunding Green Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction were used (i) to refund certain MTA Transportation Revenue Bonds and MTA Dedicated Tax Fund Bonds and (ii) to pay certain financing, legal, and miscellaneous expenses associated with the Series 2023A Bonds.

On January 17, 2023 and January 24, 2023, MTA prepaid the 2023 and 2024 projected Actuarially Determined Contributions ("ADCs") for MTA-Sponsored Pension Plans. The prepayment amounts for each year were $659.11 and $639.44, respectively.

On January 25, 2023, Grand Central Madison, a 714,000 square foot terminal underneath Grand Central Terminal began limited, temporary shuttle service between Grand Central and Jamaica prior to the full service launch scheduled on February 27, 2023. As one of the MTA's East Side Access projects, and costing approximately $11 billion, Grand Central Madison extends the Long Island Rail Road to Grand Central Terminal and projects to cut commute time by as much as 40 minutes per day (round-trip) for some customers.

On January 31, 2023, MTA executed a 2,826,779 gallon ultra-low sulfur diesel fuel hedge at an all-in price of $2.6867 (whole dollars) per gallon. The hedge covers the period from January 2024 through December 2024.

On February 14, 2023, MTA issued $828.225 Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction will be used (i) to refund certain outstanding bonds of MTA Bridges and Tunnels and (ii) pay certain financing, legal, and miscellaneous expenses.

On February 28, 2023, MTA executed a 2,826,759 gallon ultra-low sulfur diesel fuel hedge at an all-in price of $2.5711 (whole dollars) per gallon. The hedge covers the period from February 2024 through January 2025.

On March 14, 2023, MTA issued $1,254 billion Triborough Bridge and Tunnel Authority Sales Tax Revenue Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction were used (i) finance approved transit and commuter projects included in the 2020-2024 Capital Program, (ii) finance a portion of the capital costs of the Central Business District Tolling Program, and (iii) pay certain financing, legal and miscellaneous expenses.

On March 16, 2023, MTA purchased $1,032.146 for three portfolios of State and Local Governments Securities (SLGS) sufficient to pre-pay all or a portion of interest due on certain MTA Dedicated Tax Bond Funds, MTA Transportation Revenue Bonds, and TBTA Payroll Mobility Tax Senior Lien Bonds through November 15, 2026. The funds were deposited in three escrow accounts. The establishment of the Escrow Fund is not intended to constitute an economic or legal defeasance of the Bonds and the MTA and TBTA retains the ability, in its sole discretion, to withdraw in whole or in part the amounts deposited in the Escrow Fund at any time should such amounts be needed for any other authorized purpose.

The breakdown of the portfolios were allocated as follows: Dedicated Tax Bond funds, Series 2010A-2,together with the Series 2009C Bonds, $181.749; MTA Transportation Revenue Bonds, Series 2020E Bonds, together with the Series 2006B, the Series 2010A, Series 2010B-1, Series 2010C-1, Series 2010E and the Series 2020D Bonds, $582.681; TBTA Payroll Mobility Tax Senior Lien Bonds Subseries 2022D-2 Bonds and, together with the Series 2022C and the Series 2022D-1a Bonds, $267.716.

On March 31, 2023, MTA executed a 1,633,857 gallon ultra-low sulfur diesel fuel hedge at an all-in price of $2.4373 (whole dollars) per gallon. The hedge covers the period from March 2024 through February 2025.

On April 11, 2023 and May 2, 2023, $1,000.347 and $314.981, respectively, were transferred from available funds to the MTA Other Postemployment Benefits Plan ("OPEB" Plan) and the related Trust Fund to set aside funds to assist in providing health and other welfare benefits to eligible retirees and their beneficiaries. The investments will be managed with the aim to allocate within the maturity range from December 2025 through June 2028.

On April 24, 2023, MTA executed a 2,462,350 gallon ultra-low sulfur diesel fuel hedge at an all-in price of $2.4357 (whole dollars) per gallon. The hedge covers the period from April 2024 through March 2025.

On April 27, 2023, the New York State fiscal year 2023-2024 budget was enacted which includes critical investments to the MTA. The budget supports the financial stability of the MTA by adjusting the Payroll Mobility Tax for the largest businesses within New York City to 0.6%, which will generate approximately $1.1 billion; $300 million in one-time State aid; requiring New York City to contribute $165 million for paratransit services funding; $65 million to reduce the proposed fare increase on the MTA; expanding service frequencies on the subway and launching a pilot program providing five free bus routes in New York City.

On May 30, 2023, MTA executed a 2,636,717 gallon ultra-low sulfur diesel fuel hedge at an all-in price of $2.2550 (whole dollars) per gallon. The hedge covers the period from May 2024 through April 2025.

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## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans

**($ in thousands)**

**Additional Plan**

| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** |
|---|---|---|---|---|---|---|---|---|
| **Total pension liability:** | | | | | | | | |
| Service cost | $ 260 | $ 453 | $ 621 | $ 1,057 | $ 1,874 | $ 2,752 | $ 3,441 | $ 3,813 |
| Interest | 83,489 | 86,918 | 93,413 | 97,611 | 101,477 | 104,093 | 106,987 | 110,036 |
| Effect of economic / demographic (gains) or losses | 3,729 | 10,428 | 13,455 | 213 | 1,890 | 15,801 | 6,735 | - |
| Effect of assumption changes or inputs | 26,300 | - | 50,191 | - | - | - | - | - |
| Benefit payments and withdrawals | (148,630) | (152,046) | (157,254) | (159,565) | (159,717) | (158,593) | (157,071) | (156,974) |
| **Net change in total pension liability** | (34,852) | (54,247) | 426 | (60,684) | (54,476) | (35,947) | (39,908) | (43,125) |
| **Total pension liability—beginning** | 1,357,323 | 1,411,570 | 1,411,144 | 1,471,828 | 1,526,304 | 1,562,251 | 1,602,159 | 1,645,284 |
| **Total pension liability—ending (a)** | 1,322,471 | 1,357,323 | 1,411,570 | 1,411,144 | 1,471,828 | 1,526,304 | 1,562,251 | 1,602,159 |
| **Plan fiduciary net position:** | | | | | | | | |
| Employer contributions | 70,553 | 68,724 | 62,774 | 59,500 | 76,523 | 81,100 | 100,000 | 407,513 |
| Nonemployer contributions | | - | - | - | 145,000 | 70,000 | - | - |
| Member contributions | 73 | 140 | 249 | 333 | 760 | 884 | 1,108 | 1,304 |
| Net investment income | 95,247 | 4,024 | 116,092 | (31,098) | 112,614 | 58,239 | 527 | 21,231 |
| Benefit payments and withdrawals | (148,630) | (152,046) | (157,254) | (159,565) | (159,717) | (158,593) | (157,071) | (156,974) |
| Administrative expenses | (610) | (612) | (718) | (1,180) | (1,070) | (611) | (1,218) | (975) |
| **Net change in plan fiduciary net position** | 16,633 | (79,770) | 21,143 | (132,010) | 174,110 | 51,019 | (56,654) | 272,099 |
| **Plan fiduciary net position—beginning** | 760,690 | 840,460 | 819,317 | 951,327 | 777,217 | 726,198 | 782,852 | 510,753 |
| **Plan fiduciary net position—ending (b)** | 777,323 | 760,690 | 840,460 | 819,317 | 951,327 | 777,217 | 726,198 | 782,852 |
| **Employer's net pension liability—ending (a)-(b)** | $ 545,148 | $ 596,633 | $ 571,110 | $ 591,827 | $ 520,501 | $ 749,087 | $ 836,053 | $ 819,307 |
| **Plan fiduciary net position as a percentage of the total pension liability** | 58.78% | 56.04% | 59.54% | 58.06% | 64.64% | 50.92% | 46.48% | 48.86% |
| **Covered payroll** | $ 3,230 | $ 5,174 | $ 7,236 | $ 13,076 | $ 20,500 | $ 29,312 | $ 39,697 | $ 43,267 |
| **Employer's net pension liability as a percentage of covered payroll** | 16877.65% | 11531.37% | 7892.62% | 4526.06% | 2539.03% | 2555.56% | 2106.09% | 1893.61% |

Note: Information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans**

**($ in thousands)**

| | MaBSTOA Plan | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** |
| **Total pension liability:** | | | | | | | | |
| Service cost | $ 93,934 | $ 95,514 | $ 89,814 | $ 86,979 | $ 84,394 | $ 82,075 | $ 77,045 | $ 72,091 |
| Interest | 274,270 | 266,588 | 265,454 | 256,084 | 246,284 | 236,722 | 232,405 | 223,887 |
| Effect of economic / demographic (gains) or losses | (19,177) | (720) | 9,011 | 5,412 | 11,826 | 13,784 | (68,997) | - |
| Effect of assumption changes or inputs | 72,032 | | 168,752 | - | 6,347 | - | - | - |
| Differences between expected and actual experience | | | - | - | - | - | - | (1,596) |
| Benefit payments and withdrawals | (245,427) | (237,930) | (221,221) | (213,827) | (209,122) | (187,823) | (179,928) | (175,447) |
| **Net change in total pension liability** | 175,632 | 123,452 | 311,810 | 134,648 | 139,729 | 144,758 | 60,525 | 118,935 |
| **Total pension liability—beginning** | 4,246,386 | 4,122,934 | 3,811,124 | 3,676,476 | 3,536,747 | 3,391,989 | 3,331,464 | 3,212,529 |
| **Total pension liability—ending (a)** | 4,422,018 | 4,246,386 | 4,122,934 | 3,811,124 | 3,676,476 | 3,536,747 | 3,391,989 | 3,331,464 |
| **Plan fiduciary net position:** | | | | | | | | |
| Employer contributions | 156,204 | 159,486 | 206,390 | 205,433 | 202,684 | 220,697 | 214,881 | 226,374 |
| Member contributions | 24,935 | 24,709 | 23,552 | 21,955 | 19,713 | 18,472 | 16,321 | 15,460 |
| Net investment income | 416,287 | 60,326 | 447,365 | (87,952) | 350,186 | 212,260 | (24,163) | 105,084 |
| Benefit payments and withdrawals | (245,427) | (237,930) | (221,221) | (213,827) | (209,122) | (187,823) | (179,928) | (175,447) |
| Administrative expenses | (264) | (244) | (220) | (196) | (208) | (186) | (88) | (74) |
| **Net change in plan fiduciary net position** | 351,735 | 6,347 | 455,866 | (74,587) | 363,253 | 263,420 | 27,023 | 171,397 |
| **Plan fiduciary net position—beginning** | 3,306,616 | 3,300,268 | 2,844,402 | 2,918,989 | 2,555,736 | 2,292,316 | 2,265,293 | 2,093,896 |
| **Plan fiduciary net position—ending (b)** | 3,658,351 | 3,306,616 | 3,300,268 | 2,844,402 | 2,918,989 | 2,555,736 | 2,292,316 | 2,265,293 |
| **Employer's net pension liability—ending (a)-(b)** | $ 763,667 | $ 939,770 | $ 822,666 | $ 966,722 | $ 757,487 | $ 981,011 | $ 1,099,673 | $ 1,066,171 |
| **Plan fiduciary net position as a percentage of the total pension liability** | 82.73% | 77.87% | 80.05% | 74.63% | 79.40% | 72.26% | 67.58% | 68.00% |
| **Covered payroll** | $768,868 | $ 802,100 | $ 786,600 | $ 776,200 | $ 749,666 | $ 716,527 | $ 686,674 | $ 653,287 |
| **Employer's net pension liability as a percentage of covered payroll** | 99.32% | 117.16% | 104.59% | 124.55% | 101.04% | 136.91% | 160.14% | 163.20% |

Note: Information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans** (continued)

**($ in thousands)**

| | MNR Cash Balance Plan | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** |
| **Total pension liability:** | | | | | | | | |
| Interest | 11 | **14** | $ 18 | $ 20 | $ 21 | $ 24 | $ 29 | $ 32 |
| Effect of economic / demographic (gains) or losses | (11) | 10 | 4 | (11) | 12 | (15) | (10) | - |
| Effect of assumption changes or inputs | 15 | 11 | - | - | - | - | 18 | - |
| Benefit payments and withdrawals | (38) | (105) | (53) | (58) | (71) | (77) | (113) | (88) |
| **Net change in total pension liability** | (23) | (70) | (31) | (49) | (38) | (68) | (76) | (56) |
| **Total pension liability—beginning** | 378 | 448 | 479 | 528 | 566 | 634 | 710 | 766 |
| **Total pension liability—ending (a)** | 355 | 378 | 448 | 479 | 528 | 566 | 634 | 710 |
| **Plan fiduciary net position:** | | | | | | | | |
| Employer contributions | | 9 | - | 5 | - | 23 | 18 | - |
| Net investment income | (5) | 32 | 40 | 1 | 20 | 16 | 6 | 41 |
| Benefit payments and withdrawals | (38) | (105) | (53) | (58) | (71) | (77) | (113) | (88) |
| Administrative expenses | | 3 | (3) | - | - | - | 3 | (3) |
| **Net change in plan fiduciary net position** | (43) | (61) | (16) | (52) | (51) | (38) | (86) | (50) |
| **Plan fiduciary net position—beginning** | 394 | 455 | 471 | 523 | 574 | 612 | 698 | 748 |
| **Plan fiduciary net position—ending (b)** | 351 | 394 | 455 | 471 | 523 | 574 | 612 | 698 |
| **Employer's net pension liability—ending (a)-(b)** | $ 4 | $ (16) | $ (7) | $ 8 | $ 5 | $ (8) | $ 22 | $ 12 |
| **Plan fiduciary net position as a percentage of the total pension liability** | 98.87% | 104.23% | 101.45% | 98.33% | 99.05% | 101.41% | 96.53% | 98.31% |
| **Covered payroll** | $ 0 | $ 277 | $ 278 | $ 268 | $ 471 | $ 846 | $ 1,474 | $ 2,274 |
| **Employer's net pension liability as a percentage of covered payroll** | 0.00% | -5.78% | -2.52% | 2.99% | 1.06% | -0.95% | 1.49% | 0.53% |

Note: Information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans** (continued)

**($ in thousands)**

| | MTA Defined Benefit Plan | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** |
| **Total pension liability:** | | | | | | | | |
| Service cost | $ 213,675 | $ 213,494 | $ 173,095 | $ 162,273 | $ 148,051 | $ 138,215 | $ 124,354 | $ 121,079 |
| Interest | 455,230 | 427,672 | 387,193 | 358,118 | 335,679 | 308,009 | 288,820 | 274,411 |
| Effect of economic / demographic (gains) or losses | 20,656 | 92,019 | 35,935 | 75,744 | (27,059) | 86,809 | 121,556 | 2,322 |
| Effect of assumption changes or inputs | 113,662 | | 690,958 | - | 10,731 | - | (76,180) | - |
| Effect of plan changes | | - | - | 61,890 | 76,511 | 73,521 | 6,230 | - |
| Benefit payments and withdrawals | (325,473) | (293,836) | (264,985) | (242,349) | (232,976) | (209,623) | (199,572) | (191,057) |
| **Net change in total pension liability** | 477,750 | 439,349 | 1,022,196 | 415,676 | 310,937 | 396,931 | 265,208 | 206,755 |
| **Total pension liability—beginning** | 6,950,035 | 6,510,686 | 5,488,490 | 5,072,814 | 4,761,877 | 4,364,946 | 4,099,738 | 3,892,983 |
| **Total pension liability—ending (a)** | 7,427,785 | 6,950,035 | 6,510,686 | 5,488,490 | 5,072,814 | 4,761,877 | 4,364,946 | 4,099,738 |
| **Plan fiduciary net position:** | | | | | | | | |
| Employer contributions | 396,144 | 394,986 | 344,714 | 338,967 | 321,861 | 280,768 | 221,694 | 331,259 |
| Member contributions | 33,832 | 32,006 | 31,504 | 29,902 | 31,027 | 29,392 | 34,519 | 26,006 |
| Net investment income | 639,374 | 99,045 | 651,919 | (150,422) | 516,153 | 247,708 | (45,122) | 102,245 |
| Benefit payments and withdrawals | (325,473) | (293,836) | (264,985) | (242,349) | (232,976) | (209,623) | (199,572) | (191,057) |
| Administrative expenses | (3,513) | (3,660) | (3,408) | (3,152) | (4,502) | (3,051) | (1,962) | (9,600) |
| **Net change in plan fiduciary net position** | 740,364 | 228,541 | 759,744 | (27,054) | 631,563 | 345,194 | 9,557 | 258,853 |
| **Plan fiduciary net position—beginning** | 5,012,765 | 4,784,224 | 4,024,480 | 4,051,534 | 3,419,971 | 3,074,777 | 3,065,220 | 2,806,367 |
| **Plan fiduciary net position—ending (b)** | 5,753,129 | 5,012,765 | 4,784,224 | 4,024,480 | 4,051,534 | 3,419,971 | 3,074,777 | 3,065,220 |
| **Employer's net pension liability—ending (a)-(b)** | $ 1,674,656 | $ 1,937,270 | $ 1,726,462 | $ 1,464,010 | $ 1,021,280 | $ 1,341,906 | $ 1,290,169 | $ 1,034,518 |
| **Plan fiduciary net position as a percentage of the total pension liability** | 77.45% | 72.13% | 73.48% | 73.33% | 79.87% | 71.82% | 70.44% | 74.77% |
| **Covered payroll** | $ 2,028,938 | $ 2,050,970 | $ 2,052,657 | $ 2,030,695 | $ 1,857,026 | $ 1,784,369 | $ 1,773,274 | $ 1,679,558 |
| **Employer's net pension liability as a percentage of covered payroll** | 82.54% | 94.46% | 84.11% | 72.09% | 55.00% | 75.20% | 72.76% | 61.59% |

Note: Information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Schedule of the MTA's Proportionate Share of the Net Pension Liabilities of Cost-Sharing Multiple-Employer Pension Plans

**($ in thousands)**

| | NYCERS Plan | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plan Measurement Date: | June 30, 2022 | June 30, 2021 | June 30, 2020 | June 30, 2019 | June 30, 2018 | June 30, 2017 | June 30, 2016 | June 30, 2015 |
| MTA's proportion of the net pension liability | 21.900% | 22.218% | 24.420% | 24.493% | 23.682% | 24.096% | 23.493% | 23.585% |
| MTA's proportionate share of the net pension liability | $ 3,964,996 | $ 1,424,952 | $ 5,147,445 | $ 4,536,510 | $ 4,176,941 | $ 5,003,811 | $ 5,708,052 | $ 4,773,787 |
| MTA's actual covered payroll | $ 3,848,798 | $ 3,618,339 | $ 3,514,665 | $ 3,385,743 | $ 3,216,837 | $ 3,154,673 | $ 3,064,007 | $ 2,989,480 |
| MTA's proportionate share of the net pension liability as a percentage of the MTA's covered payroll | 103.019% | 39.000% | 146.456% | 113.989% | 129.846% | 158.616% | 186.294% | 159.686% |
| Plan fiduciary net position as a percentage of the total pension liability | 81.276% | 77.000% | 76.933% | 78.836% | 78.826% | 74.805% | 69.568% | 73.125% |

| | NYSLERS Plan | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Plan Measurement Date: | March 31, 2022 | March 31, 2021 | March 31, 2020 | March 31, 2019 | March 31, 2018 | March 31, 2017 | March 31, 2016 | March 31, 2015 |
| MTA's proportion of the net pension liability | 0.310% | 0.314% | 0.346% | 0.345% | 0.327% | 0.311% | 0.303% | 0.289% |
| MTA's proportionate share of the net pension liability | $ (25,856) | $ 313 | $ 91,524 | $ 24,472 | $ 10,553 | $ 29,239 | $ 48,557 | $ 9,768 |
| MTA's actual covered payroll | $ 110,702 | $ 102,838 | $ 105,457 | $ 109,252 | $ 105,269 | $ 96,583 | $ 87,670 | $ 87,315 |
| MTA's proportionate share of the net pension liability as a percentage of the MTA's covered payroll | -23.360% | 0.000% | 86.788% | 22.400% | 10.025% | 30.273% | 55.386% | 11.187% |
| Plan fiduciary net position as a percentage of the total pension liability | 103.650% | 99.950% | 86.392% | 96.267% | 98.240% | 94.703% | 90.685% | 97.947% |

Note: Information was not readily available for periods prior to 2015. This schedule is intended to show information for ten years. Additional years will be displayed as they become available. The data provided in this schedule is based on the measurement date used by NYCERS and NYSLERS for the net pension liability.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

**($ in thousands)**

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Additional Plan*** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 70,764 | $ 70,553 | $ 68,723 | $ 62,774 | $ 59,196 | $ 76,523 | $ 83,183 | $ 82,382 | $ 112,513 | $ - |
| Actual Employer Contribution | 70,764 | 70,553 | 68,724 | 62,774 | 59,500 | 221,523 | 151,100 | 100,000 | 407,513 | - |
| Contribution Deficiency (Excess) | $ - | $ - | $ (1) | $ - | $ (304) | $ (145,000) | $ (67,917) | $ (17,618) | $ (295,000) | $ - |
| Covered Payroll | $ 2,043 | $ 3,230 | $ 5,174 | $ 7,236 | $ 13,076 | $ 20,500 | $ 29,312 | $ 39,697 | $ 43,267 | $ - |
| Contributions as a % of Covered Payroll | 3463.99% | 2184.33% | 1328.26% | 867.54% | 455.02% | 1080.62% | 515.49% | 251.91% | 941.87% | N/A |
| **MaBSTOA Plan** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 158,618 | $ 156,204 | $ 159,486 | $ 209,314 | $ 202,509 | $ 202,924 | $ 220,697 | $ 214,881 | $ 226,374 | $ 234,474 |
| Actual Employer Contribution | 158,618 | 156,204 | 159,486 | 206,390 | 205,434 | 202,684 | 220,697 | 214,881 | 226,374 | 234,474 |
| Contribution Deficiency (Excess) | $ - | $ - | $ - | $ 2,924 | $ (2,925) | $ 240 | $ - | $ - | $ - | $ - |
| Covered Payroll | $ 775,512 | $ 768,868 | $ 802,100 | $ 786,600 | $ 776,200 | $ 749,666 | $ 716,527 | $ 686,674 | $ 653,287 | $ 582,081 |
| Contributions as a % of Covered Payroll | 20.45% | 20.32% | 19.88% | 26.24% | 26.47% | 27.04% | 30.80% | 31.29% | 34.65% | 40.28% |
| **Metro-North Cash Balance Plan*** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 4 | $ - | $ - | $ 8 | $ 5 | $ - | $ 23 | $ - | $ 5 | $ - |
| Actual Employer Contribution | 4 | - | - | - | 5 | - | 23 | 14 | - | - |
| Contribution Deficiency (Excess) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (14) | $ 5 | $ - |
| Covered Payroll | $ - | $ - | $ 277 | $ 278 | $ 268 | $ 471 | $ 846 | $ 1,474 | $ 2,274 | $ - |
| Contributions as a % of Covered Payroll | 0.00% | 0.00% | 0.00% | 0.00% | 1.87% | 0.00% | 2.68% | 0.96% | 0.00% | N/A |
| **MTA Defined Benefit Plan*** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 404,245 | $ 392,547 | $ 392,921 | $ 349,928 | $ 331,566 | $ 316,916 | $ 290,415 | $ 273,700 | $ 271,523 | $ - |
| Actual Employer Contribution | 404,245 | 396,144 | 393,961 | 343,862 | 339,800 | 321,861 | 280,767 | 221,694 | 331,259 | - |
| Contribution Deficiency (Excess) | $ - | $ (3,597) | $ (1,040) | $ 6,066 | $ (8,234) | $ (4,945) | $ 9,648 | $ 52,006 | $ (59,736) | $ - |
| Covered Payroll | $ 2,111,293 | $ 2,028,938 | $ 2,050,970 | $ 2,052,657 | $ 2,030,695 | $ 1,857,026 | $ 1,784,369 | $ 1,773,274 | $ 1,679,558 | $ - |
| Contributions as a % of Covered Payroll | 19.15% | 19.52% | 19.21% | 16.75% | 16.73% | 17.33% | 15.73% | 12.50% | 19.72% | N/A |

* For the MTA Defined Benefit Plan, Additional Plan and Metro-North Cash Balance Plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

**($ in thousands)**

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| **NYCERS** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 797,299 | $ 842,269 | $ 882,690 | $ 952,616 | $ 807,097 | $ 800,863 | $ 797,845 | $ 736,212 | $ 741,223 | $ 736,361 |
| Actual Employer Contribution | 797,299 | 842,269 | 882,690 | 952,616 | 807,097 | 800,863 | 797,845 | 736,212 | 741,223 | 736,361 |
| Contribution Deficiency (Excess) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Covered Payroll | $ 3,848,798 | $ 3,637,544 | $ 3,771,595 | $ 3,948,283 | $ 3,974,494 | $ 3,768,885 | $ 3,523,993 | $ 3,494,907 | $ 3,617,087 | $ 2,943,195 |
| Contributions as a % of Covered Payroll | 20.72% | 23.15% | 23.40% | 24.13% | 20.31% | 21.25% | 22.64% | 21.07% | 20.49% | 25.02% |
| **NYSLERS **** | | | | | | | | | | |
| Actuarially Determined Contribution | $ 16,284 | $ 16,284 | $ 14,533 | $ 14,851 | $ 14,501 | $ 13,969 | $ 12,980 | $ 15,792 | $ 13,816 | $ - |
| Actual Employer Contribution | 16,284 | 16,284 | 14,533 | 14,851 | 14,501 | 13,969 | 12,980 | 15,792 | 13,816 | - |
| Contribution Deficiency (Excess) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Covered Payroll | $ 110,702 | $ 99,129 | $ 102,838 | $ 106,913 | $ 109,210 | $ 103,787 | $ 94,801 | $ 86,322 | $ 84,041 | $ - |
| Contributions as a % of Covered Payroll | 14.71% | 16.43% | 14.13% | 13.89% | 13.28% | 13.46% | 13.69% | 18.29% | 16.44% | N/A |

** For the NYSLERS plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | Additional Plan | | | |
|---|---|---|---|---|
| **Valuation Dates:** | January 1, 2021 | January 1, 2020 | January 1, 2019 | January 1, 2018 |
| **Measurement Date:** | December 31, 2021 | December 31, 2020 | December 31, 2019 | December 31, 2018 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | Period specified in current valuation report (closed 12-year period from January 1, 2021) with level dollar payments. | Period specified in current valuation report (closed 13 year period beginning January 1, 2020) with level dollar payments. | Period specified in current valuation report (closed 14 year period beginning January 1, 2019) with level dollar payments. | Period specified in current valuation report (closed 15 year period beginning January 1, 2018) with level dollar payments. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | 3.00% | 3.00% | 3.00% | 3.00% |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 6.50% | 6.50% | 6.50% | 7.00% |
| **Investment rate of return :** | 6.50%, net of investment expenses | 6.50%, net of investment expenses. | 6.50%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA-sponsored pension plan members from January 1, 2015 - December 31, 2020 reflecting mortality improvement on a generational basis using Scale MP-2021 | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.25%; 3.25% | 2.25%; 3.25% | 2.25%; 3.25% | 2.50%; 3.50% |
| **Cost-of-Living Adjustments:** | N/A | N/A | N/A | N/A |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | Additional Plan (continued) | | | |
|---|---|---|---|---|
| **Valuation Dates:** | January 1, 2017 | January 1, 2016 | January 1, 2015 | January 1, 2014 |
| **Measurement Date:** | December 31, 2017 | December 31, 2016 | December 31, 2015 | December 31, 2014 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | Period specified in current valuation report (closed 16 year period beginning January 1, 2017) with level dollar payments. | Period specified in current valuation report (closed 17 year period beginning January 1, 2016) with level dollar payments. | Period specified in current valuation report (closed 18 year period beginning January 1, 2015) with level dollar payments. | Period specified in current valuation report (closed 19 year period beginning January 1, 2014) with level dollar payments. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | 3.00% | 3.00% | 3.00% | 3.00% |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.50%; 3.50% | 2.50%; 3.50% | 2.50%; 3.50% | 2.50%; 3.50% |
| **Cost-of-Living Adjustments:** | N/A | N/A | N/A | N/A |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | MaBSTOA Plan | | |
|---|---|---|---|
| **Valuation Dates:** | January 1, 2021 | January 1, 2020 | January 1, 2019 |
| **Measurement Date:** | December 31, 2021 | December 31, 2020 | December 31, 2019 |
| **Actuarial cost method:** | Frozen Initial Liability cost method | Frozen Initial Liability (FIL) | Frozen Initial Liability (FIL) |
| **Amortization method:** | For FIL bases, 15 years for Fresh Start base as of January 1, 2020 and period specified in current valuation report for specific assumption changes. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. | Reflecting general wage, merit and promotion increases for operating employees and non-operating members. Varies by years of employment. | Reflecting general wage, merit, and promotion increases of 3.5% for operating employees and 4.0% for non-operating employees per year. Large increases are assumed in the first 5 years of a member's career. |
| **Actuarial assumptions:** | | | |
| **Discount Rate:** | 6.50% | 6.50% | 6.50% |
| **Investment rate of return :** | 6.50%, net of investment expenses. | 6.50%, net of investment expenses. | 6.50%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA-sponsored pension plan members from January 1, 2015 - December 31, 2020 reflecting mortality improvement on a generational basis using Scale MP-2021 | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | RP-2014 Disabled Annuitant mortality table for males and females. | RP-2014 Disabled Annuitant mortality table for males and females. | RP-2014 Disabled Annuitant mortality table for males and females. |
| **Inflation/Railroad Retirement Wage Base:** | 2.25% | 2.25% | 2.25% |
| **Cost-of-Living Adjustments:** | 60% of inflation assumption or 1.35% per annum, if applicable | 1.35% per annum | 1.35% per annum |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | MaBSTOA Plan (continued) | | |
|---|---|---|---|
| **Valuation Dates:** | January 1, 2018 | January 1, 2017 | January 1, 2016 |
| **Measurement Date:** | December 31, 2018 | December 31, 2017 | December 31, 2016 |
| **Actuarial cost method:** | Frozen Initial Liability (FIL) | Frozen Initial Liability (FIL) | Frozen Initial Liability (FIL) |
| **Amortization method:** | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | Varies by years of employment and employment type. | Varies by years of employment and employment type. | Varies by years of employment and employment type. |
| **Actuarial assumptions:** | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | RP-2014 Disabled Annuitant mortality table for males and females. | RP-2014 Disabled Annuitant mortality table for males and females. | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.50% | 2.50% |
| **Cost-of-Living Adjustments:** | 1.375% per annum | 1.375% per annum | 1.375% per annum |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | MaBSTOA Plan (continued) | |
|---|---|---|
| **Valuation Dates:** | January 1, 2015 | January 1, 2014 |
| **Measurement Date:** | December 31, 2015 | December 31, 2014 |
| **Actuarial cost method:** | Frozen Initial Liability (FIL) | Frozen Initial Liability (FIL) |
| **Amortization method:** | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized Market value restart as of 1/1/96, then gains/losses over a 5-year period. Gains/losses are five-year moving average of market values based on market value of assets. |
| **Salary increases:** | Varies by years of employment and employment type. | In general, merit and promotion increases plus assumed general wage increases of 3.5% to 15.0% for operating employees and 4.0% to 7.0% for nonoperating employees per year, depending on years of service. |
| **Actuarial assumptions:** | | |
| **Discount Rate:** | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.50% |
| **Cost-of-Living Adjustments:** | 1.375% per annum | 1.375% per annum |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | MNR Cash Balance Plan | | | |
|---|---|---|---|---|
| **Valuation Dates:** | January 1, 2021 | January 1, 2020 | January 1, 2019 | January 1, 2019 |
| **Measurement Date:** | December 31, 2021 | December 31, 2020 | December 31, 2019 | December 31, 2018 |
| **Actuarial cost method:** | Unit Credit Cost | Unit Credit Cost | Unit Credit Cost | Unit Credit Cost |
| **Amortization method:** | One-year amortization of the unfunded liability, if any. | One-year amortization of the unfunded liability, if any. | One-year amortization of the unfunded liability, if any. | One-year amortization of the unfunded liability, if any. |
| **Asset Valuation Method:** | Actuarial value equals market value. | Actuarial value equals market value. | Actuarial value equals market value. | Actuarial value equals market value. |
| **Salary increases:** | N/A | N/A | N/A | N/A |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 3.00% | 3.00% | 3.50% | 4.00% |
| **Investment rate of return :** | 3.00%, net of investment expenses. | 3.00%, net of investment expenses. | 3.50%, net of investment expenses. | 4.00%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA-sponsored pension plan members from January 1, 2015 - December 31, 2020 reflecting mortality improvement on a generational basis using Scale MP-2021 | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on an experience study for all MTA plans. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on an experience study for all MTA plans. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2017 experience study for all MTA plans. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments, projected on a generational basis using Scale AA. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females, noth projected on a generational basis using Scale AA. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.25% | 2.25% | 2.25% | 2.50% |
| **Cost-of-Living Adjustments:** | N/A | N/A | N/A | N/A |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | MNR Cash Balance Plan (continued) | | | |
|---|---|---|---|---|
| **Valuation Dates:** | January 1, 2018 | January 1, 2017 | January 1, 2016 | January 1, 2014 |
| **Measurement Date:** | December 31, 2017 | December 31, 2016 | December 31, 2015 | December 31, 2014 |
| **Actuarial cost method:** | Unit Credit Cost | Unit Credit Cost | Unit Credit Cost | Unit Credit Cost |
| **Amortization method:** | One-year amortization of the unfunded liability, if any. | One-year amortization of the unfunded liability, if any. | One-year amortization of the unfunded liability, if any. | Period specified in current valuation report (closed 10 year period beginning January 1, 2008 - 4 year period for the January 1, 2014 valuation). |
| **Asset Valuation Method:** | Actuarial value equals market value. | Actuarial value equals market value. | Actuarial value equals market value. | Effective January 1, 2015, the Actuarially Determined Contribution (ADC) will reflect one-year amortization of the unfunded accrued liability in accordance with the funding policy adopted by the MTA. |
| **Salary increases:** | N/A | N/A | N/A | There were no projected salary increase assumptions used in the January 1, 2014 valuation as the participants of the Plan were covered under the Management Plan effective January 1, 1989. For participants of the Plan eligible for additional benefits, these benefits were not valued as the potential liability is de minimus. |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 4.00% | 4.00% | 4.00% | 4.50% |
| **Investment rate of return :** | 4.00%, net of investment expenses. | 4.00%, net of investment expenses. | 4.00%, net of investment expenses. | 4.50%, net of investment expenses. |
| **Mortality:** | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2017 experience study for all MTA plans. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2012 experience study for all MTA plans. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2012 experience study for all MTA plans. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.30% | 2.30% | 2.50% |
| **Cost-of-Living Adjustments:** | N/A | N/A | N/A | N/A |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | MTA Defined Benefit Plan | | |
|---|---|---|---|
| **Valuation Dates:** | January 1, 2021 | January 1, 2020 | January 1, 2019 |
| **Measurement Date:** | December 31, 2021 | December 31, 2020 | December 31, 2019 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | For FIL bases, 18 years for Fresh start base as of January 1, 2020 and period specified in current valuation report for specific assumption and plan change bases. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary or service, of the projected population for each group and further weighted by total present value of benefits for each group. | For Frozen Initial Liability ("FIL") bases, 18 years for Fresh start base as of Jan 1, 2020 and period specified in current valuation report for specific plan change bases. Future gains/ losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary or service, of the projected population for each group and further weighted by total present value of benefits for each group. | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | Varies by years of employment, and employee group; 2.75% general wage increases increases for TWU Local 100 MTA Bus hourly employees. | Varies by years of employment, and employee group. 2.75% general wage increases for TWU Local 100 MTA Bus hourly employees. | Varies by years of employment, and employee group. 2.75% general wage increases for TWU Local 100 MTA Bus hourly employees. |
| **Actuarial assumptions:** | | | |
| **Discount Rate:** | 6.50% | 6.50% | 6.50% |
| **Investment rate of return :** | 6.50% | 6.50% | 6.50% |
| **Mortality:** | Based on experience of all MTA sponsored pension plan members from January 1, 2015 - December 31, 2020 reflecting mortality improvement on a generational basis using Scale MP-2021 | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the RP-2000 Healthy Annuitant mortality table for males with Blue Collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | RP-2014 Disabled Annuitant mortality table for males and females. | RP-2014 Disabled Annuitant mortality table for males and females | RP-2014 Disabled Annuitant mortality table for males and females |
| **Inflation/Railroad Retirement Wage Base:** | 2.25%; 3.25% | 2.25%; 3.25% | 2.25%; 3.25% |
| **Cost-of-Living Adjustments:** | 60% of inflation assumption or 1.35%, if applicable. | 60% of inflation assumption or 1.35%, if applicable. | 60% of inflation assumption or 1.35%, if applicable. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | MTA Defined Benefit Plan (continued) | | |
|---|---|---|---|
| **Valuation Dates:** | January 1, 2018 | January 1, 2017 | January 1, 2016 |
| **Measurement Date:** | December 31, 2018 | December 31, 2017 | December 31, 2016 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees. | Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees. | Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees. |
| **Actuarial assumptions:** | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00% | 7.00% | 7.00% |
| **Mortality:** | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | RP-2014 Disabled Annuitant mortality table for males and females | RP-2014 Disabled Annuitant mortality table for males and females | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and females healthy rates, respectively. |
| **Inflation/Railroad Retirement Wage Base:** | 2.50%; 3.50% | 2.50%; 3.50% | 2.50%; 3.50% |
| **Cost-of-Living Adjustments:** | 55% of inflation assumption or 1.375%, if applicable. | 55% of inflation assumption or 1.375%, if applicable. | 55% of inflation assumption or 1.375%, if applicable. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | MTA Defined Benefit Plan (continued) | |
|---|---|---|
| **Valuation Dates:** | January 1, 2015 | January 1, 2014 |
| **Measurement Date:** | December 31, 2015 | December 31, 2014 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. | For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group. |
| **Asset Valuation Method:** | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| **Salary increases:** | Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees. | Varies by years of employment, and employee group. |
| **Actuarial assumptions:** | | |
| **Discount Rate:** | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00% | 7.00% |
| **Mortality:** | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date. | Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA, as recommended by the Society of Actuaries Retirement Plans Experience Committee. Mortality assumption is based on a 2012 experience study for all MTA plans. |
| **Pre-retirement:** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. |
| **Post-retirement Healthy Lives:** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. |
| **Post-retirement Disabled Lives:** | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and females healthy rates, respectively. | 75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and females healthy rates, respectively. |
| **Inflation/Railroad Retirement Wage Base:** | 2.50%; 3.50% | 2.50%; 3.00% |
| **Cost-of-Living Adjustments:** | 55% of inflation assumption or 1.375%, if applicable. | 55% of inflation assumption or 1.375%, if applicable. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | NYCERS Plan | | | |
|---|---|---|---|---|
| **Valuation Dates:** | June 30, 2021 | June 30, 2020 | June 30, 2019 | June 30, 2018 |
| **Measurement Date:** | June 30, 2022 | June 30, 2021 | June 30, 2020 | June 30, 2019 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. |
| **Asset Valuation Method:** | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. |
| **Salary increases:** | 3% per annum. | 3% per annum. | 3% per annum. | 3% per annum. |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Tables adopted by the Boards of Trustees during Fiscal Yeat 2019. Applies mortality improvement scale MP-2020 published by the Society of Actuaries. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was prepared by Bolton, Inc. dated June 2019 analyzed the four-year and ten-year periods ended June 30, 2017. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was prepared by Bolton, Inc. dated June 2019 analyzed the four-year and ten-year periods ended June 30, 2017. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013. |
| **Pre-retirement:** | N/A | N/A | N/A | N/A |
| **Post-retirement Healthy Lives:** | N/A | N/A | N/A | N/A |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.50% | 2.50% | 2.50% |
| **Cost-of-Living Adjustments:** | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. |

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**

**Notes to Schedule of the MTA's Contributions for All Pension Plans**

| | NYCERS Plan (continued) | | | |
|---|---|---|---|---|
| **Valuation Dates:** | June 30, 2016 | June 30, 2015 | June 30, 2014 | June 30, 2013 |
| **Measurement Date:** | June 30, 2018 | June 30, 2017 | June 30, 2016 | June 30, 2015 |
| **Actuarial cost method:** | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost | Entry Age Normal Cost |
| **Amortization method:** | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. | Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds. |
| **Asset Valuation Method:** | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. | Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011. |
| **Salary increases:** | 3% per annum. | 3% per annum. | 3% per annum. | 3% per annum. |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% | 7.00% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013. | Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013. |
| **Pre-retirement:** | N/A | N/A | N/A | N/A |
| **Post-retirement Healthy Lives:** | N/A | N/A | N/A | N/A |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.50% | 2.50% | 2.50% |
| **Cost-of-Living Adjustments:** | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA and 2.5% per annum for Escalation. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | NYSLERS Plan | | | | |
|---|---|---|---|---|---|
| **Valuation Dates:** | April 1, 2021 | April 1, 2020 | April 1, 2019 | April 1, 2018 | April 1, 2017 |
| **Measurement Date:** | March 31, 2022 | March 31, 2021 | March 31, 2020 | March 31, 2019 | March 31, 2018 |
| **Actuarial cost method:** | Aggregate Cost method | Aggregate Cost method | Aggregate Cost method | Aggregate Cost method | Aggregate Cost method |
| **Amortization method:** | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. |
| **Asset Valuation Method:** | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. |
| **Salary increases:** | 4.4% in ERS, 6.2% in PFRS | 4.40% in ERS; 6.20% in PFRS | 4.20% in ERS; 5.00% in PFRS | 0.038 | 0.038 |
| **Actuarial assumptions:** | | | | | |
| **Discount Rate:** | 5.90% | 5.90% | 6.80% | 7.00% | 7.00% |
| **Investment rate of return :** | 6.80%, net of investment expenses. | 5.90%, net of investment expenses. | 6.80%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. |
| **Mortality:** | Annuitant mortality rates are based on April 1, 2015 – March 31, 2020 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2020. | Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2015 through March 31, 2020 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2020. | Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2018. | Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. | Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. |
| **Pre-retirement:** | N/A | N/A | N/A | N/A | N/A |
| **Post-retirement Healthy Lives:** | N/A | N/A | N/A | N/A | N/A |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.70% | 2.70% | 2.50% | 2.50% | 2.50% |
| **Cost-of-Living Adjustments:** | 1.3% per annum. | 1.4% per annum. | 1.3% per annum. | 1.3% per annum. | 1.3% per annum. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

### Notes to Schedule of the MTA's Contributions for All Pension Plans

| | NYSLERS Plan (continued) | | | |
|---|---|---|---|---|
| **Valuation Dates:** | April 1, 2016 | April 1, 2016 | April 1, 2015 | April 1, 2014 |
| **Measurement Date:** | March 31, 2017 | March 31, 2017 | March 31, 2016 | March 31, 2015 |
| **Actuarial cost method:** | Aggregate Cost method | Aggregate Cost method | Aggregate Cost method | Aggregate Cost method |
| **Amortization method:** | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. | Evenly over the remaining working lifetimes of the active membership. |
| **Asset Valuation Method:** | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. | 5-year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. |
| **Salary increases:** | 3.80% | 3.80% | 3.80% | 4.90% |
| **Actuarial assumptions:** | | | | |
| **Discount Rate:** | 7.00% | 7.00% | 7.00% | 7.50% |
| **Investment rate of return :** | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.00%, net of investment expenses. | 7.5%, net of investment expenses. |
| **Mortality:** | Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. | Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. | Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. | Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014. |
| **Pre-retirement:** | N/A | N/A | N/A | N/A |
| **Post-retirement Healthy Lives:** | N/A | N/A | N/A | N/A |
| **Post-retirement Disabled Lives:** | N/A | N/A | N/A | N/A |
| **Inflation/Railroad Retirement Wage Base:** | 2.50% | 2.50% | 2.50% | 2.70% |
| **Cost-of-Living Adjustments:** | 1.3% per annum. | 1.3% per annum. | 1.3% per annum. | 1.4% per annum. |

## REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

**Notes to Schedule of MTA's Contributions for All Pension Plans (concluded)**

Significant methods and assumptions used in calculating the actuarially determined contributions of an employer's proportionate share in Cost Sharing, Multiple-Employer pension plans, the NYCERS plan and the NYSLERS plan, are presented as notes to the schedule.

Factors that significantly affect trends in the amounts reported are changes of benefit terms, changes in the size or composition of the population covered by the benefit terms, or the use of different assumptions. Following is a summary of such factors:

***Changes of Benefit Terms:***

There were no significant legislative changes in benefit for the June 30, 2021 valuation for the NYCERS plan.

There were no significant legislative changes in benefit for the April 1, 2021 valuation for the NYSLERS plan.

***Changes of Assumptions:***

There were no significant changes in the economic and demographic used in the June 30, 2021 valuation for the NYCERS plan.

There were no significant changes in the economic and demographic assumptions used in the April 1, 2021 valuation for the NYSLERS plan.

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**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**

**Schedule of Changes in the MTA's Net OPEB Liability and Related Ratios and Notes to Schedule**

**($ in thousands)**

| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** |
|---|---|---|---|---|---|
| **Total OPEB liability:** | | | | | |
| **Service cost** | $ 1,250,950 | $ 1,097,051 | $ 928,573 | $ 1,002,930 | $ 884,548 |
| **Interest on total OPEB liability** | 535,642 | 610,160 | 840,532 | 734,968 | 731,405 |
| **Effect of plan changes** | | - | - | 1,580 | 27,785 |
| **Effect of economic/demographic (gains) or losses** | 292,154 | (43,890) | 247,871 | (19,401) | 13,605 |
| **Effect of assumption changes or inputs** | (738,829) | 1,939,528 | 311,286 | (1,800,135) | 911,465 |
| **Benefit payments** | (792,984) | (724,741) | (730,677) | (691,122) | (650,994) |
| **Net change in total OPEB liability** | 546,933 | 2,878,108 | 1,597,585 | (771,180) | 1,917,814 |
| **Total OPEB liability—beginning** | 24,409,581 | 21,531,473 | 19,933,888 | 20,705,068 | 18,787,254 |
| **Total OPEB liability—ending (a)** | 24,956,514 | 24,409,581 | 21,531,473 | 19,933,888 | 20,705,068 |
| **Plan fiduciary net position:** | | | | | |
| Employer contributions | 792,984 | 387,371 | 730,677 | 691,122 | 650,994 |
| Net investment income | - | (77,118) | 63,647 | (18,916) | 47,370 |
| Benefit payments | (792,984) | (724,741) | (730,677) | (691,122) | (650,994) |
| Administrative expenses | (46) | (209) | (200) | (56) | - |
| **Net change in plan fiduciary net position** | (46) | (414,697) | 63,447 | (18,972) | 47,370 |
| **Plan fiduciary net position—beginning** | 130 | 414,827 | 351,380 | 370,352 | 322,982 |
| **Plan fiduciary net position—ending (b)** | 84 | 130 | 414,827 | 351,380 | 370,352 |
| **Net OPEB liability—ending (a)-(b)** | $ 24,956,430 | $ 24,409,451 | $ 21,116,646 | $ 19,582,508 | $ 20,334,716 |
| **Plan fiduciary net position as a percentage of the total OPEB liability** | 0.00% | 0.00% | 1.93% | 1.76% | 1.79% |
| **Covered payroll** | $ 6,537,709 | $ 6,716,423 | $ 6,901,690 | $ 6,903,700 | $ 5,394,332 |
| **Net OPEB liability as a percentage of covered payroll** | 381.73% | 363.43% | 305.96% | 283.65% | 376.96% |

## Notes to Schedule:

*Changes of benefit terms:* In the July 1, 2021 actuarial valuation, there were no changes to the benefit terms.

*Changes of assumptions:* In the July 1, 2021 actuarial valuation, there were updates to various healthcare assumptions including the per capita claim costs assumption and healthcare trend assumptions.

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

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**REQUIRED SUPPLEMENTARY INFORMATION**
**(UNAUDITED)**

**Schedule of the MTA's Contributions to the OPEB Plan for the years ended December 31:**

| **($ in thousands)** | **2022** | **2021** | **2020** | **2019** | **2018** | **2017** |
|---|---|---|---|---|---|---|
| Actuarially Determined Contribution | N/A | N/A | N/A | N/A | N/A | N/A |
| Actual Employer Contribution (1) | $ 846,299 | $ 813,195 | $ 391,529 | $ 737,297 | $ 691,122 | $ 650,994 |
| Contribution Deficiency (Excess) | N/A | N/A | N/A | N/A | N/A | N/A |
| Covered Payroll | $ 6,848,347 | $ 6,537,709 | $ 6,716,423 | $ 6,901,690 | $ 6,903,700 | $ 5,394,200 |
| Actual Contribution as a Percentage of Covered Payroll | 12.36% | 12.44% | 5.83% | 10.68% | 10.01% | 12.07% |

(1) Actual employer contribution includes the implicit rate of subsidy adjustment of $52,933 and $62,852 for the years ended December 31, 2021 and 2020, respectively.

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

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**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**

**Notes to Schedule of the MTA's Contributions to the OPEB Plan:**

| | | | | | |
|---|---|---|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 | July 1, 2019 | July 1, 2017 | July 1, 2017 |
| Measurement date | December 31, 2021 | December 31, 2020 | December 31, 2019 | December 31, 2018 | December 31, 2017 |
| Discount rate | 2.06%, net of expenses | 2.12%, net of expenses | 2.74%, net of expenses | 4.10%, net of expenses | 3.44%, net of expenses |
| Inflation | 2.30% | 2.25% | 2.25% | 2.50% | 2.50% |
| Actuarial cost method | Entry Age Normal | Entry Age Normal | Entry Age Normal | Entry Age Normal | Entry Age Normal |
| Amortization method | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll |
| Normal cost increase factor | 4.25% | 4.25% | 4.50% | 4.50% | 4.50% |
| Investment rate of return | 2.06% | 2.12% | 5.75% | 6.50% | 6.50% |
| Salary increases | 3%. Varies by years of service and differs for members of the various pension plans. | 3%. Varies by years of service and differs for members of the various pension plans. | 3%. Varies by years of service and differs for members of the various pension plans. | 3%. Varies by years of service and differs for members of the various pension plans. | 3%. Varies by years of service and differs for members of the various pension plans. |

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

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## SUPPLEMENTARY INFORMATION

**Pension And Other Employee Benefit Trust Funds**
**Combining Statement of Fiduciary Net Position as of December 31, 2022**

| ($ in thousands) | Pension Funds | | | Other Employee Benefit Trust Fund | |
|---|---|---|---|---|---|
| | Defined Benefit Pension Plan | LIRR Company Plan for Additional Pensions | MaBSTOA Plan | Other Post-employment Benefits Plan | Total |
| ASSETS: | | | | | |
| Cash | $ 6,594 | $ 696 | $ 3,695 | $ - | $ 10,985 |
| Receivables: | | | | | |
| Employee loans | - | - | 26,521 | - | 26,521 |
| Investment securities sold | - | 175 | 1,635 | - | 1,810 |
| Accrued interest and dividends | 3,786 | 400 | 1,787 | 38 | 6,011 |
| Other receivables | 2,657 | 23 | - | - | 2,680 |
| Total receivables | 6,443 | 598 | 29,943 | 38 | 37,022 |
| Investments at fair value | 5,366,950 | 652,011 | 3,289,326 | 11,698 | 9,319,985 |
| Total assets | $ 5,379,987 | $ 653,305 | $ 3,322,964 | $ 11,736 | $ 9,367,992 |
| LIABILITIES: | | | | | |
| Accounts payable and accrued liabilities | $ 5,607 | $ 238 | $ 474 | $ - | $ 6,319 |
| Payable for investment securities purchased | 5,789 | 611 | 3,592 | - | 9,992 |
| Accrued benefits payable | - | - | 75 | 1 | 76 |
| Accrued postretirement death benefits (PRDB) payable | - | - | 5,719 | - | 5,719 |
| Accrued 55/25 Additional Members Contribution (AMC) payable | - | - | 2,527 | - | 2,527 |
| Other liabilities | 557 | 59 | 466 | - | 1,082 |
| Total liabilities | 11,953 | 908 | 12,853 | 1 | 25,715 |
| NET POSITION: | | | | | |
| Restricted for pensions | 5,368,034 | 652,397 | 3,310,111 | - | 9,330,542 |
| Restricted for postemployment benefits other than pensions | - | - | - | 11,735 | 11,735 |
| Total net position | 5,368,034 | 652,397 | 3,310,111 | 11,735 | 9,342,277 |
| Total liabilities and net position | $ 5,379,987 | $ 653,305 | $ 3,322,964 | $ 11,736 | $ 9,367,992 |

See Independent Auditor’s Report and notes to the consolidated financial statements.

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**SUPPLEMENTARY INFORMATION**

**Pension And Other Employee Benefit Trust Funds**
**Combining Statement of Fiduciary Net Position as of December 31, 2021**

| ($ in thousands) | Pension Funds | | | Other Employee Benefit Trust Fund | |
|---|---|---|---|---|---|
| | Defined Benefit Pension Plan | LIRR Company Plan for Additional Pensions | MaBSTOA Plan | Other Post-employment Benefits Plan | Total |
| ASSETS: | | | | | |
| Cash | $ 24,495 | $ 2,956 | $ 11,821 | $ 107 | $ 39,379 |
| Receivables: | | | | | |
| Employee loans | - | - | 26,082 | - | 26,082 |
| Participant and union contributions | - | (20) | - | - | (20) |
| Investment securities sold | - | 139 | 5,532 | - | 5,671 |
| Accrued interest and dividends | 2,798 | 338 | 1,746 | - | 4,882 |
| Other receivables | 2,412 | 1,358 | - | - | 3,770 |
| Total receivables | 5,210 | 1,815 | 33,360 | - | 40,385 |
| Investments at fair value | 5,739,559 | 773,997 | 3,630,953 | - | 10,144,509 |
| Total assets | $ 5,769,264 | $ 778,768 | $ 3,676,134 | $ 107 | $ 10,224,273 |
| LIABILITIES: | | | | | |
| Accounts payable and accrued liabilities | $ 6,471 | $ 279 | $ 1,565 | $ - | $ 8,315 |
| Payable for investment securities purchased | 8,155 | 984 | 5,620 | - | 14,759 |
| Accrued benefits payable | - | - | 50 | 24 | 74 |
| Accrued postretirement death benefits (PRDB) payable | - | - | 5,405 | - | 5,405 |
| Accrued 55/25 Additional Members Contribution (AMC) payable | - | - | 3,847 | - | 3,847 |
| Other liabilities | 1,509 | 182 | 1,296 | - | 2,987 |
| Total liabilities | 16,135 | 1,445 | 17,783 | 24 | 35,387 |
| NET POSITION: | | | | | |
| Restricted for pensions | 5,753,129 | 777,323 | 3,658,351 | - | 10,188,803 |
| Restricted for postemployment benefits other than pensions | - | - | - | 83 | 83 |
| Total net position | 5,753,129 | 777,323 | 3,658,351 | 83 | 10,188,886 |
| Total liabilities and net position | $ 5,769,264 | $ 778,768 | $ 3,676,134 | $ 107 | $ 10,224,273 |

See Independent Auditor’s Report and notes to the consolidated financial statements.

**(A Component Unit of the State of New York)**

**SUPPLEMENTARY INFORMATION**

**Pension And Other Employee Benefit Trust Funds**
**Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2022**

| ($ in thousands) | Pension Funds | | | Other Employee Benefit Trust Fund | |
|---|---|---|---|---|---|
| | Defined Benefit Pension Plan | LIRR Additional Plan | MaBSTOA Plan | Other Post-employment Benefit Plan | Total |
| ADDITIONS: | | | | | |
| Contributions: | | | | | |
| Employer contributions | $ 400,648 | $ 70,764 | $ 158,618 | $ 788,310 | $ 1,418,340 |
| Implicit rate subsidy contribution | - | - | - | 57,989 | 57,989 |
| Member contributions | 34,471 | 50 | 25,548 | - | 60,069 |
| Total contributions | 435,119 | 70,814 | 184,166 | 846,299 | 1,536,398 |
| Investment income: | | | | | |
| Net (depreciation) / appreciation in fair value of investments | (520,371) | (56,789) | (307,355) | 11,671 | (872,844) |
| Dividend income | 72,743 | 8,067 | 45,924 | 3 | 126,737 |
| Interest income | 16,505 | 1,773 | 10,719 | 154 | 29,151 |
| Less: Investment expenses | 32,900 | 4,266 | 22,915 | - | 60,081 |
| Investment income, net | (464,023) | (51,215) | (273,627) | 11,828 | (777,037) |
| Total additions | (28,904) | 19,599 | (89,461) | 858,127 | 759,361 |
| DEDUCTIONS: | | | | | |
| Benefit payments and withdrawals | 351,857 | 143,764 | 257,973 | 788,310 | 1,541,904 |
| Implicit rate subsidy payments | - | - | - | 57,989 | 57,989 |
| Administrative expenses | 4,334 | 761 | 806 | 176 | 6,077 |
| Total deductions | 356,191 | 144,525 | 258,779 | 846,475 | 1,605,970 |
| Net increase (decrease) in fiduciary net position | (385,095) | (124,926) | (348,240) | 11,652 | (846,609) |
| NET POSITION: | | | | | |
| Restricted for Benefits: | | | | | |
| Beginning of year | 5,753,129 | 777,323 | 3,658,351 | 83 | 10,188,886 |
| End of year | $ 5,368,034 | $ 652,397 | $ 3,310,111 | $ 11,735 | $ 9,342,277 |

See Independent Auditor’s Report and notes to the consolidated financial statements.

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**SUPPLEMENTARY INFORMATION**

**Pension And Other Employee Benefit Trust Funds**
**Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2021**

| ($ in thousands) | Pension Funds | | | Other Employee Benefit Trust Fund | |
|---|---|---|---|---|---|
| | Defined Benefit Pension Plan | LIRR Additional Plan | MaBSTOA Plan | Other Post-employment Benefits Plan | Total |
| ADDITIONS: | | | | | |
| Contributions: | | | | | |
| Employer contributions | $ 396,144 | $ 70,553 | $ 156,204 | $ 740,051 | $ 1,362,952 |
| Implicit rate subsidy contribution | - | - | - | 52,933 | 52,933 |
| Member contributions | 33,832 | 73 | 24,935 | - | 58,840 |
| Total contributions | 429,976 | 70,626 | 181,139 | 792,984 | 1,474,725 |
| Investment income: | | | | | |
| Net appreciation in fair value of investments | 618,496 | 93,218 | 401,056 | - | 1,112,770 |
| Dividend income | 64,476 | 8,131 | 42,762 | - | 115,369 |
| Interest income | 10,895 | 1,361 | 8,197 | - | 20,453 |
| Less: Investment expenses | 47,492 | 6,495 | 31,205 | - | 85,192 |
| Investment income, net | 646,375 | 96,215 | 420,810 | - | 1,163,400 |
| Total additions | 1,076,351 | 166,841 | 601,949 | 792,984 | 2,638,125 |
| DEDUCTIONS: | | | | | |
| Benefit payments and withdrawals | 324,999 | 148,630 | 243,251 | 740,051 | 1,456,931 |
| Implicit rate subsidy payments | - | - | - | 52,933 | 52,933 |
| Transfer to other plans | 474 | | - | - | 474 |
| Distribution to participants | - | - | 2,175 | - | 2,175 |
| Administrative expenses | 3,513 | 610 | 264 | 47 | 4,434 |
| Total deductions | 328,986 | 149,240 | 245,690 | 793,031 | 1,516,947 |
| Net increase in fiduciary net position | 747,365 | 17,601 | 356,259 | (47) | 1,121,178 |
| **NET POSITION:** | | | | | |
| Restricted for Benefits: | | | | | |
| Beginning of year | 5,005,764 | 759,722 | 3,302,092 | 130 | 9,067,708 |
| End of year | $ 5,753,129 | $ 777,323 | $ 3,658,351 | $ 83 | $ 10,188,886 |

See Independent Auditor’s Report and notes to the consolidated financial statements.

**(A Component Unit of the State of New York)**

**SUPPLEMENTARY INFORMATION**
**SCHEDULE OF CONSOLIDATED RECONCILIATION BETWEEN FINANCIAL PLAN AND FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2022**
**($ in millions)**

| Category | Financial Plan Actual | Statement GAAP Actual | Variance |
|---|---|---|---|
| REVENUE: | | | |
| Farebox revenue | $ 3,989 | $ 4,024 | $ 35 |
| Vehicle toll revenue | 2,323 | 2,332 | 9 |
| Other operating revenue | 679 | 649 | (30) |
| Total revenue | 6,991 | 7,005 | 14 |
| OPERATING EXPENSES: | | | |
| Labor: | | | |
| Payroll | 5,516 | 5,444 | (72) |
| Overtime | 1,129 | 1,134 | 5 |
| Health and welfare | 1,479 | 1,369 | (110) |
| Pensions | 1,299 | 950 | (349) |
| Other fringe benefits | 1,051 | 1,009 | (42) |
| Postemployment benefits | 2,169 | 1,892 | (277) |
| Reimbursable overhead | (399) | (438) | (39) |
| Total labor expenses | 12,244 | 11,360 | (884) |
| Non-labor: | | | |
| Electric power | 587 | 556 | (31) |
| Fuel | 287 | 283 | (4) |
| Insurance | 43 | 9 | (34) |
| Claims | 433 | 374 | (59) |
| Paratransit service contracts | 407 | 412 | 5 |
| Maintenance and other | 903 | 680 | (223) |
| Professional service contract | 711 | 554 | (157) |
| Pollution remediation project costs | 6 | 26 | 20 |
| Materials and supplies | 610 | 561 | (49) |
| Other business expenses | 251 | 245 | (6) |
| Total non-labor expenses | 4,238 | 3,700 | (538) |
| Depreciation | 3,176 | 3,361 | 185 |
| Other expenses adjustment | 202 | - | (202) |
| Total operating expenses | 19,860 | 18,421 | (1,439) |
| NET OPERATING LOSS | $ (12,869) | $ (11,416) | $ 1,453 |

**(A Component Unit of the State of New York)**

**SUPPLEMENTARY INFORMATION**

**SCHEDULE OF CONSOLIDATED SUBSIDY ACCRUAL RECONCILIATION BETWEEN FINANCIAL PLAN AND FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2022**
**($ in millions)**

| Accrued Subsidies | Financial Plan Actual | Financial Statement GAAP Actual | Variance | |
|---|---|---|---|---|
| Mass transportation operating assistance | $ 2,601 | $ 2,601 | $ - | {1} |
| Mass transit trust fund subsidies | 590 | 597 | 7 | {1} |
| Mortgage recording tax 1 and 2 | 657 | 623 | (34) | {1} |
| MRT transfer | (12) | (18) | (6) | {1} |
| Urban tax | 660 | 657 | (3) | {1} |
| State and local operating assistance | 376 | 373 | (3) | {1} |
| Station maintenance | 198 | 188 | (10) | {1} |
| Connecticut Department of Transportation (CDOT) | 256 | 248 | (8) | {1} |
| Subsidy from New York City for MTA Bus and SIRTOA | 772 | 535 | (237) | {1} |
| Build American Bonds Subsidy | - | 83 | 83 | {1} |
| Mobility tax | 2,285 | 2,296 | 11 | {1} |
| Assistance Fund (For hire vehicle) | 300 | 345 | 45 | {1} |
| Real Property Transfer Tax Surcharge (Mansion Tax) | 495 | 513 | 18 | {1} |
| Internet Marketplace Tax | 326 | 331 | 5 | {1} |
| Transfer to Central Business District Capital Lockbox | (823) | - | 823 | {1} |
| Other non-operating income | 6 | 7,114 | 7,108 | {2} |
| Total accrued subsidies | 8,687 | 16,486 | 7,799 | |
| Net operating deficit before subsidies and debt service | (12,869) | (11,416) | 1,453 | |
| Debt Service | (3,145) | (1,904) | 1,241 | |
| Loss on disposal of subway cars | - | (1) | (1) | |
| Conversion to Cash basis: Depreciation | 3,176 | - | (3,176) | |
| Conversion to Cash basis: OPEB Obligation | 1,405 | - | (1,405) | |
| Conversion to Cash basis: GASB 68 pension adjustment | (69) | - | 69 | |
| Conversion to Cash basis: Pollution & Remediation | 6 | - | (6) | |
| Total net operating surplus/(deficit) before appropriations, grants and other receipts restricted for capital projects | $ (2,809) | $ 3,165 | $ 5,974 | |

{1} The Financial Plan records on a cash basis while the Financial Statement records on an accrual basis.
{2} The Financial Plan records do not include other non-operating income or changes in market value.

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**SUPPLEMENTARY INFORMATION**
**SCHEDULE OF FINANCIAL PLAN TO FINANCIAL STATEMENTS RECONCILIATION**
**RECONCILING ITEMS**
**FOR THE YEAR ENDED DECEMBER 31, 2022**
**($ in millions)**

| | | | |
|---|---|---|---|
| **Financial Plan Actual Operating Loss at December 31, 2022** | | | **$ (12,869)** |
| **The Financial Plan Actual Includes:** | | | |
| **1** | Lower farebox and vehicle toll revenues | | 44 |
| **2** | Higher other operating revenue | | (30) |
| **3** | Higher labor expense primarily from higher pension expense projections | | 884 |
| **4** | Higher non-labor expense primarily from higher professional service contract expense | | 538 |
| **5** | Other expense adjustments | | 17 |
| **Total operating reconciling items** | | | **1,453** |
| **Financial Statements Operating Loss at December 31, 2022** | | | **(11,416)** |
| **Financial Plan Deficit after Subsidies and Debt Service** | | | **(2,809)** |
| **The Financial Plan Actual Includes:** | | | |
| **1** | Debt service bond principal payments | | 1,241 |
| **2** | Adjustments for non-cash liabilities: | | |
| | Depreciation | (3,176) | |
| | Unfunded OPEB expense | (1,405) | |
| | Unfunded GASB No. 68 pension adjustment | 69 | |
| | Other non-cash liability adjustment | (6) | (4,518) |
| **The Financial Statement includes:** | | | |
| **3** | Higher subsidies and other non-operating revenues and expenses | | 7,798 |
| **4** | Total operating reconciling items (from above) | | 1,453 |
| **Financial Statement Gain Before Capital Appropriations** | | | **$ 3,165** |


Zero Emission Electric Bus
(MTA Commitment to Reduce Carbon Emissions)

# New York City Transit Authority

(Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the
Years Ended December 31, 2022 and 2021,
Required Supplementary Information, and
Independent Auditor's Report

**NEW YORK CITY TRANSIT AUTHORITY**
**(Component Unit of the Metropolitan Transportation Authority)**

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# INDEPENDENT AUDITOR'S REPORT

To the Members of the Board of
Metropolitan Transportation Authority

## Opinions

We have audited the financial statements of the business-type activities and fiduciary activities of the New York City Transit Authority (the "Authority"), a public benefit corporation which is a component unit of the Metropolitan Transportation Authority ("MTA"), as of and for the years ended December 31, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and fiduciary activities of the Authority as of December 31, 2022 and 2021, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Basis for Opinions

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Authority and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

## Emphasis of Matters

As discussed in Note 1 to the financial statements, the Authority is a component unit of the MTA. The MTA is a component unit of the State of New York. The Authority requires significant subsidies from, and has material transactions with, the MTA, the City of New York and the State of New York. Our opinions are not modified with respect to this matter.

As discussed in Note 2 to the financial statements, the Authority adopted Governmental Accounting Standards Board ("GASB") Statement No. 87, *Leases*, as of January 1, 2021. The adoption of GASB Statement No. 87 resulted in the restatement of the 2021 financial statements. Our opinions are not modified with respect to this matter.

**Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

**Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we

- exercise professional judgment and maintain professional skepticism throughout the audit.

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, no such opinion is expressed.

- evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

- conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audits.

**Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in the Authority's Net Pension Liability and Related Ratios for the MABSTOA Pension Plan, Schedule of the Authority's Proportionate Share of the Net Pension Liability in the NYCERS Pension Plan, Schedule of the Authority's Contributions to all Pension Plans, Note to Schedule of the Authority's Contributions to All Pension Plans, Schedule of the Authority's Proportionate Share of the Net OPEB Liability in the MTA OPEB Plan, and Schedule of the Authority's Contributions to the OPEB Plan and Notes to the Schedule of the Authority's Contribution to the OPEB Plan be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Deloitte & Touche LLP

June 6, 2023

## FINANCIAL REPORTING ENTITY

The New York City Transit Authority (NYCTA) and its component unit, Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA) (collectively, the Authority) are public benefit corporations established pursuant to the New York State (the State) Public Authorities Law, to operate public subway, bus and paratransit services within The City of New York (The City). The Authority is a component unit of the Metropolitan Transportation Authority (MTA), which is a component unit of the State, and whose mission is to continue, develop and improve public transportation and to develop and implement a unified public transportation policy in the New York Metropolitan area.

The Reporting entity includes:

(1) NYCTA, a special purpose government, and its blended Component Unit MaBSTOA, together providing transportation services to New York City. The Authority engages in Business-Type Activities. The financial results of the Authority are reported as consolidated financial statements.

(2) a Fiduciary Fund comprised of the MaBSTOA Pension Plan.

## OVERVIEW OF THE CONSOLIDATED FINANCIAL STATEMENTS

***Introduction to the Annual Report:***

This annual report consists of five parts: Management's Discussion and Analysis, Consolidated Financial Statements, Fiduciary Fund Financial Statements, Notes to the Consolidated Financial Statements, and Required Supplementary Information.

***Management's Discussion and Analysis:***

The following is a narrative overview and analysis of the financial activities of the Authority as of and for the years ended December 31, 2022 and 2021. This management discussion and analysis (MD&A) is intended to serve as an introduction to the Authority's consolidated financial statements. It provides an assessment of how the Authority's position has improved or deteriorated and identifies the factors that, in management's view, significantly affected the Authority's overall financial position. It may contain opinions, assumptions or conclusions by the Authority's management that should not be considered a replacement for, and must be read in conjunction with, the consolidated financial statements described below.

***The Consolidated Financial Statements:***

The Consolidated Statements of Net Position provide information about the nature and amounts of resources, with present service capacity, that the Authority presently controls (assets), consumption of net assets by the Authority that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Authority has little or no discretion to avoid (liabilities), and acquisition of net assets by the Authority that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflows of resources and liabilities/deferred inflows of resources being reported as net position.

The Consolidated Statements of Revenues, Expenses and Changes in Net Position show how the Authority's net position changed during each year. They account for all of the current year's revenues and expenses, measures the financial results of the Authority's operations over the past year and can be used to determine how the Authority has funded its costs.

The Consolidated Statements of Cash Flows provide information about the Authority's cash receipts, cash payments and net changes in cash resulting from operations, non-capital financing, capital and related financing and investing activities.

***The Fiduciary Fund Financial Statements:***

The Fiduciary fund is used to account for resources held in a trustee capacity for the benefit of parties outside of a government entity. The Fiduciary fund is not reported in the Authority's consolidated financial statements because the resources of that fund are not available to support Authority's own programs. The fiduciary fund is reported as a Pension Fund.

The Statements of Fiduciary Net Position present financial information about the assets, liabilities, and the fiduciary net position held in trust of the fiduciary fund of the Authority.

The Statements of Changes in Fiduciary Net Position present fiduciary activities of the fiduciary fund as additions and deductions to the fiduciary net position.

***The Notes to the Consolidated Financial Statements:***

The notes provide information that is essential to understanding the consolidated financial statements, such as the Authority's accounting methods and policies, details of cash and investments, capital assets, employee benefits, lease transactions, and future commitments and contingencies of the Authority, and information about other events or developing situations that could materially affect the Authority's financial position.

***Required Supplementation Information:***

The Required Supplementary Information provides information concerning the Authority's net pension liability and net other postemployment benefits (OPEB) liability, employer contributions for the pension plans and OPEB, related ratios and actuarial assumptions used to calculate the net pension liability and net OPEB liability.

## CONDENSED FINANCIAL INFORMATION

*All amounts are in millions, except as noted.*

The following sections will discuss the significant changes in the Authority's financial position for the years ended December 31, 2022 and 2021. Additionally, an examination of major economic factors and industry trends that have contributed to these changes is provided. It should be noted that for purposes of the MD&A, summaries of the consolidated financial statements and the various exhibits presented conform to the Authority's consolidated financial statements, which are presented in accordance with generally accepted accounting principles in the United States of America.

***Total Assets and Deferred Outflows of Resources, Distinguishing Between Capital Assets, Other Assets and Deferred Outflows of Resources***

Capital assets include but are not limited to: construction of buildings and the acquisition of subway cars, buses, track and structures, depots and yards, equipment. Right-of-use assets for leases on land, buildings, office spaces, storage spaces, equipment and vehicles have been included as a result of the implementation of GASB Statement No. 87, *Leases* with retroactive effect of this adoption as of January 1, 2021. Refer to footnote 2 for additional information.

Other assets include, but are not limited to: cash, investments, State and Local mass transit tax and operating subsidies receivables. These also include the receivable from leases of the Authority's land, buildings, station spaces, and right-of-way to third parties as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Deferred outflows of resources reflect: actuarial measurements related to pension and OPEB and employer contributions subsequent to the measurement date.

***Total assets, distinguishing between capital and other assets, and deferred outflows of resources:***

| (In millions) | 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022-2021 | Increase/(Decrease) 2021-2020 (Restated)* |
|---|---|---|---|---|---|
| Capital assets | $ 78,836 | $ 75,527 | $ 72,830 | 3,309 | $ 2,697 |
| Accumulated depreciation and amortization | (30,610) | (28,658) | (26,696) | (1,952) | (1,962) |
| Capital assets, net of accumulated depreciation and amortization | 48,226 | 46,869 | 46,134 | 1,357 | 735 |
| Other assets | 6,335 | 2,517 | 1,164 | 3,818 | 1,353 |
| Total assets | 54,561 | 49,386 | 47,298 | 5,175 | 2,088 |
| Deferred outflows of resources | 4,840 | 3,646 | 2,691 | 1,194 | 955 |
| Total assets and deferred outflows of resources | $ 59,401 | $ 53,032 | $ 49,989 | $ 6,369 | $ 3,043 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

The Authority's capital assets totaled $78,836 at December 31, 2022. Of the total, depots, yards, signals, and stations were 49.9%, subway cars and buses accounted for 16.3% and track and structures were 20.2%. These gross capital assets exclude significant infrastructure assets such as tunnels and elevated structures, which are assets owned by the City. More detailed information about the Authority's capital assets is presented in Note 5 to the consolidated financial statements.

***Significant changes in assets and deferred outflows of resources include:***

<u>December 31, 2022 versus 2021</u>

Capital assets increased from December 31, 2021 to December 31, 2022 by $3,309 or 4.4%. This increase was primarily due to station rehabilitation work of $879, signals work of $701, depots and yards of $156, track and structures of $395, acquisition of new buses of $376, and under construction work of $765 related to various projects not yet completed. Accumulated depreciation and amortization increased by $1,952, or 6.8%, due to depreciation expense of $2,156 and amortization expense of $24, partly offset by normal retirements of $228.

Other assets increased by $3,818 or 151.7% compared with the prior year. This increase was mostly due to an increase in due from MTA and constituent authorities by $3,812 primarily related to the American Rescue Plan Act of 2021 ("ARPA") accruals of $4,850 offset by receipt of Coronavirus Response and Relief Supplemental Appropriations Act funds ("CRRSAA") of $464; a decrease in MTA investment pool of $390, NYS Mortgage recording taxes receivable of $133 and a decrease in accrued subsidies of $74.

Deferred outflows of resources increased by $1,194 or 32.7% compared with the prior year. This was due to an increase of $589 related to OPEB, primarily due to changes in contributions and proportionate share of contributions based upon the most recent actuarial valuation report in accordance with GASB No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* In addition, there was an increase of $606 related to pensions, primarily due to changes in difference between projected versus actual plan investment earnings, based upon the most recent actuarial valuation report in accordance with GASB Statements No. 68, *Accounting and Financial Reporting for Pensions,* and GASB No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date.* Refer to Note 8 and 7 to the consolidated financial statements for more information regarding the Authority's postemployment benefits other than pension and pensions, respectively.

December 31, 2021 versus 2020

Capital assets increased from December 31, 2020 to December 31, 2021 by $2,697 or 3.7%. This increase was primarily due to station rehabilitation work of $741, signals work of $312, depots and yards of $205, track and structure of $315, digital screens of $86, wireless communication access system of $73, security program of $54 and under construction work of $557 related to various projects not yet completed. This also included a recognition of right-of-use assets of $299 of which $3 were new additions during 2021 as a result of the implementation of GASB Statement No. 87 *Leases*. Refer to footnote 2 for additional information. Accumulated depreciation and amortization increased by $1,962, or 7.3%, due to depreciation expense of $2,095 and amortization expense of $23, partly offset by normal retirements of $156.

Other assets increased by $1,353 or 116.2% compared with the prior year. This increase was mostly due to an increase in receivables from the MTA for the purchase of capital assets of $975; and an increase in billed and unbilled charges due from New York City and accrued subsidies of $81 due to an overall increase in 2021 subsidies and timing on receipts of billed revenues; and increase in due from MTA and constituent authorities by $405 primarily related to CRRSAA receivable offset by a decrease in MTA investment pool of $208. In addition, this included lease receivables of $63 as a result of the implementation of GASB Statement No. 87 *Leases*. Refer to footnote 2 for additional information.

Deferred outflows of resources increased $955 or 35.5% compared with the prior year. This was due to an increase of $1,363 related to OPEB, primarily due to changes in assumptions based upon the most recent actuarial valuation report in accordance with GASB No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* This was offset by a decrease of $408 related to pensions, primarily due to changes in difference between expected and actual experience and difference between projected versus actual plan investment earnings, based upon the most recent actuarial valuation report in accordance with GASB Statements No. 68, *Accounting and Financial Reporting for Pensions,* and GASB No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date.* Refer to Note 8 and 7 to the consolidated financial statements for more information regarding the Authority's postemployment benefits other than pension and pensions, respectively.

***Total Liabilities and Deferred Inflows of Resources, Distinguishing Between Current Liabilities, Non-Current Liabilities and Deferred Inflows of Resources***

Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, pollution remediation liabilities, unredeemed fares, and other current liabilities. These also include the current portion of lease liability as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Non-current liabilities include: long-term debt, claims for injuries to persons, post-employment benefits and other non-current liabilities. These also include long-term lease liabilities as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Deferred inflows of resources reflect actuarial measurements related to pension and OPEB. Additionally, as a result of the implementation of GASB Statement No. 87, *Leases*, a deferred inflow of resources from leases at the amount of the lease receivable has been recorded. Refer to footnote 2 for additional information.

| (In millions) | 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022-2021 | Increase/(Decrease) 2021-2020 (Restated)* |
|---|---|---|---|---|---|
| Current liabilities | $ 2,084 | $ 2,154 | $ 2,813 | $ (70) | $ (659) |
| Long-term liabilities | 26,263 | 22,565 | 23,939 | 3,698 | (1,374) |
| Total liabilities | 28,347 | 24,719 | 26,752 | 3,628 | (2,033) |
| Deferred inflows of resources | 1,939 | 3,664 | 1,413 | (1,725) | 2,251 |
| Total liabilities and deferred inflows of resources | $ 30,286 | $ 28,383 | $ 28,165 | $ 1,903 | $ 218 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

At the end of 2022, the Authority's liabilities consisted primarily of employee fringe benefit-related liabilities (for retirement, health and other benefits) of 65.3%, net pension liability of 16.1%, and injuries to persons (public liability and workers' compensation) of 13.8%. Included in the employee fringe benefit-related liabilities was $17,675 of post-employment benefits other than pensions.

***Significant changes in liabilities and deferred inflows of resources include:***

December 31, 2022 versus 2021

Liabilities increased from December 31, 2021 to December 31, 2022 by $3,628 or 14.7%. Current liabilities decreased by $70, or 3.25%, and long-term liabilities increased by $3,698 or 16.4%.

The net decrease in current liabilities was mainly due to decrease in salaries, wages and payroll taxes of $81 partly due to payment of 2020 employer social security taxes for the 2020 payroll tax deferral relief offered by the Coronavirus Aid, Relief, and Economic Security (CARES) Act; decrease in vacation, sick and other benefits by $15 primarily due to a $13 decrease in the reserves for claims incurred but not paid ("IBNR") for the self-insured benefits of the Authority; offset by an increase in estimated liability arising from injuries to persons by $22 due to increase in the number and amount of claims.

The net increase in long-term liabilities was primarily due to an increase of $2,256 in net pension liability primarily attributable to an increase in deferred outflow of net difference between projected and actual investment earnings on pension plan investments; increase of $1,186 in net OPEB liability primarily due to increase in deferred outflow of net difference between projected and actual investment earnings on OPEB plan investments; and an increase in the estimated liability arising from injuries to persons of $273, based on the current actuarial valuation. This was offset by a decrease in lease payable of $11 and a decrease of loans payable of $6.

Deferred inflows of resources decreased by $1,725 or 47.1% compared with prior year. This was due to a decrease of $1,999 related to pensions primarily on changes in the projected versus actual plan investment earnings based upon the most current actuarial valuation report in accordance with GASB Statements No. 68 and GASB No. 71, and a decrease of $8 related to leases. This was offset by an increase of $283 related to OPEB primarily due to changes in proportion and differences between employer contributions and proportionate share of contributions based upon the most current actuarial valuation report in accordance with GASB Statement No. 75. Refer to Notes 7 and 8 to the consolidated financial statements for more information regarding the Authority's pensions and postemployment benefits other than pension, respectively.

December 31, 2021 versus 2020

Liabilities decreased from December 31, 2020 to December 31, 2021 by $2,033 or 7.6%. Current liabilities decreased by $659, or 23.4%, and long-term liabilities decreased by $1,374 or 5.7%.

The net decrease in current liabilities was mainly due to the payment of 2020 MTA loan of $800, offset by increase in salaries, wages and payroll taxes of $44 due to higher employer social security taxes accrual for the reclassification of the 2020 payroll tax deferral relief offered by the Coronavirus Aid, Relief, and Economic Security (CARES) Act from long-term to short-term liability; an increase in vacation, sick and other benefits by $47 due to gross wage increases in 2021; and Estimated liability arising from injuries to persons by $46 due to increase in the number and amount of claims. This also includes the current lease payable of $14 as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

The net decrease in long-term liabilities was primarily due to a decrease of $3,410 in net pension liability attributable to an increase in net difference between projected and actual investment earnings on pension plan investments offset by an increase of $1,983 in net OPEB liability primarily due to change in assumptions, and an increase in the estimated liability arising from injuries to persons of $176, based upon the most current actuarial valuations. In addition, there was a decrease of $227 due to the MTA for the purchase of capital assets and a decrease of $96 for the payment of 2021 deferred payroll taxes. This also includes the long-term lease payable of $389 offset by the reversal of the obligation under capital lease of $185 as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

Deferred inflows of resources increased by $2,251 or 159.3% compared with prior year. This was due to an increase of $2,141 related to pensions primarily on changes in the projected versus actual plan investment earnings based upon the most current actuarial valuation report in accordance with GASB Statements No. 68 and GASB No. 71, and an increase of $48 related to OPEB primarily due to changes in proportion and differences between employer contributions and proportionate share of contributions based upon the most current actuarial valuation report in accordance with GASB Statement No. 75. Refer to Notes 7 and 8 to the consolidated financial statements for more information regarding the Authority's pensions and postemployment benefits other than pension, respectively. This also includes the lease deferral of $62 as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

***Total Net Position, Distinguishing Among Net Investment in Capital Assets, Restricted and Unrestricted Amounts***

| (In millions) | 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022-2021 | Increase/(Decrease) 2021-2020 (Restated)* |
|---|---|---|---|---|---|
| Net investment in capital assets | $ 47,784 | $ 46,405 | $ 45,884 | $ 1,379 | $ 521 |
| Unrestricted | (18,669) | (21,756) | (24,060) | 3,087 | 2,304 |
| Total net position | $ 29,115 | $ 24,649 | $ 21,824 | $ 4,466 | $ 2,825 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

Net position represents the residual interest in the Authority's assets and deferred outflows of resources after liabilities and deferred inflows of resources are deducted and consist of three components: net investment in capital assets, restricted and unrestricted. Net investment in capital assets includes capital assets and right-of-use lease assets, net of accumulated depreciation and amortization, lease liabilities, and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets. Net position is reported as restricted when constraints are imposed by third parties or enabling legislation, otherwise it is reported as unrestricted.

December 31, 2022 versus 2021

Total net position was $29,115 at the end of 2022, a net increase of $4,466, or 18.1% from the end of 2021. The net increase was primarily due to an operating loss of $8,323 offset by net nonoperating income of $10,400 and capital contributions from the MTA of $2,389.

December 31, 2021 versus 2020

Total net position was $24,649 at the end of 2021, a net increase of $2,825, or 12.9% from the end of 2020. The net increase was primarily due to an operating loss of $7,682 offset by net nonoperating income of $8,015 and capital contributions from the MTA of $2,492. In addition, this includes a restatement of $1 as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

### *Condensed Statements of Revenues, Expenses, and Changes in Net Position*

| (In millions) | Year Ended December 31, 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022-2021 | 2021-2020 (Restated)* |
|---|---|---|---|---|---|
| Operating revenues | $ 3,469 | $ 2,815 | $ 2,377 | $ 654 | $ 438 |
| Operating expenses | (11,792) | (10,497) | (11,086) | (1,295) | 589 |
| Operating loss | (8,323) | (7,682) | (8,709) | (641) | 1,027 |
| Nonoperating revenues (expenses): | | | | | |
| Subsidies: New York State and The City of New York | 5,035 | 4,373 | 2,558 | 662 | 1,815 |
| Triborough Bridge and Tunnel Authority | 547 | 464 | 181 | 83 | 283 |
| Internet and Mansion tax | - | 400 | - | (400) | 400 |
| Federal Transit Administration CARES Act reimbursement | - | - | 2,831 | - | (2,831) |
| Federal Transit Administration CRRSAA | - | 2,795 | - | (2,795) | 2,795 |
| Federal Transit Administration ARPA | 4,850 | - | - | 4,850 | - |
| Other nonoperating revenues ** | 17 | 11 | 9 | 6 | 2 |
| Other nonoperating expenses ** | (48) | (27) | (18) | (21) | (9) |
| Loss on disposal - subway cars / buses | (1) | (1) | - | - | (1) |
| Total nonoperating revenues (expenses) | 10,400 | 8,015 | 5,561 | 2,385 | 2,454 |
| Income (loss) before capital contributions | 2,077 | 333 | (3,148) | 1,744 | 3,481 |
| Capital contributions | 2,389 | 2,492 | 998 | (103) | 1,494 |
| Change in net position | 4,466 | 2,825 | (2,150) | 1,641 | 4,975 |
| Net position — beginning of year | 24,649 | 21,824 | 23,974 | 2,825 | (2,150) |
| Net position — end of year | $ 29,115 | $ 24,649 | $ 21,824 | $ 4,466 | $ 2,825 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020

** Previously reported interest expense separately from net other nonoperating revenue/(expense).

### *Revenue from Fares/Ridership*

| (In millions) | 2022 | 2021 | 2020 | Increase/(Decrease) 2022-2021 | 2021-2020 |
|---|---|---|---|---|---|
| Subway revenue | $ 2,280 | $ 1,717 | $ 1,530 | $ 563 | $ 187 |
| Bus revenue | 609 | 554 | 386 | 55 | 168 |
| Expired fare media revenue | 44 | 61 | 90 | (17) | (29) |
| Paratransit revenue | 18 | 15 | 5 | 3 | 10 |
| Total revenue from fares | $ 2,951 | $ 2,347 | $ 2,011 | $ 604 | $ 336 |
| Total ridership (millions) | 1,334 | 1,080 | 856 | 254 | 224 |
| Non-student average fare | $ 2.24 | $ 2.19 | $ 2.34 | $ 0.05 | $ (0.15) |

2022 versus 2021

Total revenue from fares was $2,951 in 2022, an increase of $604, or 25.7%, mainly due to increased ridership as people are returning to work, travel and leisure activities as most pandemic-time restrictions and mandates were lifted. Total ridership was 1,334, an increase of 254, or 23.5% from 2021.

2021 versus 2020

Total revenue from fares was $2,347 in 2021, an increase of $336, or 16.7%, mainly due to increased ridership as major travel restrictions were lifted and the subways resumed 24 hour a day service in May. Total ridership was 1,080, an increase of 224, or 26.2% from 2020.

***Operating Expenses, by Major Function***

| (In millions) | 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022-2021 | Increase/(Decrease) 2021-2020 (Restated)* |
|---|---|---|---|---|---|
| Salaries and wages | $ 4,227 | $ 4,042 | $ 4,059 | $ 185 | $ (17) |
| Health and welfare | 978 | 968 | 901 | 10 | 67 |
| Pensions | 538 | 72 | 929 | 466 | (857) |
| Other fringe benefits | 581 | 436 | 416 | 145 | 20 |
| Reimbursed overhead expenses | (220) | (218) | (211) | (2) | (7) |
| Postemployment benefits other than pensions | 1,426 | 1,245 | 1,171 | 181 | 74 |
| Electric Power | 343 | 275 | 240 | 68 | 35 |
| Fuel | 167 | 98 | 59 | 69 | 39 |
| Insurance | 73 | 72 | 76 | 1 | (4) |
| Public liability claims | 238 | 230 | 112 | 8 | 118 |
| Paratransit service contracts | 412 | 346 | 326 | 66 | 20 |
| Maintenance and other operating contracts | 306 | 294 | 334 | 12 | (40) |
| Professional service contracts | 139 | 149 | 146 | (10) | 3 |
| Pollution remediation projects | 1 | 35 | 116 | (34) | (81) |
| Materials and supplies | 290 | 247 | 292 | 43 | (45) |
| Depreciation and amortization | 2,179 | 2,119 | 2,070 | 60 | 49 |
| Other expenses | 114 | 87 | 50 | 27 | 37 |
| Total operating expenses | $ 11,792 | $ 10,497 | $ 11,086 | $ 1,295 | $ (589) |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

2022 versus 2021

Total operating expenses increased by $1,295 or 12.3% compared to 2021 as follows:

- Salaries and wages were higher than 2021 by $185 or 4.6%. Payroll increased by $89, or 2.6%, mainly due to gross wages increase, higher vacancies and employee unavailability tour backfill on overtime in addition to increased number of weather-related events in 2022 causing higher overtimes.

- Health and welfare expenses increased by $10, or 1.0%, primarily due to an increase in per capita claims activity.

- Pension expenses increased by $466, or 647%, primarily due to losses incurred in pension net investments.

- Other fringe benefit expenses increased by $145, or 33.3%, primarily due to higher workers compensation claims frequency and average claim cost.

- Post-employment benefits other than pensions increased by $181, or 14.5%, due to increases in per capita claims activity as well as increased retiree and dependent populations.
- Electric power expenses increased by $68, or 24.7%, mainly due to higher rates.
- Fuel expenses increased by $69, or 70.4%, mainly due to higher fuel prices.
- Public liability claims expenses increased by $8, or 3.5%, based on the most current actuarial valuation update, which reflected the increase in the number of major claims and the cost of claims.
- Paratransit service contract expenses increased by $66 or 19.1%, due to increased ridership and higher support cost.
- Maintenance and other operating contracts increased by $12, or 4.1%, mainly due to increased facility maintenance, security services and timing of real estate rental.
- Professional service contracts decreased by $10, or 6.7%, mainly due to timing of professional contract payments and bond services charges.
- Pollution remediation project expenses decreased to $1 versus $35 in 2021, due to accrual adjustments.
- Materials and supplies increased by $43 or 17.4%, primarily due to reduced maintenance activity and lower equipment purchases versus 2021.
- Depreciation and amortization expenses increased by $60, or 2.8%, due to additional capital projects reaching substantial completion and depreciation and amortization including right-of-way equipment, communication-based train control, station accessibility (ADA) improvement assets, mainline track rehabilitation and elevator replacement.

2021 versus 2020

Total operating expenses decreased by $589 or 5.3% compared to 2020 as follows:

- Salaries and wages were lower than 2020 by $17 or 0.4%. Payroll decreased by $61, or 1.8%, mainly due to a decrease in headcount as a result of retirements and the sustained agency hiring freeze followed by constrained new employee onboarding operations. Overtime expenses increased by $44 million, or 7.6%, due to higher vacancies and employee unavailability tour backfill on overtime in addition to increased number of weather-related events in 2021 causing higher overtime.
- Health and welfare expenses increased by $67, or 7.4%, primarily due to an increase in per capita claims activity that more than offset lower active headcount.
- Pension expenses decreased by $857, or 92.2%, primarily due to the significant increase in pension net investments.
- Other fringe benefit expenses increased by $20, or 4.8%, due primarily to higher workers compensation claims frequency and average claim cost.
- Post-employment benefits other than pensions increased by $74, or 6.3%, due to increases in per capita claims activity as well as increased retiree and dependent populations.

- Electric power expenses increased by $35, or 14.6%, mainly due to increased consumption and higher rates.

- Fuel expenses increased by $39, 66.1%, mainly due to higher fuel prices.

- Public liability claims expenses increased by $118, or 105.4%, based on the most current actuarial valuation update, which reflected the increase in the number of major claims and the cost of claims.

- Paratransit service contract expenses increased by $20 or 6.1%, due to increased ridership.

- Maintenance and other operating contracts decreased by $40, or 12.0%, mainly due to restrictions on automobile purchases and a decrease in safety equipment purchases. In addition, this includes a restatement of $28 as a result of implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

- Professional service contracts increased by $3, or 2.1%, mainly due to higher MTA Real Estate charges.

- Pollution remediation project expenses decreased to $35 versus $116 in 2020, due to the identification of additional areas of exposure requiring environmental remediation in 2020.

- Materials and supplies decreased by $45 or 15.4%, primarily due to reduced maintenance activity and lower equipment purchases versus 2020.

- Depreciation and amortization expenses increased by $49, or 2.4%, due to additional capital projects reaching substantial completion and starting depreciation and amortization including right-of-way equipment, and station accessibility (ADA) improvement assets. In addition, this includes a restatement of $21 as a result of implementation of GASB Statement No. 87, *Leases*. Refer to footnote 2 for additional information.

***Nonoperating Revenues and Expenses***

The Authority receives a variety of tax-supported and operating assistance subsidies from New York State and The City of New York. These subsidies represent a state mobility tax and corporate franchise, sales, energy, mortgage recording and real estate taxes and are impacted by the strength of the State and City economies and prevailing interest rates.

Tax supported and operating assistance subsidies from New York State and The City have increased $662, or 15.1% in 2022 and $1,815, or 71.0% in 2021, primarily due to the lower levels of tax supported subsidies in 2020 as a result of the COVID-19 pandemic.

The Triborough Bridge & Tunnel Authority (TBTA), another affiliate of the MTA, distributes to the Authority each year, funds that vary based upon its operating surplus. The surplus distributed increased by $83 or 17.9% in 2022 over 2021, and increased by $283 or 156.4%, in 2021 over 2020, from TBTA's toll revenue as a result of the increase in toll rates and toll crossings. Pursuant to Public Authorities Law §553-j, created by the MTA Reform and Traffic Mobility Act enacted as part of the New York State budget for Fiscal Year 2019-2020, TBTA is required to establish the Central Business District Tolling (CBDT) capital lockbox fund consisting of all monies received by TBTA under the Central Business District Tolling Program (CBDTP), as well as real estate transfer tax ("Mansion Tax") and portions of New York City and State sales tax revenue ("Internet Tax"). Monies in the fund are to be applied, subject to agreements with bondholders and applicable federal law, to the payment of operating, administration, and other necessary expenses of TBTA, or to New York City subject to the memorandum of understanding between the City and MTA Bridges and Tunnels properly allocable to the CBDTP, including the planning, designing, constructing, installing or maintaining of the CBDTP, including, without limitation, the CBDT collection system and the CBDT tolling infrastructure, the CBDT customer service center, and the costs of any MTA's capital projects included within the 2020-2024 MTA capital program or any successor programs. In April 2020, the New York State Legislature passed legislation that was signed by the Governor permitting MTA to use the funds in the CBDTP Capital Lockbox in all or any of the fiscal years of the authority beginning in 2020 through 2021 to offset decreases in revenue, including but not limited to, lost taxes, fees, charges, fares and tolls, due in whole or in part, or increases in operating costs due in whole to the state disaster emergency caused by the novel coronavirus, COVID-19. During 2021, the Authority received an allocation from the MTA of TBTA's internet and mansion tax from the CBDTP Capital Lockbox of $400.

Capital contributions from the MTA of $2,389 in 2022 and $2,492 million in 2021, represent capital program funding from several sources including bonds, Federal, State and City funding. Capital contributions decreased by $103, or 4.1%, compared to 2021 due to a timing of capital funding for various capital projects. More detailed information about the Authority's contributed capital is presented in Note 2.

In 2022, nonoperating revenues included the MTA operating assistance allocation of $4,850 from the Federal government under the COVID-19 economic relief program known as the American Rescue Plan Act of 2021 ("ARPA").

In 2021, nonoperating revenues included the MTA operating assistance allocation of $2,795 million from the Federal government under the COVID-19 economic relief program known as CRRSAA.

Detailed information about ARPA, CRRSAA and the CARES Act is presented in Note 15 to the consolidated financial statements.

***Changes in Net Position***

The change in net position represents the net total of capital contributions, operating losses and nonoperating income. The net position increased by $4,466 in 2022. The 2021 net position increased by $2,825 net of $1 offset as a result of restatement due to the adoption of GASB Statement No. 87 *Leases.*

***Budget Highlights***

Total non-reimbursable operating revenues in 2022 of $3,469 (excluding ARPA Federal Aid of $4,850), were lower than budget by $652, or 16%, primarily due to underruns in Farebox Revenue. Farebox revenue were lower than budget by $651, or 18% mainly due to lower than projected ridership. Subway revenue was lower by $510, or 18%. Similarly, bus revenue was also lower by $131, or 18%. In addition, fare media liability revenue reflecting the residual values of expired MetroCards, of $44 underran the budget by $9, or 17%. Similarly, paratransit revenues were also below the budget by $2, or 11%. Other operating revenues (excluding ARPA Recovery receipts of $4,850) of $183, were lower than budget by $5, or 3%, mainly due to higher paratransit reimbursements.

Total non-reimbursable operating expenses in 2022 of $11,792 were lower than budget by $774, or 6%. Labor-related expenses of $7,530 underran the budget (including favorable GASB 68 & GASB 75 adjustments to pensions and OPEB, respectively) by $775, or 9%. This result was due primarily to health & welfare and OPEB expenses lower than budget by $175, or 10%. Favorable actuarial valuations of GASB 75 in addition to favorable rates, higher prescription drug contract rebates, and vacancy savings resulted in significant underruns. Pension expenses were also favorable to budget by $41, or 4% due to significant increase in net investment returns per the latest GASB 68 actuarial valuation.

Vacancies also caused payroll underruns of $167, or 5%, and unfavorable Worker's Compensation reserve adjustments caused overruns in other fringe benefits of $16, or 3%. Partial offset occurred as overtime expenses were higher than budget by $231, or 47%, due to higher vacancies and employee unavailability tour backfill on overtime along with greater adverse weather response. Reimbursable overhead also overran the budget by $40, or 15.3% reflecting lower (unfavorable) reimbursable project requirements.

Non-labor expenses overran the budget by $8, or 0.4%. Paratransit service contracts were lower by $12, or 3%, principally due to fewer trips and lower support costs. Materials and supplies were under by $44, or 13%, primarily reflecting reduced maintenance activity and timing of vehicle materials expense. Electric power overran budget by $27, or 9%, due to higher consumption and rates, and insurance was down $11, or 13%, due to less than projected vehicle and liability premium. Maintenance and other operating contract expenses underran the budget by $18 or 5%, due to underruns in non-vehicle maintenance repairs, and professional service contract expenses were favorable by $18, or 12% primarily due to timing of professional contract payments and bond service charges. Providing partial offset to general non-labor expense favorability, other business expenses were higher than budget by $18, or 19% resulting from higher card processing transaction fees. Claims expense for public liability overran the budget by $24, or 12%, reflecting higher reserve requirements based on increased claims activity, and fuel was $41 higher, or 33%, due to higher prices and consumption.

## OVERALL FINANCIAL POSITION, RESULTS OF OPERATIONS AND IMPORTANT ECONOMIC CONDITIONS

### *Results of Operations and Overall Financial Position*

Total revenue from fares was $2,951 in 2022, an increase of $604 or 25.7% from 2021. Total ridership was 1,334 million, an increase of 254 or 23.5% from 2021. Total operating expenses, including depreciation and amortization, other post-employment benefits and environmental remediation expenses, were $11,792 in 2022, an increase of $1,295 or 12.3%.

Going forward, the stability of the Authority's financial position is subject to certain risks, requiring the efficient management of costs, including the establishment of new cost reduction programs, in order to counteract any adverse impacts to revenue streams or cost increases.

### *Economic Conditions*

Metropolitan New York is the most transit-intensive region in the United States, and a financially sound and reliable transportation system is critical to the region's economic well-being. New York City Transit (NYCT) consists of urban subway and bus systems, including paratransit services.

MTA system-wide utilization for 2022 exceeded the depths experienced in 2020, with ridership up by 589.3 million trips (61.8%) over the 2020 ridership level. Year-over-year improvements continued, with 2022 exceeding 2021 ridership levels by 332.0 million trips (27.4%), with ridership during the fourth quarter of 2022, up 40.9 million trips (10.9%) compared with the fourth quarter of 2021. For the fourth quarter 2022 compared with the fourth quarter of 2021, MTA New York City Transit subway ridership increased by 33.9 million trips (13.9%), and MTA New York City Transit bus decreased by 72 thousand trips (-0.1%).

Seasonally adjusted non-agricultural employment in New York City for the fourth quarter was higher in 2022 than in 2021 by 215.4 thousand jobs (4.9%). On a quarter-to-quarter basis, New York City employment gained 27.5 thousand jobs (0.6%), the tenth consecutive quarterly increase. These increases were preceded by the steep decline of 891.4 thousand jobs (19.0%) during the second quarter of 2020.

National economic growth, as measured by Real Gross Domestic Product ("RGDP"), increased at an annualized rate of 2.7% in the fourth quarter of 2022, according to the most recent advance estimate released by the Bureau of Economic Analysis; in the third quarter of 2022, the revised RGDP increased 3.2%. The increase in fourth quarter real GDP reflected increases in private inventory investment, consumer spending, nonresidential fixed investment, federal government spending, and state and local government spending. These were partially offset by decreases residential fixed investment and exports. Imports, which are a subtraction in the calculation of GDP, decreased. The increase in private inventory investment was led by manufacturing, mainly petroleum and coal products, as well as mining, utilities, and construction industries. The increase in consumer spending reflected an increase in services that was partly offset by a decrease in goods. Within services, the increase was led by health care as well as housing and utilities. Within goods, the leading contributor to the decrease was "other" durable goods. Within nonresidential fixed investment, increases in intellectual property products and structures were partly offset by a decrease in equipment. Within federal government spending, the increase was led by nondefense spending. The increase in state and local government spending primarily reflected an increase in compensation of state and local government employees. Within residential fixed investment, the leading contributors to the decrease were new single-family construction and brokers' commissions. Within exports, a decrease in goods was partly offset by an increase in services (led by travel as well as transport). Within imports, a decrease in goods, led by durable consumer goods, was partly offset by an increase in services, led by travel.

The New York City metropolitan area's price inflation rate, as measured by the Consumer Price Index for All Urban Consumers ("CPI-U"), was lower than the national average in the fourth quarter of 2022, with the metropolitan area index increasing 6.1% while the national index increased 7.1% when compared with the fourth quarter of 2021. Regional prices for energy products increased 15.3%, and national prices of energy products rose 12.7%. In the metropolitan area, the CPI-U exclusive of energy products increased by 5.5%, while nationally, inflation exclusive of energy products increased 6.7%. The New York Harbor spot price for conventional gasoline increased more steeply, by 16.0%, from an average price of $2.36 per gallon to an average price of $2.74 per gallon between the fourth quarters of 2021 and 2022.

In its announcement on February 1, 2023, the Federal Open Market Committee ("FOMC") raised its target for the Federal Funds rate to the 4.50% to 4.75% range, the seventh increase since March 2022. The Federal Funds rate target had been in the 0.00% to 0.25% range from March 15, 2020 through March 16, 2022, when the FOMC increased the target to the 0.25% to 0.50% range. The target was further increased to the 0.75% to 1.00% range on May 4, 2022, to the 1.50% to 1.75% range on June 15, 2022, to the 2.25% to 2.50% range on July 27, 2022, to the 3.00% to 3.25% range on September 21, 2022, to the 3.75% to 4.00% range on November 2,2022, to the 4.25% to 4.50% range on December 14, 2022, and most recently to the 4.5% to 4.75% range on February 1, 2023. In support of its actions, FOMC noted that job gains have remained robust, the unemployment rate has remained low, and inflation remains elevated and reflects supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures. Russia's war in Ukraine, in addition to the tremendous human and economic hardship it is causing, has created additional upward pressure on inflation and is weighing on global economic activity. In addition to increases in the Federal Funds rate target, the FOMC since May has been reducing its holdings of Treasury securities and agency mortgage-backed securities. The FOMC seeks to achieve maximum employment, with achieving a two percent inflation rate over the longer term and is prepared to adjust the stance of its monetary policy as appropriate if risks emerge that could impede its employment and inflation goals based on assessments of the economic outlook, considering information on public health, labor market conditions, inflation pressures and expectations, and financial and international developments.

Banking conditions are currently under higher stress as Silicon Valley Bank and Signature Bank have entered receivership and the Federal Reserve has proactively moved to protect the health of the overall system from a contagion event. This situation is being monitored.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was signed into law and provided $4.0 billion in funding to the MTA. The Coronavirus Response and Relief Supplemental

Appropriations Act of 2021 (“CRRSAA”) became law on December 27, 2020, and provided the MTA with $4.1 billion in aid. On March 11, 2021, the American Rescue Plan Act of 2021 (“ARPA”) was signed in law, with MTA receiving $6.9 billion in aid and $4.85 billion allocated to NYCTA.

The influence of the Federal Reserve’s monetary policy on the mortgage market is a matter of interest to the MTA, since variability of mortgage rates can affect real estate transactions and thereby impact receipts from the Mortgage Recording Taxes (“MRT”) and the Urban Taxes, two important sources of MTA revenue. While real estate transaction activity initially was severely impacted by social distancing and the economic disruption caused by the COVID-19 pandemic, demand for suburban residential real estate, along with mortgage rates that were historically low until recently, significantly strengthened mortgage activity and refinancing of existing mortgages. Mortgage Recording Tax collections in the fourth quarter of 2022 were lower than the fourth quarter of 2021 by $52.0 million (32.0%). Average monthly receipts in the fourth quarter of 2022 were $9.6 million (15.1%) lower than the monthly average for 2006, just prior to the steep decline in Mortgage Recording Tax revenues during the Great Recession. MTA’s Urban Tax receipts during the fourth quarter of 2022—which are derived from commercial real estate transactions and mortgage recording activity within New York City and can vary significantly from quarter to quarter based on the timing of exceptionally high-priced transactions—were $9.8 million (7.8%) lower than receipts during the fourth quarter of 2021. Average monthly receipts in the fourth quarter of 2022 were $12.8 million (17.4%) lower than the monthly average for 2007, just prior to the steep decline in Urban Tax revenues during the Great Recession.

## SIGNIFICANT CAPITAL ASSET ACTIVITY

### *Capital Program*

The MTA has ongoing programs on behalf of the Authority and other affiliated agencies, subject to approval by the New York State Metropolitan Transportation Authority Capital Program Review Board (the State Review Board), which are intended to improve public transportation in the New York Metropolitan area.

*2005-2009 Capital Program*—The MTA Capital Program for 2005-2009 was approved by the CPRB in July 2005 and amended in July 2006. The 2005-2009 Program, as approved, provided for $20.1 billion in capital expenditures, of which the Authority’s share was $11.2 billion. In February 2007, the MTA Board further amended the Program to add $1.2 billion of Federal East Side Access Full Funding Grant Agreement (FFGA) funds to the East Side Access project, which relates to the Capital Construction Company’s capital program. In July 2008, the MTA Board further amended the Program to add an additional $267 million of Federal East Side Access FFGA funds and $764 million in Federal Second Avenue Subway FFGA funds relating to the Capital Construction Company’s capital program. Also included in this amendment were the rollover of unused LaGuardia Airport Project funds from the 2000-2004 Capital Program and other miscellaneous funding adjustments. In 2009, the capital program received $0.7 billion in federal stimulus funding. In 2011, the program received $0.2 billion in HYIC funds to cover the full value of additional work associated with the Number 7 Extension.

The 2005-2009 Capital Program is designed to continue a program of capital expenditures that would support on-going maintenance and provide needed improvements to enhance services to its customers. Reallocation between programs, subsequent to the amendments and federal stimulus funding noted above, resulted in the overall plan totaling $24.4 billion, of which the Authority’s share is $11.5 billion. The Authority’s portion of the capital program excludes $7.7 billion of approved capital projects managed by the MTA Capital Construction Company on behalf of the Transit Authority and the Long Island Rail Road. Among the projects in the 2005-2009 Transit Capital Program are the following: normal replacement of 1,002 B Division Cars, fleet growth of 23 A Division Cars, the purchase of 1,236 new buses including 1,043 standard, 90 articulated and 103 express buses, the purchase of 1,387 new paratransit vehicles, rehabilitation of 36 stations, replacement of 23 escalators, replacement of 52 miles of mainline track and 143 mainline switches, signal modernization, communications improvements, and improvements to shops, yards, and depots.

The combined funding sources for the 2005-2009 Capital Program are comprised of $7.8 billion in federal funds, $1.5 billion from the New York State voter approved State-Wide Transportation Bond Act, $11.2 billion in bonds, and $3.9 billion from other sources.

At December 31, 2022, $11.5 billion has been encumbered to Authority projects from the 2005-2009 approved plan, of which approximately $11.4 billion has been expended.

*2010-2014 Capital Program*—The 2010-2014 Capital Program was approved by the MTA Board in September 2009. The program totaling approximately $25.6 billion was subsequently submitted to the NYS Capital Program Review Board (CPRB) for their review and approval. The submitted Program was vetoed without prejudice by the Review Board in December 2009. Subsequently, the resubmitted 2010-2014 Program, totaling $26.3 billion was approved by the MTA Board in April 2010. In June 2010, the CPRB approved the 2010-2014 Capital Program totaling $23.8 billion, as submitted, of which the Authority's share was $12.8 billion. The approved CPRB program fully funded only the first two years of the plan, with a commitment to come back to CPRB with a funding proposal for the last three years. On December 21, 2011, the MTA Board approved an amendment to the 2010-2014 Program that funds the last three years of the program through a combination of self-help (efficiency improvements and real estate initiatives), participation by our funding providers and innovative and pragmatic financing arrangements. The Authority's share of the $24.3 billion revised program was $11.6 billion. On March 27, 2012, the CPRB approved the amended 2010-2014 Capital Program as submitted for the Transit and Commuter systems totaling $22.2 billion. On December 19, 2012, the MTA Board approved an amendment to the 2010-2014 Capital Programs to add projects for the repair and restoration of MTA agency assets damaged as a result of Tropical Storm Sandy, which struck the region on October 29, 2012. The revised programs provide for an additional $4.8 billion in Sandy recovery-related capital expenditures, of which the Authority's share is $3.4 billion. On January 23, 2013, the amended program for the Transit and Commuter systems totaling $26.2 billion as submitted was deemed approved by the CPRB. On July 24, 2013, the MTA Board approved a further amendment to the 2010-2014 Capital Programs for the Transit, Commuter and Bridges and Tunnels systems to include specific revisions to planned projects and to include new resilience/mitigation initiatives, totaling $5.8 billion in response to Tropical Storm Sandy. The Authority's share of the new initiative is $5.1 billion. On August 26, 2013, the CPRB deemed approved those amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved an amendment to the 2010-2014 Capital Programs to reflect revised project estimates. However, the overall program remained unchanged at $34.8 billion. On September 3, 2014, the amended program for the Transit and Commuter systems totaling $31.8 billion as submitted was deemed approved by the CPRB. On May 24, 2017, the MTA Board approved a further amendment to reduce the overall 2010-2014 capital program by $2.8 billion. The reduction reflects adjustments to the Sandy program to match funding and administrative scope transfers for projects in the Core program. On July 31, 2017, the amended program for the Transit and Commuter systems totaling $29.2 billion as submitted was deemed approved by the CPRB. On September 25, 2019, the MTA Board approved an amendment to the overall 2010-2014 capital program totaling $31.7 billion reflecting administrative budget adjustments and updated project cost and timing assumptions. The Authority's share of the amended program totaled $11.4 billion. On February 21, 2020, the CPRB deemed approved the revised 2010-2014 Capital Programs for the Transit and Commuter systems, as submitted.

The combined funding sources for the last MTA Board approved 2010-2014 Capital Program are comprised of $11.7 billion in MTA bonds, $7.4 billion in federal funds, $2.0 billion in Bridges and Tunnels dedicated funds, $0.1 billion in MTA Bus Federal and City Match, $0.8 billion in State Assistance, $0.6 billion in City Capital Funds, and $1.5 billion from other sources. The funding strategy for Tropical Storm Sandy repair and restoration assumes the receipt of $6.7 billion in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), $0.02 billion in Pay-as-you-go capital, supplemented, to the extent necessary, by external borrowing of up to $0.9 billion in additional MTA and MTA Bridges and Tunnels bonds.

In December 31, 2022, $11.3 billion has been encumbered to Authority projects from the 2010-2014 approved plan, of which approximately $10.7 billion has been expended.

*2015-2019 Capital Program*—the 2015-2019 Capital Program totaling $32.0 billion was approved by the MTA Board in September 2014. The program totaling approximately $29.0 billion was subsequently submitted to the CPRB for their review and was vetoed without prejudice by the Review Board in October 2014. On October 28, 2015, the MTA Board approved a revised 2015-2019 capital program totaling $26.1 billion. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling $2.9 billion was approved by the MTA Board in October 2015 and was not subject to CPRB approval. On April 20, 2016, the MTA Board approved a further revised 2015-2019 capital program totaling $29.5 billion, of which $26.6 billion was subsequently approved by the CPRB on May 23, 2016 (The MTA Bridges and Tunnels 2015-2019 Capital Program totaling $2.9 billion is not subject to CPRB approval.). The Authority's share of the approved 2015-2019 capital program was $15.8 billion. On February 23, 2017, the MTA Board approved an amendment to add three station investment projects to the NYCT and LIRR portions of the Capital Program resulting in a net increase of $0.1 billion transferred from prior capital programs. On May 24, 2017, the MTA Board approved further amendment, adding $2.9 billion to the 2015-2019 Capital Program reflecting increasing support for new priority projects, new funding for Second Avenue Subway Phase 2, and administrative scope transfers. The amended Capital Program, as submitted, was deemed approved by the CPRB on July 31, 2017. On December 13, 2017, the MTA Board approved an amendment to the Capital Program, adding $0.349 billion to incorporate the NYC Subway Action Plan. The Authority's share of the amended 2015-2019 capital program totaling $32.8 billion is $16.7 billion. On April 25, 2018, the MTA Board approved a full amendment to increase the 2015-2019 Capital Programs to $33.3 billion reflecting updated project cost estimates, emerging new needs across the agencies, and reallocation of funds within the East Side Access and Regional Investment programs, among others. On June 1, 2018, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems totaling $30.3 billion as submitted. The Authority's share of the amended capital program was $16.7 billion. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling $2.9 billion as approved by the MTA Board in April 2018, was not subject to CPRB approval.

In the 2015-2019 Capital Program, NYC Transit continues normal replacement of key assets like rolling stock and mainline track/switches while also emphasizing overdue investments in signals and other infrastructure. Stations continue to be an important focus of investment given the importance of the station environment to NYC Transit's customers and their communities. Core infrastructure investments include: modernization of six interlockings; the purchase of 535 railcars to replace railcars reaching the end of their useful lives; 1,441 new buses, including 1,086 standard, 305 articulated and 50 express buses; replacement of approximately 51 miles of mainline track and 127 mainline switches; communications improvements and improvements to shops, yards, and depots; ADA accessibility improvements; completion of the new fare payment system; elimination of station defects; substantial access and circulation improvements at the Grand Central and Times Square stations. On September 25, 2019, the MTA Board approved a full amendment to the 2015-2019 Capital Programs totaling $33.9 billion, reflecting updated project timing and cost estimates, new needs, and changing priorities. On February 21, 2020, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems, as submitted. The Authority's share of the amended capital program was $16.7 billion. Reallocation between programs, subsequent to the amendment resulted in the overall plan totaling $34 billion, of which the Authority's share is $16.7 billion.

The combined funding sources for the last MTA Board approved 2015-2019 Capital Program are comprised of $8.4 billion in MTA Bonds, $2.9 billion in MTA Bridges and Tunnels dedicated funds, $9.2 billion in funding from the State of New York, $7.6 billion in Federal Funds, $2.7 billion from City Capital Funds, $2.2 billion in pay-as-you-go (PAYGO) capital, and $1.0 billion from Other Sources.

As of December 31, 2022, $16.2 billion has been encumbered to Authority projects from the 2015-2019 approved plan, of which approximately $11.0 billion has been expended.

*2020-2024 Capital Program* – the 2020-2024 Capital program totaling $54.8 was approved by the MTA Board on September 25, 2019. The capital programs for the transit and commuter systems totaling $51.5 billion was subsequently submitted to the CPRB on October 1, 2019 and approved on January 1, 2020. The Authority's share of the capital program was $35.4 billion. On December 15, 2021, a Letter Amendment was submitted to the Board that increased the total funding for the 2020-2024 Capital Program to $55.4 billion. The amendment addressed budget adjustments and additional funding to support Penn Station Access and other program projects. The amended Capital Program was deemed approved by the CPRB on December 23, 2021. The Authority's share of the amended capital program was $35.1 billion. On July 27, 2022 the MTA Board approved an amendment to increase the 2020-2024 Capital Program by $108 million to reflect addition of new projects, additional support for existing projects and changes to existing project budgets. The capital programs were subsequently submitted to the CPRB on August 1, 2022 and approved on August 30, 2022. The Authority's share of the amended capital program was $34.6 billion.

The combined funding sources for the MTA Board approved 2020–2024 MTA Capital Programs include $15 billion in Central Business District tolling sources, $10 billion in new revenue sources, $8.0 billion in MTA bonds, $12.4 billion in Federal funds, $3.1 billion in State of New York funding, $3 billion in City of New York funding, $3.3 billion in MTA Bridges and Tunnels dedicated funds, and $0.5 billion in from Other contributions.

As of December 31, 2022, $10.8 billion has been encumbered to Authority projects from the 2020-2024 approved plan, of which approximately $2.2 billion has been expended.

The federal government has a contingent equity interest in assets acquired by the MTA with federal funds and upon disposal of such assets, the federal government may have a right to its share of the proceeds from the sale. This provision has not been a substantial impediment to the MTA's operation.

## CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

### *The 2022 MTA November Financial Plan*

The 2022 MTA November Financial Plan (the "November Plan"), which includes the 2022 November Forecast, the 2023 Final Proposed Budget and a Financial Plan for the years 2023 to 2026, updates the 2022 July Financial Plan (the "July Plan").

***The July Plan*** - The July Plan projected annual balanced budgets through 2024, with unfunded deficits of approximately $2.5 billion in both 2025 and 2026. The balanced budgets were only achieved with the federal COVID relief funds awarded to the MTA, which totaled $15.1 billion since the start of the pandemic. MTA received $4.0 billion in 2020 from the Coronavirus Aid, Relief and Economic Security (CARES) Act, $4.1 billion in 2021 from the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and $6.9 billion in 2022 from the American Rescue Plan Act of 2021 (ARPA).

This federal funding covers the structural imbalance in MTA's finances in the near-term. Without federal COVID relief funds, each year of the Plan would be in substantial deficit. In addition, the deficits in the July Plan would have been higher without the assumed 4% fare and toll increases in 2023 and 2025 that were built into the Plan. The 2026 annual deficit would have reached approximately $3 billion without such increases being implemented.

Since the July Plan, ridership recovery remained steady at about 61% of the pre-pandemic level through the summer, and then moved upwards to 63% in September and 64% in October and is tracking the midpoint projection based on the recent McKinsey updated analysis.

***The November Plan*** - Before the use of federal COVID relief funds to offset deficits, the July Plan had projected deficits of $2.6 billion in 2022, $2.4 billion in 2023, $2.3 billion in 2024, $2.6 billion in 2025, and $2.6 billion in 2026. These deficits included the favorable impacts from two actions proposed in the July Plan: fare and toll yield increases of four percent effective in both March 2023 and March 2025, which were expected to generate $1.5 billion through 2026; and operating efficiency savings ("Fiscal Baseline Reset") expected to generate $400 million in lower expenses through 2026. The November Plan will use the same ridership forecast that was set forth in the July Plan based on the midpoint ridership recovery derived from the analysis dated July 2022. The November Plan, before the use of federal COVID aid, shows improvement in 2022, but worsening deficits in the out-years of the Plan.

***MTA Operating Efficiencies*** - MTA operating agencies are engaged in an ambitious effort to identify innovative ways of doing business more efficiently and as a result reduce expenses and improve service to customers. Operating Agency and Headquarters leadership have identified concrete initiatives to generate sizeable savings and help address the fiscal cliff. The operating efficiency initiatives will generate $100 million in 2023, increasing to $400 million in 2024, $408 million in 2025 and $416 million in 2026.

***Increase 2023 Fare and Toll Revenue Targets*** - MTA is proposing a 2023 fare and toll increase yielding approximately 5.5% in additional fare and toll revenue. This action is estimated to generate a total of $1,309 million, which includes an additional $350 million over the Plan period and is reflected in Other Below-the-Line Adjustments in the Plan Adjustments section.

More detailed information on the November Plan can be found in the MTA 2023 Final Proposed Budget – November Financial Plan 2023-2026 Volumes 1 and 2 at www.MTA.info.

**Impacts from Global Coronavirus Pandemic:**

Ridership levels continue to show improvement, although ridership remains significantly below pre-pandemic levels. MTA New York City Subway resumed 24 hours a day service on May 17, 2021, after subway service was shut down overnight for over a year to allow for thorough disinfecting of the system and other enhancements. MTA Metro-North Railroad currently operates on an 93% pre-pandemic service level during the week and 100% on weekends relative to pre-pandemic levels MTA Long Island Rail Road operated on an 87% pre-pandemic service level through the end of 2022. In January of 2023 the Grand Central Madison terminal was opened for LIRR service. Service was initially run as a shuttle between Jamaica and Grand Central Madison terminals. Full LIRR service to Grand Central Madison began in February. resulting in a 41% increase in overall LIRR service.

- ***Ridership and Traffic Update.*** Daily ridership on MTA facilities continues to be well-below 2019 levels. While ridership has been steadily increasing, ridership compared to the pre-pandemic equivalent day in 2019 is down 32 percent on the subways, 38 percent for bus (combined NYCT bus and MTA Bus Company), 36 percent on MTA Metro-North Railroad, and 38 percent on the MTA Long Island Rail Road. Traffic crossings at MTA Bridges and Tunnels facilities are closely resembling pre-pandemic levels.

For additional information, refer to Note 15 to financial statements regarding the impact from the COVID-19 pandemic.

**CONTACTING MTA CONTROLLER'S OFFICE**

This financial report is designed to provide our customers and other interested parties with a general overview of MTA finances and to demonstrate MTA's accountability for the funds it receives. If you have any questions about this report or need additional financial information, contact Metropolitan Transportation Authority, Deputy Chief, Controller's Office, 2 Broadway, New York, NY 10004.

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## NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**CONSOLIDATED STATEMENTS OF NET POSITION**
**AS OF DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities | |
|---|---|---|
| | 2022 | 2021 (Restated) |
| **ASSETS AND DEFERRED OUTFLOWS OF RESOURCES** | | |
| CURRENT ASSETS: | | |
| Cash (Note 3) | $ 25,493 | $ 27,619 |
| Receivables: | | |
| Billed and unbilled charges due from New York City | 48,758 | 41,215 |
| Accrued subsidies | 47,866 | 121,846 |
| Due from MTA and constituent Authorities (Note 10) | 4,651,134 | 839,381 |
| Other (Note 6 ) | 114,177 | 104,277 |
| Less allowance for doubtful accounts | (4,843) | (6,998) |
| Net receivables | 4,857,092 | 1,099,721 |
| Materials and supplies — at average cost — net | 319,350 | 319,520 |
| Prepaid expenses and other current assets | 57,671 | 38,718 |
| Total current assets | 5,259,606 | 1,485,578 |
| NONCURRENT ASSETS: | | |
| Due from MTA for the purchase of capital assets (Note 10) | 1,026,738 | 975,476 |
| Capital assets (Note 5): | | |
| Construction work-in-progress | 5,813,958 | 5,048,936 |
| Other capital assets, net of accumulated depreciation and amortization * | 42,411,992 | 41,820,056 |
| Lease receivables (Note 6) | 47,900 | 55,562 |
| Restricted deposits and other escrow funds | 1,031 | 773 |
| Total noncurrent assets | 49,301,619 | 47,900,803 |
| Total assets | 54,561,225 | 49,386,381 |
| DEFERRED OUTFLOWS OF RESOURCES: | | |
| Related to pensions (Note 7) | 1,772,956 | 1,167,397 |
| Related to OPEB (Note 8) | 3,067,290 | 2,478,549 |
| Total deferred outflows of resources | 4,840,246 | 3,645,946 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | $ 59,401,471 | $ 53,032,327 |

See notes to consolidated financial statements. Continued)

* For presentation purposes, included leasehold improvements on property, net of accumulated depreciation, previously presented separately.

## NEW YORK CITY TRANSIT AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

**CONSOLIDATED STATEMENTS OF NET POSITION**
**AS OF DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities 2022 | Business-Type Activities 2021 (Restated) |
|---|---|---|
| **LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION** | | |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 159,349 | $ 157,672 |
| Accrued expenses: | | |
| Salaries, wages, and payroll taxes | 260,843 | 341,660 |
| Vacation, sick pay, and other benefits | 798,221 | 813,490 |
| Retirement and death benefits | 29,598 | 35,808 |
| Estimated liability arising from injuries to persons (Note 12) | 391,719 | 369,470 |
| Pollution remediation projects (Note 13) | 19,759 | 19,485 |
| Other | 178,074 | 161,146 |
| Total accrued expenses | 1,678,214 | 1,741,059 |
| Unredeemed farecards | 204,000 | 211,697 |
| Revenue advances | 24,309 | 21,179 |
| Lease Payable (Note 6) | 11,726 | 14,197 |
| Loans Payable (Note 9) | 6,366 | 8,127 |
| Total current liabilities | 2,083,964 | 2,153,931 |
| NONCURRENT LIABILITIES: | | |
| Net pension liability (Note 7) | 4,561,254 | 2,304,900 |
| Net OPEB liability (Note 8) | 17,675,397 | 16,489,792 |
| Estimated liability arising from injuries to persons (Note 12) | 3,522,585 | 3,250,061 |
| Lease Payable (Note 6) | 377,493 | 388,774 |
| Loans Payable (Note 9) | 46,757 | 53,181 |
| Pollution remediation projects (Note 13) | 79,036 | 77,939 |
| Restricted deposits and other escrow funds | 1,031 | 773 |
| Total noncurrent liabilities | 26,263,553 | 22,565,420 |
| Total liabilities | 28,347,517 | 24,719,351 |
| DEFERRED INFLOWS OF RESOURCES: | | |
| Related to pensions (Note 7) | 631,311 | 2,630,384 |
| Related to OPEB (Note 8) | 1,254,712 | 971,928 |
| Related to leases (Note 6) | 53,222 | 61,566 |
| Total deferred inflows of resources | 1,939,245 | 3,663,878 |
| NET POSITION: | | |
| Net investment in capital assets | 47,783,608 | 46,404,713 |
| Unrestricted | (18,668,899) | (21,755,615) |
| Total net position | 29,114,709 | 24,649,098 |
| TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | $ 59,401,471 | $ 53,032,327 |

See notes to consolidated financial statements. (Concluded)

# NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities | |
|---|---|---|
| | **2022** | **2021 (Restated)** |
| OPERATING REVENUES: | | |
| Rapid transit | $ 2,280,202 | $ 1,717,046 |
| Surface transit | 609,178 | 553,612 |
| Expired fare media | 43,753 | 60,820 |
| Paratransit fares | 18,244 | 15,231 |
| School, elderly, and paratransit reimbursement | 334,292 | 300,355 |
| Advertising and other | 183,124 | 168,264 |
| Total operating revenues | 3,468,793 | 2,815,328 |
| OPERATING EXPENSES: | | |
| Salaries and wages | 4,226,936 | 4,042,300 |
| Health and welfare | 978,008 | 968,484 |
| Pensions | 538,201 | 71,893 |
| Other fringe benefits | 580,941 | 435,563 |
| Reimbursed overhead expenses | (219,974) | (218,090) |
| Postemployment benefits other than pensions | 1,425,889 | 1,245,208 |
| Electric power | 342,879 | 275,302 |
| Fuel | 166,691 | 98,046 |
| Insurance | 73,296 | 71,570 |
| Public liability claims | 237,501 | 230,201 |
| Paratransit service contracts | 411,972 | 345,758 |
| Maintenance and other operating expenses | 306,142 | 294,185 |
| Professional service contracts | 138,819 | 149,305 |
| Environmental remediation | 483 | 35,227 |
| Materials and supplies | 290,525 | 247,578 |
| Depreciation and amortization | 2,179,643 | 2,118,664 |
| Other expenses | 114,206 | 86,089 |
| Total operating expenses | 11,792,158 | 10,497,283 |
| OPERATING LOSS | (8,323,365) | (7,681,955) |

(Continued)

# NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**CONSOLIDATED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**
**FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities | |
|---|---|---|
| | **2022** | **2021 (Restated)** |
| NONOPERATING REVENUES (EXPENSES): | | |
| Tax-supported subsidies: | | |
| New York State (Note 2) | $ 3,769,416 | $ 3,282,947 |
| New York City | 656,690 | 512,748 |
| Operating assistance subsidies: | | |
| New York State | 158,672 | 190,406 |
| New York City | 158,672 | 158,672 |
| Triborough Bridge and Tunnel Authority | 546,905 | 463,827 |
| Internet & Mansion tax | - | 399,950 |
| Less amounts provided to Staten Island Rapid Transit Operating authority | (8,409) | (7,100) |
| Other subsidies: | | |
| Assistance fund (Note 2) | 300,000 | 235,811 |
| Total subsidies revenues | 5,581,946 | 5,237,261 |
| Federal Transit Administration ARPA reimbursement (Note 15) | 4,850,084 | - |
| Federal Transit Administration CRRSAA reimbursement (Note 15) | - | 2,795,317 |
| Other nonoperating revenues | 16,878 | 10,883 |
| Other nonoperating expenses | (48,730) | (27,883) |
| Loss on disposal of subway cars | (620) | (854) |
| Total nonoperating income | 10,399,558 | 8,014,724 |
| INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS | 2,076,193 | 332,769 |
| CAPITAL CONTRIBUTIONS (Note 2) | 2,389,418 | 2,492,482 |
| CHANGE IN NET POSITION | 4,465,611 | 2,825,251 |
| NET POSITION: | | |
| Beginning of year | 24,649,098 | 21,823,847 |
| End of year | $ 29,114,709 | $ 24,649,098 |

See notes to consolidated financial statements. (Concluded)

# NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities | |
|---|---|---|
| | **2022** | **2021 (Restated)** |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Cash received from passengers, tenants, advertisers, and others | $ 3,451,234 | $ 2,335,276 |
| Cash payments for payroll and related employee costs | (6,921,941) | (6,687,007) |
| Cash payments to suppliers for goods and services | (1,959,987) | (1,631,306) |
| Net cash used in operating activities | (5,430,694) | (5,983,037) |
| CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES: | | |
| Subsidies received | 6,149,557 | 7,433,167 |
| MTA loan | - | (800,000) |
| Net cash provided by noncapital financing activities | 6,149,557 | 6,633,167 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Principal payments | (8,080) | (8,952) |
| Interest paid | (16,465) | (2,481) |
| Receipts from leases | 9,057 | 9,077 |
| Payments of leases | (42,114) | (41,078) |
| Payments on MTA Transportation bonds issued to fund capital assets | (1,345,661) | (1,285,376) |
| Subsidies designated for debt service payments | 353,187 | 321,550 |
| Capital project costs incurred for capital program | (906,956) | (881,284) |
| Cash transferred to capital program fund | (72,116) | (2) |
| Reimbursement of capital project costs from MTA | 912,798 | 812,387 |
| Net cash used in capital and related financing activities | (1,116,350) | (1,076,159) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Change in MTA investment pool | 389,806 | 433,354 |
| Interest on investments | 5,555 | 285 |
| Net cash provided by investing activities | 395,361 | 433,639 |
| NET (DECREASE) INCREASE IN CASH | (2,126) | 7,610 |
| CASH—Beginning of year | 27,619 | 20,009 |
| CASH—End of year | $ 25,493 | $ 27,619 |

(Continued)

## NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Business-Type Activities | |
|---|---|---|
| | **2022** | **2021 (Restated)** |
| RECONCILIATION OF CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Operating loss | $ (8,323,365) | $ (7,681,955) |
| Adjustments to reconcile operating loss to net cash used in operating activities—depreciation and amortization | 2,179,643 | 2,118,664 |
| On-behalf payments related to rent (Note 6) | 7,469 | 7,159 |
| CHANGES IN OPERATING ASSETS AND LIABILITIES: | | |
| Increase in operating receivables | (644) | (455,818) |
| (Increase) decrease in prepaid expenses and other current assets | (18,953) | 1,317 |
| Decrease (increase) in materials and supplies | 170 | (14,520) |
| (Increase) decrease in deferred outflows of resources related to pensions | (605,559) | 407,704 |
| Increase in deferred outflows of resources related to OPEB | (588,741) | (1,363,069) |
| Decrease in farecard liability | (7,697) | (15,141) |
| (Decrease) increase in accrued salaries, wages and payroll taxes | (80,817) | 43,961 |
| Increase (decrease) in accounts payable and other accrued liabilities | 8,353 | (1,593) |
| (Decrease) increase in accrued vacation, sick pay and other benefits | (15,269) | 47,494 |
| Decrease in accrued retirement and death benefits | (6,210) | (1,131) |
| Increase (decrease) in net pension liability | 2,256,354 | (3,409,666) |
| Increase in net OPEB liability | 1,185,605 | 1,982,584 |
| (Decrease) increase in deferred inflows of resources related to pensions | (1,999,073) | 2,141,809 |
| Increase in deferred inflows of resources related to OPEB | 282,784 | 47,785 |
| Increase in estimated liability arising from injuries to persons | 294,773 | 222,255 |
| Increase in liability for environmental pollution remediation | 483 | 35,227 |
| Decrease in other long term liability | - | (96,103) |
| NET CASH USED IN OPERATING ACTIVITIES | $ (5,430,694) | $ (5,983,037) |
| SUPPLEMENTAL SCHEDULE OF NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Contributed capital assets | $ 2,283,084 | $ 1,450,996 |
| Capital asset related liabilities | 389,219 | 402,971 |
| Interest expense for leases | 27,695 | 25,378 |
| Interest income from leases | 1,485 | 1,458 |
| TOTAL NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES | $ 2,701,483 | $ 1,880,803 |

See notes to consolidated financial statements.

(Concluded)

## NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

### STATEMENTS OF FIDUCIARY NET POSITION
### PENSION FUND
### AS OF DECEMBER 31, 2022 AND 2021
### (In thousands)

| | Fiduciary Activities* | |
|---|---|---|
| | **2022** | **2021** |
| ASSETS: | | |
| Cash | $ 3,695 | $ 11,821 |
| Receivables: | | |
| Employee loans | 26,521 | 26,082 |
| Investment receivables | 1,635 | 5,532 |
| Interest and dividends | 1,787 | 1,746 |
| Total receivables | 29,943 | 33,360 |
| Investments at fair value | 3,289,326 | 3,630,953 |
| TOTAL ASSETS | $3,322,964 | $3,676,134 |
| LIABILITIES: | | |
| Accounts payable and accrued liabilities | $ 474 | $ 1,565 |
| Payable for investment securities purchased | 3,592 | 5,620 |
| Accrued benefits payable | 75 | 50 |
| Accrued postretirement death benefits (PRDB) payable | 5,719 | 5,405 |
| Accrued 55/25 Additional Members Contribution (AMC) payable | 2,527 | 3,847 |
| Other liabilities | 466 | 1,296 |
| Total liabilities | 12,853 | 17,783 |
| NET POSITION—Restricted for pensions | 3,310,111 | 3,658,351 |
| TOTAL LIABILITIES AND NET POSITION | $3,322,964 | $3,676,134 |

* Includes the Manhattan and Bronx Surface Transit Operating Authority Pension Plan (MaBSTOA Plan) only.

See notes to consolidated financial statements.

# NEW YORK CITY TRANSIT AUTHORITY
**(Component Unit of the Metropolitan Transportation Authority)**

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION**
**PENSION FUND**
**FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021**
**(In thousands)**

| | Fiduciary Activities* | |
|---|---|---|
| | **2022** | **2021** |
| ADDITIONS: | | |
| Contributions: | | |
| Employer contributions | $ 158,618 | $ 156,204 |
| Member contributions | 25,548 | 24,935 |
| Total contributions | 184,166 | 181,139 |
| Investments income: | | |
| Net (depreciation) appreciation in fair value of investments | (307,355) | 401,056 |
| Dividend income | 45,924 | 42,762 |
| Interest income | 10,719 | 8,197 |
| Less—investment expenses | 22,915 | 31,205 |
| Investment income—net | (273,627) | 420,810 |
| Total additions | (89,461) | 601,949 |
| DEDUCTIONS: | | |
| Benefit payments and withdrawals | 257,973 | 243,251 |
| Distribution to participants | - | 2,175 |
| Administrative expenses | 806 | 264 |
| Total deductions | 258,779 | 245,690 |
| Net increase in fiduciary net position | (348,240) | 356,259 |
| NET POSITION—Restricted for pensions: | | |
| Beginning of year | 3,658,351 | 3,302,092 |
| End of year | $ 3,310,111 | $ 3,658,351 |

* Includes the Manhattan and Bronx Surface Transit Operating Authority Pension Plan (MaBSTOA Plan) only.

See notes to consolidated financial statements.

## 1. BASIS OF PRESENTATION

**Reporting Entity**—The accompanying consolidated financial statements include the accounts of the New York City Transit Authority (Transit Authority), and its component unit, the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA) (collectively, the Authority), which are public benefit corporations and component units of the Metropolitan Transportation Authority (MTA) created pursuant to the Public Authorities Law (the Act) of the State of New York (the State) to operate public subway and bus services within The City of New York (The City).

The operations of the Authority are classified as Business-Type activities in these consolidated financial statements. The Authority is operationally and legally independent of the MTA. The Authority enjoys certain rights typically associated with separate legal status including, in some cases, the ability to issue debt. However, the Authority is included in the MTA's consolidated financial statements as a blended component unit because of the MTA's financial accountability and the Authority is under the direction of the MTA Board (a reference to "MTA Board" means the board of MTA and/or the boards of the Authority and other MTA component units that apply in the specific context, all of which are comprised of the same persons). Under accounting principles generally accepted in the United States of America (GAAP), the MTA is required to include the Authority in its consolidated financial statements.

MaBSTOA is a component unit of the Transit Authority and, therefore, the financial results of MaBSTOA are combined with those of the Transit Authority in the consolidated financial statements. MaBSTOA is operationally and legally independent of the Authority. MaBSTOA enjoy certain rights typically associated with separate legal status. However, MaBSTOA is included in the Authority's consolidated financial statements as a blended component unit because of the Authority's financial accountability. The Manhattan and Bronx Surface Transit Operating Authority Pension Plan (MaBSTOA Plan) is categorized as a Pension Fund and is a fiduciary component unit of the Authority.

The Authority has material transactions with affiliated agencies included in the MTA financial reporting group. Such agencies include the MTA, Triborough Bridge and Tunnel Authority (TBTA), Metro North Commuter Railroad (MNCR), Long Island Rail Road (LIRR), MTA Bus Company (MTA Bus), Staten Island Rapid Transit Operating Authority (SIRTOA), and First Mutual Transportation Assurance Company (FMTAC). See Note 10.

The Authority is a part of the financial reporting group of the MTA and is included in the consolidated financial statements of the MTA in accordance with GASB Statement No. 14, as amended by GASB Statement No. 61. The MTA is a component unit of the State and is included in the State of New York Comprehensive Annual Financial Report of the State Comptroller as a public benefit corporation.

In July 2003, the MTA Capital Construction Company was created by action of the MTA Board of Directors as a public benefit corporation subsidiary of the MTA under section 1266(s) of the Public Authorities Law. The mission of this subsidiary company is to plan, design and construct current and future major MTA system expansion projects. Projects currently underway, include all activities associated with the Long Island Rail Road East Side access, the Number 7 Line Extension, the Lower Manhattan Fulton Transit Center, the new South Ferry station complex, system-wide capital Security Projects, and the Second Avenue Subway, which are consolidated under the management of the MTA Capital Construction Company.

In December of 2004, MTA Bus was created as a public benefit corporation subsidiary of the MTA specifically to operate certain City bus routes. These routes are currently operated by MTA Bus and not by the Authority. All material transactions between MTA Bus and the Authority have been recorded as of December 31, 2022.

In October 2021, the MTA Grand Central Madison Concourse Operating Company ("MTA GCMC") was created as a public benefit corporation subsidiary of the MTA under section 1266(s) of the Public Authorities Law. The mission of this subsidiary is to operate and maintain the infrastructure and structures supporting Long Island Rail Road's access into Grand Central Terminal. On January 25, 2023, MTA GCMC, a 714,000 square foot terminal underneath Grand Central Terminal began limited, temporary shuttle service between Grand Central and Jamaica prior to the full service launch on February 27, 2023.

**Staten Island Rapid Transit Operating Authority**—The Staten Island Rapid Transit Operating Authority (SIRTOA) is a component unit of the MTA and provides transportation service on Staten Island. SIRTOA is managed by the Authority on behalf of The City. The Authority has no responsibility for the operating deficit of SIRTOA. The Authority collects, on SIRTOA's behalf, its share of certain operating assistance subsidies determined by formula, and transfers such subsidies to SIRTOA. The amount of subsidy funds to which SIRTOA is entitled is recorded as a reduction of the subsidy revenues of the Authority.

**Operations**—Operations are conducted pursuant to leases with The City which expired on November 1, 1989, except that the terms of the leases continue so long as any financing agreement between the Authority and the MTA and any MTA Transportation Revenue Bonds remain outstanding. The City has the option to terminate the leases at any time. In the event of termination, The City is required to assume the assets and liabilities of the Authority and must pay or make provision for the payment of any debt incurred pursuant to financing agreements of the Authority.

Substantial operating losses (the difference between operating revenues and expenses) result from the essential services that the Authority provides; such operating losses will continue in the foreseeable future. To meet the funding requirements of these operating losses, the Authority receives subsidies from:

a. The State, in the form of annual subsidies of special State and regional tax revenues, operating assistance, and reimbursement of certain expenses;

b. The City, in the form of operating assistance, tax revenues, and reimbursement of certain expenses; and

c. An affiliated agency (TBTA), in the form of a portion of its operating surplus.

d. In 2020, the Federal Transit Administration, in the form of the Coronavirus Aid, Relief and Economic Security, also known as the CARES Act.

e. In 2021, the Federal government, in the form of CRRSAA.

f. In 2022, the Federal government, in the form of ARPA.

The New York State Public Authorities Law and the financing agreement between the Authority and the MTA provide that the Authority shall establish fares, tolls, and other fees for the use of its facilities as may be necessary to maintain its combined operations on a self-sustaining basis as defined in such law. It is the opinion of management that the Authority is in compliance with these requirements. The Authority is not liable for real estate taxes, franchise taxes, or sales taxes on substantially all of its purchases or other excise taxes on its properties.

**Capital Financing—**The MTA has ongoing programs on behalf of the Authority and other affiliated agencies, subject to approval by the New York State Metropolitan Transportation Authority Capital Program Review Board (the State Review Board), which are intended to improve public transportation in the New York Metropolitan area.

The federal government has a contingent equity interest in assets acquired by the MTA with federal funds and upon disposal of such assets, the federal government may have a right to its share of the proceeds from the sale. This provision has not been a substantial impediment to the MTA's operation.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Basis of Accounting— Enterprise Fund—**The accompanying consolidated financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

The Authority applies Governmental Accounting Standards Board (GASB) Codification of Governmental Accounting and Financial Reporting Standards (GASB Codification) Section P80, *Proprietary Accounting and Financial Reporting*.

**Basis of Accounting—Fiduciary Fund—**The fiduciary fund financial statements provide information about the funds that are used to report resources held in trust for retirees and beneficiaries covered by pension plans. Separate financial statements are presented for the fiduciary fund.

The MaBSTOA Plan is categorized as a Pension Fund and is a fiduciary component unit of the Authority.

The fiduciary statements of the fiduciary funds are prepared using the accrual basis of accounting and a measurement focus on the periodic determination of additions, deductions, and net position restricted for benefits.

**New Accounting Standards Adopted**

The Authority adopted the following GASB Statement for the year ended December 31, 2022, with retroactive effect of this adoption as of January 1, 2021

GASB Statement No. 87, *Leases*, was issued to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right-to-use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities.

The Authority evaluated all the requirements under GASB Statement No. 87, Leases, and adopted this Statement for the year ended December 31, 2022, and applied the retroactive effect of this adoption by the recognition and measurement of lease assets and liabilities as of January 1, 2021. Net position as of and for the year ended December 31, 2021, was restated by $613.

The following schedule summarizes the net effect of adopting GASB Statement No. 87, *Leases,* in the Consolidated Statement of Net Position (in thousands):

| | As Previously Stated | | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|---|
| CURRENT ASSETS: | | | | |
| Other | $ 96,799 | | $ 7,478 | $ 104,277 |
| Net receivables | 1,092,243 | | 7,478 | 1,099,721 |
| Total current assets | 1,478,100 | | 7,478 | 1,485,578 |
| NONCURRENT ASSETS: | | | | |
| Other noncurrent receivable | - | | 55,562 | 55,562 |
| Leased property under capital lease, net of accumulated amortization | 59,427 | | (59,427) | - |
| Other capital assets, net of accumulated depreciation and amortization | 41,544,729 | * | 275,327 | 41,820,056 |
| Total noncurrent assets | 47,629,341 | | 271,462 | 47,900,803 |
| Total assets | 49,107,441 | | 278,940 | 49,386,381 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | 52,753,387 | | 278,940 | 53,032,327 |
| CURRENT LIABILITIES: | | | | |
| Lease payable | - | | 14,197 | 14,197 |
| Total Current liabilities | 2,139,734 | | 14,197 | 2,153,931 |
| NONCURRENT LIABILITIES: | | | | |
| Lease payable | - | | 388,774 | 388,774 |
| Obligation under capital lease, long-term | 184,984 | | (184,984) | - |
| Total noncurrent liabilities | 22,361,630 | | 203,790 | 22,565,420 |
| Total liabilities | 24,501,364 | | 217,987 | 24,719,351 |
| DEFERRED INFLOWS OF RESOURCES: | | | | |
| Related to leases | - | | 61,566 | 61,566 |
| Total deferred inflows of resources | 3,602,312 | | 61,566 | 3,663,878 |
| NET POSITION: | | | | |
| Net investment in capital assets | 46,406,800 | | (2,087) | 46,404,713 |
| Unrestricted | (21,757,089) | | 1,474 | (21,755,615) |
| Total net position | 24,649,711 | | (613) | 24,649,098 |
| TOTAL LIABILITIES, DEFERRED INFLOW OF RESOURCES AND NET POSITION | 52,753,387 | | 278,940 | 53,032,327 |

* For presentation purposes, this included leasehold improvements on property, net of accumulated depreciation previously presented separately.

In addition, revenues, expenses and changes in net position for the year ended December 31, 2021 were required to be restated by GASB Statement No. 87, *Leases,* as follows (in thousands):

| | As Previously Stated | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|
| OPERATING REVENUES: | | | |
| Advertising and other | $ 168,248 | $ 16 | $ 168,264 |
| Total operating revenues | 2,815,312 | 16 | 2,815,328 |
| OPERATING EXPENSES: | | | |
| Maintenance and other operating expenses | 321,721 | (27,536) | 294,185 |
| Depreciation and amortization | 2,097,844 | 20,820 | 2,118,664 |
| Total operating expenses | 10,503,999 | (6,716) | 10,497,283 |
| OPERATING LOSS | (7,688,687) | 6,732 | (7,681,955) |
| NONOPERATING REVENUES (EXPENSES): | | | |
| Other nonoperating revenues | 9,425 | 1,458 | 10,883 |
| Other nonoperating expenses | (19,080) | (8,803) | (27,883) |
| Total nonoperating income | 8,022,069 | (7,345) | 8,014,724 |
| INCOME (LOSS) BEFORE CAPITAL CONTRIBUTIONS | 333,382 | (613) | 332,769 |
| CHANGE IN NET POSITION | 2,825,864 | (613) | 2,825,251 |
| NET POSITION - End of period | 24,649,711 | (613) | 24,649,098 |

The following schedule summarizes the cash flow impact of adopting GASB Statement No. 87, *Leases* in Consolidated Statement of Cash Flows (in thousands) for certain leases previously classified as operating and capital leases:

| Year-ended December 31, | As Previously Stated | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Cash received from passengers, tenants, advertisers, and others | $ 2,344,353 | $ (9,077) | $ 2,335,276 |
| Cash payments to suppliers for goods and services | (1,672,384) | 41,078 | (1,631,306) |
| Net cash used in opeating activities | (6,015,038) | 32,001 | (5,983,037) |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | | |
| Receipts from leases | - | 9,077 | 9,077 |
| Payments of leases | - | (41,078) | (41,078) |
| Net cash used in capital and realted financing activities | (1,044,158) | (32,001) | (1,076,159) |
| RECONCILIATION OF CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Operating loss | (7,688,687) | 6,732 | (7,681,955) |
| Depreciation and amortization | 2,097,844 | 20,820 | 2,118,664 |
| (Decrease) increase in accounts payable and other accrued liabilities | (6,042) | 4,449 | (1,593) |
| NET CASH USED IN OPERATING ACTIVITIES | (6,015,038) | 32,001 | (5,983,037) |
| NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES: | | | |
| Noncash capital and related financing activities: | | | |
| Capital assets related liabilities | - | 402,971 | 402,971 |
| Interest expense for leases | - | 25,379 | 25,379 |
| Interest income from leases | - | 1,458 | 1,458 |

GASB Statement No. 91, *Conduit Debt Obligations*. The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This Statement achieves those objectives by clarifying the existing definition of a conduit debt obligations; establishing that a conduit debt is not a liability of the issuer; establishing standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improving required note disclosures. The adoption of this Statement did not have an impact on the financial position, results of operations or cash flows of the Authority.

GASB Statement No. 92, *Omnibus 2020*. The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics and includes specific provisions about the following:

- The effective date of Statement No. 87, *Leases*, and Implementation Guide No. 2019-3, *Leases*, for interim financial reports
- Reporting of intra-entity transfers of assets between a primary government employer and a component unit defined benefit pension plan or defined benefit other postemployment benefit (OPEB) plan.
- The applicability of Statements No. 73, *Accounting and Financial Reporting for Pensions and Related Assets* That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68, as amended, and No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, to reporting assets accumulated for postemployment benefits.

- The applicability of certain requirements of Statement No. 84, *Fiduciary Activities, to postemployment benefit arrangements.*
- Measurement of liabilities (and assets, if any) related to asset retirement obligations (AROs) in a government acquisition.
- Reporting by public entity risk pools for amounts that are recoverable from reinsurers or excess insurers.
- Reference to nonrecurring fair value measurements of assets or liabilities in authoritative literature
- Terminology used to refer to derivative instruments.

The adoption of this Statement has no material impact on the financial position, results of operations or cash flows of the Authority.

GASB Statement No. 93, *Replacement of Interbank Offered Rates*. Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate (IBOR)—most notably, the London Interbank Offered Rate (LIBOR). As a result of global reference rate reform, LIBOR ceased to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate. The objective of this Statement is to address those and other accounting and financial reporting implications that result from the replacement of an IBOR.

The adoption of this Statement did not have an impact on the financial position, results of operations or cash flows of the Authority.

**Accounting Standards Issued but Not Yet Adopted**

GASB has issued the following pronouncements that may affect the future financial position, results of operations, cash flows, or financial presentation of the Authority upon implementation. Management has not yet evaluated the effect of implementation of these standards.

| GASB Statement No. | GASB Accounting Standard | Authority Required Year of Adoption |
|---|---|---|
| 94 | *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* | 2023 |
| 96 | *Subscription-based Information Technology Arrangements* | 2023 |
| 99 | *Omnibus 2022* | 2023 |
| 100 | *Accounting Changes and Error Corrections* | 2024 |
| 101 | *Compensated Absences* | 2024 |

**Net Position**—The Authority follows the "business type" activity requirements of GASB 34, *Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments* which requires that resources be classified for accounting and reporting purposes into the following two net position categories:

- Net investment in capital assets: Capital assets including right-of-use assets, net of accumulated depreciation and amortization, and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.

- Unrestricted: Net position that are not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by actions of management or the Board of Directors or may otherwise be limited by contractual agreements with outside parties.

**Subsidies**—The Authority receives subsidies from various sources, including the State and The City, which are included in nonoperating revenues. In general, these subsidies are subject to annual appropriations by the governmental units and periodic approval of the continuation of the taxes supporting the subsidies.

The principal funding sources for the Authority are as follows:

*Operating Assistance Appropriations and Grants*—The Authority receives, subject to annual appropriations, State and City operating assistance funds. The funds received under the State transit operating assistance program are fully matched by contributions from The City. State and City operating assistance subsidies are recognized as non-operating revenue in the amount of the respective annual appropriation when such appropriation becomes effective.

*Triborough Bridge and Tunnel Authority*—The New York State Public Authorities law requires the TBTA to transfer its annual operating surplus, as defined, to MTA with allocation to the Authority. The initial $24 million of the operating surplus is provided to the Authority and the balance is divided equally between the Authority and the MTA. However, the amounts transferred to the Authority and the MTA are net of a provision for debt service on TBTA bonds issued to finance the acquisition of facilities under their respective portions of the Capital Program. For the years ended December 31, 2022 and 2021, $215.1 million and $243.2 million, respectively, were paid from the operating surplus of the TBTA to satisfy the Authority's portion of debt service requirements.

In April 2019, the approved 2019-2020 New York State Budget enacted legislation that included new, dedicated revenue streams for the MTA. The additional sources of revenue include a Central Business District Tolling Program. The Central Business District Tolling Program will assess a toll for vehicles entering the Central Business District, defined as south of 60th Street in Manhattan, but will exclude vehicles traveling on the FDR Drive or the West Side Highway, which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street. The Federal Highway Administration has provided MTA guidance to proceed with an environmental assessment, which will allow for the congestion pricing program to proceed.

The enacted State Budget also included provisions for a new Real Property Transfer Tax Surcharge (referred to as the "Mansion Tax") on high-priced residential property sales in New York City and an Internet Marketplace Sales Tax. The Mansion Tax went into effect on July 1, 2019 and increases the transfer tax on a sliding scale by a quarter percent starting at $2, with a combined top rate of 4.15%, on the sale of New York City residential properties valued at $25 or above. The Internet Marketplace Sales Tax went into effect on June 1, 2019 and requires internet marketplace providers to collect and remit sales tax from out of state retailers on their sites that have gross receipts exceeding $300,000 (dollars) and delivering more than one hundred sales into New York State in the previous four quarters. The sales tax will be collected at the normal rate of 4% plus local sales tax.

The proceeds from the Central Business District Tolling Program, the Internet Marketplace Sales Tax and the Real Property Transfer Tax Surcharge will be deposited into the MTA's Central Business District Tolling Program capital lock box and may only be used to support financing of the 2020-2024 Capital Program.

In April 2020, the New York State Legislature passed legislation that was signed by the Governor permitting MTA to use the funds in the CBDTP Capital Lockbox in all or any of the fiscal years of the authority beginning in 2020 through 2021 to offset decreases in revenue, including but not limited to, lost taxes, fees, charges, fares and tolls, due in whole or in part, or increases in operating costs due in whole to the state disaster emergency caused by the novel coronavirus, COVID-19. During 2021, the Authority received an allocation from the MTA of TBTA's internet and mansion tax from the CBDTP Capital Lockbox of $400.

**Mortgage Recording Taxes**—Under New York State law, the MTA receives operating and capital assistance from the State Mortgage Recording Tax, which is collected by The City and the seven counties within the MTA transportation region, at the rate of three-tenths of 1% of the debt secured by certain real estate mortgages. Such legislation governs the use of the funds from this revenue source whereby the proceeds of this tax are first used by the MTA to meet the operating costs of the MTA headquarters, with the remaining funds allocated 55% to the Authority and 45% to the commuter railroads for their capital and operating needs. The Authority recognizes such sources of funds when designated by the MTA for the Authority's use. The portion of this subsidy attributable to the Authority is reported in "Tax-supported subsidies: New York State" in the accompanying consolidated statements of Revenues, Expenses, and Changes in Net Position. The Authority records the portion of its State Mortgage Recording Tax subsidy which funds principal and interest payments on long-term debt, net of investment earnings on unexpended proceeds, used to construct capital assets as capital contributions.

In addition, the State designated for the MTA's use an additional mortgage recording tax (the Additional Mortgage Recording Tax) of one-quarter of 1% of mortgages secured by real estate improved or to be improved by structures containing one to six dwelling units in the MTA transportation region. The funds from this additional tax are available, after satisfying debt service requirements, to meet the capital and operating needs of the Authority and the commuter railroads to be disbursed at MTA's discretion.

No funds from the Additional Mortgage Recording Tax were disbursed to the Authority in 2022 and 2021.

The Authority receives operating assistance directly from The City through The City Mortgage Recording Tax at the rate of five-eighths of 1% of the debt secured by certain real estate mortgages and through the Real Property Transfer Tax at the rate of 1% of certain properties' assessed value (collectively referred to as Urban Tax Subsidies). These Urban Tax Subsidies are reflected in Tax supported subsidies: New York City, in the accompanying consolidated statements of Revenues, Expenses, and Changes in Net Position. These funds are recognized as revenue, based upon the reported amount of taxes collected by The City from underlying transactions, within the Authority's fiscal year.

**New York State Regional Mass Transit Taxes**—The Authority receives, subject to annual appropriations, revenues from taxes enacted by the State legislature from various taxing sources.

In 1980, the State enacted a series of taxes, portions of which are deposited in the Metro Mass Transportation Operating Account (MMTOA), to fund the operating deficits of State mass transportation systems. MMTOA taxes currently include a business privilege tax imposed on petroleum business in the State, a one-quarter of 1% sales and use tax on certain personal property and services, a corporate franchise tax imposed on transportation and transmission companies, and a temporary franchise tax surcharge on certain corporations, banks, insurance, utility, and transportation companies attributable to business activity carried on in the State. MMTOA taxes are subject to annual appropriation, availability of sufficient tax collections, and determination of operating need by the State for the MTA. They are recognized as revenue in the amount of the annual appropriation when such appropriation becomes effective.

Under New York State law, subject to annual appropriation, the MTA receives operating and capital assistance through a portion of petroleum business tax receipts, certain motor fuel taxes, and certain motor vehicle fees, which are collected by the State. Such assistance is required by law to be allocated, after provision for debt service on any bonds secured by such taxes, 85% to the Authority and 15% to the commuter railroads for their operating and capital needs. MTA Dedicated Tax Fund Bonds (DFT Bonds) are secured by certain petroleum business tax receipts. The Authority recognizes such sources of funds when designated by the MTA for the Authority's use. A portion of the petroleum business tax receipts collected by the MTA is used to satisfy the debt service requirements for the DTF Bonds and is recorded as capital contributions.

**Metropolitan Commuter Transportation Mobility Tax**—In June 2009, Chapter 25 of the Laws of 2009 added Article 23, which established the Metropolitan Commuter Transportation Mobility Tax (MCTMT). This tax is administered by the NYS Tax Department, and the proceeds from this tax are distributed to the MTA. This tax is imposed on certain employers and self-employed individuals engaging in business within the Metropolitan Commuter Transportation District (MCTD), which includes all counties in New York City, and the counties of Rockland, Nassau, Suffolk, Orange, Putnam, Duchess, and Westchester. This tax requires certain employers that have payroll expenses within the MCTD to pay at a rate of 0.34% of an employer's payroll expenses for all covered employees for each calendar quarter. The effective date of this tax was March 1, 2009 for employers other than public schools districts; September 1, 2009 for public schools districts, and January 1, 2009 for individuals. Also in 2009, several amendments to the existing tax law provided the MTA supplemental revenues to be deposited into the MTA's Aid Trust Account. These amendments imposed a supplemental fee of one dollar for each six month period of validity of a learner's permit or a driver's license issued to a person residing in the MCTD, a supplemental fee of twenty-five dollars per year on the registration and renewals of registrants of motor vehicles who reside within the MCTD, imposed on taxicab owners a tax of fifty cents per ride on taxicab rides originating in New York City and terminating within the MCTD, and a supplemental tax of five percent of the cost of rentals of automobiles rented within the MCTD. The supplemental Aid Tax receipts are included in the Mobility Tax amounts for reporting purposes.

The composition of New York State tax-supported subsidies for 2022 and 2021 is as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Petroleum business tax | $ 103,847 | $ 172,144 |
| Metro mass tax | 1,784,790 | 1,532,692 |
| Payroll Mobility tax | 1,880,779 | 1,578,111 |
| | $3,769,416 | $3,282,947 |

**Paratransit**—Pursuant to an agreement between The City and the MTA, the Authority, effective July 1, 1993, assumed operating responsibility for all paratransit service required by the Americans with

Disability Act of 1990. Services are provided by private vendors under contract with the Authority. The City reimburses the Authority for the lesser of 33% of net paratransit operating expenses defined as labor, transportation, and administrative costs less fare revenues and 6% of gross urban tax proceeds as described above, or an amount that is 20% greater than the amount paid by The City for the preceding calendar year. Fare revenues and The City reimbursement aggregated approximately $268.5 million in 2022 and $226.5 million in 2021. Total paratransit expenses, including paratransit service contracts, were $486.9 million and $415.6 million in 2022 and 2021, respectively.

**Operating and Non-operating Expenses**—Operating and non-operating expenses are recognized in the accounting period in which the liability is incurred. All expenses related to operating the Authority (e.g., salaries, insurance, depreciation, lease amortization, etc.) are reported as operating expenses. All other expenses (e.g., interest on long-term debt, interest on leases, fuel hedge transactions, etc.) are reported as non-operating expenses.

**Reimbursement of Expenditures—**Engineering and labor costs incurred by the Authority for capital projects are reimbursed under the capital program by the MTA to the extent that they relate to approved expenditures applicable to capital projects primarily initiated after April 1, 1982. They were reimbursed by The City to the extent they related to amounts approved for prior projects. In 2022 and 2021, reimbursements were netted against gross operating expenses on the consolidated statements of Revenues, Expenses, and Changes in Net Position.

**Fare and Service Reimbursement from the State and City**—In 1995, The City ceased reimbursing the Authority for the full costs of the free/reduced fare program for students. Beginning in 1996, the State and The City each began paying $45 million per annum to the Authority toward the cost of the program. In 2009, the State reduced its $45 million reimbursement to $6.3 million. Beginning in 2010, the State increased its annual commitment to $25.3 million while The City's annual commitment remained at $45 million. These commitments have been met by both the State and The City for both 2021 and 2022. For the year ended December 31, 2022, the Authority received $100.3 million from the State and the City combined, which includes a 2023 advance from the City of $30 million and recorded as unearned revenue.

Prior to April 1995, The City was obligated to reimburse the Authority for the transit police force. As a result of the April 1995 merger of the transit police force into the New York City Police Department, The City no longer reimburses the Authority for the costs of policing the Transit System on an ongoing basis since policing of the Transit System is being carried out by the New York City Police Department at The City's expense. The Authority continues to be responsible for certain capital costs and support services related to such police activities, a portion of which is reimbursed by The City. The Authority received approximately $4.5 million and $2.1 million in 2022 and 2021, respectively for the reimbursement of transit police costs.

**Assistance Fund**—*Congestion Zone Surcharges*—In April 2018, the approved 2018-2019 New York State Budget enacted legislation that provided additional sources of revenue, in the form of surcharges and fines, as defined by Article 29-C, Chapter 59 of the Tax Law, to address the financial needs of the MTA. Beginning on January 1, 2019, the legislation imposed the following:

- A surcharge of $2.75 on for-hire transportation trips provided by motor vehicles carrying passengers for hire (or $2.50 in the case of taxicabs that are subject to the $0.50 cents tax on hailed trips that are part of the MTA Aid Trust Account Receipts), other than pool vehicles, ambulance and buses, on each trip that (1) originates and terminates south of and excluding 96th Street in the City of New York, in the Borough of Manhattan (the "Congestion Zone"), (2) originates anywhere in NYS and terminates within the Congestion Zone, (3) originates in the Congestion Zone and terminates anywhere in NYS, or (4) originates anywhere in NYS, enters into the Congestion Zone while in transit, and terminates anywhere in NYS.

- A surcharge of $0.75 cents for each person who both enters and exits a pool vehicle in NYS and who is picked up in, dropped off in, or travels through the Congestion Zone.

The Congestion Zone Surcharges do not apply to transportation services administered by or on behalf of MTA, including paratransit services.

The April 2018 legislation also created the New York City Transportation Assistance Fund, held by MTA. The fund consists of the three sub-accounts, the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account.

- ***Subway Action Plan Account***—Funds in this account may be used exclusively for funding the operating and capital costs, and debt service associated, with the Subway Action Plan.

- ***Outer Borough Transportation Account***—Funds in this account may be used exclusively for funding (1) the operating and capital costs of, and debt service associated with, the MTA facilities, equipment and services in the counties of Bronx, Kings, Queens and Richmond, and any projects improving transportation connections from such counties to Manhattan, or (2) a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels.

- ***General Transportation Account***—Funds in this account may be used exclusively for funding the operating and capital costs of MTA. In each case, funds may be used for various operations and capital needs or for debt service and reserve requirements.

**Federal Transit Administration CARES Act Reimbursement**—In 2020, nonoperating revenues included operating assistance of $2.830 billion from the Federal government under the CARES Act, in response to the economic fallout of the COVID-19 pandemic.

**Federal Transit Administration CRRSAA Reimbursement**—In 2021, nonoperating revenues included operating assistance of $2.795 billion from the Federal government known as the Coronavirus Response and Relief Supplemental Appropriations Act ("CRRSAA") which is a COVID-19 economic relief program covering the transportation industry.

**American Rescue Plan Act ("ARPA") Reimbursement** – In 2022, nonoperating revenues included operating assistance of $4.850 billion from the Federal government to combat the COVID-19 pandemic.

Detailed information about the CARES, CRRSAA and ARPA is presented in Note 15.

**MTA Investment Pool**—The MTA, on behalf of the Authority, invests funds which are not immediately required for Authority's operations in securities permitted by the State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes and U.S. Treasury zero-coupon bonds. All investments are held by the MTA's agent in custody accounts in the name of the MTA. The Authority categorizes its fair value measurement within the fair value hierarchy established by U.S. GAAP. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. The Authority's investment in the MTA Investment Pool is valued based on other observable inputs (Level 2 inputs).

**Due from/to MTA and Constituent Authorities**—Due from/to MTA and constituent Authorities consists of reimbursements due from the MTA Capital Program for billed and unbilled charges relating to capital projects, farecards and intercompany operating receivables, payables, and inter-agency loan transactions.

**Prepaid Expenses and Other Current Assets**— The Authority prepaid $29.7 million to the New York Health Insurance Plan (NYSHIP) and $28.0 million in risk management related insurance coverage during 2022. The Authority prepaid $12.1 million to the New York Health Insurance Plan (NYSHIP) and $26.6 million in risk management related insurance coverage during 2021.

**Due from/to MTA for Purchase of Capital Assets**—Due from/to MTA for purchase of capital assets consists of funds held by the MTA which are restricted for capital asset acquisitions by the Authority pursuant to the 2002 Transportation Revenue Bond Resolution. This capital program pool is comprised of non-bond proceed funds derived from safe harbor and sale/leaseback transactions, operating fund transfers, legal settlements, TBTA bond purchase rights and swap option agreements, and interest earnings on these pooled funds.

**Capital Assets**—Capital assets acquired prior to April 1982 were funded primarily by The City, with capital grants made available to the Authority. The City has title to a substantial portion of such assets and, accordingly, these assets are not recorded on the books of the Authority. Subsequent acquisitions, which are part of the capital program, are recorded at cost by the Authority. Funding sources for the acquisition of these capital assets include Federal, State, and City capital grants, grants from the Port Authority of New York and New Jersey, the proceeds from the issuance of Transportation Revenue Bonds, and various TBTA bonding and other sources. Capital assets are recorded at cost and are depreciated on a straight-line basis over 25 or 35 years for subway cars, 12 years for buses, and lives generally ranging from 10 years to 60 years for the other capital assets. Leases recorded under GASB Statement No. 87, *Leases,* are classified as right-of-use assets. Accumulated depreciation and amortization are reported as reductions of capital and right-of-use assets. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

**Leases** – As a result of the adoption of GASB Statement No. 87, certain lease agreements are classified as financings of the right-to-use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. Lease receivables and liabilities are measured at the present value of payments expected to be made during the lease term, using an applicable discount rate stated or implicit in the lease and if not available, using incremental borrowing rate at the time of valuation. Lease assets and deferred inflows are amortized on a straight-line basis over the term of the lease.

**Contributed Capital**—Capital assets contributed by the MTA and restricted funds due from the MTA for the purchase of capital assets are recorded as capital contributions on the consolidated statements of Revenues, Expenses, and Changes in Net Position. Contributed capital is recognized upon identification of capital costs to be funded by the MTA. Capital contributions for the years ended December 31, 2022 and 2021, consist of the following (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Capital assets contributed by MTA from: | | |
| Federal grants | $ 1,106,449 | $ 702,533 |
| Other than federal grants | 2,076,501 | 1,635,022 |
| Petroleum business taxes received for principal and interest payments on debt | 353,187 | 321,550 |
| Principal and interest payments on MTA Transportation bonds issued to fund capital assets | (977,726) | (947,522) |
| Decrease in funds due from MTA for purchase of capital assets | (168,993) | 780,899 |
| Total capital contributions | $ 2,389,418 | $ 2,492,482 |

**Passenger Revenue**— Sale of farecards is reported as deferred revenue and recognized as operating income when used. Expired fare media revenue is recognized on the date of the expiration on the farecard.

**Materials and Supplies**—Materials and supplies are recorded at weighted average cost, net of a reserve for obsolescence at December 31, 2022 and 2021 of $89.0 million and $89.0 million, respectively.

**Employee Benefits**—In accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*, the Authority recognizes a net pension liability for each qualified pension plan in which it participates, which represents the excess of the total pension liability over the fiduciary net position of the qualified pension plan, or the Authority's proportionate share thereof in the case of a cost-sharing multiple-employer plan, measured as of the pension plans' measurement dates. Changes in the net pension liability during the year are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the year incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the respective qualified pension plan and recorded as a component of pension expense beginning with the year in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the period in which the difference occurred.

In 2003, and as a result of collective bargaining, the Authority assumed responsibility for providing health benefits to its employees who are members of the Transport Workers Union (TWU) Local 100, as well as to retirees who were members of the TWU Local 100 and reach normal retirement age while working for the Authority. During 2005, the Authority also began providing health benefits for active and retired members of the Amalgamated Transit Union (ATU) Local 1056 and Local 726. Previously, these benefits were being provided by the TWU and ATU Health Benefits Trusts (the Trusts) with the Authority required to make monthly contributions to the Trusts on behalf of the participants on a ‘pay as you go’ basis. The majority of the benefits provided under the plan are self-insured with administrative services provided by various health insurance companies.

The Authority has recorded a liability for claims incurred but not reported (IBNR). The liability represents those estimated future payments that are attributable, under the plan’s provisions, to services rendered to participants prior to year-end. The estimated liability of claims includes benefits expected to be paid to retired or terminated employees or their beneficiaries and present employees or their beneficiaries, as applicable. The estimated liability for claims incurred but not reported or paid is $170.4 million and $172.4 million as of December 31, 2022 and 2021, respectively.

In accordance with GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* and GASB Statement No. 85, *Omnibus,* the Authority recognizes a proportionate share of the net OPEB liability for the MTA’s cost-sharing multiple-employer OPEB Plan, which represents the excess of the total OPEB liability over the fiduciary net position of the OPEB Plan, measured as of the measurement date of the plan.

Changes in the net OPEB liability during the year are recorded as OPEB expense, or as deferred outflows of resources or deferred inflows of resources relating to OPEB depending on the nature of the change, in the year incurred. Changes in net OPEB liability that are recorded as deferred outflows of resources or deferred inflows of resources that arise from changes in actuarial assumptions and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the OPEB plan and recorded as a component of OPEB expense beginning with the year in which they are incurred. Projected earnings on qualified OPEB plan investments are recognized as a component of OPEB expenses. Differences between projected and actual investment earnings are reported as deferred outflows of resources or deferred inflow of resources as a component of OPEB expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

**Receivables**—Receivables are recorded as amounts due to the Authority, reduced by an allowance for doubtful accounts, to report the receivables at their net realizable value.

**Pollution Remediation Projects**—Pollution remediation costs are being expensed in accordance with the provisions of GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (see Note 13). An operating expense provision and corresponding liability measured at current value using the expected cash flow method has been recognized for certain pollution remediation obligations, which previously may not have been required to be recognized, have been recognized earlier than in the past or are no longer able to be capitalized as a component of a capital project. Pollution remediation obligations occur when any one of the following obligating events takes place: the Authority is in violation of a pollution prevention-related permit or license; an imminent threat to public health due to pollution exists; the Authority is named by a regulator as a responsible or potentially responsible party to participate in remediation; the Authority voluntarily commences or legally obligates itself to commence remediation efforts; or the Authority is named or there is evidence to indicate that it will be named in a lawsuit that compels participation in remediation activities.

**Use of Management’s Estimates**—The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements. In addition, they affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates and assumptions.

## 3. CASH

The bank balances are insured up to $250 in the aggregate by the Federal Deposit Insurance Corporation (FDIC) for each bank in which funds are deposited. Cash, including funds on hand and in transit, consists of the following at December 31, 2022 and 2021 (in thousands):

| | 2022 | | 2021 | |
|---|---|---|---|---|
| | Book Balance | Bank Balance | Book Balance | Bank Balance |
| Insured and collateralized deposits | $10,234 | $ 9,654 | $13,845 | $13,338 |
| Less escrow and other restricted deposits | (1,219) | (1,219) | (984) | (984) |
| Commercially insured funds on-hand and in-transit | 16,478 | - | 14,758 | - |
| | $25,493 | $ 8,435 | $27,619 | $12,354 |

Deposits in the Authority's bank accounts are collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero coupon bonds, pursuant to the New York State Public Authorities Law. The on-hand and in-transit funds consist primarily of passenger revenue funds collected, but not yet deposited.

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Authority will not be able to recover the value of its deposits. While the Authority does not have a formal deposit policy for custodial credit risk, New York State statues govern the Authority's investment policies.

## 4. MTA INVESTMENT POOL

The MTA, on behalf of the Authority, invests funds which are not immediately required for the Authority's operations, in securities permitted by the State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero coupon bonds. All investments are held by the MTA's agent, in custody accounts, in the name of the MTA. The Authority records its position in the Pool based upon a net asset value derived on assets invested in the Pool plus all realized income and losses earned. The Authority's earnings from short-term investments approximated $6.6 million and $0.3 million for the years ended December 31, 2022 and 2021, respectively. For the year ended December 31, 2021, the Authority has a negative investment pool balance of $225.2 million as funds were used for working capital purposes to offset the shortfall in Tax subsidy revenue, in addition to the payment of $800 million loan to MTAHQ. The deficit of $225.2 million has been reclassified in the Due from MTA and constituent authorities category in the consolidated balance sheets. For the year ended December 31, 2022, the Authority has a negative investment pool balance of $615.0 million as funds were used for working capital purposes to offset the shortfall in Tax subsidy revenue. With right of offset, the deficit of $615.0 million has been reclassified in the Due from MTA and constituent authorities category in the consolidated balance sheets.

## 5. CAPITAL ASSETS

Capital assets and improvements include all land, buildings, equipment, and infrastructure of the Authority having a minimum useful life of two years and having a cost of more than $25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. Leases recorded under GASB Statement No. 87, *Leases,* are classified as right-of-use assets and measured at the present value of the initial measurement of the lease liability, plus any payments made to the lessor at or before the commencement of the lease term and certain direct costs.

Capital assets are recorded at cost and are depreciated on a straight-line basis over 25 or 35 years for subway cars, 12 years for buses, and lives generally ranging from 10 years to 60 years for the other capital assets. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

The following is a summary of capital and right-of-use assets activity at January 1, 2021, December 31, 2021 and December 31,2022:

| (In thousands) | January 1, 2021 | Additions/ Reclassifications (Restated) | Deletions/ Reclassifications (Restated) | December 2021 (Restated) | Additions/ Reclassifications | Deletions/ Reclassifications | December 2022 |
|---|---|---|---|---|---|---|---|
| Capital assets not being depreciated—construction work-in-progress | $ 4,491,664 | $ 2,435,710 | $ (1,878,438) | $ 5,048,936 | $ 3,405,209 | $ (2,640,187) | $ 5,813,958 |
| Total capital assets not being depreciated | 4,491,664 | 2,435,710 | (1,878,438) | 5,048,936 | 3,405,209 | (2,640,187) | 5,813,958 |
| Capital assets being depreciated: | | | | | | | |
| Subway cars | 9,526,830 | (1,824) | - | 9,525,006 | 122 | (22,928) | 9,502,200 |
| Buses | 3,006,158 | 246,754 | (104,602) | 3,148,310 | 375,537 | (203,899) | 3,319,948 |
| Track and structures | 15,208,399 | 314,971 | - | 15,523,370 | 394,619 | - | 15,917,989 |
| Depots and yards | 5,001,566 | 205,793 | - | 5,207,359 | 155,731 | - | 5,363,090 |
| Stations | 22,639,180 | 740,421 | - | 23,379,601 | 879,161 | - | 24,258,762 |
| Signals | 8,714,912 | 312,178 | - | 9,027,090 | 700,817 | - | 9,727,907 |
| Service vehicles | 527,847 | 23,540 | - | 551,387 | 4,971 | - | 556,358 |
| Building | 166,733 | | - | 166,733 | - | - | 166,733 |
| Other * | 3,546,958 | 218,545 | (114,514) | 3,650,989 | 260,575 | (1,311) | 3,910,253 |
| Total capital asset being depreciated | 68,338,583 | 2,060,378 | (219,116) | 70,179,845 | 2,771,533 | (228,138) | 72,723,240 |
| Less accumulated depreciation: | | | | | | | |
| Subway cars | (4,790,134) | (238,464) | - | (5,028,598) | (220,794) | 22,308 | (5,227,084) |
| Buses | (1,644,351) | (225,830) | 103,748 | (1,766,433) | (229,002) | 203,899 | (1,791,536) |
| Track and structures | (5,803,267) | (394,098) | - | (6,197,365) | (401,889) | - | (6,599,254) |
| Depots and yards | (2,476,880) | (139,836) | - | (2,616,716) | (132,306) | - | (2,749,022) |
| Stations | (6,844,535) | (650,953) | - | (7,495,488) | (686,537) | - | (8,182,025) |
| Signals | (2,650,495) | (266,627) | - | (2,917,122) | (277,671) | - | (3,194,793) |
| Service vehicles | (219,100) | (21,514) | - | (240,614) | (20,250) | - | (260,864) |
| Building | (96,105) | (3,307) | - | (99,412) | (3,308) | - | (102,720) |
| Other * | (2,171,240) | (154,804) | 52,676 | (2,273,368) | (183,951) | 1,311 | (2,456,008) |
| Total accumulated depreciation | (26,696,107) | (2,095,433) | 156,424 | (28,635,116) | (2,155,708) | 227,518 | (30,563,306) |
| Total capital assets being depreciated—net | 41,642,476 | (35,055) | (62,692) | 41,544,729 | 615,825 | (620) | 42,159,934 |
| Right-of-use assets being amortized: | | | | | | | |
| Leased buildings and structures | 295,418 | 77 | - | 295,495 | 317 | - | 295,812 |
| Leased equipment and vehicles | 304 | 2,688 | - | 2,992 | | - | 2,992 |
| Leased other | 71 | - | - | 71 | 349 | - | 420 |
| Total Right-of-Use Assets being amortized | 295,793 | 2,765 | - | 298,558 | 666 | - | 299,224 |
| Less accumulated amortization: Right-of-Use Assets | | | | | | | |
| Leased buildings and structures | - | (22,873) | - | (22,873) | (22,967) | - | (45,840) |
| Leased equipment and vehicles | - | (321) | - | (321) | (766) | - | (1,087) |
| Leased other | - | (37) | - | (37) | (202) | - | (239) |
| Total accumulated amortization | - | (23,231) | - | (23,231) | (23,935) | - | (47,166) |
| Right-of-use assets being amortized—net | 295,793 | (20,466) | - | 275,327 | (23,269) | - | 252,058 |
| Total capital assets, including right-of-use asset—net | $ 46,429,933 | $ 2,380,189 | $ (1,941,130) | $ 46,868,992 | $ 3,997,765 | $ (2,640,807) | $ 48,225,950 |

* For presentation purposes, Other included leased property under capital lease and leasehold improvements on property. Previously reported in separated tables.

In accordance with GASB Statement No. 89, there is no interest capitalized related to the construction of capital assets.

In December 2021, MTA obtained legal title to the wireless telecommunications equipment installed on the Authority's property according to the network license agreement that MTA entered into with the licensee. The license agreement provides for the licensee to construct, operate, and maintain the wireless network. This asset was transferred by MTA to the Authority as a non-cash capital contribution recorded at $73.3 representing the fair market value at the date of conveyance.

As of December 31, 2022, $66.6 billion is unexpended from the overall MTA Capital program (2005-2024) and $22.9 billion has been committed.

As of December 31, 2021, $72.8 billion is unexpended from the overall MTA Capital program and $16.9 billion has been committed.

## 6. LEASES

The Authority entered into various lease agreements that convey control of the right to use other entities' nonfinancial assets. Lease receivables and lease liabilities are measured at the present value of payments expected to be made during the lease term, using NYCTA's incremental borrowing rate at the time of valuation ranging from 0.72% to 5.64% if an applicable stated or implicit rate is not available.

The initial measurement of the Authority's leased asset and lease liability for those agreements was as of January 1, 2021. The lease liability is reduced as payments are made, and an outflow of resources for interest on the liability is recognized. The lease asset is amortized on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset.

For lessor leases, a lease receivable and deferred inflow of resources were measured as of January 1, 2021. Interest revenues are recognized on the lease receivables and an inflow of resources from the deferred inflow of resources are recognized on a straight-line basis over the term of the lease.

**As Lessor**

The Authority leases its land, building, station space, equipment, and right-of-way to other entities. These leases have terms between 1 year to 16 years, with payments required monthly, quarterly, semi-annually, or annually. In addition, the Authority also receives payments for variable leases and operating expenses associated with spaces that are not included in the measurement of lease receivables. Lease receivables are measured at the present value of payments expected to be made during the lease term, using NYCTA's incremental borrowing rate at the time of valuation ranging from 0.72% to 5.64% if an applicable stated or implicit rate is not available.

The total amount of inflows of resources recognized for the year ended December 31, 2022 and 2021 is presented below (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease Revenue | $ 9,218 | $ 9,093 |
| Interest Revenue | 1,485 | 1,458 |
| Other Variable Revenue | 0 | 1,004 |

The balance of lease receivables as of December 31, 2022 and December 31, 2021 are as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease receivables - current | $ 8,444 | $ 7,478 |
| Lease receivables - noncurrent | 47,900 | 55,562 |
| Total Lease receivables | $ 56,344 | $ 63,040 |

The Authority did not recognize any revenue associated with residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021, respectively.

The principal and interest requirements to maturity for the lease receivables subsequent to December 31, 2022, are as follows (in thousands):

| Years Ending December 31 | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 8,444 | $ 1,317 | $ 9,761 |
| 2024 | 8,602 | 1,122 | 9,724 |
| 2025 | 8,063 | 922 | 8,985 |
| 2026 | 7,624 | 730 | 8,354 |
| 2027 | 7,644 | 542 | 8,186 |
| 2028–2032 | 11,297 | 1,181 | 12,478 |
| 2033–2037 | 4,670 | 314 | 4,984 |
| Total | $ 56,344 | $ 6,128 | $ 62,472 |

**As Lessee**

The Authority leases building, office space, storage space, equipment, vehicle, and cell tower space from other entities. These leases have terms between 1 year to 67 years, with payments required monthly, quarterly, or annually.

The amount of lease expenses recognized for variable payments not included in the measurement of lease liability were $1,885 and $2,656 for the year ended December 31, 2022 and 2021. The Authority recognized $0 expense attributable to residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021.

The principal and interest requirements to maturity for the lease liability subsequent to December 31, 2022, are as follows (in thousands):

| Years Ending December 31 | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 11,726 | $ 27,675 | $ 39,401 |
| 2024 | 11,138 | 27,620 | 38,758 |
| 2025 | 9,298 | 27,507 | 36,805 |
| 2026 | 8,965 | 27,413 | 36,378 |
| 2027 | 2,802 | 27,383 | 30,185 |
| 2028–2032 | 20,891 | 135,106 | 155,997 |
| 2033–2037 | 41,221 | 124,133 | 165,354 |
| 2038–2042 | 77,107 | 98,843 | 175,950 |
| 2043–2047 | 137,285 | 51,899 | 189,184 |
| 2048–2052 | 20,408 | 9,850 | 30,258 |
| 2053–2057 | 3,521 | 8,780 | 12,301 |
| 2058–2062 | 4,248 | 8,053 | 12,301 |
| 2063–2067 | 5,125 | 7,176 | 12,301 |
| 2068–2072 | 6,183 | 6,118 | 12,301 |
| 2073–2077 | 7,460 | 4,841 | 12,301 |
| 2078–2082 | 9,000 | 3,301 | 12,301 |
| 2083–2087 | 10,858 | 1,442 | 12,300 |
| Thereafter | 1,983 | 34 | 2,017 |
| Total | $389,219 | $597,174 | $986,393 |

**Significant lease transactions -** In 1990, the Authority acquired an office building located at 130 Livingston Street in Brooklyn, New York. The property is located on land owned by the New York City Economic Development Corporation (NYC EDC), as trustee for The City, with whom the Authority has entered into a 99-year ground lease. In 2011, the ground lease between the MTA and NYC EDC for Livingston Street was renegotiated with monthly lease payments increasing from approximately $47 to $111 per month. In January 2020, the base rent was increased to $205 per month as a result of a revaluation of the land appraisal. Rent expense payments under the lease were approximately $2.5 million in 2022 and 2021.

On July 29, 1998, the MTA, (solely on behalf of MTA Long Island Rail Road and MTA Metro-North Railroad, MTA New York City Transit, and MTA Bridges and Tunnels) entered into a lease and related agreements whereby each agency, as sublessee, will rent, an office building at Two Broadway in lower Manhattan. The triple-net-lease has an initial stated term of approximately 50 years, with the right to extend the lease for two successive 15-year periods at a rental of at least 95% of fair market rent. Remaining payments under the lease approximate $996 million. Under the subleases, the lease is apportioned as follows: the Authority, 68.7%, MTA, 21%; and TBTA, 10.3%. However, the involved agencies have agreed to sub-sublease space from one another as necessary to satisfy actual occupancy needs. The agencies will be responsible for obligations under the lease based on such actual occupancy percentages. Actual occupancy percentages at December 31, 2022 for the Authority, TBTA and MTA (including MTA Bus, MTA Construction and Development, and MTA Business Service Center) were 48.7%, 7.4% and 43.9%, respectively. The Authority’s sublease is for a year-to-year term, automatically extended, except upon the giving of a non-extension notice by the Authority.

MTA pays the lease payments on behalf of the Authority and subsequently makes monthly chargebacks in the form of rental payments treated as management fees. During 2022 and 2021, the total of the rental payments charged to the Authority was $7.5 million and $7.2 million, respectively, less than the lease payment made by MTA on behalf of the Authority.

## 7. EMPLOYEE BENEFITS

**Pensions**—The Authority participates in two defined benefit pension plans for their employees, the Manhattan and Bronx Surface Transit Operating Authority Pension Plan (MaBSTOA) and New York City Employees' Retirement System (NYCERS). A brief description of each of the pension plans follows:

***Plan Descriptions***

**MaBSTOA**— The MaBSTOA Plan is a multi-employer defined benefit retirement plan administered by MTA New York City Transit covering employees of MaBSTOA and MTA Headquarters. Prior to January 1, 2020, this was a single employer defined benefit retirement plan covering only MaBSTOA employees. Employees of MaBSTOA and MTA Headquarters are specifically excluded from participating in the New York City Employees' Retirement System (NYCERS). The Plan provides retirement as well as death, accident and disability benefits. Effective January 1, 1999, in order to afford managerial and non-represented MaBSTOA employees the same pension rights as like title employees in the Transit Authority, membership in the MaBSTOA Plan is optional.

The Board of Administration, established in 1963, determines eligibility of employees and beneficiaries for retirement and death benefits. Article 12.08 of the MaBSTOA plan assigns authority to the MaBSTOA Board to establish and amend benefit provisions. The Board is composed of five members: two representatives from the Transport Workers Union, Local 100 (TWU) and three employer representatives. The MaBSTOA Plan is a fiduciary component unit of the Authority and is reflected in the Pension Fund section of the Authority's basic financial statements.

The pension plan issues a publicly available financial report that includes financial statements and required supplementary information regarding the employee benefit plan. The report may be obtained by writing to MaBSTOA Pension Plan, New York City Transit Authority, 2 Broadway, 10th Floor, New York, New York, 10004 or at www.mta.info.

**NYCERS**—The NYCERS Plan is a cost-sharing, multiple-employer retirement system for employees of The City of New York (The City) and certain other governmental units whose employees are not otherwise members of The City's four other pension systems. NYCERS administers the New York City Employees Retirement System qualified pension plan.

NYCERS was established by an act of the Legislature of the State of New York under Chapter 427 of the Laws of 1920. NYCERS functions in accordance with the governing statutes contained in the New York State Retirement and Social Security Law (RSSL), and the New York City Administrative Code, which are the basis by which benefit terms and employer and member contribution requirements are established and amended. The head of the retirement system is the Board of Trustees.

NYCERS issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information. This report may be obtained by writing to the New York City Employees' Retirement System at 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3724 or at www.nycers.org.

All employees holding permanent civil service positions in the competitive or labor class are required to become members of the NYCERS six months after their date of appointment, but may voluntarily elect to join the NYCERS prior to their mandated membership date. All other eligible employees have the option of joining the NYCERS upon appointment or anytime thereafter. NYCERS members are assigned to a “tier” depending on the date of their membership.

Tier 1 All members who joined prior to July 1, 1973.

Tier 2 All members who joined on or after July 1, 1973 and before July 27, 1976.

Tier 3 Only certain members who joined on or after July 27, 1976 and prior to April 1, 2012.

Tier 4 All members (with certain member exceptions) who joined on or after July 27, 1976 but prior to April 1, 2012. Members who joined on or after July 27, 1976 but prior to September 1, 1983 retain all rights and benefits of Tier 3 membership.

Tier 6 Members who joined on or after April 1, 2012.

***Benefits Provided***

**MaBSTOA**—MaBSTOA provides retirement, disability, death, and accident benefits to plan members and beneficiaries. The benefits provided by the Plan are generally similar to the benefits provided to participants in NYCERS. Benefits vest after either 5, 10, or 20 years of credited service, depending on the date of employment.

In 2008, NYCERS has determined that Tier 4 employees are and have been eligible for a post retirement death benefit retroactive to 1986. In June 2012, the MTA Board approved an amendment to the MaBSTOA Plan to provide for incorporation of this benefit.

*Tier 1—*

Eligibility and Benefit Calculation—Tier 1 members must be at least age 50 with the completion of 20 years of service to be eligible to collect a service retirement benefit. Generally, the benefit is 1.50% for service before March 1, 1962, plus 2.0% for service from March 1, 1962 to June 30, 1970, plus 2.5% for service after June 30, 1970. The accumulated percentage, up to a maximum of 50%, is multiplied by the member’s compensation, which is the greater of earned salary during the year prior to retirement. Once the accumulated reaches 50%, the percentage for each further year of service reverts back to 1.5%. The percentage in excess of 50% is multiplied by the final compensation, which is the highest average earnings over five consecutive years.

Ordinary Disability Benefits—Generally, ordinary disability benefits, are provided to eligible Tier 1 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by final compensation.

Accidental Disability Benefits—The accidental disability benefit to eligible Tier 1 members is equal to 75% of final compensation reduced by 100% of any worker’s compensation payments.

Ordinary Death Benefits—Tier 1 members requires the completion of six months of service but completion of twenty years of service is required to receive a lump sum equal to the present value of the retirement benefit.

*Tier 2—*

Eligibility and Benefit Calculation—Tier 2 members must be at least age 55 with the completion of 25 years of service to be eligible to collect a service retirement benefit. Generally, the benefit equals 50% of final 3-year average compensation, defined as the highest average earnings over three consecutive years, plus 1% of final 5-year average compensation, defined as the highest average earnings over five consecutive years, per year of credited service in excess of 20 years. For early retirement, members must be at least age 50 with the completion of at least 20 years of service. The benefit is determined in the same manner as the service retirement but not greater than 2.0% of final 3-year average compensation per year of service.

Ordinary Disability Benefits—Generally, ordinary disability benefits, are provided to eligible Tier 2 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by the final 5- year average compensation.

Accidental Disability Benefits—The accidental disability benefit to eligible Tier 2 members is equal to 75% of the final 5-year average compensation reduced by any worker's compensation payments.

Ordinary Death Benefits—Tier 2 members require the completion of 90 days of service to receive a lump sum equal to 3 times salary, raised to the next multiple of $1,000.

*Tiers 3 and 4—*

Eligibility and Benefit Calculation—Tier 3 and 4 members in the Regular 62 and 5 Plan must be at least age 62 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of Final Average Salary (FAS) for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30. FAS is defined as the highest average earnings over three consecutive years, of which earnings in a year cannot exceed 110% of the average of the two preceding years. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service. For early retirement, members must be at least age 55 with the completion of at least 5 years of service. The benefit equals the service retirement benefit reduced by 6% for each of the first two years prior to age 62, and by 3% for years prior to age 60.

Tier 3 and 4 members in the Regular 55 and 25 Plan must be at least age 55 with the completion of at least 25 years of service, or be at least age 62 with the completion of at least 5 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of FAS for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30. If the member completes less than 25 years of credited service, the benefit equals 1-2/3% of FAS multiplied by years of service.

Tier 4 members in the 57 & 5 Plan must be at least age 57 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of FAS for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service.

*Ordinary and Accidental Disability Benefits*—For eligible members of the Regular 62 and 5 Plan, 55 and 25 Plan and 57 and 5 Plan, ordinary and accidental disability benefits, are provided after 10 years of service for ordinary and no service required for accidental. The benefit equals the greater of 1-2/3% of FAS per year of service and 1/3 of FAS.

*Ordinary Death Benefits*—For eligible members of the Regular 62 and 5 Plan, 55 and 25 Plan, 57 and 5 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement.

After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

*Tier 6—*

*Eligibility and Benefit Calculation*—Tier 6 members in the 55 and 25 Special Plan must be at least age 55 with the completion of at least 25 years, or at least age 63 with the completion of at least 10 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of FAS for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable earnings over five consecutive years.

Tier 6 members in the Basic 63 and 10 Plan must be at least age 63 with the completion of at least 10 years to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 35% of FAS plus 2.0% of FAS for years of service in excess of 20. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable earnings over five consecutive years. For early retirement, members must be at least age 55 with the completion of at least 10 years of service. The benefit equals the service retirement benefit reduced by 6.5% for each year prior to age 63.

*Ordinary and Accidental Disability Benefits*—For eligible members of the 55 and 25 Special Plan and the Basic 63 and 10 Plan, ordinary and accidental disability benefits, are provided after 10 years of service for ordinary and no service required for accidental. The benefit equals the greater of 1-2/3% of FAS per year of service and 1/3 of FAS.

*Ordinary Death Benefits*—For eligible members of the 55 and 25 Special Plan and the Basic 63 and 10 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement. After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

In 2020, an amendment to the MaBSTOA Pension Plan was approved by the Board to provide a COVID-19 Accidental Death Benefit. Chapter 89 of the Laws of 2020 (Chapter 89) was passed by the Legislature, and signed by the Governor, on May 30, 2020. Chapter 89 enacted Sections 361-b, 509-a and 607-i of the Retirement and Social Security Law and Section 13-149.1 of the New York City Administrative Code, to provide a special line-of-duty Accidental Death Benefit to eligible members of the pension plan.

**NYCERS**—NYCERS provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (non-job-related disabilities) and Accident Disability Retirements (job-related disabilities) to participants generally based on salary, length of service, and member Tiers.

The Service Retirement benefits provided to Tier 1 participants fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of final salary. The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of final salary.

Tier 2 participants have provisions similar to Tier 1, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit.

Tier 3 participants were later mandated into Tier 4, but could retain their Tier 3 rights. The benefits for Tier 3 participants are reduced by one half of the primary Social Security benefit attributable to service, and provides for an automatic annual cost-of-living escalator in pension benefits of not more than 3.0%.

During March 2012, the Governor signed Chapter 18 of the Laws of 2012 that placed certain limitations on the Tier 3 and Tier 4 benefits available to participants who joined on and after April 1, 2012. In general, these changes, commonly referred to as Tier 6, increase the age requirement to 63 for most non-uniformed employees to retire and receive a full pension, require member contributions for all years of service for non-uniformed employees, institute progressive member contributions for non-uniformed employees, and lengthen the final average salary period from 3 to 5 years.

NYCERS provides automatic Cost-of-Living Adjustments (COLA), death benefits, accident, disability retirement benefits, and other supplemental pension benefits to certain retirees and beneficiaries. Members become fully vested as to benefits upon the completion of 5 years of service.

The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983 and 2012, significant amendments made to the State Retirement and Social Security Law (RSSL) modified certain benefits for employees joining the Plan on or after the effective date of such amendments, creating membership tiers.

Chapter 89 of the Laws of 2020, passed by the Legislature and signed by the Governor on May 30, 2020, provides benefits to statutory beneficiaries of members whose death was a result or was contributed to by COVID-19. This act adds Retirement and Social Security Law Sections 509-a and 607-i and Administrative Code of the City of New York Section 13-149.1 by providing an Accidental Death Benefit to eligible members of the NYCERS Plan. This special benefit expired on December 31, 2020.

***Membership***

Membership in the MaBSTOA pension plan consisted of the following at January 1, 2021 and 2020, the date of the latest actuarial valuations:

| | 2021 | 2020 |
|---|---|---|
| Active Plan Members | 8,533 | 8,795 |
| Retirees and beneficiaries receiving benefits | 6,020 | 5,944 |
| Vested formerly active members not yet receiving benefits | 1,125 | 1,040 |
| Total | 15,678 | 15,779 |

***Contributions and Funding Policy***

**MaBSTOA**—The contribution requirements of plan members are established, approved and may be amended only by the MaBSTOA Board, in accordance with the Articles of the MaBSTOA plan. The financial objective of the Plan is to fund, on an actuarial basis, the retirement and death benefits for eligible MaBSTOA employees and beneficiaries. The Plan's funding policy is for periodic employer contributions to provide for actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due. MaBSTOA contributions to the fund are made annually.

The MaBSTOA Pension Plan includes the following plans: (i.) the Tier 3 and 4 Transit Age 62 Plan; (ii.) the Tier 6 Age 63 Plan; (iii.) the 55/25 Plan; (iv.) the Tier 4 25 Year Early Retirement Plan; (v.) the Tier 4 Age 57 Plan, and (vi.) the 2000 amendments which are all under the same terms and conditions as NYCERS.

For employees, the Plan has both contributory and noncontributory requirements depending on the date of entry into service. Employees entering qualifying service on or before July 26, 1976, are non-contributing (Tiers 1 and 2). Certain employees entering qualifying service on or after July 27, 1976, are required to contribute 3% of their salary (Tiers 3 and 4).

In March 2012, pursuant to Chapter 18 of the Laws of 2012, individuals joining NYCERS or the MaBSTOA Pension Plan on or after April 1, 2012 are subject to the provisions of Tier 6. The highlights of Tier 6 include:

Increases in employee contribution rates. The rate varies depending on salary, ranging from 3% to 6% of gross wages. Contributions are made until retirement or separation from service.

- The retirement age increases to 63 and includes early retirement penalties, which reduce pension allowances by 6.5 percent for each year of retirement prior to age 63.
- Vesting after 10 years of credited service; increased from 5 years of credited service under Tier 3 and Tier 4.
- Adjustments of the Pension Multiplier for calculating pension benefits (excluding Transit Operating Employees): the multiplier will be 1.75% for the first 20 years of service, and 2% starting in the 21st year; for an employee who works 30 years, their pension will be 55% of FAS under Tier 6, instead of 60% percent under Tier 4.
- Adjustments to the FAS Calculation; the computation changed from an average of the final 3 years to an average of the final 5 years. Pensionable overtime will be capped at $15,000 per year plus an inflation factor.
- Pension buyback in Tier 6 will be at a rate of 6% of the wages earned during the period of buyback, plus 5% compounded annually from the date of service until date of payment.

Pursuant to Section 7.03 of the MaBSTOA Plan, active plan members are permitted to borrow up to 75% of their contributions with interest. Their total contributions and interest remain intact and interest continues to accrue on the full balance. The participant’s accumulated contribution account is used as collateral against the loan.

Upon termination of employment before retirement, certain participants are entitled to refunds of their own contributions including accumulated interest less any loans outstanding.

The Authority’s contributions to the MaBSTOA plan amounted to $158.6 million and $156.2 million for the years ended December 31, 2022 and 2021, respectively.

**NYCERS**—NYCERS funding policy is to contribute statutorily-required contributions (Statutory Contributions), determined by the Chief Actuary for the New York City Retirement System, in accordance with State statutes and City laws, and are generally funded by employers within the appropriate Fiscal Year. The Statutory Contributions are determined under the One-Year Lag Methodology (OYLM). Under OYLM, the actuarial valuation date is used for calculating the Employer Contributions for the second following Fiscal Year. Statutory Contributions are determined annually to be an amount that, together with member contributions and investment income, provides for NYCERS’ assets to be sufficient to pay benefits when due.

Member contributions are established by law. NYCERS has both contributory and noncontributory requirements, with retirement age varying from 55 to 70 depending upon when an employee last entered qualifying service.

In general, Tier 1 and Tier 2 member contribution rates are dependent upon the employee's age at membership and retirement plan election. In general, Tier 3 and Tier 4 members make basic contributions of 3.0% of salary, regardless of age at membership. Effective October 1, 2000, in accordance with Chapter 126 of the Laws of 2000, these members, except for certain Transit Authority employees enrolled in the Transit 20-Year Plan, are not required to make basic contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, members who meet certain eligibility requirements will receive one month's additional service credit for each completed year of service up to a maximum of two additional years of service credit. Effective December 2000, certain Transit Authority Tier 3 and Tier 4 members make basic member contributions of 2.0% of salary, in accordance with Chapter 10 of the Laws of 2000. Certain Tier 2, Tier 3 and Tier 4 members who are participants in special retirement plans are required to make additional member contributions of 1.85%, in addition to their base membership contribution. Tier 6 members are mandated to contribute between 3.0% and 6.0% of salary, depending on salary level, until they separate from City service or until they retire.

The Authority is required to contribute at an actuarially determined rate. The Authority's contributions to NYCERS for the years ended December 31, 2022 and 2021 were $765 million and $807.7 million, respectively.

***Net Pension Liability***

The Authority's net pension liabilities for each of the pension plans reported at December 31, 2022 and 2021 were measured as of December 31, 2021 and 2020, respectively for the MaBSTOA plan and June 30, 2022 and 2021, respectively for NYCERS. The total pension liability for each of the pension plans were determined as of the actuarial valuation dates of January 1, 2021 and 2020 for MaBSTOA plan and June 30, 2021 and 2020 for NYCERS, respectively, and updated to roll forward the total pension liability to the respective measurement dates. The fiduciary net position and additions to and deductions from the fiduciary net position have been determined on the same basis as reported by NYCERS and MaBSTOA. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the Plan; and investments are reported at fair value.

### *Actuarial Assumptions*

The total pension liability in each pension plan's actuarial valuation dates were determined using the following actuarial assumptions for each of the pension plans as follows:

| | MaBSTOA | | NYCERS | |
|---|---|---|---|---|
| **Valuation Date** | **January 1, 2021** | **January 1, 2020** | **June 30, 2021** | **June 30, 2020** |
| **Investment Rate of Return** | 6.50% per annum, net of investment expenses | 6.50% per annum, net of investment expenses | 7.00% per annum, net of investment expenses | 7.00% per annum, net of investment expenses |
| **Salary Increases** | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. | In general, merit and promotion increases, plus assumed General Wage increases of 3.0% per year. | In general, merit and promotion increases, plus assumed General Wage increases of 3.0% per year. |
| **Inflation** | 2.25% | 2.25% | 2.50% | 2.50% |
| **Cost-of Living Adjustments** | 1.35% per annum | 1.35% per annum | 1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees. | 1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees. |
| **Mortality** | Based on experience of all MTA-sponsord pension plan members from 1/1/15 - 12/31/20 reflecting mortality improvement on a generational basis using Scale MP-2021 | Based on experience of all MTA members reflecting mortality improvement on a generational basis using Scale AA. | Mortality tables for service and disability pensioners were developed from an experience study of the plan. The mortality tables for beneficiaries were developed from an experience review. | Mortality tables for service and disability pensioners were developed from an experience study of the plan. The mortality tables for beneficiaries were developed from an experience review. |
| **Pre-retirement** | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments. | N/A | N/A |
| **Post-retirement Healthy Lives** | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. | N/A | N/A |
| **Post-retirement Disabled Lives** | RP-2014 Disabled Annuitant mortality table for males and females. | RP-2014 Disabled Annuitant mortality table for males and females. | N/A | N/A |

### *Expected Rate of Return on Investments*

The long-term expected rate of return on investments of 6.5% and 7.0% for the MaBSTOA plan and NYCERS, respectively, was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocations of each of the funds and the expected real rate of returns (RROR) for each of the asset class in the MaBSTOA plan and NYCERS were as of the measurement dates of December 31, 2021 and June 30, 2022, respectively, are summarized as follows:

| | MaBSTOA Plan | |
|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long-Term Expected Real Rate of Return** |
| US Core Fixed Income | 10.50 % | 1.39 % |
| US Long Bonds | 2.00 | 1.16 |
| US Inflation-Indexed Bonds | 2.00 | 0.60 |
| US High Yield Bonds | 3.00 | 3.92 |
| US Bank/Leveraged Loans | 1.50 | 3.49 |
| Private Credit | 7.00 | 6.93 |
| Emerging Markets Bonds | 2.00 | 3.98 |
| US Large Cap Equity | 18.00 | 4.94 |
| US Small Cap Equity | 7.00 | 6.73 |
| Foreign Developed Equity | 12.00 | 6.27 |
| Emerging Markets Equity | 4.50 | 8.82 |
| Emerging Markets Small Cap Equity | 1.50 | 8.89 |
| US REITs | 1.00 | 5.60 |
| Private Real Estate Property | 4.00 | 4.61 |
| Private Equity | 7.00 | 10.36 |
| Commodities | 4.00 | 1.99 |
| Hedge Funds—MultiStrategy | 13.00 | 3.73 |
| | 100.00 % | |
| Assumed Inflation—Mean | | 2.30 |
| Assumed Inflation—Standard Deviation | | 1.23 |
| Portfolio Nominal Mean Return | | 7.39 |
| Portfolio Standard Deviation | | 12.15 |
| Long Term Expected Rate of Return selected by MTA | | 6.50 |

| | NYCERS | |
|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long-Term Expected Real Rate of Return** |
| Public markets: | | |
| U.S. public market equities | 27.00 % | 7.00 % |
| Developed public market equities | 12.00 | 7.20 |
| Emerging public market equities | 5.00 | 9.00 |
| Fixed income | 30.50 | 2.50 |
| Private markets (alternative investments): | | |
| Private equity | 8.00 | 11.30 |
| Private real estate | 7.50 | 6.70 |
| Infrastructure | 4.00 | 6.00 |
| Opportunistic fixed income | 6.00 | 7.40 |
| | 100.00 % | |
| Assumed inflation—mean | | 2.50 |
| Long term expected rate of return | | 7.00 |

***Discount Rate***

The discount rate used to measure the total pension liability was 6.5% for the MaBSTOA plan as of December 31, 2021 and December 31, 2020 and 7.0% for NYCERS as of June 30, 2022 and June 30, 2021. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable for each pension plan and that employer contributions will be made at the rates determined by each pension plan's actuary. Based on those assumptions, each pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current and non-active members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

***Changes in Net Pension Liability—MaBSTOA***

The Authority's net pension liability for the MaBSTOA plan at the measurement date of December 31, 2021 and 2020 were as follows (in thousands):

| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
|---|---|---|---|
| Balance as of December 31, 2020 | $4,246,385 | $3,306,615 | $ 939,770 |
| Changes for fiscal year 2021: | | | |
| Service cost | 93,934 | - | 93,934 |
| Interest on total pension liability | 274,270 | - | 274,270 |
| Effect of economic/demographic (gains) or losses | (19,177) | - | (19,177) |
| Effect of assumptions changes or inputs | 72,032 | - | 72,032 |
| Benefit payments and withdrawals | (245,427) | (245,427) | - |
| Administrative expense | - | (264) | 264 |
| Member contributions | - | 24,935 | (24,935) |
| Net investment income | - | 416,287 | (416,287) |
| Employer contributions | - | 156,204 | (156,204) |
| Balance as of December 31, 2021 | $4,422,017 | $3,658,350 | $ 763,667 |

| | Total Pension Liability | Plan Fiduciary Net Position | Net Pension Liability |
|---|---|---|---|
| Balance as of December 31, 2019 | $4,122,934 | $3,300,268 | $ 822,666 |
| Changes for fiscal year 2020: | | | |
| Service cost | 95,514 | - | 95,514 |
| Interest on total pension liability | 266,588 | - | 266,588 |
| Effect of economic/demographic (gains) or losses | (720) | - | (720) |
| Effect of assumptions changes or inputs | - | - | - |
| Benefit payments and withdrawals | (237,931) | (237,931) | - |
| Administrative expense | - | (244) | 244 |
| Member contributions | - | 24,709 | (24,709) |
| Net investment income | - | 60,327 | (60,327) |
| Employer contributions | - | 159,486 | (159,486) |
| Balance as of December 31, 2020 | $4,246,385 | $3,306,615 | $ 939,770 |

***Sensitivity of the Net Pension Liability to Changes in the Discount Rate***

The following presents the Authority's net pension liability calculated using the current discount rate for the MaBSTOA Plan, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate used as of each measurement date (in thousands):

| | December 31, 2021 | | | December 31, 2020 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (5.5%) | Discount Rate (6.5%) | 1% Increase (7.5%) | 1% Decrease (5.5%) | Discount Rate (6.5%) | 1% Increase (7.5%) |
| Net pension liability | $ 1,269,779 | $ 763,667 | $ 335,356 | $ 1,421,343 | $ 939,770 | $ 531,498 |

***The Authority's Proportion of Net Pension Liability—NYCERS***

The following table presents the Authority's proportionate share of the net pension liability of NYCERS at the measurement date of June 30, 2022 and 2021, and the proportion percentage of the net pension liability of NYCERS allocated to the Authority (in millions):

| | June 30, 2022 | June 30, 2021 |
|---|---|---|
| The Authority's proportion of the net pension liability | 20.975 % | 21.285 % |
| The Authority's proportionate share of the net pension liability | $ 3,798 | $ 1,365 |

The Authority's proportion of the net pension liability was based on the Authority's actual contributions made to NYCERS for the years ended June 30, 2022 and 2021, relative to the contributions of all employers in the plan.

***Sensitivity of the Proportionate Share of the Net Pension Liability to Changes in the Discount Rate***

The following table presents the Authority's proportionate share of the net pension liability calculated using the current discount rate for NYCERS, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate used as of each measurement date (in thousands):

| | June 30, 2022 | | | June 30, 2021 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (6.0%) | Discount Rate (7.0%) | 1% Increase (8.0%) | 1% Decrease (6.0%) | Discount Rate (7.0%) | 1% Increase (8.0%) |
| The Authority's proportionate share of the net pension liability | $6,043,234 | $3,797,586 | $1,900,797 | $3,581,942 | $1,365,129 | $ (515,695) |

***Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions***

For the years ended December 31, 2022 and 2021, the Authority recognized pension expense, gross of capital project reimbursements and other pension adjustments of $37,465 and $31,837 for December 31, 2022 and 2021, respectively, related to each pension plan as follows (in thousands):

| Pension Plans | December 31, 2022 | December 31, 2021 |
|---|---|---|
| MaBSTOA | $ 132,278 | $ 140,280 |
| NYCERS | 443,388 | (36,550) |
| Total | $ 575,666 | $ 103,730 |

For the years ended December 31, 2022 and 2021, the Authority's reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows (in thousands):

| For the Year Ended December 31, 2022 | MaBSTOA Deferred Outflows of Resources | MaBSTOA Deferred Inflows of Resources | NYCERS Deferred Outflows of Resources | NYCERS Deferred Inflows of Resources | Total Deferred Outflows of Resources | Total Deferred Inflows of Resources |
|---|---|---|---|---|---|---|
| Differences between expected and actual experience | $ 10,906 | $ 16,683 | $ 329,382 | $ 83,469 | $ 340,288 | $ 100,152 |
| Changes in actuarial assumptions | 156,544 | - | 625 | 121,483 | 157,169 | 121,483 |
| Net difference between projected and actual earnings on pension plan investments | - | 111,215 | 694,052 | - | 694,052 | 111,215 |
| Changes in proportion and differences between contributions and proportionate share of contributions | - | - | 44,781 | 298,461 | 44,781 | 298,461 |
| Employer contributions to plan subsequent to the measurement date of net pension liability | 158,619 | - | 378,047 | - | 536,666 | - |
| Total | $ 326,069 | $ 127,898 | $ 1,446,887 | $ 503,413 | $ 1,772,956 | $ 631,311 |

| For the Year Ended December 31, 2021 | MaBSTOA Deferred Outflows of Resources | MaBSTOA Deferred Inflows of Resources | NYCERS Deferred Outflows of Resources | NYCERS Deferred Inflows of Resources | Total Deferred Outflows of Resources | Total Deferred Inflows of Resources |
|---|---|---|---|---|---|---|
| Differences between expected and actual experience | $ 17,004 | $ 3,896 | $ 350,414 | $ 157,915 | $ 367,418 | $ 161,812 |
| Changes in actuarial assumptions | 121,560 | - | 1,262 | 169,353 | 122,823 | 169,353 |
| Net difference between projected and actual earnings on pension plan investments | 57,062 | - | - | 2,003,309 | 57,062 | 2,003,309 |
| Changes in proportion and differences between contributions and proportionate share of contributions | - | - | 47,502 | 295,910 | 47,502 | 295,910 |
| Employer contributions to plan subsequent to the measurement date of net pension liability | 156,204 | - | 416,388 | - | 572,593 | - |
| Total | $ 351,830 | $ 3,896 | $ 815,567 | $ 2,626,488 | $ 1,167,397 | $ 2,630,384 |

The annual differences between the projected and actual earnings on investments are amortized over a five-year closed period beginning the year in which the difference occurs.

The following table presents the recognition periods used by each pension plans to amortize the annual differences between expected and actual experience and the changes in proportion and differences between employer contributions and proportionate share of contributions, beginning the year in which the deferred amount occurs.

| | Recognition Period (in Years) | | |
|---|---|---|---|
| **Pension Plan** | Differences Between Expected and Actual Experience | Changes in Proportion and Differences between Employer Contributions and Proportionate Share of Contributions | Changes in Actuarial Assumptions |
| MaBSTOA | 6.40 | N/A | 6.40 |
| NYCERS | 5.79 | 5.79 | 5.79 |

For the years ended December 31, 2022 and 2021, $536.7 million and $572.6 million, respectively, were reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement dates. The amount of $536.7 million will be recognized as a reduction of the net pension liability in the year ended December 31, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2022 will be recognized as pension expense as follows (in thousands):

| Year Ending December 31 | MaBSTOA | NYCERS | Total |
|---|---|---|---|
| 2023 | $ 37,990 | $ 36,320 | $ 74,310 |
| 2024 | (23,044) | 100,661 | 77,617 |
| 2025 | 24,723 | (49,913) | (25,190) |
| 2026 | (11,613) | 474,355 | 462,742 |
| 2027 | 8,193 | 4,004 | 12,197 |
| Thereafter | 3,303 | - | 3,303 |
| Total | $ 39,552 | $ 565,427 | $ 604,979 |

*Deferred Compensation Plans*—As permitted by Internal Revenue Code Section 457, the Authority has established a trust or custodial account to hold plan assets for the exclusive use of the participants and their beneficiaries. Plan assets and liabilities are not reflected on the Authority's consolidated statements of net position.

Certain Authority employees are participants in a second deferred compensation plan established in accordance with Internal Revenue Code Section 401(k). Participation in the plan is available to all nonunion and certain other employees. All amounts of compensation deferred under the plan, and all income attributable to such compensation, are solely the property of the participants; accordingly, this plan is not reflected in the accompanying consolidated statements of net position. The Authority is not required to contribute to the plan and did not contribute to the plan in 2022 and 2021.

## 8. OTHER POSTEMPLOYMENT BENEFITS

The Authority participates in a defined benefit other postemployment benefits (OPEB) plan for its employees, the Metropolitan Transportation Authority Retiree Welfare Benefits Plan (OPEB Plan). A description of the Plan follows:

### *Plan Description*

The MTA Retiree Welfare Benefits Plan (OPEB Plan) and the related Trust Fund (Trust) was established on January 1, 2009 for the exclusive benefit of MTA and related agencies retired employees and their eligible spouses and dependents, to fund some of the OPEB provided in accordance with the Authority's various collective bargaining agreements. Postemployment benefits are part of an exchange of salaries and benefits for employee services rendered. Amounts contributed to the OPEB Plan are held in an irrevocable trust and may not be used for any other purpose than to fund the costs of health and welfare benefits of its eligible participants.

The OPEB Plan and the Trust are exempt from federal income taxation under Section 115(1) of the Internal Revenue Code. The OPEB Plan is classified as a cost-sharing multiple-employer defined benefit OPEB plan.

The OPEB Plan Board of Managers, comprised of the MTA Chairman, MTA Chief Financial Officer and MTA Director of Labor Relations, are the administrators of the OPEB Plan. The MTA Board has the right to amend, suspend or terminate the OPEB Plan.

The separate annual financial statements of the OPEB Plan may be obtained by writing to MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 10004 or at www.mta.info.

**Benefits Provided**—The benefits provided by the OPEB Plan include medical, pharmacy, dental, vision, life insurance and a Medicare supplemental plan. The different types of benefits provided vary by employee type (represented employees versus non-represented) and the relevant collective bargaining agreements. Certain benefits are provided upon retirement as defined in the applicable pension plan. The Authority provides benefits to certain former employees if separated from service within 5 years of attaining retirement eligibility. Employees of the Authority are members of NYCERS and the MaBSTOA Plan.

The Authority participates in the New York State Health Insurance Program (NYSHIP) and provides medical and prescription drug benefits, including Medicare Part B reimbursements, to many of its retirees. NYSHIP offers a Preferred Provider Organization (PPO) plan and several Health Maintenance Organization (HMO) plans. Represented and other New York City Transit employees who retired prior to January 1, 1996 or January 1, 2001, do not participate in NYSHIP. These benefits are provided either through a self-insured health plan, a fully insured health plan or an HMO.

The Authority is a participating employer in NYSHIP. The NYSHIP financial report can be obtained by writing to NYS Department of Civil Service, Employee Benefits Division, Alfred E. Smith Office Building, 805 Swan Street, Albany, NY 12239.

**OPEB Plan Eligibility**—To qualify for benefits under the OPEB Plan, a former employee of the Authority must:

(a) have retired;

(b) be receiving a pension;

(c) have at least 10 years of credited service as a member of NYCERS or the MaBSTOA Plan; and

(d) have attained the minimum age requirement (unless within 5 years of commencing retirement for certain members). A represented retired employee may be eligible only pursuant to the relevant collective bargaining agreement.

Surviving Spouse and Other Dependents—

- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of retired managers and certain non-represented retired employees.

- Represented retired employees must follow the guidelines of their collective bargaining agreements regarding continued health coverage for a surviving spouse or domestic partner and surviving dependents. The surviving spouse coverage continues until spouse is eligible for Medicare for represented employees, retiring on or after:

  - May 21, 2014 for Transport Workers Union (TWU) Local 100;
  - September 24, 2014 for Amalgamated Transit Union (ATU) Local 726;
  - October 29, 2014 for ATU Local 1056;

The OPEB Plan Board of Managers has the authority to establish and amend the benefits that will be covered under the OPEB Plan, except to the extent that they have been established by collective bargaining agreement.

**Contributions**—The Authority is not required by law or contractual agreement to provide funding for the OPEB Plan, other than the "pay-as-you-go" (PAYGO) amounts. PAYGO is the cost of benefits necessary to provide the current benefits to retirees and eligible beneficiaries and dependents. Employees are not required to contribute to the OPEB Plan. The OPEB Plan Board has the authority for establishing and amending the funding policy. For the years ended December 31, 2022 and 2021, the Authority paid $589.6 million and $561.6 million of PAYGO to the OPEB Plan, respectively. The PAYGO amounts included an implicit rate subsidy adjustment of $10.8 million and $9.6 million for the years ended December 31, 2022 and 2021, respectively. There were no additional prior year implicit rate subsidy adjustments for the year ended December 31, 2022.

The discount rate estimates investment earnings for assets earmarked to cover retiree health benefits. Under GASB Statement No. 75, the discount rate depends on the nature of underlying assets for funded plans. Since the amount of benefits paid in 2021 and 2020 exceeded the current market value of the assets, a depletion date is assumed to occur immediately. Therefore, the discount rate is set equal to the municipal bond index. The MTA elected the Bond Buyer 20-Bond General Obligation Index. As a result, the discount rates as of December 31, 2021 and December 31, 2020, the measurement dates, are 2.06% and 2.12%, respectively.

Employer contributions include the implicit subsidy, or age-related subsidy inherent in the healthcare premiums structure. The implicit subsidy arises when an employer allows a retiree and their dependents to continue on the active plans and pay the active premiums. Retirees are not paying the true cost of their benefits because they have higher utilization rates than actives and therefore are partially subsidized by the active employees. As shown in the following table, for the years ended December 31, 2021 and 2020, the employer made a cash payment for retiree healthcare of $9.6 million and $16.4 million, respectively, as part of the employer's payment for active-employee healthcare benefits. For purposes of GASB Statement No. 75, this payment made on behalf of the active employees should be reclassified as benefit payments for retiree health care to reflect the retirees' underlying age-adjusted, retiree benefit costs (in thousands).

| Blended and Age-adjusted Premium | 2021 Retirees | 2020 Retirees |
|---|---|---|
| | (in thousands) | |
| Total blended premiums | $ 551,980 | $ 473,163 |
| Employment payment for retiree healthcare | 9,651 | 16,435 |
| Net payments | $ 561,631 | $ 489,598 |

***Net OPEB Liability***

The Authority's proportionate share of the Plan's net OPEB liability reported at December 31, 2022 and 2021 was measured as of the OPEB Plan's fiscal year-end of December 31, 2021 and 2020, respectively. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation date of July 1, 2021 and July 1, 2019 and rolled forward to December 31, 2021 and 2020, respectively. The Authority's proportion of the net OPEB liability was based on a projection of the Authority's long-term share of contributions to the OPEB Plan relative to the projected contributions of all participating employers. The following table presents the Authority's proportionate share of the net OPEB liability and corresponding proportion percentage at the measurement date (in thousands):

| | December 31, 2021 | December 31, 2020 |
|---|---|---|
| The Authority's proportion of the net OPEB liability | 70.825 % | 67.555 % |
| The Authority's proportionate share of the net OPEB liability | $ 17,675,397 | $ 16,489,792 |

**OPEB Plan Fiduciary Net Position**—The fiduciary net position has been determined on the same basis used by the OPEB plan. The OPEB plan uses the accrual basis of accounting under which contributions from the employer are recognized when paid. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Investments are reported at fair value based on quoted market prices or net asset value.

***Actuarial Assumptions***

Actuarial valuation involves estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future, such as future employment, mortality and health care cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan, which refers to the plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees. The projections include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members at that time. The Authority may not be obligated to provide the same types or levels of benefits to retirees in the future.

The total OPEB liability was determined by actuarial valuations performed on July 1, 2021 and July 1, 2019. Update procedures were used to roll forward the total OPEB liability to December 31, 2021 and

2020, the measurement dates, respectively. The actuarial valuations were performed using the following actuarial assumptions, applied to all periods included in the measurement, unless specified:

| | | |
|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 |
| Measurement date | December 31, 2021 | December 31, 2020 |
| Discount rate | 2.06%, net of expenses | 2.12%, net of expenses |
| Inflation | 2.30% | 2.25% |
| Actuarial cost method | Entry age normal | Entry age normal |
| Amortization method | Level percentage of payroll | Level percentage of payroll |
| Normal cost increase factor | 4.25% | 4.25% |
| Salary increases | Varies by years of service and differs for members of the various Pension Plans | Varies by years of service and differs for members of the various Pension Plans |
| Investment rate of return | 2.06% | 2.12% |

**Salary Scale**—Salary increases vary by years of service and differ for members of NYCERS and the MaBSTOA Plan. Rates are shown below for the measurement date December 31, 2021:

| | | | MaBSTOA | |
|---|---|---|---|---|
| **Years of Service** | **NYCERS Rate of Increase** | **Years of Service** | **Operating Employee Rate** | **Non-operating Employee Rate** |
| 0 | 19.00 % | 0 | 12.00 % | 6.00 % |
| 1 | 14.00 | 1 | 12.00 | 7.00 |
| 2 | 10.00 | 2 | 15.00 | 6.50 |
| 3 | 9.00 | 3 | 5.00 | 6.25 |
| 4 | 6.00 | 4 | 3.00 | 6.00 |
| 5 | 5.00 | 5–9 | 3.00 | 4.50 |
| 6–22 | 4.50 | 10 | 3.00 | 4.30 |
| 23+ | 4.00 | 11 | 3.00 | 4.10 |
| | | 12 | 3.00 | 3.90 |
| | | 13 | 3.00 | 3.80 |
| | | 14 | 3.00 | 3.70 |
| | | 15 | 3.00 | 3.60 |
| | | 16 | 3.00 | 3.50 |
| | | 17 | 3.00 | 3.40 |
| | | 18 | 3.00 | 3.30 |
| | | 19+ | 3.00 | 3.25 |

**Healthcare Cost Trend**—The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2021 utilizing the baseline assumptions included in the model, except inflation of 2.25% for medical and pharmacy benefits. Further adjustments apply based on percentage of costs associated with administrative expenses, inflation on administrative costs, and aging factors. For NYSHIP benefits, trends are multiplied by 90% to reflect that NYSHIP trends have been generally lower than trends projected by the Getzen model over the past 10 years. Separate long-term trends are used for Medicare Part B reimbursements and for dental and vision benefits (3.5% per year). The self-insured trend is applied directly for represented employees. No self-insured post-65 trend is assumed during 2021 to reflect the approximately 90% reduction in the contracted Medicare Advantage plan premiums for 2022.

**Healthcare Cost Trend Rates**—The following lists illustrative rates for the NYSHIP and self-insured trend assumptions for the measurement date December 31, 2021:

| | NYSHIP Trend | | Self-Insured Trend | |
|---|---|---|---|---|
| Trend from Year Ending | Pre-65 Trend | Post-65 Trend | Pre-65 Trend | Post-65 Trend |
| 2021 to 2022 | 5.30 % | 4.60 % | 5.90 % | 0.00 % |
| 2022 to 2023 | 5.10 | 4.60 | 5.60 | 5.10 |
| 2023 to 2024 | 4.80 | 4.60 | 5.40 | 5.10 |
| 2024 to 2025 | 4.60 | 4.60 | 5.10 | 5.10 |
| 2025 to 2026 | 4.50 | 4.50 | 5.00 | 5.00 |
| 2026 to 2027 | 4.40 | 4.40 | 4.90 | 4.80 |
| 2027 to 2028 | 4.30 | 4.30 | 4.70 | 4.70 |
| 2028 to 2029 | 4.20 | 4.20 | 4.60 | 4.60 |
| 2029 to 2030 | 4.00 | 4.00 | 4.50 | 4.50 |
| 2030 to 2031 | 3.90 | 3.90 | 4.40 | 4.40 |
| 2040 to 2041 | 3.90 | 3.90 | 4.30 | 4.30 |
| 2050 to 2051 | 3.80 | 3.80 | 4.20 | 4.20 |
| 2060 to 2061 | 3.80 | 3.80 | 4.20 | 4.20 |
| 2070 to 2071 | 3.50 | 3.50 | 3.90 | 3.90 |
| 2080 to 2081 | 3.30 | 3.30 | 3.70 | 3.70 |
| 2090 to 2091 | 3.30 | 3.30 | 3.70 | 3.70 |
| 2100 to 2101 | 3.30 | 3.30 | 3.70 | 3.70 |

For purposes of applying the Entry Age Normal cost method, the healthcare trend prior to the valuation date is based on the ultimate rates, which are 3.3% for NYSHIP costs, 3.7% for self-insured medical and pharmacy costs, and 3.6% for Medicare Part B costs.

**Mortality**— All mortality rates (except accidental death for active police members) are projected on a generational basis using the Society of Actuaries Mortality Improvement Scale MP-2021. As generational tables, they reflect mortality improvement both before and after the measurement date. The post-retirement mortality assumption is based on an experience analysis covering the period from January 1, 2015 to December 31, 2020 for the MTA-sponsored pension plans. The mortality rates vary by employee type.

For the Authority, the mortality rates are based on the Pri.H-2012(BC) Mortality Table, headcount weighted with blue collar adjustments for males and females with separate rates for employees, healthy annuitants and disabled annuitants. Employee and healthy annuitant male rates are multiplied by 92%.

**Expected Rate of Return on Investments**—The best-estimate range for the long-term expected rate of return was determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions as of December 31, 2021 are as follows:

| Asset Class | Index | Target Allocation | Long-Term Expected Arithmetic Real Rate of Return |
|---|---|---|---|
| US Cash | BAML 3-Mo Tbill | 100.00 % | -0.26% |
| | | | |
| Assumed Inflation—Mean | | | 2.30 % |
| Assumed Inflation—Standard Deviation | | | 1.23 % |
| | | | |
| Portfolio Nominal Mean Return | | | 2.03 % |
| Portfolio Standard Deviation | | | 1.11 % |
| | | | |
| Long Term Expected Rate of Return selected by MTA | | | 2.06 % |

**Discount Rate—**The plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total OPEB liability is equal to the single equivalent rate that results in the same actuarial present value as the long-term expected rate of return applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payments, to the extent that the plan's fiduciary net position is not projected to be sufficient. Therefore, the discount rate is set equal to the Bond Buyer General Obligation 20-Bond Municipal Bond Index as of December 31, 2021 and 2020 of 2.06% and 2.12%, respectively.

**Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate**—The following presents the Authority's proportionate share of the net OPEB liability, as well as what the Authority's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for the measurement:

| | December 31, 2021 | | | December 31, 2020 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (1.06%) | Discount Rate (2.06%) | 1% Increase (3.06%) | 1% Decrease (1.12%) | Discount Rate (2.12%) | 1% Increase (3.12%) |
| | | (in thousands) | | | (in thousands) | |
| Proportionate share of the net OPEB liability | $ 20,438,272 | $ 17,675,397 | $ 15,432,891 | $ 18,981,683 | $ 16,489,805 | $ 14,451,653 |

**Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates**—The following presents the Authority's proportionate share of the net OPEB liability, as well as what the Authority's proportionate share of the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rates used for the measurement:

| | December 31, 2021 | | | December 31, 2020 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease | Healthcare Cost Current Trend Rate * (in thousands) | 1% Increase | 1% Decrease | Healthcare Cost Current Trend Rate * (in thousands) | 1% Increase |
| Proportionate share of the net OPEB liability | $ 15,013,791 | $ 17,675,397 | $ 21,084,009 | $ 13,913,383 | $ 16,489,792 | $ 19,790,306 |

* For further details, refer to the Health Care Cost Trend Rates tables in the Actuarial Assumptions section of this Note Disclosure.

***OPEB Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB***—For the year ended December 31, 2022 and 2021, the Authority recognized OPEB expense of $1.4 billion and $1.3 billion, respectively, which represents its proportionate share of the Plan's OPEB expense.

The annual differences between the projected and actual earnings on investments are amortized over a 5-year closed period beginning the year in which the difference occurs. The annual differences between expected and actual experience, changes in assumptions and the changes in proportion and differences between employer contributions and proportionate share of contributions are amortized over a 7.6-year close period, beginning the year in which the deferred amount occurs.

At December 31, 2022 and 2021, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows ($ in thousands):

| | December 31, 2022 | | December 31, 2021 | |
|---|---|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ 293,351 | $ 29,723 | $ 130,326 | $ 33,782 |
| Changes in assumptions | 1,382,672 | 1,040,210 | 1,589,762 | 723,075 |
| Net difference between projected and actual earnings on OPEB plan investments | 33,369 | - | 40,906 | - |
| Changes in proportion and differences between contributions and proportionate share of contributions | 768,309 | 184,779 | 140,747 | 215,071 |
| Employer contributions to the plan subsequent to the measurement of net OPEB liability | 589,589 | - | 576,808 | - |
| Total | $ 3,067,290 | $ 1,254,712 | $2,478,549 | $ 971,928 |

For the year ended December 31, 2022 and 2021, $589.5 million and $576.8 million, respectively, were reported as deferred outflows of resources related to OPEB resulting from both the Authority's contributions subsequent to the measurement date and an implicit rate subsidy adjustment. These amounts include both the Authority's contributions subsequent to the measurement date and an implicit rate subsidy adjustment that will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2023 and December 31, 2022, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2022 will be recognized in OPEB expense as follows:

| Year Ending December 31: | |
|---|---|
| 2023 | $ 192,410 |
| 2024 | 186,321 |
| 2025 | 138,979 |
| 2026 | 194,388 |
| 2027 | 263,567 |
| Thereafter | 247,324 |
| Total | $ 1,222,989 |

## 9. LOANS PAYABLE

**Loans Payable**—The MTA and the New York Power Authority (NYPA) entered into an updated Energy Services Program Agreement (ESP Agreement). The ESP Agreement authorized the Authority, as an affiliate of the MTA, to enter into a Customer Installation Commitment (CIC) with NYPA for turn-key, energy efficiency projects, which would usually be long-term funded and constructed by NYPA. The repayment period for the NYPA loan can be up to 20 years, but can be repaid at any time without penalty.

The debt service requirements at December 31, 2022 are as follows (in thousands):

| Year | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 6,366 | $1,624 | $ 7,990 |
| 2024 | 6,389 | 1,418 | 7,807 |
| 2025 | 6,341 | 1,216 | 7,557 |
| 2026 | 6,043 | 1,015 | 7,058 |
| 2027 | 6,019 | 824 | 6,843 |
| 2028–2032 | 20,901 | 1,633 | 22,534 |
| 2033–2037 | 1,064 | 27 | 1,091 |
| Total | $53,123 | $7,757 | $60,880 |
| Less current portion | 6,366 | | |
| Long-term loans payable | $46,757 | | |

The above interest amounts include both fixed and variable rate calculations. Interest on the variable-rate loan is paid at the Securities Industry and Financial Markets Association Municipal Swap Index (SIFMA) rate and is reset annually. The SIFMA rate as of December 31, 2022 was 3.66%.

## 10. RELATED PARTY TRANSACTIONS

The Authority receives support services from the MTA in the areas of budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services, most of which are charged back to the Authority through intercompany billings. The MTA also provides funding for the Authority's capital program via MTA debt issuance, federal capital grant pass-throughs, and proceeds from the sale of tax benefits on leasing transactions. The Authority recognizes funds contributed to Transit capital programs as contributed capital in the consolidated statements of revenues, expenses, and changes in net position. State and City tax—supported subsidies received by the Authority from the MTA to support operations are recorded as nonoperating revenues. The MTA also provides short-term loans, as required, to supplement the Authority's working capital needs. In 2020, the MTA provided $800.0 million to the Authority as a short-term loan, which was paid back at the end of 2021.

The Authority has intercompany transactions with MTA, MNCR, LIRR, MTA Bus, TBTA, and SIRTOA related to farecard settlements, service agreements, shared operating contracts, inter-agency loan transactions, and other operating receivables and payables.

The resulting receivables and payables from the above transactions are recorded in Due from / Payable to MTA and constituent authorities, Due from / to MTA for the purchase of capital assets and MTA loan, included in the accompanying consolidated statements of net position.

Related party transactions consist of the following at December 31, 2022 and 2021 (in thousands):

| | 2022 | | 2021 | |
|---|---|---|---|---|
| | Receivable | (Payable) | Receivable | (Payable) |
| MTA | $ 11,044,559 | $ (6,500,143) | $ 6,428,072 | $ (5,703,763) |
| Constituent authorities | 129,189 | (22,471) | 138,290 | (23,218) |
| Total MTA and constituent authorities | $ 11,173,748 | $ (6,522,614) | $ 6,566,362 | $ (5,726,981) |

Shown as a separate line item on the statements of net position under due from MTA for purchase of capital assets is a balance of $1,026,738 and $975,476 as of December 31, 2022 and 2021, respectively.

## 11. FUEL HEDGE

MTA partially hedges its fuel cost exposure using financial hedges. All MTA fuel hedges provide for up to 24 monthly settlements. The table below summarizes the active ultra-low sulfur diesel (ULSD) hedges in whole dollars:

| Counterparty | JPMorgan | Goldman Sachs | JPMorgan | Goldman Sachs | BOA_ Merrill | Goldman Sachs |
|---|---|---|---|---|---|---|
| Trade Date | 1/26/2021 | 2/23/2021 | 3/31/2021 | 4/29/2021 | 6/2/2021 | 6/29/2021 |
| Effective Date | 1/1/2022 | 2/1/2022 | 3/1/2022 | 4/1/2022 | 5/1/2022 | 6/1/2022 |
| Termination Date | 12/31/2022 | 1/31/2023 | 2/28/2023 | 3/31/2023 | 4/30/2023 | 5/31/2023 |
| Price/Gal | $1.61 | $1.78 | $1.81 | $1.94 | $2.05 | $2.06 |
| Notional Qnty (Gal) | 2,862,779 | 2,826,759 | 2,826,761 | 2,826,752 | 2,826,757 | 2,826,738 |

| Counterparty | JPMorgan | BOA_ Merrill | BOA_ Merrill | BOA_ Merrill | Cargill | Goldman Sachs |
|---|---|---|---|---|---|---|
| Trade Date | 7/27/2021 | 8/31/2021 | 9/29/2021 | 10/25/2021 | 11/30/2021 | 12/28/2021 |
| Effective Date | 7/1/2022 | 8/1/2022 | 9/1/2022 | 10/1/2022 | 11/1/2022 | 12/1/2022 |
| Termination Date | 6/30/2023 | 7/31/2023 | 8/31/2023 | 9/30/2023 | 10/31/2023 | 11/30/2023 |
| Price/Gal | $2.05 | $2.03 | $2.15 | $2.29 | $2.01 | $2.22 |
| Notional Qnty (Gal) | 2,826,751 | 2,826,725 | 2,826,740 | 2,826,749 | 2,826,751 | 2,826,765 |

| Counterparty | Goldman Sachs | Cargill | Cargill | Cargill | Goldman Sachs | Goldman Sachs |
|---|---|---|---|---|---|---|
| Trade Date | 1/25/2022 | 2/28/2022 | 3/31/2022 | 4/28/2022 | 5/31/2022 | 6/27/2022 |
| Effective Date | 1/1/2023 | 2/1/2023 | 3/1/2023 | 4/1/2023 | 5/1/2023 | 6/1/2023 |
| Termination Date | 12/31/2023 | 1/31/2024 | 2/29/2024 | 3/31/2024 | 4/30/2024 | 5/31/2024 |
| Price/Gal | $2.36 | $2.50 | $2.75 | $2.87 | $2.95 | $3.02 |
| Notional Qnty (Gal) | 2,826,779 | 2,826,759 | 2,826,761 | 2,826,752 | 2,826,757 | 2,826,738 |

| Counterparty | BOA_ Merrill | BOA_ Merrill | Cargill | BOA_ Merrill | BOA_ Merrill | Goldman Sachs |
|---|---|---|---|---|---|---|
| Trade Date | 7/25/2022 | 8/29/2022 | 9/29/2022 | 10/25/2022 | 11/30/2022 | 12/28/2022 |
| Effective Date | 7/1/2023 | 8/1/2023 | 9/1/2023 | 10/1/2023 | 11/1/2023 | 12/1/2023 |
| Termination Date | 6/30/2024 | 7/31/2024 | 8/31/2024 | 9/30/2024 | 10/31/2024 | 11/1/2024 |
| Price/Gal | $2.87 | $2.96 | $2.68 | $2.74 | $2.76 | $2.70 |
| Notional Qnty (Gal) | 2,826,751 | 2,826,725 | 2,826,740 | 2,826,749 | 2,826,751 | 2,826,765 |

The monthly settlements are based on the daily prices of the respective commodities whereby MTA will either receive a payment, or make a payment to the various counterparties, depending on the average monthly price of the commodities in relation to the contract prices. At a contract's termination date, the Authority will take delivery of the fuel. As of December 31, 2022, the total outstanding notional value of the ULSD contracts was 52.1 million gallons with a positive fair market value of $19.2 million. The valuation of each trade was based on discounting future net cash flows to a single current amount (the income approach) using observable commodity futures prices (Level 2 inputs).

The Transit Authority recognized a fuel hedge loss of $1.0 million and $0.02 million in 2022 and 2021, respectively.

## 12. RISK MANAGEMENT

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of its assets; injuries to persons, including employees; and natural disasters.

The Authority is self-insured up to certain per occurrence limits for liability claims arising from injuries to persons, excluding employees. For claims arising from incidents that occurred on or after November 1, 2001, but before November 1, 2006, the self-insured retention limit was $7 million per occurrence. Claims arising on or after November 1, 2006, but before November 1, 2009 were subject to an $8 million limit. Effective November 1, 2009, the retention limit was increased to $9 million per occurrence and effective November 1, 2012, the retention limit was increased to $10 million. Effective October 31, 2015, the self-insured retention limit was increased to $11 million. Lower limits applied for claims arising prior to November 1, 2001. The Authority is self-insured for work-related injuries to employees. The annual cost associated with injuries to persons, other than employees, and damage to third-party property, is reflected in expenses as public liability claims in the accompanying consolidated statements of revenues, expenses and change in net position.

The Authority establishes its liability for injuries to employees and to the general public on the basis of independent actuarial estimates of future liability.

A summary of activity in estimated liability arising from injuries to persons, including employees, and damage to third-party property, for the years ended December 31, 2022 and 2021, is as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Balance at beginning of year | $3,619,531 | $3,397,276 |
| Activity during the year: | | |
| Current year claims and changes in estimates | 646,948 | 498,082 |
| Claims paid | (352,175) | (275,827) |
| Balance at end of year | 3,914,304 | 3,619,531 |
| Less current portion | (391,719) | (369,470) |
| Long-term liability | $3,522,585 | $3,250,061 |

**Liability Insurance—First Mutual Transportation Assurance Company (**FMTAC), an insurance captive subsidiary of MTA, operates a liability insurance program (ELF) that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. For claims arising from incidents that occurred on or after November 1, 2006, but before November 1, 2009, the self-insured retention limit is: $8 million for the Authority. For claims arising from incidents that occurred on or after November 1, 2009, but before November 1, 2012, the self-insured retention limit is: $9 million for Authority. Effective November 1, 2012, the self-insured retention limits for ELF was increased to $10 million for the Authority. Effective October 31, 2015 the self-insured retention limit for ELF was increased to $11 million for the Authority. The maximum amount of claims arising out of any one occurrence is the total assets of the program available for claims, but in no event greater than $50 million. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF program for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying the other MTA Group entities above their specifically assigned self-insured retention with a limit of $50 million per occurrence with a $50 million annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. On December 31, 2022, the balance of the assets in this program was $174.0 million.

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords the MTA Group additional coverage limits of $357.5 million for a total limit of $407.5 million ($357.5 million excess of $50 million). In certain circumstances, when the assets in the program described in the preceding paragraph are exhausted due to payment of claims, the All-Agency Excess Liability Insurance will assume the coverage position of $50 million.

On March 1, 2022, the “nonrevenue fleet” automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA Long Island Rail Road, MTA Staten Island Railway, MTA Police, MTA Metro-North Railroad, MTA Inspector General, MTA Construction & Development Company, and MTA Headquarters with the exception of the Authority.

On March 1, 2022, the “Access-A-Ride” automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA New York City Transit’s Access-A-Ride program, including the contracted operators. This policy provides a $1 million per occurrence limit excess of a $2 million self-insured retention.

**Property Insurance**—Effective May 1, 2022, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2022, FMTAC directly insures property damage claims of the Related Entities* in excess of a $25 million per occurrence deductible, subject to an annual $75 million aggregate deductible. The total All Risk program annual limit is $500 million per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

*Related entities are Triborough Bridge and Tunnel Authority, Metro-North Commuter Railroad Company, The Long Island Rail Road Company, New York City Transit Authority, Staten Island Rapid Transit Operating Authority, MTA Bus Company, MTA Construction & Development Company and MTA Grand Central Madison Concourse Operating Company.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of $7.5 million per occurrence. In addition to the noted $25 million per occurrence self-insured deductible, MTA self-insures above that deductible for $85.731 million within the overall $500 million per occurrence property program as follows: $13.296 million (or 26.59%) of the primary $50 million layer, plus $17.127 million (or 34.25%) of the $50 million excess $50 million layer, plus $8.08 million (or 16.16%) of the $50 million excess $100 million layer, plus $2.845 million (or 5.69%) of the $50 million excess $150 million layer, plus $1.398 million (or 2.79%) of the $50 million excess $200 million layer, plus $10.559 million (or 21.11%) of the $50 million excess $250 million layer, plus $9.182 million (or 18.36%) of the $50 million excess $300 million layer, plus $6.247 million (or 12.49%) of the $50 million excess $350 million layer, plus $8.747 million (or 17.49%) of the $50 million excess $400 million layer, and $8.247 million (or 16.49%) of the $50 million excess $450 million layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the $500 million per occurrence noted above, FMTAC’s property insurance program has been expanded to include a further layer of $100 million of fully collateralized earthquake coverage for an event of a certain index value and for storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three year period from May 12, 2020 to April 30, 2023. The expanded protection is reinsured by MetroCat Re Ltd. 2020-1, a Bermuda special purpose insurer independent from the MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2020-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values, and also for an earthquake event of a certain index value.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act (TRIPRA) of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of $200 million. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of $215 million for any one occurrence and in the annual aggregate (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds $5 million and less than the $200 million TRIPRA trigger up to a maximum recovery of $200 million for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of $215 million. Recovery under the terrorism policy is subject to a deductible of $25 million per occurrence and $75 million in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed $75 million future losses in that policy year are subject to a deductible of $7.5 million. The terrorism coverages expire at midnight on May 1, 2023.

No FMTAC reimbursements were processed for the 21 claims for the Authority at December 31, 2022. At December 31, 2022, FMTAC had $1,113 million of assets to insure current and future claims.

## 13. CONTINGENCIES

The Authority is involved in various litigation and claims involving personal liability claims and certain other matters. The ultimate outcome of these claims and suits cannot be predicted at this time. Nevertheless, management does not believe that the ultimate outcome of these matters will have a material effect on the consolidated financial position of the Authority.

Under the terms of federal and state grants, periodic audits are required, and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursements to the grantor agencies. While questioned costs may occur, ultimate repayments required of the MTA or the Authority have been infrequent in prior years.

In accordance with GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, in 2022 and 2021, the Authority recognized $0.5 million and $35.2 million, respectively, in pollution remediation expenses. The expense provision was measured at its current value utilizing the prescribed expected cash flow method (see Note 2). Pollution remediation obligations are estimates and subject to changes resulting from price increases or reductions, technology, or changes in applicable laws or regulations. The Authority does not expect any recoveries of cost that would have a material effect on the recorded obligations.

A summary of the activity in pollution remediation liability at December 31, 2022 and 2021, were as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Balance at beginning of year | $ 97,424 | $ 99,635 |
| Activity during the year: | | |
| Changes in estimates | 483 | 35,227 |
| Payments | 888 | (37,438) |
| Balance at end of year | 98,795 | 97,424 |
| Less current portion | (19,759) | (19,485) |
| Long-term liability | $ 79,036 | $ 77,939 |

The Authority's pollution remediation liability primarily consists of future remediation activities associated with asbestos removal, lead abatement, ground water contamination, and soil remediation.

## 14. CONDENSED COMPONENT UNIT INFORMATION

The following table presents condensed financial information for MaBSTOA, a blended component unit of the Authority (in thousands):

| **December 31:** | **2022** | **2021** (Restated) |
|---|---|---|
| Current assets | $ 8,324 | $ 8,470 |
| Capital assets | 751,841 | 681,589 |
| Deferred outflows of resources | 326,069 | 351,830 |
| Total assets and deferred outflows of resources | 1,086,234 | 1,041,889 |
| Current liabilities | 513,937 | 582,624 |
| Non-current liabilities | 1,683,629 | 1,807,740 |
| Deferred inflows of resources | 127,897 | 3,896 |
| Total liabilities and deferred inflows of resources | 2,325,463 | 2,394,260 |
| Net Investment in capital assets | 739,175 | 667,763 |
| Unrestricted | (1,978,404) | (2,020,134) |
| Total net position | $ (1,239,229) | $ (1,352,371) |
| **For the Year Ended December 31:** | | |
| Fare revenue | $ 266,245 | $ 249,883 |
| Advertising and other revenue | 14,606 | 14,499 |
| Total operating revenue | 280,851 | 264,382 |
| Total labor expenses | 1,161,241 | 1,173,324 |
| Total non-labor expenses | 151,787 | 138,649 |
| Depreciation | 102,671 | 89,165 |
| Total operating expenses | 1,415,699 | 1,401,138 |
| Operating (deficit) surplus | (1,134,848) | (1,136,756) |
| Loss before capital contributions | (1,134,848) | (1,136,756) |
| Capital contributions | 1,247,990 | 1,160,552 |
| Change in net position | 113,142 | 23,796 |
| Net position, beginning of the year | (1,352,371) | (1,376,167) |
| Net position, end of year | $ (1,239,229) | $ (1,352,371) |

## 15. NOVEL CORONAVIRUS (COVID-19)

On March 12, 2020, the World Health Organization declared the COVID-19 outbreak to be a pandemic in the face of the global spread of the virus. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was first detected in China, and has since spread globally, including to the United States and to New York State. On March 7, 2020, Governor Cuomo declared a Disaster Emergency in the State of New York. On March 13, 2020, President Trump declared a national state of emergency as a result of the COVID-19 pandemic. By order of Governor Cuomo ("New York State on PAUSE"), effective March 22, 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The PAUSE order was lifted on May 15, 2020 for five New York regions that met the requirements to start opening. However, a new order was signed by Governor Cuomo on May 15, 2020 extending the PAUSE to June 13, 2020 for New York City, Long Island, and the Hudson Valley. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a sharp decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. A significant development was the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15, 2021 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. MTA has seen ridership steadily improve since the low point of ridership during the pandemic in 2020; but continues to be well-below 2019 levels.

***Coronavirus Aid, Relief and Economic Security Act ("CARES Act').*** The CARES Act is a $2.2 trillion economic stimulus bill passed by Congress and signed into law by the President on March 27, 2020 in response to the economic fallout of the COVID-19 pandemic in the United States. The CARES Act through the Federal Transit Administration's ("FTA") formula funding provisions provided approximately $4 billion to MTA. Funding was provided at a 100 percent Federal share, with no local match required, and is available to support operating, and other expenses generally eligible under those programs and incurred beginning on January 20, 2020, to prevent, prepare for, and respond to the COVID-19 pandemic, including operating service for essential workers, such as medical personnel and first responders. On May 8, 2020, the FTA approved MTA's initial grant application of $3.9 billion. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately $98 million in additional formula grant allocations to MTA for a CARES Act grant total of $4.0 billion. As of December 31, 2020, a total of $4.0 billion was released to MTA for operating assistance that occurred from January 20, 2020, through July 31, 2020. The MTA has received all CARES Act funding as provided in the first congressional relief package.

***Federal Reserve Bank of New York's Municipal Liquidity Facility LLC ("MLF")***. Due to the COVID-19 pandemic, the Federal Reserve established the MLF in April 2020 as a source of emergency financing by being available to purchase up to $500 billion of short-term notes from state and local governments and certain public entities to ensure they had access to credit during the COVID-19 pandemic. MTA was able to utilize the MLF twice before the MLF window closed at the end of December 2020. On August 26, 2020, MTA directly placed with the MLF $450.72 million Transportation Revenue BANs, Series 2020B, which were issued to retire existing Transportation Revenue BANs maturing on September 1, 2020. The MTA subsequently retired the MLF $450.72 million Transportation Revenue BANs, Series 2020B, with an issuance of Dedicated Tax Funds bonds on March 1, 2022. MTA issued into the MLF a second time by directly placing $2.907 billion Payroll Mobility Tax BANs issued for working capital on December 17, 2020. The $2.907 billion MLF loan matures in December 2023. In December 2022, the

MTA Board authorized the MTA to place MTA funds and unspent proceeds in an Interim Redemption Subaccount, for the purpose of redeeming the BANs at or before maturity. Subsequently, MTA transferred $2.907 billion into the Interim Redemption Subaccount pursuant to such Board approval.

***Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA").*** On December 27, 2020, the President signed into law the Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA") that includes $900 billion for various COVID-19 economic relief programs to address hardships caused by the coronavirus pandemic and a $1.4 trillion government funding package to fund the government through September 30, 2021. Included in the legislation is $45 billion in financial assistance to the transportation industry, including $16 billion for another round of airline employee and contractor payroll support: $14 billion for transit; $10 billion for highways; $2 billion for intercity buses; $2 billion for airports; and $1 billion for Amtrak. The MTA received $4.1 billion in aid from the CRRSAA between December 2021 of $0.6 million and January 2022 of $3.5 billion. Release of such funds by the FTA was awaiting agreement of the final allocation of CRRSAA and ARPA monies among the states of New York, New Jersey, and Connecticut which was made on November 9, 2021.

***American Rescue Plan Act ("ARPA").*** On March 11, 2021, President Biden signed into law the American Rescue Plan Act of 2021 ("ARPA"). The $1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. The package includes $30 billion of direct federal aid to transportation agencies. Release of such funds was awaiting agreement on the final allocation of CRRSAA and ARPA monies among the states of New York, New Jersey, and Connecticut which was made on November 9, 2021. The MTA received $6.1 billion in aid from ARPA in 2022. In September of 2021, additional Assistance Funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received $769 million in additional aid in the fourth quarter of 2022.

***Federal Emergency Management Agency ("FEMA") Reimbursement***. The MTA is eligible for FEMA payments which are expected to cover expenses related to the COVID-19 pandemic, over and above normal emergency costs that are not covered by other federal funding. An estimated $783.4 million of direct COVID-19 related expenses incurred from the start of the pandemic through July 1, 2022, was submitted by MTA to the New York State Department of Budget (DOB), which is the agency managing Covid-19 related expense reimbursement from FEMA.

## 16. SUBSEQUENT EVENTS

On January 17, 2023 and January 24, 2023, MTA prepaid the 2023 and 2024 projected Actuarially Determined Contributions ("ADCs") for MTA-Sponsored Pension Plans. The prepayment amounts for the MaBSTOA Pension Plan for each year were $166.8 million and $161.6 million, respectively.

* * * * * *

**REQUIRED SUPPLEMENTARY INFORMATION**

## NEW YORK CITY TRANSIT AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**SCHEDULE OF CHANGES IN THE AUTHORITY'S NET PENSION LIABILITY AND RELATED RATIOS FOR THE MABSTOA PENSION PLAN AT DECEMBER 31**
**(In millions)**

| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|
| Total pension liability: | | | | | | | | |
| Service cost | $ 94 | $ 95 | $ 90 | $ 87 | $ 84 | $ 82 | $ 77 | $ 72 |
| Interest | 274 | 267 | 265 | 256 | 246 | 237 | 233 | 224 |
| Differences between expected and actual experience | (19) | (1) | 9 | 6 | 12 | 14 | (69) | (2) |
| Change of assumptions | 72 | - | 169 | - | 6 | - | - | - |
| Benefit payments and withdrawals | (245) | (238) | (221) | (214) | (209) | (188) | (180) | (175) |
| Net change in total pension liability | 176 | 123 | 312 | 135 | 139 | 145 | 61 | 119 |
| Total pension liability—beginning | 4,246 | 4,123 | 3,811 | 3,676 | 3,537 | 3,392 | 3,331 | 3,212 |
| Total pension liability—ending(a) | 4,422 | 4,246 | 4,123 | 3,811 | 3,676 | 3,537 | 3,392 | 3,331 |
| Fiduciary net position: | | | | | | | | |
| Employer contributions | 156 | 159 | 206 | 205 | 202 | 221 | 215 | 226 |
| Member contributions | 25 | 25 | 24 | 22 | 20 | 19 | 16 | 15 |
| Net investment income | 416 | 60 | 447 | (88) | 350 | 212 | (24) | 105 |
| Benefit payments and withdrawals | (245) | (238) | (221) | (214) | (209) | (188) | (180) | (175) |
| Administrative expenses | - | - | - | - | - | - | - | - |
| Net change in plan fiduciary net position | 352 | 6 | 456 | (75) | 363 | 264 | 27 | 171 |
| Plan fiduciary net position—beginning | 3,307 | 3,300 | 2,844 | 2,919 | 2,556 | 2,292 | 2,265 | 2,094 |
| Plan fiduciary net position—ending(b) | 3,659 | 3,306 | 3,300 | 2,844 | 2,919 | 2,556 | 2,292 | 2,265 |
| Employer's net pension liability—ending(a)-(b) | $ 763 | $ 940 | $ 823 | $ 967 | $ 757 | $ 981 | $ 1,100 | $ 1,066 |
| Plan fiduciary net position as a percentage of the total pension liability | 82.7 % | 77.9 % | 80.0 % | 74.6 % | 79.4 % | 72.3 % | 67.6 % | 68.0 % |
| Covered-employee payroll | 769 | 802 | 787 | 776 | 750 | 717 | 687 | 653 |
| Employer's net pension liability as a percentage of covered-employee payroll | 99.2 % | 117.1 % | 104.6 % | 124.6 % | 100.9 % | 136.8 % | 160.1 % | 163.2 % |

**Note:** This schedule is intended to show information for ten years. Additional years will be displayed as they become available. In accordance with GASB No. 68, information was not readily available for periods prior to 2014.

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY IN THE NYCERS PENSION PLAN AT JUNE 30**
**(In millions)**

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|---|---|
| The Authority's proportion of the net pension liability | 20.975 % | 21.285 % | 23.207 % | 23.271 % | 22.527 % | 22.788 % | 22.227 % | 22.380 % |
| The Authority's proportionate share of the net pension liability | $ 3,798 | $ 1,365 | $ 4,892 | $ 4,310 | $ 3,973 | $ 4,732 | $ 5,400 | $ 4,530 |
| The Authority's actual covered-employee payroll | $ 3,726 | $ 3,504 | $ 3,388 | $ 3,256 | $ 3,090 | $ 3,024 | $ 2,930 | $ 2,862 |
| The Authority's proportionate share of the net pension liability as a percentage of the Authority's covered-employee payroll | 101.932 % | 38.955 % | 144.392 % | 132.371 % | 128.576 % | 156.481 % | 184.300 % | 158.277 % |
| Plan fiduciary net position as a percentage of the total pension liability | 81.276 % | 93.144 % | 76.933 % | 78.836 % | 78.826 % | 74.805 % | 69.568 % | 73.125 % |

**Note:** This schedule is intended to show information for ten years. Additional years will be displayed as they become available. In accordance with GASB No. 68, information was not readily available for periods prior to 2015.

# NEW YORK CITY TRANSIT AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
### SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO ALL PENSION PLANS
### FOR THE YEARS ENDED DECEMBER 31
### (In millions)

| **MaBSTOA** | **2022** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|
| Actuarially Determined Contribution | $ 158.6 | $ 156.2 | $ 159.5 | $ 209.3 | $ 202.5 | $ 202.9 | $ 220.7 | $ 214.9 | $ 226.4 | $ 234.5 |
| Actual Employer Contribution | $ 158.6 | 156.2 | 159.5 | 206.4 | 205.4 | 202.7 | 220.7 | 214.9 | 226.4 | 234.5 |
| Contribution Deficiency (Excess) | $ | $ - | $ - | $ 2.9 | $ (2.9) | $ 0.2 | $ - | $ - | $ - | $ - |
| Covered Payroll | 775.5 | 768.9 | 802.1 | 786.6 | 776.2 | 749.7 | 716.5 | 686.7 | 653.3 | 582.1 |
| Contributions as a % of Covered Payroll | 20.45 % | 20.31 % | 19.9 % | 26.2 % | 26.5 % | 27.0 % | 30.8 % | 31.3 % | 34.7 % | 40.3 % |

| **NYCERS** | **2022** | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** | **2013** |
|---|---|---|---|---|---|---|---|---|---|---|
| Actuarially Determined Contribution | $ 765.3 | $ 807.7 | $ 841.9 | $ 904.1 | $ 768.4 | $ 759.6 | $ 753.2 | $ 694.4 | $ 708.2 | $ 702.9 |
| Actual Employer Contribution | $ 765.3 | $ 807.7 | 841.9 | 904.1 | 768.4 | 759.6 | 753.2 | 694.4 | 708.2 | 702.9 |
| Contribution Deficiency (Excess) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Covered Payroll | 3,725.8 | 3,518.0 | 3,644.7 | 3,784.2 | 3,841.0 | 3,624.4 | 3,386.1 | 3,344.3 | 3,449.1 | 2,811.1 |
| Contributions as a % of Covered Payroll | 20.5 % | 23.0 % | 23.1 % | 23.9 % | 20.0 % | 21.0 % | 22.2 % | 20.8 % | 20.5 % | 25.0 % |

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**NOTES TO SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO ALL PENSION PLANS:**

The following actuarial methods and assumptions were used in the January 1, 2021 and 2020 funding valuation for the MaBSTOA pension plan as follows:

| | MaBSTOA | |
|---|---|---|
| Valuation Date | January 1, 2021 | January 1, 2020 |
| Measurement Date | December 31, 2021 | December 31, 2020 |
| Actuarial cost method | Frozen Initial Liability (FIL) | Frozen Initial Liability (FIL) |
| Amortization method | For FIL bases, 15 years for Fresh start base as of 1/1/2021. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. | For FIL bases, 15 years for Fresh start base as of 1/1/2020. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population. |
| Asset Valuation Method | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. | Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets. |
| Actuarial assumptions: | | |
| Discount Rate | 6.5% | 6.5% |
| Investment rate of return | 6.5%, net of investment expenses | 6.5%, net of investment expenses |
| Mortality | Based on experience of all MTA-sponsored pension plan members from January 1, 2015 - December 31, 2020 reflecting mortality improvement on a generational basis using Scale MP-2021. | Based on experience of all MTA members reflecting mortality improvement on a generational basis using Scale AA. |
| Inflation | 2.25% per annum | 2.25% per annum |
| Salary increases | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. | Reflecting general wage, merit and promotion increases for operating and non-operating members. Varies by years of employment. |
| Overtime | Except for managerial employees, rates of overtime for operating employees vary by years of service and are applied to base salary ranging from 16% to 30%, and 3.0% of base salary for nonoperating employees regardless of the years of service. For Tier 6 members, all overtime was assumed to be less than the overtime cap. | Except for managerial employees, 8.5% of base salary for operating employees and 3.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than the overtime cap. |
| Cost-of-Living Adjustments | 60% of inflation assumption or 1.35%, if applicable | 1.35% per annum |
| Rate of normal retirement | Rates vary by age, years of service at retirement and Tier/Plan. | Rates vary by age, years of service at retirement and Tier/Plan. |

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.

(Continued)

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**NOTES TO SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO ALL PENSION PLANS:**

Significant methods and assumptions used in calculating the actuarially determined contributions of an employer's proportionate share in a Cost Sharing, Multiple-Employer pension plan, the NYCERS Plan, should be presented as notes to the schedule. Factors that significantly affect trends in the amounts reported are changes of benefit terms, changes in the size or composition of the population covered by the benefit terms, or the use of different assumptions. Following is a summary of such factors.

**Changes of Benefit Terms**
There were no changes of benefit terms in the June 30, 2021 funding valuation.

**Changes of Assumptions**
There were no changes of benefit assumptions in the June 30, 2021 funding valuation.

(Concluded)

## NEW YORK CITY TRANSIT AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF THE NET OPEB LIABILITY IN THE MTA OPEB PLAN AT**
**(In millions)**

| Plan Measurement Date (December 31) | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| The Authority's proportion of the net OPEB liability | 70.8 % | 67.5 % | 68.70 % | 67.83 % | 67.88 % |
| The Authority's proportionate share of the net OPEB liability | $ 17,675 | $ 16,490 | $ 14,507 | $ 13,281 | $ 13,784 |
| The Authority's covered payroll | $ 3,645 | $ 4,447 | $ 4,571 | $ 4,617 | $ 3,619 |
| The Authority's proportionate share of the net OPEB liability as a percentage of its covered payroll | 484.91 % | 370.80 % | 317.37 % | 287.65 % | 380.80 % |
| Plan fiduciary net position as a percentage of the total OPEB liability | 0.00 % | 0.00 % | 1.93 % | 1.76 % | 1.79 % |

**Note:** This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

## NEW YORK CITY TRANSIT AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)**
**SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO THE OPEB PLAN AND NOTES TO SCHEDULE OF THE AUTHORITY'S CONTRIBUTION TO THE OPEB PLAN FOR THE YEARS ENDED DECEMBER 31**
**(In millions)**

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|
| Actuarially Determined Contribution | n/a | n/a | n/a | n/a | n/a | n/a |
| Actual Employer Contribution [(1)] | $ 589.6 | $ 576.8 | $ 236.7 | $ 505.6 | $ 468.8 | $ 441.9 |
| Contribution Deficiency (Excess) | n/a | n/a | n/a | n/a | n/a | n/a |
| Covered Payroll | 4,501.3 | 3,644.7 | 4,446.8 | 4,570.8 | 4,617.2 | 3,618.6 |
| Actual Contribution as a Percentage of Covered Payroll | 13.1 % | 15.4 % | 11.01 % | 11.06 % | 10.15 % | 12.21 % |

[(1)] Actual employer contribution includes the implicit rate of subsidy adjustment of $10.8, $9.6, $12.8, $21.3, $19.9 and $19.6 for the years ended December 31, 2022, 2021, 2020, 2019, 2018 and 2017, respectively.

**Notes to Schedule of the Authority's Contribution to the OPEB Plan:**

*Methods and assumptions used to determine contribution rates:*

| | | |
|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 |
| Measurement date | December 31, 2021 | December 31, 2020 |
| Discount rate | 2.06% | 2.12% |
| Inflation | 2.30% | 2.25% |
| Actuarial cost method | Entry Age Normal | Entry Age Normal |
| Investment rate of return | 2.06% | 2.12% |

*Changes of benefit terms*: In the July 1, 2021 actuarial valuation, there were no changes to the benefit terms.

*Changes of assumptions*:. In the July 1, 2021 actuarial valuation, there were changes in healthcare related assumptions, mortality, demographic and economic assumptions.

**Note:** This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

Verrazzano-Narrows Bridge During Lightning Storm

# Triborough Bridge and Tunnel Authority

(Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the Years Ended December 31, 2022 and 2021, Required Supplementary Information, and Independent Auditor's Report

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

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**INDEPENDENT AUDITOR'S REPORT**

To the Members of the Board of
Metropolitan Transportation Authority

**Opinion**

We have audited the financial statements of the Triborough Bridge and Tunnel Authority (the "Authority"), a public benefit corporation which is a component unit of the Metropolitan Transportation Authority ("MTA"), as of and for the years ended December 31, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of December 31, 2022 and 2021, and the changes in financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Authority and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Emphasis of Matter**

As discussed in Note 2 to the financial statements, the Authority adopted Governmental Accounting Standards Board ("GASB") Statement No. 87, *Leases*, as of January 1, 2021. The adoption of GASB Statement No. 87 resulted in the restatement of the 2021 financial statements. Our opinion is not modified with respect to this matter.

**Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.
In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

**Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we

- exercise professional judgment and maintain professional skepticism throughout the audit.
- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Authority's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

**Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of the Authority's Proportionate Share of Net Pension Liability in the New York City Employees' Retirement System, Schedule of the Authority's Contributions to the New York City Employees' Retirement System, Schedule of the Authority's Proportionate Share of Net OPEB Liability in the MTA OPEB Plan, and Schedule of the Authority's Contributions to the MTA OPEB Plan be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Deloitte & Touche LLP

June 6, 2023

## OVERVIEW OF THE FINANCIAL STATEMENTS

### Introduction

The following is a narrative overview and analysis of the financial activities of Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels" or "Authority") for the years ended December 31, 2022 and 2021. This discussion and analysis is intended to serve as an introduction to MTA Bridges and Tunnels' financial statements which have the following components: (1) Management's Discussion and Analysis ("MD&A"), (2) Financial Statements (3) Notes to the Financial Statements, and (4) Required Supplementary Information.

### Management's Discussion and Analysis

This MD&A provides an assessment of how MTA Bridges and Tunnels' position has improved or deteriorated and identifies the factors that, in management's view, significantly affected MTA Bridges and Tunnels' overall financial position. It may contain opinions, assumptions, or conclusions by MTA Bridges and Tunnels' management that should not be considered a replacement for and must be read in conjunction with the financial statements.

### The Financial Statements Include

The Statements of Net Position provide information about the nature and amounts of resources with present service capacity that MTA Bridges and Tunnels presently controls (assets), consumption of net assets by MTA Bridges and Tunnels that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that MTA Bridges and Tunnels has little or no discretion to avoid (liabilities), and acquisition of net assets by MTA Bridges and Tunnels that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflows of resources and liabilities/deferred inflows of resources being reported as net position.

The Statements of Revenues, Expenses and Changes in Net Position show how MTA Bridges and Tunnels' net position changed during each year and accounts for all the current and prior year's revenues and expenses, measure the success of MTA Bridges and Tunnels' operations over the twelve months and can be used to determine how MTA Bridges and Tunnels has funded its costs.

The Statements of Cash Flows provide information about MTA Bridges and Tunnels' cash receipts, cash payments, and net changes in cash resulting from operations, noncapital financing, capital and related financing, and investing activities.

**The Notes to the Financial Statements Provide**

Information that is essential to understanding the financial statements, such as MTA Bridges and Tunnels' basis of presentation, and significant accounting policies, details of cash and investments, capital assets, employee benefits, long-term debt, lease transactions, future commitments and contingencies, and subsequent events of MTA Bridges and Tunnels.

The notes to the financial statements also describe any other events or developing situations that could materially affect MTA Bridges and Tunnels' financial position.

**Required Supplementary Information**

The Required Supplementary Information provides information about the changes in the net pension liability and net other postemployment benefits ("OPEB") liability, employer contributions for the OPEB and pension plans, related ratios and actuarial assumptions used to calculate the net pension liability and net OPEB liability.

**FINANCIAL REPORTING ENTITY**

Triborough Bridge and Tunnel Authority is a public benefit corporation, separate and apart from the State of New York, without any power of taxation. Triborough Bridge and Tunnel Authority is empowered to operate and maintain nine toll bridges and tunnels and the Battery-Parking Garage, all located in New York City. The board members of the Metropolitan Transportation Authority ("MTA") also serve as the Board of Triborough Bridge and Tunnel Authority. Triborough Bridge and Tunnel Authority operates under the name of MTA Bridges and Tunnels and is a component unit of the MTA. The MTA is a component unit of the State of New York.

MTA Bridges and Tunnels' operations and capital costs (debt obligations) for its bridges and tunnels are paid by the revenues it generates from its facilities. MTA Bridges and Tunnels' surplus amounts are used to fund transit and commuter operations and finance capital projects for the transit and commuter systems operated by other affiliates and subsidiaries of the MTA.

On April 1, 2019 the MTA Reform and Traffic Mobility Act ("the Act") was enacted as part of the State budget for Fiscal Year 2019-2020. Pursuant to Public Authorities Law section 553-J, created by the Act, MTA Bridges and Tunnels is required to establish the Central Business District tolling capital lock-box fund which is kept separate and apart from TBTA operating monies.  The fund shall consist of monies received through the Central Business District Tolling Program (CBDTP), as well as real estate transfer tax ("Mansion Tax") and Portions of City and State wide sales taxes ("Internet Tax").

Monies in the fund are be applied, subject to agreements with bondholders and applicable Federal law, to the payment of operating, administration, and other necessary expenses of the Authority, or to the City of New York subject to the memorandum of understanding including the planning, designing, constructing, installing or maintaining of the CBDTP, including, without limitation, the Central Business District tolling infrastructure, the Central Business District Tolling Collection System and the Central Business District tolling Customer Service Center, and the costs of any Metropolitan Transportation Authority capital projects included within the 2020 to 2024 MTA capital program or any successor programs.

In April 2020, the New York State Legislature passed legislation that was signed by the Governor which permitted MTA to use funds in the CBDTP Capital Lockbox in all or any of the fiscal years of the authority beginning in 2020 through 2021 to offset decreases in revenue, including but not limited to, lost taxes, fees, charges, fares and tolls, due in whole or in part, or increases in operating costs due in whole to the state disaster emergency caused by the novel coronavirus, COVID-19.

## CONDENSED FINANCIAL INFORMATION

The following sections will discuss the significant changes in MTA Bridges and Tunnels' financial position for the years ended December 31, 2022, and 2021. Additionally, an examination of major economic factors and industry trends that have contributed to these changes is provided. It should be noted that for purposes of the MD&A, summaries of the financial statements and the various exhibits presented are in conformity with MTA Bridges and Tunnels' financial statements, which are presented in accordance with accounting principles generally accepted in the United States of America.

### Total Assets and Deferred Outflows of Resources, Distinguishing Between Capital Assets, Other Assets and Deferred Outflows of Resources

Capital assets include, but are not limited to: bridges, structures, tunnels, roadway, buildings and the acquisition of equipment and vehicles. Additionally a right-of-use asset for the lease on the Two Broadway office building has been included in the current year financial statements as a result of the implementation of GASB Statement No. 87, *Leases* with retroactive effect of this adoption as of January 1, 2021. Refer to the Significant Accounting Policies footnote 2 for additional information.

Other assets include, but are not limited to: cash, restricted and unrestricted investments, receivables and prepaid expenses. This also includes the receivable from applicable leases of MTA Bridges and Tunnels garage spaces and bridges and tunnels easement rights to third parties as a result of the implementation of GASB No. 87, *Leases* with retroactive effect of this adoption as of January 1, 2021. Refer to footnote 2 for additional information.

Deferred outflows of resources reflect: deferred outflows from pension activities and OPEB activities.

**(In thousands)**

| **Assets and Deferred Outflows of Resources** | **As of December 31,** | | | **Increase/(Decrease)** | |
|---|---|---|---|---|---|
| | **2022** | **2021** | **2020** | **2022–2021** | **2021–2020** |
| | | (Restated) | | | (Restated)* |
| Capital Assets—Net | $ 7,794,286 | $ 7,631,332 | $7,250,134 | $ 162,954 | $ 381,198 |
| Other Assets | 11,143,649 | 4,729,541 | 1,847,806 | 6,414,108 | 2,881,735 |
| Deferred Outflows of Resources | 463,696 | 579,546 | 565,003 | (115,850) | 14,543 |
| Total Assets and Deferred Outflows of Resources | $ 19,401,631 | $ 12,940,419 | $9,662,943 | $ 6,461,212 | $3,277,476 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020.

### Significant Changes in Assets and Deferred Outflows of Resources

December 31, 2022 versus 2021:

Total assets and deferred outflows of resources increased by $6,461,212 for the year ended December 31, 2022.

Capital assets, net, increased $162,954 for the year ended December 31, 2022. This was primarily due to increases in roadway of $433,312, primary structures of $252,910, property road and equipment of $39,246, open road tolling systems and equipment of $1,807, buildings of $11,158 and other of $6,245. These increases in assets were offset by accumulated depreciation and amortization of $206,374 and decrease in construction work in progress of $375,350. See Capital Asset footnote for further details.

Other assets increased by $6,414,108 for the year ended December 31, 2022. This was primarily due to a new loan receivable relating to MTA Payroll Mobility Tax (PMT) bonds of $5,796,324; increase in restricted short-term investments of $798,927, interest receivable of $39,119 and accounts receivable of $36,645. This increase was offset by decreases in unrestricted short-term investments of $10,467; cash of $208,226 due to the transfer of internet and mansion tax for the MTA Capital Program and allowance for doubtful accounts $49,642.

There was a decrease in deferred outflows of resources of $115,850. This was due to decreases in the deferred outflows of resources related to OPEB of $19,836; change in fair market value of derivative instruments of $98,998; and deferred financing costs of $18,490 offset by an increase in the deferred outflows related to pension of $21,474 resulting from changes in the proportionate share of the net pension liability of New York City Employees Retirement System.

December 31, 2021 versus 2020:

Total assets and deferred outflows of resources increased by $3,277,476 for the year ended December 31, 2021.

Capital assets, net, increased $381,198 for the year ended December 31, 2021. This increase was primarily due to construction work in progress of $186,661 offset by a write-off of costs related to a study that has no future benefit of $8,854, primary structures of $194,667, property road and equipment of $102,508, roadway of $43,063, open road tolling systems and equipment of $8,469, buildings of $8,218, other of $5,733 and right-of-use asset of $45,604 was added due to implementation of GASB Statement No. 87, *Leases*. In addition, leasehold improvement previously reported as capital assets of $36,952 were removed from capital assets and moved to right-of-use assets because of the implementation of GASB Statement No. 87, *Leases*. These increases in assets were offset by accumulated depreciation and amortization of $176,773 which was net of $17,186 of accumulated depreciation removed from capital assets due to the adoption of GASB Statement No. 87, *Leases*. See Capital Asset footnote for further details.

Other assets increased by $2,881,735 for the year ended December 31, 2021. The increase was primarily due to a new loan receivable relating to MTA Payroll Mobility Tax (PMT) bonds of $2,088,314, higher restricted short-term investments of $867,269, of which $803,104 is due to restricted PMT proceeds, higher unrestricted short-term investments of $129,343, an increase in current lease receivable-lessor of $1,514 and increase in non-current lease receivable-lessor of $14,308 due to the adoption of GASB Statement No. 87, *Leases*, and higher accounts receivable of $116,509 less allowance for doubtful accounts increase of $39,943. This increase was offset by lower cash of $290,007, which was mainly due to internet and mansion tax cash transferred out in the current year.

There was an increase in deferred outflows of resources of $14,543. This was due to an increase in the deferred outflows of resources related to OPEB of $100,142, which was offset by decreases in the change in fair market value of derivative instruments of $45,445, deferred financing costs of $24,264 and the deferred outflows related to pension of $15,890 resulting from changes in the proportionate share of the net pension liability of New York City Employees Retirement System.

**Total Liabilities and Deferred Inflows of Resources, Distinguishing Between Current Liabilities, Non- Current Liabilities and Deferred Inflows of Resources**

Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, pollution remediation liabilities, unredeemed tolls, and other current liabilities. This also includes the current portion of long-term lease payable as a result of the implementation of GASB Statement No. 87, *Leases*. Refer to Significant Accounting Policies footnote 2 for additional information.

Non-current liabilities include: net pension liabilities, claims for injuries to persons, post-employment benefits and other non-current liabilities. This also includes the long-term lease liability as a result of the implementation of GASB Statement No. 87, *Leases* with retroactive effect of this adoption as of January 1, 2021. Refer to footnote 2 for additional information.

Deferred inflows of resources reflect pension related deferred inflows and deferred inflows from OPEB activities. As a result of the implementation of GASB Statement No. 87, *Leases*, a deferred inflow of resources from leases at the amount of the lease receivable was recognized. Refer to footnote 2 for additional information.

| Total Liabilities and Deferred Inflows of Resources | As of December 31, 2022 | 2021 (Restated) | 2020 | Increase/(Decrease) 2022–2021 | 2021–2020 (Restated)* |
|---|---|---|---|---|---|
| Current Liabilities | $ 1,252,283 | $ 1,507,010 | $ 1,318,083 | $ (254,727) | $ 188,927 |
| Noncurrent Liabilities | 20,686,901 | 13,813,471 | 10,668,094 | 6,873,430 | 3,145,377 |
| Deferred Inflow of Resources | 234,942 | 257,243 | 120,080 | (22,301) | 137,163 |
| Total Liabilities and Deferred Inflows of Resources | $22,174,126 | $15,577,724 | $12,106,257 | $ 6,596,402 | $ 3,471,467 |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020

**Significant Changes in Liabilities and Deferred Inflows of Resources**

December 31, 2022 versus 2021:

Total liabilities and deferred inflows of resources increased by $6,596,402 for the year ended December 31, 2022.

Current liabilities decreased by $254,727 for the year ended December 31, 2022. This was primarily due to a decrease in unearned toll revenues by $18,847 decrease in surplus paid to NYCTA of $3,681 and MTA of $1,233; decrease of accounts payable of $34,726; decrease of current portion claims payable $1,867, and payable to MTA of $334,829 primarily due to reimbursements to MTA for capital projects. These were offset by increases in interest payable of $40,207 and unearned interest revenue of $45,366 primarily due to the issuance of new PMT bonds; reclassification of long-term debt obligations of $50,125 from noncurrent to current; and increase in accrued salaries of $6,102 attributable to an increase in labor reserves.

Non-current liabilities increased by $6,873,430 for the year ended December 31, 2022. This was mainly due to the increase in long-term debt obligations of $6,940,901 for the issuance of new PMT bonds of $6,172,585, Sales Tax bond of $758,796, and senior and subordinate bonds of $9,520. There was also an increase in net pension liability of $107,586 based upon the most current valuation report in accordance with GASB Statements No. 68 and GASB No. 71. These increases were offset by a decrease in OPEB liability of $79,332 primarily due to the change in proportionate share and difference in employer contributions based upon the most current actuarial valuation report in accordance with GASB Statement No. 71; and decrease in net derivative liabilities of $99,018.

There was a net decrease in deferred inflows of resources of $22,301. This was mainly attributable to an increase of $84,477 related to OPEB due to change in assumptions and proportionate share and difference in employer contributions; offset by a decrease of $104,869 related to pensions primarily on changes in the projected versus actual plan investment earnings, and $1,463 amortization of deferred inflows of resources as a result of implementation of GASB Statement No. 87, *Leases*.

December 31, 2021 versus 2020:

Total liabilities and deferred inflows of resources increased by $3,471,467 for the year ended December 31, 2021.

Current liabilities increased by $188,927 for the year ended December 31, 2021. Unearned toll revenue was higher by $70,616, which was due to easing of COVID-19 restrictions. There was also an increase in interest payable of $15,284 and unearned interest revenue of $7,141, which was primarily due from the issuance of new PMT bonds, and higher current portion of long-term debt obligations of $17,690. There were also increases in due to NYCTA and MTA of $55,083 and $53,312, respectively, due to higher surplus paid, and higher accrued salaries of $9,313, attributable to an increase in the labor reserves. These increases were offset by lower accounts payable of $20,365 and lower payable to MTA of $17,373.

Non-current liabilities increased by $3,145,377 for the year ended December 31, 2021. The increase was mainly due to higher long-term debt obligations of $3,189,274 of which $2,863,787 relate to the issuance of new PMT bonds and $325,487 relates to senior and subordinate bonds and a net increase of $24,279 lease payable, as lessee due implementation of GASB No. 87, *Leases*. There was also an increase in postemployment benefits other than pensions of $174,084 attributable to the increase of the Authority's portion of the overall liability from 3.85% to 4.05% based on actual contributions from the participating employers. These increases were offset by lower net pension liability of $195,722, which was due to higher investment income and lower net derivative liabilities of $45,466.

There was a net increase in deferred inflows of resources of $137,163. This amount was mainly due to increase of $134,372 related to OPEB primarily on changes in the projected versus actual plan investment earnings, and lease deferral of $15,382 as a result of the implementation of GASB Statement No. 87, *Leases* and offset by a decrease of $12,591 related to OPEB.

(In thousands)

| | As of December 31, | | | Increase/(Decrease) | |
|---|---|---|---|---|---|
| **Net Position** | **2022** | **2021** (Restated) | **2020** | **2022–2021** | **2021–2020** (Restated)* |
| Net investment in capital assets | $ 2,105,405 | $ 2,147,095 | $ 2,295,343 | $ (41,690) | $ (148,248) |
| Restricted | 2,409,990 | 1,606,192 | 747,646 | 803,798 | 858,546 |
| Unrestricted | (7,287,890) | (6,390,592) | (5,486,303) | (897,298) | (904,289) |
| Total net position | $(2,772,495) | $(2,637,305) | $(2,443,314) | $ (135,190) | $ (193,991) |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020

The negative net position resulted from assets transferred to MTA and NYCTA for prior years' debt financing incurred on their behalf Net position represents the residual interest in the MTA Bridges and Tunnels assets and deferred outflows of resources after liabilities and deferred inflows of resources are deducted and consist of three components: net investment in capital assets, restricted and unrestricted. Net investment in capital assets include capital assets and right-of-use lease assets, net of accumulated depreciation and amortization, and outstanding principal balances of debt attributable to the acquisition, construction, or improvement of those assets. Net position is reported as restricted when constraints are imposed by third parties or enabling legislation, otherwise it is reported as unrestricted. In 2021, the total net position was restated and increased by $341 due to the implementation of GASB No. 87, *Leases*. Refer to footnote 2 for additional information.

**Significant Changes in Net Position**

December 31, 2022 versus 2021:

In 2022, the total net position decreased by $135,190. This was due to operating income of $1,686,603, non-operating income of $497,127, relief of MTA transfers in of $372,656 and offset by transfers out to MTA and NYCTA for operating surplus of $1,184,711 and contribution for labor settlement to MTA of $7,740 to settle inter-company loan balance, internet and mansion tax transfers of $1,041,465, and Sales Tax bond proceeds transfer of $457,660.

December 31, 2021 versus 2020:

In 2021, the total net position decreased by $193,991. This was due to operating income of $1,541,785 plus net non-operating income of $396,864 less net transfers out of $1,036,544 for operating surplus and $1,096,096 for internet and mansion transfers. The 2021 net position increased by $341 due to adoption of GASB Statement No. 87, *Leases*.

**Condensed Statements of Revenues, Expenses and Changes in Net Position (in thousands)**

| | Years Ended December 31, | | | Increase/(Decrease) | |
|---|---|---|---|---|---|
| | 2022 | 2021 (Restated) | 2020 | 2022–2021 | 2021–2020 (Restated)* |
| Operating revenues | $ 2,356,751 | $ 2,194,414 | $ 1,660,735 | $ 162,337 | $ 533,679 |
| Operating expenses | (670,148) | (652,629) | (636,336) | (17,519) | (16,293) |
| Operating income | 1,686,603 | 1,541,785 | 1,024,399 | 144,818 | 517,386 |
| Nonoperating revenue, net excluding transfers | 497,127 | 396,864 | 117,746 | 100,263 | 279,118 |
| Income before transfers | 2,183,730 | 1,938,649 | 1,142,145 | 245,081 | 796,504 |
| Transfers in—MTA | 372,656 | 491 | 3,344 | 372,165 | (2,853) |
| Transfers out | (2,691,576) | (2,133,131) | (472,755) | (558,445) | (1,660,376) |
| Changes in net position | (135,190) | (193,991) | 672,734 | 58,801 | (866,725) |
| Net position—Beginning of year | (2,637,305) | (2,443,314) | (3,116,048) | (193,991) | 672,734 |
| Net position—End of year | $(2,772,495) | $(2,637,305) | $(2,443,314) | $ (135,190) | $ (193,991) |

*GASB 87 restatement is as of 1/1/2021, therefore 2021 balances are not comparative with 2020

**Operating Revenues**

For the year ended December 31, 2022, the operating revenues increased by $162,337 as compared to December 31, 2021. The year 2022 reflected the full year effect of the toll increase effective April 11, 2021 while 2021 only reflected 8.5 months of the toll increase. Total crossings in 2022 were 326.3 million versus 307.3 million in 2021, an increase of 6.2%. See “Overall Financial Position and Results of Operations and Important Economic Conditions” below.

For the year ended December 31, 2021, the operating revenues increased by $533,679 as compared to December 31, 2020. The current year included a toll increase effective April 11, 2021. Total crossings in 2021 were 307.3 million versus 253.2 million in 2020, an increase of 21.4%. See "Overall Financial Position and Results of Operations and Important Economic Conditions" below.

**Revenue by Major Source**

MTA Bridges and Tunnels tolls accounted for 98.9% and 98.9% of operating revenues in 2022 and 2021, respectively. The remaining revenue primarily represented income from parking fees (net of operating expenses) collected at the Battery Parking Garage and fees collected from E-ZPass customers.

Toll revenues (net of bad debt expense relating to toll collections) were $2,332,384 and $2,169,877 for the years ended December 31, 2022 and December 31, 2021, respectively.

**Operating Expenses**

Operating expenses, including depreciation and amortization, increased for the year ended December 31, 2022, as compared to the prior year by $17,519. This was primarily due to the increases in maintenance and other operating contracts of $24,543 mainly due to major maintenance and painting projects; depreciation and amortization expense of $4,141; salaries and wages of $6,953, insurance of $2,767, credit card fees of $5,239; and retirement and other benefits of $5,116. These increases were offset by a decrease in OPEB expense of $21,820 and professional service contracts decrease of $12,786.

Operating expenses, including depreciation and amortization, increased for the year ended December 31, 2021, as compared to the prior year by $16,293. The increase was primarily due to higher depreciation and amortization expense of $22,169 partly due to the effect of the implementation of GASB Statement No. 87, *Leases*, higher post-employment benefits other than pensions of $16,441, and higher professional services of $10,590 due to higher legal expenses resulting from an increase in reserves for new pending litigation settlements. There was also an increase in credit card fees of $5,388 and higher insurance expense of $3,910. These increases were offset by lower retirement and other employee benefits of $30,243 and lower maintenance and other operating contracts of $11,731, mainly from major maintenance and painting projects.

**Non-operating Revenues (Expenses)**

Net non-operating revenues increased by $100,263 for the year ended December 31, 2022. This was mainly due to increases in mansion tax and investment income of $118,787 and $13,003 respectively for CBDTP, interest income of $127,256 for the new PMT interest income on senior bonds, and premium/discount due to reimbursement for interest expense from MTA. This was offset by increase in interest expense of $141,213, mostly related to senior bonds, including the new PMT interest expense and premium/discount, decrease in internet tax of $16,857 and increase in interest expense-leases of $710 due annual amortization.

Net non-operating revenues increased by $279,118 for the year ended December 31, 2021. This increase was mainly due to higher internet tax and mansion tax of $84,507 and $214,713, respectively, for CBDTP, and higher interest income of $37,295 for the new PMT interest income on senior bonds and premium/discount due to reimbursement for interest expense from MTA. This increase was offset by higher interest expense of $58,591, mostly related to senior bonds, including the new PMT interest expense and premium/discount and due to the implementation of GASB No. 87, *Leases*.

## OVERALL FINANCIAL POSITION AND RESULTS OF OPERATIONS AND IMPORTANT ECONOMIC CONDITIONS

### Economic Conditions/Results of Operations

Two key economic factors that have statistically significant relationships to changes in traffic volumes are regional non-farm employment and inflation (CPI-U). Based on data from the U.S. Bureau of Labor Statistics, regional employment 2022 and 2021 increased by 5.9% and 2.7%, respectively. Inflation was 3.3% in 2021, however, there was a sharp increase to 6.1% in 2022.

In the fourth quarter 2022, crossings were up 1.4 million (1.7%) compared with the fourth quarter of 2021. The 2019 New York State Budget approved congestion pricing in Manhattan south of 60$^{th}$ Street, which will likely impact ridership and vehicle crossings once implemented.

In April 2019, with the passage of the New York State MTA Reform and Traffic Mobility Act ("the Act"), TBTA was authorized to design, develop, install/implement, operate, and maintain the Central Business District (CBD) Tolling Program. TBTA's implementation of CBD Tolling is contingent on completion of a federal environmental review in accordance with the National Environmental Policy Act (NEPA). If the Federal Highway Administration (FHWA) issues a favorable decision that allows the project to move forward, the vendor (TransCore) will have up to 310 days from Notice to Proceed 2 to complete design and construction of the tolling infrastructure. The MTA continues to work with FHWA to complete the NEPA process and anticipates a federal decision in 2023. If the program receives federal approval, the final determination of the toll structure (including potential caps on the number of times different vehicle types are charged), will not occur until after recommendations by the Traffic Mobility Review Board (as defined in the Act), a hearing, and adoption of the toll structure by the TBTA Board.

Traffic in 2022 has recovered from the impact of COVID-19, B&T paid crossings of 326.3 million in 2022 was less than a 1% decreased from a record 329.4 million in 2019. In addition to the steadily rebounding traffic volume, the toll increase in 2021 has also resulted in toll revenue for the year 2022 to total $2,332.4 million, which was $261.0 million, or 12.6% higher than 2019.

In its announcement on May 4, 2022, the Federal Open Market Committee ("FOMC") raised its target for the Federal Funds rate to the range of 0.75% to 1.00%. Previously, on March 16, 2022, the FOMC raised its target for the Federal Funds rate to the range of 0.25% to 0.50%. Prior to the March 16 increase, the Federal Funds rate target range was 0.00% to 0.25%, and was last changed on March 15, 2020, when it was reduced from a range of 1.50% to 1.75%. The FOMC cites the invasion of Ukraine by Russia as causing uncertainty for the US economy, creating additional upward pressure on inflation which will weigh on economic activity. Additionally, COVID-related lockdowns in China are likely to exacerbate supply chain disruptions. While economic activity edged down in the first quarter of 2022, household spending and fixed business investment remained strong. Job gains have been robust, and the national unemployment rate has declined substantially. Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher energy prices and broader price pressures. The FOMC seeks to achieve maximum employment and a 2 percent inflation rate over the longer run, and with appropriate firming of its monetary policy stance, the FOMC expects to achieve these goals. The FOMC also plans to begin, on June 1, reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities. The FOMC will continue to assess the economic outlook and is prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the FOMC's employment and inflation goals.

The E-ZPass electronic toll collection system continued to facilitate management of high traffic volumes. E-ZPass market share remained consistent overall, with a slight increase in Passenger Vehicles market share and a slight decrease in Commercial vehicles market share from 2021 to 2022.

| | **2022** | **2021** | **2020** |
|---|---|---|---|
| Total | 95.1 % | 94.9 % | 95.2 % |
| Average weekday | 95.6 | 95.3 | 95.6 |
| Passenger vehicles | 95.4 | 95.2 | 95.5 |
| Commercial vehicles | 97.1 | 96.7 | 97.1 |
| Average weekend | 94.2 | 93.9 | 94.1 |

**SIGNIFICANT CAPITAL ASSET ACTIVITY**

**Capital Program**

MTA Bridge and Tunnels' facilities are all in a state of good repair. MTA Bridge and Tunnels' portion of the MTA's Capital Program for 2020-2024 totals $2,823,241 (*this excludes $503,000 for Central Business District Tolling Program ("CBDTP") discussed below*) for normal replacement and system improvement projects. The commitments made during the fourth quarter 2022 were $123,134 bringing the total commitment under the five-year plan to $620,455.

MTA Bridge and Tunnels' portion of the MTA's Capital Program for 2015-2019 totals $2,935,089 for normal replacement and system improvement projects. The commitments made during the fourth quarter 2022 were $1,965 bringing the total commitment under the five-year plan to $2,515,907. All planned major projects in the 2015-2019 program have been committed as of December 31, 2022. The differential between the total program value and the committed value reflects a combination of good bid savings and project contingency, which are held in reserve for potential re-programming for additional future work.

MTA Bridge and Tunnels' portion of the Capital Program for 2010-2014 totals $2,021,982 for normal replacement and system improvement projects. The commitments made during the fourth quarter 2021 were $495 bringing the total commitment under the five-year plan to $1,948,433.

MTA Bridge and Tunnels' portion of the Capital Program for 2005-2009 totals $1,126,736 for normal replacement and system improvement projects. There were no commitments made during the fourth quarter 2022. The total commitment under the five-year plan is $1,115,272.

Approximately 74% of the projected expenditures in the 2020-2024 Capital Program will be incurred at three facilities over the life of the program: The Robert F. Kennedy Bridge, the Throgs Neck Bridge and the Verrazzano-Narrows Bridge. Other major projects in the 2020-2024 Capital Program include the Dyckman Street Abutment replacement and substation upgrade at the Henry Hudson Bridge, lighting and power redundancy and resiliency improvements at the Bronx-Whitestone Bridge, tower elevator replacement at the Marine Parkway Bridge, rehabilitation of the Queens Midtown and Hugh L. Carey tunnels' ventilation and service buildings, and the rehabilitation/replacement of the agency-wide facility monitoring and safety systems.

Approximately 59% of the projected expenditures in the 2015-2019 Capital Program have been incurred at three facilities: The Robert F. Kennedy Bridge, the Throgs Neck Bridge, and the Verrazano-Narrows Bridge. Two of the three largest valued projects in this program – the Replacement of the Grid Decks on the Suspended Span at the Throgs Neck Bridge and the Reconstruction of the Upper-Level Approach Ramps at the Verrazzano Narrows Bridge -- were completed in 2022. Other major projects in the 2015-2019 Capital

Program include the skewback retrofit and the reconstruction of the upper and lower-level toll plaza decks and southbound approach roadway (Phase B) at the Henry Hudson Bridge, the rehabilitation of the Queens Midtown Tunnel controls and communication systems, rehabilitation of the Hugh L. Carey Tunnel ventilation systems, and scour protection, repair, and replacement of the pier fender systems at the Cross Bay Bridge. The majority of the original planned capital projects in the 2015-2019 Capital Program have been completed, with the remaining major projects planned for completion later in 2023.

Approximately 63% of the expenditures in the 2010-2014 Capital Program have been incurred at three facilities over the life of the program: the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge, and the Verrazzano-Narrows Bridge. Other major projects in the 2010-2014 Plan included the rehabilitation of tunnel walls, roadway drainage, fire lines and ceiling repairs (Phase II) and replacement of electrical switchgear and power distribution equipment at the Brooklyn-Battery Tunnel, upper and lower-level toll plazas deck rehabilitation at the Henry Hudson Bridge and a facility-wide electrical upgrade, vent building switchgear and motor control center replacement at the Queens Midtown Tunnel. All original plan projects from the 2010-2014 program have been completed.

Approximately 62% of the expenditures in the 2005-2009 Capital Program have been incurred at four facilities over the life of the program: the Verrazzano-Narrows Bridge, the Robert F. Kennedy Bridge, the Bronx-Whitestone Bridge, and the Throgs Neck Bridge.

MTA Bridge and Tunnels' portion of the MTA's Capital Program for Sandy Restoration and Resiliency totals \$764,980 of which \$595,959 is for facility restoration and \$169,021 is for facility mitigation projects. There was no commitment made during the fourth quarter 2022. The total commitment under these plans is \$697,074 to date.

Approximately 92% of the expenditures have been incurred at the Hugh L. Carey and Queens Midtown Tunnels.

On April 11, 2019, legislation was signed into law enabling the Triborough Bridge and Tunnel Authority (TBTA) to implement the nation's first ever CBDTP as part of the Fiscal Year 2020 New York State Budget. The planning, design, construction, operations and maintenance of the CBDTP will primarily be the responsibility of TBTA though it will also require the involvement of various other regional agencies and stakeholders. The CBDTP will reduce congestion and enhance mobility in Manhattan's Central Business District (south of and inclusive of 60th street).

MTA Bridge and Tunnels' Central Business District Tolling Program (CBDTP) totals \$503,000, which represents the total capital budget established to support the entire CBDTP. Key components include program and construction management; design, construction, and integration of the toll technology system and infrastructure; development of Customer Service Centre Software and build-out: the Environmental Assessment; and outreach and education. A contract with TransCore was executed on October 31, 2019, one month ahead of schedule. TransCore will design, build, operate, and maintain the tolling system. The total commitments made during the fourth quarter 2022 were \$582. The total commitment under this plan is \$367,173 to date.

## CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

### Ridership and Traffic Update

Daily ridership on MTA facilities continues to be well-below 2019 levels. While ridership has been steadily increasing, ridership compared to the pre-pandemic equivalent day in 2019 is down 32 percent on the subways, 38 percent for bus (combined NYCT bus and MTA Bus Company), 36 percent on MTA Metro-North

Railroad, and 38 percent on the MTA Long Island Railroad. Traffic crossings at MTA Bridges and Tunnels facilities are closely resembling pre-pandemic levels.

**Verrazzano-Narrows Bridge Rebate Programs**

The cost of the 2021-2022 (covering the period April 2021 through March 2022) Verrazzano-Narrows Bridge Rebate Programs totaled $28.3 million. The rebates for Staten Island Residents were $22.0 million and the rebates for the Verrazzano-Narrows Bridge Commercial Rebate Program were $6.3 million. These programs were funded by the State and MTA, with the State's contribution provided by appropriations to MTA. The State's contribution was $24.0 million ($21.2 million Resident Program and $2.8 million Commercial Program) and the MTA contribution was $7 million ($3.5 million Resident Program and $3.5 million Commercial Program).

The projected annualized cost of the 2022-2023 (covering the period April 2022 through March 2023) Verrazzano-Narrows Bridge Rebate Programs is expected to total $30.0 million. The rebates for Staten Island Residents are estimated to be $23.0 million and the rebates for the Verrazzano-Narrows Bridge Commercial Rebate Program are estimated to be $7.0 million. These programs were funded by the State and MTA, with the State's contribution provided by appropriations to MTA. The State's contribution was $25.0 million ($19.7 million Resident Program and $5.3 million Commercial Program) and the MTA contribution was $7 million ($3.5 million Resident Program and $3.5 million Commercial Program).

If, as a result of unexpected toll transaction activity, MTA Bridges and Tunnels estimates that such MTA and State funds allocated to the MTA for the 2022-2023 Verrazzano-Narrows Bridge Rebate Programs, net of offsets, will be insufficient to fund the 2022-2023 Verrazzano-Narrows Bridge Commercial Rebate Program for the full Program year, MTA Bridges and Tunnels may reduce the rebate amount under such Program to a percentage that is forecast to be payable in full for the remainder of the Program year with the available funds. However, in the event that such MTA and State funds allocated to MTA for the 2022-2023 Verrazzano-Narrows Bridge Rebate Programs are fully depleted at any time during the 2022-2023 Verrazzano-Narrows Bridge Rebate Programs annual period, the 2022-2023 Verrazzano-Narrows Bridge Rebate Programs will cease and Staten Island residents will be charged the applicable resident discount toll and trucks and other commercial vehicles will be charged the applicable New York Customer Service Center E-ZPass toll for the Verrazzano-Narrows Bridge.

The Verrazzano-Narrows Bridge Rebate Programs will continue into future years provided that (a) MTA's annual period contribution does not exceed $7 million, (b) the MTA Board approves a budget that includes MTA's contribution to such program, and (c) the State provides to MTA funds sufficient for at least half the expenses of each continuing annual period.

**CONTACTING MTA CONTROLLER'S OFFICE**

This financial report is designed to provide our customers and other interested parties with a general overview of MTA Bridges and Tunnel Authority finances and to demonstrate MTA Bridges and Tunnel Authority's accountability for the funds it receives. If you have any questions about this report or need additional financial information, contact MTA Bridges and Tunnel Authority, Deputy Chief, Controller's Office, 2 Broadway, New York, NY 10004

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# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

## STATEMENTS OF NET POSITION
## AS OF DECEMBER 31, 2022 AND 2021
## ($ in thousands)

| | 2022 | 2021 |
|---|---|---|
| **ASSETS AND DEFERRED OUTFLOWS OF RESOURCES** | | (Restated) |
| CURRENT ASSETS: | | |
| Cash—unrestricted (Note 3) | $ 9,038 | $ 217,264 |
| Unrestricted investments (Note 4) | 224,169 | 234,636 |
| Restricted investments (Note 4) | 2,002,017 | 1,203,090 |
| Invested funds at MTA—unrestricted (Note 5) | 377,205 | 372,582 |
| Invested funds at MTA—restricted (Note 5) | 407,973 | 403,101 |
| Accrued interest receivable | 39,424 | 305 |
| Accounts receivable | 518,577 | 481,932 |
| Less allowance for doubtful accounts | (357,751) | (308,109) |
| Lease receivable, as lessor (Note 14) | 1,463 | 1,514 |
| Due from MTA (Note 18) | 4,124 | 2,485 |
| Loan receivable from MTA (Note 18) | 31,625 | 2,088,314 |
| Prepaid expenses | 8,741 | 6,912 |
| Total current assets | 3,266,605 | 4,704,026 |
| NON-CURRENT ASSETS: | | |
| Capital assets (Note 6): | | |
| Land and construction work-in-progress | 537,383 | 912,733 |
| Other capital assets (net of accumulated depreciation and amortization) | 7,256,903 | 6,718,599 |
| Total capital assets-net of accumulated depreciation and amortization | 7,794,286 | 7,631,332 |
| Lease receivable, as lessor (noncurrent) (Note 14) | 12,845 | 14,308 |
| Due from MTA (Note 18) | 7,860,753 | 7,740 |
| Derivative instrument assets (Note 13) | 3,446 | 3,467 |
| Total non-current assets | 15,671,330 | 7,656,847 |
| TOTAL ASSETS | 18,937,935 | 12,360,873 |
| DEFERRED OUTFLOWS OF RESOURCES: | | |
| Related to pensions (Note 7) | 79,906 | 58,432 |
| Related to other post-employment benefits (Note 8) | 155,800 | 175,636 |
| Accumulated decreases in fair value of derivative instruments (Note 13) | 70,933 | 169,931 |
| Loss on debt refunding | 157,057 | 175,547 |
| Total deferred outflows of resources | 463,696 | 579,546 |
| TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES | $19,401,631 | $ 12,940,419 |

(Continued)

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

### STATEMENTS OF NET POSITION
### AS OF DECEMBER 31, 2022 AND 2021
### ($ in thousands)

| **LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION** | **2022** | **2021** (Restated) |
|---|---|---|
| CURRENT LIABILITIES: | | |
| Accounts payable and accrued expenses | $ 140,249 | $ 174,975 |
| Accrued expenses: | | |
| Interest | 101,894 | 61,687 |
| Payable to MTA (Note 18) | 43,488 | 378,317 |
| Payable to NYCTA—operating expense (Note 18) | 39 | 37 |
| Accrued salaries | 36,080 | 29,978 |
| Accrued vacation and sick pay benefits | 18,278 | 19,624 |
| Total accrued expenses | 199,779 | 489,643 |
| Current portion—long-term debt (Notes 9 to 12) | 380,080 | 329,955 |
| Current portion—estimated liability from injuries to persons (Note 15) | 4,874 | 6,741 |
| Due to NYCTA—operating surplus (Note 1 and 18) | 82,495 | 86,176 |
| Due to MTA—operating surplus (Note 1 and 18) | 103,292 | 104,525 |
| Other unearned revenue | 52,507 | 7,141 |
| Unearned tolls revenue (includes $83,307 and $95,693 in 2022 and 2021, respectively, due to other toll agencies) | 289,007 | 307,854 |
| Total current liabilities | 1,252,283 | 1,507,010 |
| NON-CURRENT LIABILITIES: | | |
| Estimated liability arising from injuries to persons (Note 15) | 51,530 | 49,149 |
| Post employment benefits other than pensions (Note 8) | 908,111 | 987,443 |
| Long-term debt (Notes 9 to 12) | 19,400,579 | 12,459,678 |
| Net pension liability (Note 7) | 167,407 | 59,821 |
| Derivative instrument liabilities (Note 13) | 34,608 | 147,415 |
| Due to MTA—change in fair value of derivative (Note 13 and 18) | 39,771 | 25,982 |
| Lease payable, as lessee (Note 14) | 84,895 | 83,983 |
| Total non-current liabilities | 20,686,901 | 13,813,471 |
| TOTAL LIABILITIES | 21,939,184 | 15,320,481 |
| DEFERRED INFLOWS OF RESOURCES: | | |
| Related to pensions (Note 7) | 54,456 | 159,325 |
| Related to leases | 13,473 | 15,382 |
| Related to other post-employment benefits (Note 8) | 167,013 | 82,536 |
| TOTAL DEFERRED INFLOWS OF RESOURCES | 234,942 | 257,243 |
| NET POSITION: | | |
| Net investment in capital assets | 2,105,405 | 2,147,095 |
| Restricted | 2,409,990 | 1,606,192 |
| Unrestricted | (7,287,890) | (6,390,592) |
| Total net position | (2,772,495) | (2,637,305) |
| TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION | $ 19,401,631 | $ 12,940,419 |

See notes to financial statements. (Concluded)

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

## STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
## FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021
## ($ in thousands)

| | 2022 | 2021 (Restated) |
|---|---|---|
| OPERATING REVENUES: | | |
| Bridges and tunnels | $ 2,332,384 | $ 2,169,877 |
| Building rentals and fees | 23,737 | 22,928 |
| Other income | 630 | 1,609 |
| Total operating revenues | 2,356,751 | 2,194,414 |
| OPERATING EXPENSES: | | |
| Salaries and wages | 118,498 | 111,545 |
| Retirement and other employee benefits | 51,836 | 46,720 |
| Post employment benefits other than pensions | 54,738 | 76,558 |
| Electric power | 4,645 | 3,977 |
| Fuel | 2,813 | 1,765 |
| Insurance | 13,774 | 11,007 |
| Maintenance and other operating contracts | 145,171 | 120,628 |
| Professional service contracts | 14,781 | 27,567 |
| Materials and supplies | 3,631 | 3,300 |
| Depreciation and amortization | 206,374 | 202,233 |
| Credit card fees | 38,073 | 32,834 |
| Other | 15,814 | 14,495 |
| Total operating expenses | 670,148 | 652,629 |
| OPERATING INCOME | 1,686,603 | 1,541,785 |
| NON-OPERATING REVENUES (EXPENSES): | | |
| Build America Bonds subsidy | 8,533 | 8,536 |
| Interest expense | (527,654) | (386,441) |
| Interest expense—leases | (7,688) | (6,978) |
| Interest income on PMT | 164,551 | 37,295 |
| Change in fair value of derivative financial instruments (Note 13) | 13,789 | 8,965 |
| Change in fair value of derivative—due to MTA | (13,789) | (8,965) |
| Internet revenue tax | 328,059 | 344,916 |
| Mansion revenue tax | 513,078 | 394,291 |
| Investment income | 13,515 | 512 |
| Other non-operating revenue | 4,733 | 4,733 |
| Total non-operating revenue, net | 497,127 | 396,864 |
| INCOME BEFORE TRANSFERS | 2,183,730 | 1,938,649 |
| TRANSFERS IN—MTA | 372,656 | 491 |

(Continued)

## TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

### STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
### FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021
### ($ in thousands)

| | 2022 | 2021 (Restated) |
|---|---|---|
| TRANSFERS OUT (Note 1): | | |
| New York City Transit Authority | $ (546,904) | $ (463,827) |
| Metropolitan Transportation Authority | (637,807) | (573,208) |
| Contribution for labor settlement to MTA | (7,740) | - |
| Sales tax bond proceeds transfers | (457,660) | - |
| Internet and mansion transfers | (1,041,465) | (1,096,096) |
| | (2,691,576) | (2,133,131) |
| CHANGE IN NET POSITION | (135,190) | (193,991) |
| NET POSITION—Beginning of year | (2,637,305) | (2,443,314) |
| NET POSITION—End of year | $(2,772,495) | $(2,637,305) |

See notes to financial statements. (Concluded)

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

### STATEMENTS OF CASH FLOWS
### FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021
### ($ in thousands)

| | 2022 | 2021 (Restated) |
|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES: | | |
| Tolls collected | $ 2,316,708 | $ 2,183,752 |
| Building rentals and fees received | 22,581 | 22,860 |
| Payroll and related fringe benefits | (217,031) | (211,276) |
| Other operating expenses | (244,530) | (211,685) |
| Net cash provided by operating activities | 1,877,728 | 1,783,651 |
| CASH FLOW FROM NONCAPITAL FINANCING ACTIVITIES— | | |
| Transfer internet & mansion revenue to MTA | (1,041,465) | (1,096,096) |
| Internet & mansion tax revenue | 852,678 | 719,411 |
| Proceeds from PMT bonds | 6,222,558 | 2,865,821 |
| PMT loan interest paid on debt | (167,434) | (31,209) |
| PMT loan principal paid on debt | (8,360) | - |
| Proceeds from Sales Tax Bonds | 755,758 | - |
| Transfers of proceeds of sales tax bond to MTAHQ | (457,797) | - |
| Sales Tax Bonds interest paid on debt | (10,929) | - |
| Subsidies paid to affiliated agencies | (1,193,342) | (928,734) |
| Net cash provided in noncapital financing activities | 4,951,667 | 1,529,193 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Payment for capital assets | (376,917) | (578,619) |
| Principal payments on Senior, Subordinate, and BAN | (321,695) | (312,265) |
| Bond proceeds | 434,642 | 717,086 |
| Receipts from leases | 1,764 | 1,666 |
| Payments of leases | (2,043) | (2,043) |
| Interest payments | (401,420) | (386,559) |
| Net cash used in capital and related financing activities | (665,669) | (560,734) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Gross sales of short-term securities | 10,255,499 | 6,908,174 |
| Gross purchases of short-term securities | (10,856,063) | (7,918,555) |
| PMT bonds interest received on debt | 235,522 | 45,910 |
| PMT bonds principal received on debt | 35,472 | 4,611 |
| Transfer of PMT bond proceeds to MTAHQ | (6,042,382) | (2,082,257) |
| Net cash used in investing activities | (6,371,952) | (3,042,117) |
| NET (DECREASE)/INCREASE IN CASH | (208,226) | (290,007) |
| CASH—Beginning of year | 217,264 | 507,271 |
| CASH—End of year | $ 9,038 | $ 217,264 |



(Continued)

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

### STATEMENTS OF CASH FLOWS
### FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021
### ($ in thousands)

| | 2022 | 2021 (Restated) |
|---|---|---|
| RECONCILIATION OF OPERATING INCOME TO NET CASH OPERATING ACTIVITIES: | | |
| Operating income | $ 1,686,603 | $ 1,541,785 |
| Adjustments to reconcile to net cash provided by operating activities: | | |
| Depreciation and amortization | 206,374 | 202,233 |
| On-behalf payments related to rent (Note 14) | (7,437) | (2,133) |
| GASB 68 pension expense adjustment | (22,210) | (45,917) |
| GASB 75 OPEB expense adjustment | 24,982 | 61,350 |
| Net (increase) decrease in receivables | (28,807) | (58,596) |
| Net increase in operating payables | 30,175 | 5,590 |
| Net increase in prepaid expenses | 1,627 | 609 |
| Net increase in accrued salary costs, vacation and insurance | 5,268 | 8,113 |
| Net (decrease) increase in unearned revenue | (18,847) | 70,617 |
| NET CASH FROM OPERATING ACTIVITIES | $ 1,877,728 | $ 1,783,651 |
| NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES: | | |
| Capital assets related liabilities | $ 117,457 | $ 145,481 |
| Contributed capital assets | 352,499 | - |
| Interest expense for leases | 7,688 | 6,978 |
| Interest income from leases | 250 | 418 |
| TOTAL NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES | $ 477,894 | $ 152,877 |
| Interest expense includes amortization of net (premium) | $ (61,299) | $ (74,877) |

See notes to financial statements. (Concluded)

**($in thousands, except as noted)**

## 1. BASIS OF PRESENTATION

**Reporting Entity**—The Triborough Bridge and Tunnel Authority (the "Authority" or "MTA Bridges and Tunnels") is a public benefit corporation created pursuant to the Public Authorities Law (the "Act") of the State of New York (the "State"). MTA Bridges and Tunnels is a component unit of the Metropolitan Transportation Authority ("MTA"). The MTA is a component unit of the State and is included in the State of New York Comprehensive Annual Financial Report of the Comptroller as a public benefit corporation. MTA Bridges and Tunnels is operationally and legally independent of the MTA. MTA Bridges and Tunnels enjoy certain rights typically associated with separate legal status including the ability to issue debt. However, MTA Bridges and Tunnels is included in the MTA's consolidated financial statements as a blended component unit because of the MTA's financial accountability and MTA Bridges and Tunnels is under the direction of the MTA Board (a reference to "MTA Board" means the board of MTA and/or the boards of the MTA Bridges and Tunnels and other MTA component units that apply in the specific context, all of which are comprised of the same persons). Under accounting principles generally accepted in the United States of America ("GAAP"), the MTA is required to include MTA Bridges and Tunnels in its consolidated financial statements.

MTA Bridges and Tunnels operates seven toll bridges, two toll tunnels, and the Battery Parking Garage.

All Authority toll facilities operate E-ZPass in conjunction with a regional electronic toll collection system. MTA Bridges and Tunnels' annual net earnings before depreciation and amortization and other adjustments ("operating transfer") are transferred to the New York City Transit Authority ("TA") and the MTA pursuant to provisions of the Act. In addition, MTA Bridges and Tunnels annually transfers its unrestricted investment income to the MTA. The operating transfer and the investment income transfer can be used to fund operating expenses or capital projects. The TA receives $24,000 plus 50% of MTA Bridges and Tunnels' remaining annual operating transfer, as adjusted, to reflect certain debt service transactions and the MTA receives the balance of the operating transfer, as adjusted, to reflect certain debt service transactions, plus the annual unrestricted investment income. Transfers are made during the year. The remaining amount due at December 31, 2022 and 2021, of $185,787 and $190,701, respectively, is recorded as a liability in MTA Bridges and Tunnels' financial statements.

MTA Bridges and Tunnels certified to the City of New York (the "City") and the MTA that its operating transfer and its unrestricted investment income at December 31, 2022 and 2021, were as follows:

| | 2022 | 2021 |
|---|---|---|
| Operating transfer | $1,184,711 | $1,037,035 |
| Investment income (excludes unrealized gain or loss) | 3,718 | 94 |
| | $1,188,429 | $1,037,129 |

## 2. SIGNIFICANT ACCOUNTING POLICIES

**Basis of Accounting**—The accompanying financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

The MTA Bridges and Tunnels applies Governmental Accounting Standards Board ("GASB") Codification of Governmental Accounting and Financial Reporting Standards ("GASB Codification") Section P80, Proprietary Accounting and Financial Reporting.

**New Accounting Standards Adopted**—The MTA Bridges and Tunnels adopted the following GASB Statements for the year ended December 31, 2022:

GASB Statement No. 87, *Leases*, was issued to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities.

The MTA Bridges and Tunnels evaluated all the requirements under GASB Statement No. 87, *Leases,* and adopted this Statement for the year ended December 31, 2022, and applied the retroactive effect of this adoption by the recognition and measurement of lease assets and liabilities as of January 1, 2021. Net position as of and for the year ended December 31, 2021, was restated by $341.

The following schedule summarizes the net effect of adopting GASB Statement No. 87 in the Consolidated Statement of Net Position as of December 31, 2021 (in thousands):

| | As Previously Stated | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|
| CURRENT ASSETS: | | | |
| Lease receivable, as lessor | $ - | $ 1,514 | $ 1,514 |
| Total current assets | 4,702,512 | 1,514 | 4,704,026 |
| NONCURRENT ASSETS: | | | |
| Other capital assets, net of accumulated depreciation/amortization | 6,694,419 | 24,180 | 6,718,599 |
| Total capital assets-net of accumulated depreciation and amortization | 7,607,152 | 24,180 | 7,631,332 |
| Lease receivable, as lessor | - | 14,308 | 14,308 |
| Total non-current assets | 7,618,359 | 38,488 | 7,656,847 |
| Total assets | 12,320,871 | 40,002 | 12,360,873 |
| Total assets and deferred outflows of resources | 12,900,417 | 40,002 | 12,940,419 |
| NONCURRENT LIABILITIES: | | | |
| Capital Lease Obligation | 59,704 | (59,704) | - |
| Lease payable, as lessee | - | 83,983 | 83,983 |
| Total non-current liabilities | 13,789,192 | 24,279 | 13,813,471 |
| Total Liabilities | 15,296,202 | 24,279 | 15,320,481 |
| DEFERRED INFLOWS OF RESOURCES: | | | |
| Deferred inflows related to leases | - | 15,382 | 15,382 |
| Total deferred inflows of resources | 241,861 | 15,382 | 257,243 |
| NET POSITION: | | | |
| Net investment in capital assets | 2,147,194 | (99) | 2,147,095 |
| Unrestricted | (6,391,032) | 440 | (6,390,592) |
| Total net position | (2,637,646) | 341 | (2,637,305) |

In addition, revenues, expenses and changes in net position for the year ended December 31, 2021 were required to be restated by GASB Statement No. 87, *Leases,* as follows (in thousands):

| | As Previously Stated | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|
| OPERATING REVENUES: | | | |
| Other income | $ 1,586 | $ 23 | $ 1,609 |
| Total operating revenues | 2,194,391 | 23 | 2,194,414 |
| OPERATING EXPENSES: | | | |
| Maintenance and other operating contracts | 120,520 | 108 | 120,628 |
| Depreciation and amortization | 201,356 | 877 | 202,233 |
| Total operating expenses | 651,644 | 985 | 652,629 |
| Operating income | 1,542,747 | (962) | 1,541,785 |
| NON-OPERATING REVENUES (EXPENSES): | | | |
| Other non-operating revenue | 2,220 | 2,513 | 4,733 |
| Interest expense-capital lease obigation | (5,350) | (1,628) | (6,978) |
| Investment income | 94 | 418 | 512 |
| Total non-operating (expenses) | 395,561 | 1,303 | 396,864 |
| Income before contributions and transfers | 1,938,308 | 341 | 1,938,649 |
| Change in net position | (194,332) | 341 | (193,991) |
| NET POSITION - End of period | (2,637,646) | 341 | (2,637,305) |

The following schedule summarizes the cash flow impact of adopting GASB Statement No. 87, *Leases* in Consolidated Statement of Cash Flows (in thousands) for certain leases previously classified as operating and capital leases:

| **Year-ended December 31,** | As Previously Stated | GASB Statement No. 87 Impact | Restatement Reported |
|---|---|---|---|
| CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Building rentals and fees received | $ 24,526 | $ (1,666) | $ 22,860 |
| Other operating expenses | (213,728) | 2,043 | (211,685) |
| Net cash provided by operating acttivities | 1,783,274 | 377 | 1,783,651 |
| CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES: | | | |
| Receipts from leases | - | 1,666 | 1,666 |
| Payments of leases | - | (2,043) | (2,043) |
| Net cash used in capital and related financing activities | (560,357) | (377) | (560,734) |
| RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES: | | | |
| Operating income | 1,542,747 | (962) | 1,541,785 |
| Depreciation and amortization | 201,356 | 877 | 202,233 |
| On-behalf payments related to rent (Note 14) | (2,219) | 86 | (2,133) |
| Net (increase) decrease in receivables | (56,930) | (1,666) | (58,596) |
| Net (increase) decrease in payables | 3,548 | 2,042 | 5,590 |
| Net cash provided by operating activities | 1,783,274 | 377 | 1,783,651 |
| NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES: | | | |
| Noncash capital and related financing activities: | | | |
| Capital assets related liabilities | 61,498 | 83,983 | 145,481 |
| Interest expense for leases | - | 6,978 | 6,978 |
| Interest income from leases | - | 418 | 418 |
| Total noncash capital and related financing activities | 61,498 | 91,379 | 152,877 |

GASB Statement No. 91, *Conduit Debt Obligations*. The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This Statement achieves those objectives by clarifying the existing definition of a conduit debt obligations; establishing that a conduit debt is not a liability of the issuer; establishing standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improving required note disclosures. Conduit debt obligations doesn't apply to the primary government MTA and its component unit MTA Bridges and Tunnels. The adoption of this Statement did not have an impact on the financial position, results of operations or cash flows of the MTA Bridges and Tunnels.

GASB Statement No. 92, *Omnibus 2020*. The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics and includes specific provisions about the following:

- The effective date of Statement No. 87, *Leases*, and Implementation Guide No. 2019-3, *Leases*, for interim financial reports
- Reporting of intra-entity transfers of assets between a primary government employer and a component unit defined benefit pension plan or defined benefit other postemployment benefit (OPEB) plan.
- The applicability of Statements No. 73, *Accounting and Financial Reporting for Pensions and Related Assets* That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68, as amended, and No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, to reporting assets accumulated for postemployment benefits.
- The applicability of certain requirements of Statement No. 84, *Fiduciary Activities, to postemployment benefit arrangements.*
- Measurement of liabilities (and assets, if any) related to asset retirement obligations (AROs) in a government acquisition.
- Reporting by public entity risk pools for amounts that are recoverable from reinsurers or excess insurers.
- Reference to nonrecurring fair value measurements of assets or liabilities in authoritative literature
- Terminology used to refer to derivative instruments.

The adoption of this Statement has no material impact on the financial position, results of operations or cash flows of MTA Bridges and Tunnels.

GASB Statement No. 93, *Replacement of Interbank Offered Rates*. Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate (IBOR)—most notably, the London Interbank Offered Rate (LIBOR). As a result of global reference rate reform, LIBOR is expected to cease to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate. The objective of this Statement is to address those and other accounting and financial reporting implications that result from the replacement of an IBOR. The adoption of this Statement has no material impact on the financial position, results of operations or cash flows of MTA Bridges and Tunnels.

**Accounting Standards Issued But Not Yet Adopted**—GASB has issued the following pronouncements that may affect the future financial position, results of operations, cash flows, or financial presentation of the MTA Bridges and Tunnels upon implementation. Management has not yet evaluated the effect of implementation of these standards.

| GASB Statement No. | GASB Accounting Standard | MTA Required Year of Adoption |
|---|---|---|
| 94 | *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* | 2023 |
| 96 | *Subscription-based information technology arrangements* | 2023 |
| 99 | *Omnibus 2022* | 2023 |
| 100 | *Accounting changes and Error Corrections* | 2024 |
| 101 | *Compensated Absences* | 2024 |

**Use of Management's Estimates**—The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the consolidated interim financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates include fair value of investments and derivative instruments, allowances for doubtful accounts, accrued expenses and other liabilities, depreciable lives of capital assets, estimated liability arising from injuries to persons, pension benefits and other postemployment benefits. Actual results could differ significantly from those estimates.

**Operating Revenues**—Bridges and Tunnels—Revenue is recognized through the fully cashless toll collection system, comprising of toll collection activity and the Tolls-By-Mail video billing. Revenues are earned when the vehicles use the TBTA facilities, however, the cash is either on a prepaid or post-paid basis.

MTA Bridges and Tunnels has two toll rebate programs at the Verrazzano-Narrows Bridge: the Staten Island Resident ("SIR") Rebate Program, available for residents of Staten Island participating in the Staten Island Resident E-ZPass toll discount plan, and the Verrazzano-Narrows Bridge Commercial Rebate Program ("VNB Commercial Rebate Program"), available for commercial vehicles making more than ten trips per month using the same New York Customer Service Center ("NYCSC") E-ZPass account. The Verrazzano- Narrows Bridge Commercial Rebate Program and Staten Island Resident Rebate Program are funded by the State and the MTA. There is no impact to revenue due to this program.

**Non-operating Revenues**—Build America Bonds subsidy—MTA Bridges and Tunnels is receiving cash subsidy payments from the U.S. Treasury equal to 35% of the interest payable on the Series of Bonds issued as "Build America Bonds" and authorized by the Recovery Act. The Internal Revenue Code of 1986 imposes requirements that MTA Bridges and Tunnels must meet and continue to meet after the issuance in order to receive the cash subsidy payments. The interest on these bonds is fully subject to Federal income taxation.

Triborough Bridge and Tunnel Authority (“MTA Bridges and Tunnels”) had interest income on the Payroll Mobility Tax senior bonds that were received from MTA. The funding for PMT was received by MTA from Payroll Mobility Tax receipts. This income transferred to MTA Bridges and Tunnels from MTA to covered interest payment on the PMT senior bonds.

On April 1, 2019 the MTA Reform and Traffic Mobility Act (“the Act”) was enacted as part of the State budget for Fiscal Year 2019-2020. Pursuant to Public Authorities Law section 553-j, created by the Act, MTA Bridges and Tunnels is required to establish the Central Business District tolling (CBDTP) capital lockbox fund which is kept separate and apart from any other TBTA monies. The fund shall consist of all monies received by MTA Bridges and Tunnels under the Central Business District Tolling Program (CBDTP), as well as revenues of the real estate transfer tax (“Mansion Tax”) and Portions of New York City and State sales taxed revenue.

Monies in the fund are to be applied, subject to agreements with bondholders and applicable Federal law, to the payment of operating, administration, and other necessary expenses of the MTA Bridges and Tunnels, or to New York City subject to the memorandum of understanding between the City and MTA Bridges and Tunnels properly allocable to the CBDTP, including the planning, designing, constructing, installing or maintaining of the CBDTP, including, without limitation, the Central Business District tolling infrastructure, the Central Business District Tolling collection system and the Central Business District tolling customer service center, and the costs of any Metropolitan Transportation Authority capital projects included within the 2020 to 2024 MTA capital program or any successor programs.

In April 2020, the New York State Legislature passed legislation that was signed by the Governor which permitted MTA to use funds in the CBDTP Capital Lockbox in all or any of the fiscal years of the authority beginning in 2020 through 2021 to offset decreases in revenue, including but not limited to, lost taxes, fees, charges, fares and tolls, due in whole or in part, or increases in operating costs due in whole to the state disaster emergency caused by the novel coronavirus, COVID-19. For the years ended December 31, 2022, and 2021 MTA Bridges and Tunnels had internet and mansion tax revenue earned of $841 million and $739 million respectively.

During 2022, Triborough Bridge and Tunnel Authority issues bonds to help finance approved transit and commuter projects included in the MTA 2020-2024 Capital Program, to finance a portion of the capital costs of the Central Business District Tolling Program and to pay certain financing, legal and miscellaneous expenses associated with the bond issuance. These Bonds are issued by MTA Bridges and Tunnels under the Triborough Bridge and Tunnel Authority Special Obligation Resolution Authorizing Sales Tax Revenue Obligations. The Bonds are MTA Bridges and Tunnels’ special, not general, obligations, payable solely from monies in the Obligations Trust Estate pledged by the TBTA Sales Tax Resolution derived primarily from the sales tax receipts that flow into the Central Business District Tolling Capital Lockbox Fund.

**Operating and Non-operating Expenses**—Operating and non-operating expenses are recognized in the accounting period in which the liability is incurred. All expenses related to operating the MTA Bridges and Tunnels (e.g., salaries, insurance, depreciation, lease amortization, etc.) are reported as operating expenses. All other expenses (e.g., interest on long-term debt, interest on leases, etc.) are reported as non-operating expenses.

**Investments**—MTA Bridges and Tunnels adopted GASB Statement No. 72, Fair Value Measurement and Application, which addresses accounting and financial reporting issues related to fair value measurements. Under the Statement, investment assets and liabilities are to be measured at fair value, which is described as the "price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants." Fair Value assumes that the transaction will occur in the MTA's Bridges and Tunnels principal (or most advantageous) market. GASB Statement No. 72 requires a government to use valuation techniques that are appropriate under the circumstances and for which sufficient data are available to measure fair value. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

The MTA Bridges and Tunnels investment policies comply with the New York State Comptroller's guidelines for such operating and capital policies. Those policies permit investments in, among others, obligations of the U.S. Treasury, its agencies, and instrumentalities, and repurchase agreements secured by such obligations.

Investments are recorded on the MTA Bridges and Tunnels statement of net position at fair value, except for repurchase agreements, which are recorded at amortized cost. All investment income, including changes in the fair value of investments, is reported as revenue on the MTA Bridges and Tunnels statement of revenues, expenses, and changes in net position. Fair values have been determined using quoted market values at December 31, 2022 and December 31, 2021.

Investment derivative instrument contracts are reported at fair value using the income approach.

**MTA Investment Pool**—The MTA, on behalf of the MTA Bridges and Tunnels, invests funds which are not immediately required for the MTA Bridges and Tunnels' operations in securities permitted by the New York State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes and U.S. Treasury zero-coupon bonds. All investments are held by the MTA's agent in custody accounts in the name of the MTA. The Company has no financial instruments with significant individual or group concentration of credit risk.

**Capital Assets**—Properties and equipment are carried at cost and are depreciated on a straight-line basis over estimated useful lives. Expenses for maintenance and repairs are charged to operations as incurred. Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA having a minimum useful life of two years and having a cost of more than $25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. GASB 87 leases are classified as right-of-use assets and measured at the present value of the initial measurement of the lease liability, plus any payments made to the lessor at or before the commencement of the lease term and certain direct costs. Accumulated depreciation and amortization are reported as reductions of fixed assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment, 25 to 100 years for infrastructure, 10 years for open road tolling systems and equipment, and 25 years for open road tolling infrastructure. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

**Leases** – As a result of the adoption of GASB Statement No. 87, certain lease agreements are classified as financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. Lease receivables and liabilities are measured at the present value of payments expected to be made during the lease term, using an applicable discount rate stated or implicit in the lease and if not available, using incremental borrowing rate at the time of valuation. Lease assets and deferred inflows are amortized on a straight-line basis over the term of the lease.

**Compensated Absences**—MTA Bridges and Tunnels has accrued the full value (including fringe benefits) of all vacation and sick leave benefits earned by employees to date if the leave is attributable to past service and it is probable that MTA Bridges and Tunnels will compensate the employees for the benefits through paid time off or some other means, such as cash payments at termination or retirement.

**Net Position**—MTA Bridges and Tunnels follows the "business type" activity requirements of GASB 34, Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments which requires that resources be classified for accounting and reporting purposes into the following three net position categories:

**Net investment in Capital Assets**

Capital assets, inclusive of right-of-use assets, net of accumulated depreciation and amortization and outstanding principal balances of debt attributable to the acquisition, construction, or improvement of those assets.

**Restricted**

*Nonexpendable*—Net position subject to externally imposed stipulations such that the Authority maintains them permanently. For the years ended December 31, 2022 and 2021, the Authority did not have nonexpendable net position.

*Expendable*—Net position whose use by the Authority is subject to externally imposed stipulations that can be fulfilled by actions of the Authority pursuant to those stipulations or that expire with the passage of time. For the years ended December 31, 2022, and 2021, the Authority had expendable restricted net position related to (1) Debt Service of $214,333 and $176,772, (2) the Necessary Reconstruction Reserve of $724,183 and $647,316 and (3) Payroll Mobility Tax $1,167,356 and $782,104, (4) Sale Tax Revenue Bond $304,118 and $0, respectively.

**Unrestricted**

Net position that is not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by actions of management or the Board of Directors.

**Subsidies**—Subsidies provided by MTA Bridges and Tunnels represent its operating transfer and investment income computed on an accrual basis these transferred are made to NYTCA and MTA. In addition, for the years ended December 31, 2022, and 2021 MTA Bridges and Tunnels transferred out internet and mansion tax to MTA of $1,041,465 and $1,096,096, respectively.

**Pension Plans**—The Authority follows GASB Statement No. 68, *Accounting and Financial Reporting for Pensions* and GASB Statement No. 71, for its pension plans.

The MTA Bridges and Tunnels recognizes a net pension liability for the qualified pension plan in which it participates, which represents the excess of the total pension liability over the fiduciary net position of the qualified pension plan, or the MTA Bridges and Tunnels' proportionate share thereof in the case of a cost- sharing multiple-employer plan. The net pension liability is calculated using the qualified pension plan's measurement date. Changes in the net pension liability during the year are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the year incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the respective qualified pension plan and recorded as a component of pension expense beginning with the year in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

**Postemployment Benefits Other Than Pensions**—MTA Bridges and Tunnels follows GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* and GASB Statement No. 85, *Omnibus* for the OPEB Plan.

The MTA Bridges and Tunnels recognizes a proportionate share of the net OPEB liability for the MTA's cost-sharing multiple-employer OPEB Plan, which represents the excess of the total OPEB liability over the fiduciary net position of the OPEB Plan, measured as of the measurement date of the plan. The change in portion is based on actual contributions from the participating employers.

Changes in the net OPEB liability during the year are recorded as OPEB expense, or as deferred outflows of resources or deferred inflows of resources relating to OPEB depending on the nature of the change, in the year incurred. Changes in net OPEB liability that are recorded as deferred outflows of resources or deferred inflows of resources that arise from changes in actuarial assumptions and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the OPEB plan and recorded as a component of OPEB expense beginning with the year in which they are incurred. Projected earnings on qualified OPEB plan investments are recognized as a component of OPEB expenses. Differences between projected and actual investment earnings are reported as deferred outflows of resources or deferred inflow of resources as a component of OPEB expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

## 3. CASH

The bank balances are insured up to $250 in the aggregate by the Federal Deposit Insurance Corporation ("FDIC") for each bank in which funds are deposited.

Cash at December 31, 2022 and 2021 consists of the following (in thousands):

| | 2022 | | 2021 | |
|---|---|---|---|---|
| | Carrying Amount | Bank Balance | Carrying Amount | Bank Balance |
| Insured deposits | $ 250 | $ 250 | $ 250 | $ 250 |
| Collateralized deposits | 8,788 | 8,608 | 217,014 | 216,796 |
| | $ 9,038 | $ 8,858 | $ 217,264 | $ 217,046 |

All collateralized deposits are held by the Authority or its agent in the Authority's name.

The MTA, on behalf of itself, its affiliates, and subsidiaries invests funds which are not immediately required for the MTA's operations in securities permitted by the New York State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero coupon bonds.

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the MTA will not be able to recover the value of its deposits. While the MTA does not have a formal deposit policy for custodial credit risk, New York State statues govern the MTA's investment policies. The MTA's uninsured and uncollateralized deposits are primarily held by commercial banks in the metropolitan New York area and are subject to the credit risks of those institutions.

## 4. INVESTMENTS

MTA Bridges and Tunnels' investment policies comply with the New York State Comptroller's guidelines for investment policies. MTA's All-Agency Investment Guidelines restrict MTA Bridges and Tunnels' investments to obligations of the U.S. Treasury, its agencies and instrumentalities and repurchase agreements backed by U.S. Treasury securities. All investments were managed by the MTA, as MTA Bridges and Tunnels' agent, in custody accounts kept in the name of MTA Bridges and Tunnels for restricted investments and in the name of the MTA Bridges and Tunnels for unrestricted investments. MTA's All-Agency Investment Guidelines state that securities underlying repurchase agreements must have a market value at least equal to the cost of the investment.

MTA Bridges and Tunnels holds its investments at a custodian bank. The custodian must meet certain banking institution criteria enumerated in MTA's Bridges and Tunnels Investment Guidelines. The Investment Guidelines also require the Treasury Division to hold at least $100 of its portfolio with a separate emergency custodian bank. The purpose of this deposit is in the event that MTA Bridges and Tunnels main custodian cannot execute transactions due to an emergency outside of the custodian's control, MTA Bridges and Tunnels has an immediate alternate source of liquidity.

MTA Bridges and Tunnels categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

MTA Bridges and Tunnels had the following recurring fair value measurements as of December 31, 2022 and 2021 (in thousands):

| | December 31, 2022 | Fair Value Measurements Level 1 | Fair Value Measurements Level 2 | December 31, 2021 | Fair Value Measurements Level 1 | Fair Value Measurements Level 2 |
|---|---|---|---|---|---|---|
| Investments by fair value level: | | | | | | |
| Debt securities: | | | | | | |
| U.S. treasury securities | $ 2,209,627 | $ 1,407,834 | $ 801,793 | $1,427,700 | $1,427,700 | $ - |
| Repurchase agreements | 16,559 | 16,559 | - | 10,026 | 10,026 | - |
| Total debt securities | 2,226,186 | 1,424,393 | 801,793 | 1,437,726 | 1,437,726 | - |
| Total investments by fair value level | 2,226,186 | $ 1,424,393 | $ 801,793 | 1,437,726 | $1,437,726 | $ - |
| Total investments | $ 2,226,186 | | | $1,437,726 | | |

Investments classified as Level 1 and Level 2 of the fair value hierarchy, totaling $2,226,186 and $1,437,726 as of December 31, 2022 and 2021, respectively, are valued using quoted prices in active markets. Fair values include accrued interest to the extent that interest is included in the carrying amounts. Accrued interest on investments other than Treasury bills and coupons is included in other receivables on the statements of net position.

Investments available to pay operating and maintenance expenses, debt service and operating surplus transfers, at December 31, 2022 and 2021, are as follows (in thousands):

| **Investments** | **2022** | **2021** |
|---|---|---|
| CURRENT: | | |
| Restricted: | | |
| Bond Proceeds Fund | $ 1,736,341 | $ 996,475 |
| Primarily Necessary Reconstruction Fund | 30,824 | 30,310 |
| Debt Service Fund | 229,477 | 173,217 |
| Cost of Issuance Fund | 5,375 | 3,088 |
| Total current—restricted | 2,002,017 | 1,203,090 |
| Total current—unrestricted | 224,169 | 234,636 |
| TOTAL—CURRENT | $ 2,226,186 | $ 1,437,726 |

The unexpended bond proceeds of the General Purpose Revenue Bonds 1980 Resolution, not including proceeds held for the Transportation Project, were restricted for payment of capital improvements of MTA Bridges and Tunnels' present facilities. The Debt Service Funds are restricted for the payment of debt service as provided by the bond resolutions.

The fair value of the above investments consists of $224,169 and $234,636 in 2022 and 2021 in unrestricted investments respectively, and $2,002,017 and $1,203,090 in 2022 and 2021 in restricted investments, respectively. Investments had weighted average monthly yields ranging from 0.089% to 2.941% for the year ended December 31, 2022 and 0.063% to 0.151% for the year ended December 31, 2021. The net unrealized gain on investments was $9,547 and $73 for the years ended December 31, 2022 and 2021, respectively.

**Interest Rate Risk**—Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of interest rate risk. The greater the duration of a bond or portfolio of bonds, the greater its price volatility will be in response to a change in interest rate risk and vice versa. Duration is an indicator of bond price's sensitivity to a 100-basis point change in interest rates (in thousands).

| | December 31, 2022 | | December 31, 2021 | |
|---|---|---|---|---|
| | Fair Value | Duration (In years) | Fair Value | Duration (In years) |
| U.S. Treasuries | $ 2,209,627 | 0.01 | $ 1,427,700 | 0.01 |
| Repurchase agreements | 16,559 | * | 10,026 | * |
| Total fair value | 2,226,186 | | 1,437,726 | |
| Modified duration | - | 0.01 | - | 0.01 |
| Total investments | $ 2,226,186 | | $ 1,437,726 | |

* Duration is less than a month

**Credit Risk**—At December 31, 2022 and 2021, the following credit quality rating has been assigned to MTA investments by a nationally recognized rating organization (in thousands):

| Quality Rating from Standard & Poor's | December 31, 2022 | Percent of Portfolio | December 31, 2021 | Percent of Portfolio |
|---|---|---|---|---|
| Not Rated | $ 16,559 | 1 % | $ 10,026 | 1 % |
| U.S. Government | 2,209,627 | 99 | 1,427,700 | 99 |
| Total | 2,226,186 | 100 % | 1,437,726 | 100 % |
| Total investment | $ 2,226,186 | | $ 1,437,726 | |

## 5. MTA INVESTMENT POOL

The MTA, on behalf of MTA Bridges and Tunnels, invests funds which are not immediately required for MTA Bridges and Tunnels' operations in securities permitted by the MTA's All-Agency Investment Guidelines in accordance with the New York State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero-coupon bonds. All investments are held by the MTA's agent in custody accounts in the name of the MTA. The MTA has no financial instruments with significant individual or group concentration of credit risk. MTA Bridges and Tunnels categorizes its fair value measurement within the fair value hierarchy established by U.S. GAAP. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs. MTA Bridges and Tunnels' investment in the MTA Investment Pool is valued based on other observable inputs (Level 2 inputs). The amounts related to investment pool funds for the year ended December 31, 2022 were $377,205 for short-term unrestricted and $407,973 for short-term restricted. The amounts related to investment pool funds for the year ended December 31, 2021 were $372,582 for short-term unrestricted and $403,101 for short-term restricted.

## 6. CAPITAL ASSETS

Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA Bridges and Tunnels' having a minimum useful life of two years and having a cost of more than $25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. Leases recorded under GASB Statement No. 87, *Leases* are classified as right-of-use assets and measured at the present value of the initial measurement of the lease liability, plus any payments made to the lessor at or before the commencement of the lease term and certain direct costs. Accumulated depreciation and amortization are reported as reductions of fixed assets and right-of-use assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment, and 25 to 100 years for infrastructure. Right-of-use assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

The following is a summary of capital assets activity at January 1, 2021, December 31, 2021 and December 31, 2022:

| | Restated Balance January 1, 2021 | Restated Additions/ Transfers | Restated Deletions/ Transfers | Restated Balance December 31, 2021 | Additions/ Transfers | Deletions/ Transfers | Balance December 31, 2022 |
|---|---|---|---|---|---|---|---|
| Capital assets not being depreciated: | | | | | | | |
| Land | $ 52,940 | $ - | $ - | $ 52,940 | $ | $ | $ 52,940 |
| Construction in progress | 673,132 | 563,792 | 377,131 | 859,793 | 368,349 | 743,699 | 484,443 |
| Total capital assets not being depreciated | 726,072 | 563,792 | 377,131 | 912,733 | 368,349 | 743,699 | 537,383 |
| Capital assets being depreciated: | | | | | | | |
| Leasehold improvement—2 Broadway | 45,020 | - | - | 45,020 | - | - | 45,020 |
| Primary structures | 3,973,023 | 194,667 | - | 4,167,690 | 252,910 | - | 4,420,600 |
| Toll equipment | 574 | - | - | 574 | | - | 574 |
| Buildings | 684,546 | 8,218 | - | 692,764 | 11,158 | - | 703,922 |
| Roadway | 2,332,892 | 43,063 | - | 2,375,955 | 433,312 | - | 2,809,267 |
| Property—Road and equipment | 740,110 | 102,508 | - | 842,618 | 39,246 | - | 881,864 |
| ORT systems and equipment | 456,958 | 8,469 | - | 465,427 | 1,807 | - | 467,234 |
| Other | 263,589 | 5,733 | - | 269,322 | 6,245 | - | 275,567 |
| Total capital assets being depreciated | 8,496,712 | 362,658 | - | 8,859,370 | 744,678 | - | 9,604,048 |
| Less accumulated depreciation: | | | | | | | |
| Leasehold improvement—2 Broadway | 29,148 | 1,100 | - | 30,248 | 319 | - | 30,567 |
| Primary structures | 699,865 | 40,144 | - | 740,009 | 43,173 | - | 783,182 |
| Toll equipment | 31 | 14 | - | 45 | 14 | - | 59 |
| Buildings | 238,696 | 17,231 | - | 255,927 | 17,458 | - | 273,385 |
| Roadway | 679,515 | 80,879 | - | 760,394 | 88,948 | - | 849,342 |
| Property—Road and equipment | 53,848 | 19,983 | - | 73,831 | 21,737 | - | 95,568 |
| ORT systems and equipment | 67,357 | 22,871 | - | 90,228 | 23,208 | - | 113,436 |
| Other | 223,956 | 10,079 | - | 234,035 | 9,859 | - | 243,894 |
| Total accumulated depreciation | 1,992,416 | 192,301 | | 2,184,717 | 204,716 | - | 2,389,433 |
| Total capital assets being depreciated— Net of accumulated depreciation | 6,504,296 | 170,357 | | 6,674,653 | 539,962 | - | 7,214,615 |
| Capital assets—Net | $7,230,368 | $ 734,149 | $377,131 | $7,587,386 | $ 908,311 | $743,699 | $7,751,998 |
| Right of use assets being amortized | | | | | | | |
| Leased buildings and structures | 45,604 | - | - | 45,604 | - | - | 45,604 |
| Total right of Use Assets being amortized | 45,604 | - | - | 45,604 | - | - | 45,604 |
| Less accumulated depreciation - Right of Use Assets | | | | | | | |
| Leased buildings and structures | - | 1,658 | - | 1,658 | 1,658 | - | 3,316 |
| Total accumulated depreciation | - | 1,658 | - | 1,658 | 1,658 | - | 3,316 |
| Right of use assets being amortized - net | 45,604 | (1,658) | - | 43,946 | (1,658) | - | 42,288 |
| Total capital assets, including right of use asset - net | $7,275,972 | $ 732,491 | $377,131 | $7,631,332 | $ 906,653 | $743,699 | $7,794,286 |

In 2022 and 2021, capital asset additions included $16,147 and $21,640, respectively, of costs incurred by engineers working on capital projects.

## 7. EMPLOYEE BENEFITS

### Plan Description

***NYCERS***—The New York City Employees Retirement System (NYCERS) Plan is a cost-sharing, multiple-employer retirement system for employees of The City of New York (the City) and certain other governmental units whose employees are not otherwise members of the City's four other pension systems. NYCERS administers the New York City Employees Retirement System qualified pension plan.

NYCERS was established by an act of the Legislature of the State of New York under Chapter 427 of the laws of 1920. NYCERS functions in accordance with the governing statutes contained in the New York State Retirement and Social Security Law (RSSL), and the New York City Administrative Code, which are the basis by which benefit terms and employer and member contribution requirements are established and amended. The head of the retirement system is the Board of Trustees.

NYCERS issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information. This report may be obtained by writing to the New York City Employees' Retirement System at 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3724 or at www.nycers.org.

All employees holding permanent civil service positions in the competitive or labor class are required to become members of NYCERS six months after their date of appointment but may voluntarily elect to join NYCERS prior to their mandated membership date. All other eligible employees have the option of joining NYCERS upon appointment or anytime thereafter. NYCERS members are assigned to a "Tier" depending on the date of their membership.

Tier 1 All members who joined prior to July 1, 1973.

Tier 2 All members who joined on or after July 1, 1973 and before July 27, 1976.

Tier 3 Only certain members who joined on or after July 27, 1976 and prior to April 1, 2012.

Tier 4 All members (with certain member exceptions) who joined on or after July 27, 1976 but prior to April 1, 2012. Members who joined on or after July 27, 1976 but prior to September 1, 1983 retain all rights and benefits of Tier 3 membership.

Tier 6 Members who joined on or after April 1, 2012.

**Benefits Provided**—NYCERS provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (non-job-related disabilities) and Accident Disability Retirements (job-related disabilities) to participants generally based on salary, length of service, and member Tiers. Chapter 89 of the Laws of 2020, passed by the Legislature and signed by the Governor on May 30, 2020, provides benefits to statutory beneficiaries of members whose death was a result or was contributed to by COVID-19. This act adds Retirement and Social Security Law Sections 509-a and 607-i and Administrative Code of the City of New York Section 13-149.1 by providing an Accidental Death Benefit to eligible members of the NYCERS Plan.

The Service Retirement benefits provided to Tier 1 participants fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of final salary. The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of final salary.

Tier 2 participants have provisions similar to Tier 1, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit.

Tier 3 participants were later mandated into Tier 4 but could retain their Tier 3 rights. The benefits for Tier 3 participants are reduced by one half of the primary Social Security benefit attributable to service and provides for an automatic annual cost-of-living escalator in pension benefits of not more than 3.0%.

During March 2012, the Governor signed Chapter 18 of the Laws of 2012 that placed certain limitations on the Tier 3 and Tier 4 benefits available to participants who joined on and after April 1, 2012. In general, these changes, commonly referred to as Tier 6, increase the age requirement to 63 for most non-uniformed employees to retire and receive a full pension, require member contributions for all years of service for non-uniformed employees, institute progressive member contributions for non-uniformed employees, and lengthen the final average salary period from 3 to 5 years.

NYCERS provides automatic Cost-of-Living Adjustments (COLA), death benefits, accident, disability retirement benefits, and other supplemental pension benefits to certain retirees and beneficiaries. Members become fully vested as to benefits upon the completion of 5 years of service.

The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983 and 2012, significant amendments made to the State Retirement and Social Security Law (RSSL) modified certain benefits for employees joining the Plan on or after the effective date of such amendments, creating membership tiers.

**Contributions and Funding Policy**—NYCERS funding policy is to contribute statutorily-required contributions (Statutory Contributions), determined by the Chief Actuary for the New York City Retirement System, in accordance with State statutes and City laws, and are generally funded by employers within the appropriate Fiscal Year. The Statutory Contributions are determined under the One-Year Lag Methodology (OYLM). Under OYLM, the actuarial valuation date is used for calculating the Employer Contributions for the second following Fiscal Year. Statutory Contributions are determined annually to be an amount that, together with member contributions and investment income, provides for NYCERS' assets to be sufficient to pay benefits when due.

Member contributions are established by law. NYCERS has both contributory and noncontributory requirements, with retirement age varying from 55 to 70 depending upon when an employee last entered qualifying service.

In general, Tier 1 and Tier 2 member contribution rates are dependent upon the employee's age at membership and retirement plan election. In general, Tier 3 and Tier 4 members make basic contributions of 3.0% of salary, regardless of age at membership. Effective October 1, 2000, in accordance with Chapter 126 of the Laws of 2000, these members, except for certain Transit Authority employees enrolled in the Transit 20-Year Plan, are not required to make basic contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, members who meet certain eligibility requirements will receive one month's additional service credit for each completed year of service up to a maximum of two additional years of service credit. Effective December 2000, certain Transit Authority Tier 3 and Tier 4 members make basic member contributions of 2.0% of salary, in accordance with Chapter 10 of the Laws of 2000. Certain Tier 2, Tier 3 and Tier 4 members who are participants in special retirement plans are required to make additional member contributions of 1.85%, in addition to their base membership contribution. Tier 6 members are mandated to contribute between 3.0% and 6.0% of salary, depending on salary level, until they separate from service or retire.

MTA Bridges and Tunnels is required to contribute at an actuarially determined rate. MTA Bridges and Tunnels contributions to NYCERS for the years ended December 31, 2022 and 2021 were $31,973 and $34,591, respectively.

**Net Pension Liability**—MTA Bridges and Tunnels net pension liability for the NYCERS pension plan reported at December 31, 2022 and December 31, 2021 was measured as of June 30, 2022 and June 30, 2021, respectively. The total pension liability at December 31, 2022 and December 31, 2021 for the NYCERS pension plan was determined as of the actuarial valuation dates as of June 30, 2021 and June 30, 2020, respectively, and updated to roll forward the total pension liability to the measurement dates, respectively. The fiduciary net position and additions to and deductions from the fiduciary net position have been determined on the same basis as reported by NYCERS. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the Plan; and investments are reported at fair value.

**Actuarial Assumptions**—The total pension liability in each pension plan's actuarial valuation dates were determined using the following actuarial assumptions for the pension plan:

| | **NYCERS** | |
|---|---|---|
| **Valuation Date:** | **June 30, 2021** | **June 30, 2020** |
| Investment Rate of Return | 7.00% per annum, net of investment expenses | 7.00% per annum, net of investment expenses |
| Salary Increases | In general, merit and promotion increases, plus assumed General Wage increases of 3.0% per year. | In general, merit and promotion increases, plus assumed General Wage increases of 3.0% per year. |
| Inflation | 2.50% | 2.50% |
| Cost-of Living Adjustments | 1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees | 1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees |
| Mortality | Mortality tables for service and disability pensioners were developed from an experience study of the plan. The mortality tables for beneficiaries were developed from an experience review. | Mortality tables for service and disability pensioners were developed from an experience study of the plan. The mortality tables for beneficiaries were developed from an experience review. |
| Pre-retirement | N/A | N/A |
| Post-retirement—Healthy Lives | N/A | N/A |
| Post-retirement—Disabled Lives | N/A | N/A |

**Expected Rate of Return on Investments**—The long-term expected rate of return on investments of 7.0% for the NYCERS plan was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocations of the fund and the expected real rate of return (RROR) for the asset class in NYCERS was as of the measurement dates of June 30, 2022 and 2021 and is summarized as follows:

| | NYCERS 2022 | |
|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long-Term Expected Real Rate of Return** |
| Public markets: | | |
| U.S. public market equities | 27.0 % | 7.0 % |
| Developed public market equities | 12.0 | 7.2 |
| Emerging public market equities | 5.0 | 9.0 |
| Fixed income | 30.5 | 2.5 |
| Private markets (alternative investments): | | |
| Private Equity | 8.0 | 11.3 |
| Private real estate | 7.5 | 6.7 |
| Infrastructure— | 4.0 | 6.0 |
| Opportunistic fixed income | 6.0 | 7.4 |
| | 100 % | |
| Assumed inflation—mean | | 2.50 % |
| Long term expected rate of return | | 7.00 % |

| | NYCERS 2021 | |
|---|---|---|
| **Asset Class** | **Target Asset Allocation** | **Long-Term Expected Real Rate of Return** |
| Public markets: | | |
| U.S. public market equities | 27.0 % | 7.1 % |
| Developed public market equities | 12.0 | 7.2 |
| Emerging public market equities | 5.0 | 9.0 |
| Fixed income | 30.5 | 1.8 |
| Private markets (alternative investments): | | |
| Private Equity | 8.0 | 11.3 |
| Private real estate | 7.5 | 6.9 |
| Infrastructure— | 4.0 | 6.0 |
| Opportunistic fixed income | 6.0 | 7.1 |
| | 100 % | |
| Assumed inflation—mean | | 2.50 % |
| Long term expected rate of return | | 7.00 % |

**Discount Rate**—The discount rate used to measure the total pension liability was 7.0% for the NYCERS plan as of June 30, 2022 and 2021. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable for the pension plan and that employer contributions will be made at the rates determined by the pension plan's actuary. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current and non-active members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**MTA Bridges and Tunnels Proportion of Net Pension Liability—NYCERS**—The following table presents the MTA Bridges and Tunnels proportionate share of the net pension liability of NYCERS at the measurement date of June 30, 2022 and 2021, and the proportion percentage of the net pension liability of NYCERS allocated to MTA Bridges and Tunnels:

| | 2022 | 2021 |
|---|---|---|
| | ($ in millions) | |
| Bridges and Tunnels proportion of the net pension liability | 0.924 % | 0.933 % |
| Bridges and Tunnels proportionate share of the net pension liability | $ 167.40 | $ 59.82 |

MTA Bridges and Tunnels proportion of the net pension liability was based on the actual contributions made to NYCERS for the years ended June 30, 2022 and 2021, relative to the contributions of all employers in the plan.

**Sensitivity of the Proportionate Share of the Net Pension Liability to the Discount Rate**—The following table presents MTA Bridges and Tunnels proportionate share of the net pension liability calculated using the discount rate of 7.0% for NYCERS, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (6.0%) or 1-percentage point higher (8.0%) than the current rate used as of each measurement date:

| | June 30, 2022 | | | June 30, 2021 | | |
|---|---|---|---|---|---|---|
| | 1% Decrease (6.00%) | Discount Rate (7.00%) | 1% Increase (8.00%) | 1% Decrease (6.00%) | Discount Rate (7.00%) | 1% Increase (8.00%) |
| | | (In millions) | | | (In millions) | |
| Bridges and Tunnels proportionate share of the net pension liability | $ 266.40 | $ 167.40 | $ 83.79 | $ 156.97 | $ 59.82 | $ (22.60) |

**Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions**—For the years ended December 31, 2022 and 2021, MTA Bridges and Tunnels recognized pension expense as follows (in thousands):

| Pension Plans | 2022 | 2021 |
|---|---|---|
| NYCERS | $ 9,762 | $ (11,273) |

For the years ended December 31, 2022 and 2021, the MTA Bridges and Tunnels reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows:

| | 2022 | |
|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources |
| | (In millions) | |
| Differences between expected and actual experience | $ 14,520 | $ 3,680 |
| Changes in assumptions | 28 | 5,355 |
| Net difference between projected and actual earnings on pension plan investments | 30,596 | - |
| Proportionate share of contributions | 6,245 | 45,421 |
| Employer contribution to plan subsequent to the measurement date of net pension liability | 28,517 | - |
| Total | $ 79,906 | $ 54,456 |

| | 2021 | |
|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources |
| | (In millions) | |
| Differences between expected and actual experience | $ 15,356 | $ 6,920 |
| Changes in assumptions | 55 | 7,422 |
| Net difference between projected and actual earnings on pension plan investments | - | 87,789 |
| Proportionate share of contributions | 7,593 | 57,194 |
| Employer contribution to plan subsequent to the measurement date of net pension liability | 35,428 | -<br>- |
| Total | $ 58,432 | $ 159,325 |

The annual differences between the projected and actual earnings on investments are amortized over a five-year-closed period beginning the year in which the difference occurs.

The following table presents the recognition periods used by each pension plans to amortize the annual differences between expected and actual experience and the changes in proportion and differences between employer contributions and proportionate share of contributions, beginning the year in which the deferred amount occurs.

| | Recognition Period (in Years) | | |
|---|---|---|---|
| **Pension Plan** | **Difference between Expected and Actual Experience** | **Changes in Proportion and Differences between Employer Contributions and Proportionate Share of Contribution** | **Changes in Actuarial Assumptions** |
| **NYCERS** | 5.79 | 5.79 | 5.79 |

For the years ended December 31, 2022 and 2021, $28,517 and $35,428, respectively, were reported as deferred outflows of resources related to pensions resulting from MTA Bridges and Tunnels contributions subsequent to the measurement date. The amount of $28,517 will be recognized as a reduction of the net pension liability in the year ended December 31, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2022, will be recognized as pension expense as follows (in millions):

| **Years Ending December 31** | **Increase/(Decrease) in Pension Expense** |
|---|---|
| 2023 | $ (8,588) |
| 2024 | (823) |
| 2025 | (8,450) |
| 2026 | 14,750 |
| 2027 | 44 |
| Thereafter | |
| Total | $ (3,067) |

***Deferred Compensation Plans***—As permitted by Internal Revenue Code Section 457, MTA Bridges and Tunnels has established a trust or custodial account to hold plan assets for the exclusive use of the participants and their beneficiaries.

Certain MTA Bridges and Tunnels employees are participants in a second deferred compensation plan established in accordance with Internal Revenue Code Section 401(k). Participation in the plan is available to all nonunion and certain other employees. All amounts of compensation deferred under the plan, and all income attributable to such compensation, are solely the property of the participants; accordingly, this plan is not reflected in the accompanying consolidated statements of net position. MTA Bridges and Tunnels did not contribute to the plan in 2022 and 2021.

## 8. OTHER POSTEMPLOYMENT BENEFITS

MTA Bridges and Tunnels participates in a defined benefit other postemployment benefits ("OPEB") plan for its employees, the Metropolitan Transportation Authority Retiree Welfare Benefits Plan ("OPEB Plan"). A description of the Plan follows:

### *(1) Plan Description*

The MTA Retiree Welfare Benefits Plan ("OPEB Plan") and the related Trust Fund ("Trust") was established on January 1, 2009 for the exclusive benefit of MTA and related agencies retired employees and their eligible spouses and dependents, to fund some of the OPEB provided in accordance with the MTA Bridges and Tunnels various collective bargaining agreements. Postemployment benefits are part of an exchange of salaries and benefits for employee services rendered. Amounts contributed to the OPEB Plan are held in an irrevocable trust and may not be used for any other purpose than to fund the costs of health and welfare benefits of its eligible participants.

The OPEB Plan and the Trust are exempt from federal income taxation under Section 115(1) of the Internal Revenue Code. The OPEB Plan is classified as a cost-sharing multiple-employer defined benefit OPEB plan.

The OPEB Plan Board of Managers, comprised of the MTA Chairman, MTA Chief Financial Officer and MTA Director of Labor Relations, are the administrators of the OPEB Plan. The MTA Board has the right to amend, suspend or terminate the OPEB Plan.

The separate annual financial statements of the OPEB Plan may be obtained by writing to MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 10004 or at www.mta.info.

*Benefits Provided*—The benefits provided by the OPEB Plan include medical, pharmacy, dental, vision, life insurance and a Medicare supplemental plan. The different types of benefits provided vary by agency, employee type (represented employees versus non-represented) and the relevant collective bargaining agreements. Certain benefits are provided upon retirement as defined in the applicable pension plan. Certain agencies provide benefits to certain former employees if separated from service within 5 years of attaining retirement eligibility. Employees of MTA Bridges and Tunnels are members of the NYCERS pension plan.

MTA Bridges and Tunnels participates in the New York State Health Insurance Program ("NYSHIP") and provides medical and prescription drug benefits, including Medicare Part B reimbursements, to many of its retirees. NYSHIP offers a Preferred Provider Organization ("PPO") plan and several Health Maintenance Organization ("HMO") plans.

MTA Bridges and Tunnels is a participating employer in NYSHIP. The NYSHIP financial report can be obtained by writing to NYS Department of Civil Service, Employee Benefits Division, Alfred E. Smith Office Building, 805 Swan Street, Albany, NY 12239.

*OPEB Plan Eligibility*—To qualify for benefits under the OPEB Plan, a former employee of MTA Bridges and Tunnels must:

(a) have retired;

(b) be receiving a pension (except in the case of the 401(k) Plan);

(c) have at least 10 years of credited service as a member of NYCERS, and

(d) have attained the minimum age requirement (unless within 5 years of commencing retirement for certain members). A represented retired employee may be eligible only pursuant to the relevant collective bargaining agreement.

Surviving Spouse and Other Dependents—Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of retired managers and certain non-represented retired employees.

The OPEB Plan Board of Managers has the authority to establish and amend the benefits that will be covered under the OPEB Plan, except to the extent that they have been established by collective bargaining agreement.

*Contributions*—MTA Bridges and Tunnels is not required by law or contractual agreement to provide funding for the OPEB Plan, other than the "pay-as-you-go" ("PAYGO") amounts. PAYGO is the cost of benefits necessary to provide the current benefits to retirees and eligible beneficiaries and dependents. Employees are not required to contribute to the OPEB Plan. The OPEB Plan Board has the authority for establishing and amending the funding policy. For the years ended December 31, 2022 and 2021, MTA Bridges and Tunnels paid $32,898 and $28,855, respectively, of PAYGO to the OPEB Plan.

The discount rate estimates investment earnings for assets earmarked to cover retiree health benefits. Under GASB Statement No. 75, the discount rate depends on the nature of underlying assets for funded plans. A depletion date of Trust assets is assumed to occur immediately. Therefore, the discount rate is set equal to the municipal bond index. The MTA elected the Bond Buyer General Obligation 20-Bond Municipal Bond Index. As a result, the discount rates as of December 31, 2021 and 2020, the measurement dates, are 2.06% and 2.12%, respectively.

Employer contributions include the implicit subsidy, or age-related subsidy inherent in the healthcare premiums structure. The implicit subsidy arises when an employer allows a retiree and their dependents to continue the active plans and pay the active premiums. Retirees are not paying the true cost of their benefits because they have higher utilization rates than actives and therefore are partially subsidized by the active employees. As shown in the following table, for the years ended December 31, 2021 and 2020, the employer made a cash payment for retiree healthcare of $1,290 and $2,495, respectively, as part of the employer's payment for active-employee healthcare benefits. For purposes of GASB Statement No. 75, this payment made on behalf of the active employees should be reclassified as benefit payments for retiree health care to reflect the retirees' underlying age-adjusted, retiree benefit costs.

| **Blended and Age-adjusted Premium** | **2021 Retirees** | **2020 Retirees** |
|---|---|---|
| | **(In thousands)** | |
| Total blended premiums | $ 27,565 | $ 26,823 |
| Employment payment for retiree healthcare | 1,290 | 2,495 |
| Net payments | $ 28,855 | $ 29,318 |

***(2) Net OPEB Liability***

At December 31, 2022 and 2021, MTA Bridges and Tunnels reported a net OPEB liability of $908,111 and $987,443, respectively, for its proportionate share of the Plan's net OPEB liability. The net OPEB liabilities were measured as of the OPEB Plan's fiscal year-end of December 31, 2021 and 2020, respectively. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation date of July 1, 2021 and July 1, 2019 respectively, and rolled forward to December 31, 2021 and 2020, respectively. The MTA Bridges and Tunnels proportion of the net OPEB liability was based on a projection of the MTA Bridges and Tunnels long-term share of contributions to the OPEB Plan relative to the projected contributions of all participating employers. At December 31, 2022 and 2021, the MTA Bridges and Tunnels proportion was 3.64% and 4.05%, respectively.

*OPEB Plan Fiduciary Net Position*—The fiduciary net position has been determined on the same basis used by the OPEB Plan. The OPEB Plan uses the accrual basis of accounting under which contributions from the employer are recognized when paid. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Investments are reported are fair value based on quoted market prices or net asset value.

**(*3) Actuarial Assumptions***

Actuarial valuation involves estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future, such as future employment, mortality and health care cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan, which refers to the plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees. The projections include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members at that time. MTA Bridges and Tunnels may not be obligated to provide the same types or levels of benefits to retirees in the future.

The total OPEB liability was determined by an actuarial valuation performed on July 1, 2021 and July 1, 2019 respectively and update procedures were used to roll forward the total OPEB liability to December 31, 2021 and 2020, the measurement dates, respectively. The actuarial valuations were performed using the following actuarial assumptions, applied to all periods included in the measurement, unless specified:

| | **2022** | **2021** |
|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 |
| Measurement date | December 31, 2021 | December 31, 2020 |
| Discount rate | 2.06%—net of expenses | 2.12%—net of expenses |
| Inflation | 2.25% | 2.25% |
| Actuarial cost method | Entry age normal | Entry age normal |
| Amortization method | Level percentage of payroll | Level percentage of payroll |
| Normal cost increase factor | 4.25% | 4.25% |
| Investment rate of return | 2.06% | 2.12% |

*Salary Increases*

Salary Scale—salaries are assumed to increase by years of service. Rates are shown below:

| Years of Employment | 2022 Rate of Increase | 2021 Rate of Increase |
|---|---|---|
| 0 | 11.00 % | 11.00 % |
| 1 | 10.00 | 10.00 |
| 2 | 9.00 | 9.00 |
| 3 | 8.00 | 8.00 |
| 4 | 7.00 | 7.00 |
| 5 | 6.00 | 6.00 |
| 6 | 5.00 | 5.00 |
| 7 | 4.00 | 4.00 |
| 8 | 3.80 | 3.80 |
| 9 | 3.60 | 3.60 |
| 10+ | 3.50 | 3.50 |

*Healthcare Cost Trend*— The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2021 utilizing the baseline assumptions included in the model, except inflation of 2.25% for medical and pharmacy benefits. Further adjustments apply based on percentage of costs associated with administrative expenses, inflation on administrative costs, and aging factors. For NYSHIP benefits, trends are multiplied by 90% to reflect that NYSHIP trends have been generally lower than trends projected by the Getzen model over the past 10 years. Separate long-term trends are used for Medicare Part B reimbursements and for dental and vision benefits (3.5% per year). No self-insured post-65 trend is assumed during 2021 to reflect the approximately 90% reduction in the contracted Medicare Advantage plan premiums for 2022.

The valuation reflects the actuaries understanding of the impact in future health costs due to the Affordable Care Act ("ACA") passed into law in March 2010. An excise tax for high-cost health coverage or "Cadillac" health plans was included in ACA. The provision levies a 40% tax on the value of health plan costs that exceed certain thresholds for single coverage or family coverage. In December 2019, the President signed into law the "Further Consolidated Appropriations Act, 2020" (the "Act"), which included the permanent repeal of the "Cadillac" tax, effective January 1, 2020. The impact of the elimination of the "Cadillac" tax on the Triborough Bridge and Tunnel Authority's OPEB liability is approximately $12.6 million and was reflected in the valuation dated July 1, 2019 and in the reporting year-ended December 31, 2020.

*Healthcare Cost Trend Rates*—The following lists illustrative rates for the NYSHIP trend assumptions for MTA Bridges and Tunnels (all amounts are in percentages).

| | **NYSHIP 2022** | | **MTA Bridges and Tunnels 2022** | |
|---|---|---|---|---|
| **Fiscal Year** | **< 65** | **>=65** | **< 65** | **>=65** |
| 2022 | 5.30 % | 4.60 % | 5.20 % | 3.60 % |
| 2023 | 5.10 | 4.60 | 5.00 | 3.90 |
| 2024 | 4.80 | 4.60 | 4.80 | 4.30 |
| 2025 | 4.60 | 4.60 | 4.60 | 4.60 |
| 2026 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2027 | 4.40 | 4.40 | 4.40 | 4.40 |
| 2028 | 4.30 | 4.30 | 4.30 | 4.30 |
| 2029 | 4.20 | 4.20 | 4.20 | 4.20 |
| 2039 | 3.90 | 3.90 | 3.90 | 3.90 |
| 2049 | 3.90 | 3.90 | 3.90 | 3.90 |
| 2059 | 3.80 | 3.80 | 3.80 | 3.80 |
| 2069 | 3.80 | 3.80 | 3.80 | 3.80 |
| 2079 | 3.50 | 3.50 | 3.50 | 3.50 |
| 2089 | 3.30 | 3.30 | 3.30 | 3.30 |
| 2099 | 3.30 | 3.30 | 3.30 | 3.30 |
| 2109 | 3.30 | 3.30 | 3.30 | 3.30 |

| | **NYSHIP 2021** | | **MTA Bridges and Tunnels 2021** | |
|---|---|---|---|---|
| **Fiscal Year** | **< 65** | **>=65** | **< 65** | **>=65** |
| 2021 | 6.20 % | 5.70 % | 5.80 % | 4.00 % |
| 2022 | 5.70 | 5.40 | 5.50 | 4.60 |
| 2023 | 5.10 | 5.10 | 5.10 | 5.10 |
| 2024 | 5.00 | 5.00 | 5.00 | 5.00 |
| 2025 | 4.90 | 4.90 | 4.90 | 4.90 |
| 2026 | 4.80 | 4.80 | 4.80 | 4.80 |
| 2027 | 4.70 | 4.70 | 4.70 | 4.70 |
| 2028 | 4.60 | 4.60 | 4.60 | 4.60 |
| 2029 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2039 | 4.60 | 4.60 | 4.60 | 4.60 |
| 2049 | 4.80 | 4.80 | 4.80 | 4.70 |
| 2059 | 4.50 | 4.50 | 4.50 | 4.50 |
| 2069 | 4.20 | 4.20 | 4.20 | 4.20 |
| 2079 | 3.80 | 3.80 | 3.80 | 3.80 |
| 2089 | 3.80 | 3.80 | 3.80 | 3.80 |
| 2099 | 3.80 | 3.80 | 3.80 | 3.80 |

For purposes of applying the Entry Age Normal Cost method, the healthcare trend prior to the valuation date are based on the ultimate rate, which is 3.7% for medical and pharmacy costs.

***Mortality***—Preretirement and postretirement health annuitant rates are projected on a generational basis using Scale AA. As a generational table, it reflects mortality improvements both before and after the measurement date. The postretirement mortality assumption is based on an experience analysis covering the period from January 1, 2011 to December 31, 2015 for the MTA-sponsored pension plans.

*Preretirement*—RP-2000 Employee Mortality Table for Males and Females with blue-collar adjustments.

*Postretirement Healthy Lives*—95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.

*Postretirement Disabled Lives*—RP-2014 Disabled Annuitant mortality table for males and females.

***Expected Rate of Return on Investments***—The best-estimate range for the long-term expected rate of return was determined using by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumption as of December 31, 2021 are as follows:

| **Asset Class** | **Index** | **Target Allocation** | **Long-Term Expected Real Rate of Return** |
|---|---|---|---|
| US cash | BAML 3-Mon Tbill | 100.00 % | (0.26)% |
| Assumed Inflation - Mean | | | 2.30 % |
| Assumed Inflation - Standard Deviation | | | 1.23 % |
| Portfoli Nominal Mean return | | | 2.03 % |
| Portfolio Standard Deviation | | | 1.11 % |
| **Long term expected rate of return selected by MTA** | | | 2.06 % |

*Discount Rate*—The plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total OPEB liability is equal to the single equivalent rate that results in the same actuarial present value as the long-term expected rate of return applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payments, to the extent that the plan's fiduciary net position is not projected to be sufficient. Therefore, the discount rate is set equal to the Bond Buyer General Obligation 20-Bond Municipal Bond Index as of December 31, 2021 and 2020, of 2.06% and 2.12%, respectively.

*Sensitivity of the MTA Bridges and Tunnels Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate*—The following presents the MTA Bridges and Tunnels proportionate share of the net OPEB liability, as well as what the MTA Bridges and Tunnels proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for the measurement (in thousands):

| **2022** | **1% Decrease (1.06%)** | **Discount Rate (2.06%)** | **1% Increase (3.06%)** |
|---|---|---|---|
| Proportionate share of the net OPEB liability | $ 1,050.06 | $ 908.11 | $ 792.89 |

| **2021** | **1% Decrease (1.12%)** | **Discount Rate (2.12%)** | **1% Increase (3.12%)** |
|---|---|---|---|
| Proportionate share of the net OPEB liability | $ 1,136.66 | $ 987.44 | $ 865.39 |

*Sensitivity of the MTA Bridges and Tunnels Proportionate Share of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates*—The following presents the MTA Bridges and Tunnels proportionate share of the net OPEB liability, as well as what the MTA Bridges and Tunnels proportionate share of the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rates used for the measurement (in thousands):

| **2022** | **1% Decrease** | **Trend Rate** * | **1% Increase** |
|---|---|---|---|
| Proportionate share of the net OPEB liability | $ 771.37 | $ 908.11 | $ 1,083.24 |

| **2021** | **1% Decrease** | **Cost Current Trend Rate** * | **1% Increase** |
|---|---|---|---|
| Proportionate share of the net OPEB liability | $ 833.16 | $ 987.44 | $ 1,185.08 |

* For further details, refer to the Health Care Cost Trend Rates tables in the Actuarial Assumptions section of this Note Disclosure.

***(4) OPEB Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB***

For the years ended December 31, 2022 and 2021, MTA Bridges and Tunnels recognized OPEB expense of $57,880 and $76,558, respectively, which represents its proportionate share of the Plan's OPEB expense.

The annual differences between the projected and actual earnings on investments are amortized over a 5-year closed period beginning the year in which the difference occurs. The annual differences between expected and actual experience, changes in assumptions and the changes in proportion and differences between employer contributions and proportionate share of contributions are amortized over a 7.6-year close period, beginning the year in which the deferred amount occurs.

MTA Bridges and Tunnels reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows (In thousands):

| | December 31, 2022 | |
|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ 15,072 | $ (1,527) |
| Changes in assumptions | 71,038 | (53,443) |
| Net difference between projected and actual earnings on OPEB plan investments | 1,714 | - |
| Changes in proportion and differences between contributions and proportionate share of contributions | 35,078 | (112,043) |
| Employer contributions to the plan subsequent to the measurement of net OPEB liability | 32,898 | - |
| Total | $ 155,800 | $ (167,013) |

| | December 31, 2021 | |
|---|---|---|
| | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Differences between expected and actual experience | $ 7,804 | $ (2,023) |
| Changes in assumptions | 95,198 | (43,299) |
| Net difference between projected and actual earnings on OPEB plan investments | 2,449 | - |
| Changes in proportion and differences between contributions and proportionate share of contributions | 41,330 | (37,214) |
| Employer contributions to the plan subsequent to the measurement of net OPEB liability | 28,855 | - |
| Total | $ 175,636 | $ (82,536) |

At December 31, 2022 and 2021, MTA Bridges and Tunnels reported as deferred outflow of resources related to OPEB of $155,800 and $175,636, respectively. This amount includes both MTA Bridges and Tunnels contributions subsequent to the measurement date and an implicit rate subsidy adjustment of $32,898 that will be recognized as a reduction of the net OPEB liability in the year ending December 31, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2022, will be recognized in OPEB expense as follows (in thousands):

| Years Ending December 31 | |
|---|---|
| 2023 | $ (6,939) |
| 2024 | (7,252) |
| 2025 | (9,685) |
| 2026 | (7,480) |
| 2027 | (4,354) |
| Thereafter | (8,401) |
| | $ (44,111) |

## 9. LONG-TERM DEBT

MTA Bridges and Tunnels issues long-term bonds to fund its own capital projects, as well as the Transportation Projects for NYCTA and Commuter rails, through the following four credits:

- General Revenue Bonds,
- Payroll Mobility Tax Bonds,
- Sales Tax Bonds and
- Subordinate Revenue Bonds.

The MTA and MTA Bridges and Tunnels entered into a Payroll Mobility Tax Financing Agreement (the "Financing Agreement"), dated as of April 9, 2021, to provide the mechanism by which MTA will deposit, allocate and transfer certain payroll mobility taxes ("Mobility Tax Receipts") and certain fees, surcharges and taxes ("Aid Trust Account Receipts," and together with the Mobility Tax Receipts, "PMT Receipts") in order to share the PMT receipts on a parity basis with MTA Bridges and Tunnels. The Financing Agreement ensures that sufficient amounts will be available for MTA to (i) provide MTA Bridges and Tunnels, or the trustee on behalf of MTA Bridges and Tunnels, with the PMT Receipts necessary for MTA Bridges and Tunnels to timely perform its obligations under the Triborough Bridge and Tunnel Authority Payroll Mobility Tax Obligation Resolution and certain related resolutions, each adopted on March 17, 2021, and (ii) retain, or provide to the trustee under the MTA PMT Resolution on its own behalf, the PMT Receipts necessary for MTA to timely perform its obligations under the Metropolitan Transportation Authority Payroll Mobility Tax Obligation Resolution and certain related resolutions, each adopted on November 18, 2020. The aforementioned resolutions were adopted for the purpose of issuing from time to time one or more series of bonds, notes or other obligations secured by the Financing Agreement and the PMT Receipts.

During 2022, the Authority issued bonds to help finance approved transit and commuter projects included in the MTA 2020-2024 Capital Program, to finance a portion of the capital costs of the Central Business District Tolling Program and to pay certain financing, legal and miscellaneous expenses associated with the bond issuance. These bonds were issued by the Authority under the Triborough Bridge and Tunnel Authority Special Obligation Resolution Authorizing Sales Tax Revenue Obligations. The bonds are MTA Bridges and Tunnels' special, not general, obligations, payable solely from monies in the Obligations Trust Estate pledged by the TBTA Sales Tax Resolution derived primarily from the sales tax receipts that flow into the Central Business District Tolling Capital Lockbox Fund.

The following represents MTA Bridges and Tunnels' issuance of long-term debt in 2022:

- On January 22, 2022, MTA Bridges and Tunnels remarketed General Revenue Variable Rate 2003B-1 of $96,335 from irrevocable direct-pay letter of credit issued by Bank of America, N.A., was replaced by irrevocable direct-pay letter of credit with U.S. Bank National Association.

- On February 10, 2022, MTA Bridges and Tunnels issued $592,680 of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022A.The Series 2022A Bonds were issued to (i) retire MTA outstanding Dedicated Tax Fund Bond Anticipation Notes 2019a (DTF 2019A BAN), and pay certain financing, legal, and miscellaneous expenses.

- On April 5, 2022, MTA Bridges and Tunnels has a forward delivery (August 12, 2022 delivery) refunding of $1,000,015 of Triborough Bridge and Tunnel authority Payroll Mobility Tax Senior Lien Bonds, Series 2022B. The series 2022B Bonds were issued to retire MTA outstanding bonds; 2002D-1 and 2012C, D, F, H and pay certain financing, legal and miscellaneous expenses. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

- On May 5, 2022, MTA Bridges and Tunnels issued $927,950 of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022C. The Series 2021C Bonds were issued to (i) retire MTA outstanding Transportation Revenue Bond Anticipation Notes 2019B, and pay certain financing, legal, and miscellaneous expenses.

- On July 20, 2022, MTA Bridges and Tunnels issued $700,000 Sales Tax Revenue Bond, Series 2022A are being issued to (i) finance approved transit and commuter projects included in the MTA 2020-2024 capital program, and (ii) pay certain financing, legal and miscellaneous expense. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

- On August 18, 2022, MTA Bridges and Tunnels issued $400,000 General Revenue Bonds, Series 2022A to finance bridge and tunnel projects.

- On September 1, 2022, MTA Bridges and Tunnels issued $951,370, Payroll Mobility Tax Senior Lien BAN 2022A to refund MTA Bond 2012B, C, E, F and 2012H. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

- On September 15, 2022, MTA Bridges and Tunnels issued $748,682, Payroll Mobility Tax Senior Lien Bond 2022D, this bond has an additional $17M on subseries 2022D-1b due to capital appreciation. This bond refunded MTA Bond 2018A-2, 2014D-2 and 2011B. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

- On November 1, 2022, MTA Bridges and Tunnels issued $700,200, Payroll Mobility Tax Senior Lien Bond 2022E to retire MTA Bond 2019F, and refund MTA Bonds 2018A-2 and 2014D-2 and 2011B. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

- On December 8, 2022, MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bond remarketed 2018E of $148,470 from irrevocable direct-pay letter of credit issued by Bank of America, N.A., was replaced by irrevocable direct-pay letter of credit with USB AG.

- On December 15, 2022, MTA Bridges and Tunnels issued $766,540, Payroll Mobility Tax Senior Lien BAN 2022B to retire MTA Bond 2020A-1. This bond is not for the benefit of MTA Bridges and Tunnels capital projects.

MTA Bridges and Tunnels' non-current portion of long-term debt as of December 31, 2022 and 2021, is comprised of the following (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Senior Revenue Bonds (Notes 10) | $ 8,783,214 | $ 8,681,913 |
| PMT Bonds (Note 10) | 9,036,372 | 2,863,787 |
| Subordinate Revenue Bonds (Note 11) | 605,040 | 688,320 |
| CBD BAN (Note 12) | 217,157 | 225,658 |
| Sales Tax Revenue Bond (Note 13) | 758,796 | - |
| Total long-term debt—net of premiums and discounts | $ 19,400,579 | $ 12,459,678 |

MTA Bridges and Tunnels has entered into several Letter of Credit Agreements and Standby Bond Purchase Agreements (together, "Credit and Liquidity Agreements") as listed on the table below.

| | | | |
|---|---|---|---|
| TBTA General Revenue | 2001C | State Street | June 26, 2023 |
| TBTA General Revenue | 2003B-1 | U.S. Bank National Assoc. | January 17, 2025 |
| TBTA General Revenue | 2005A | Barcleys Bank | January 24, 2024 |
| TBTA General Revenue | 2005B-2ab | State Street | January 21, 2026 |
| TBTA General Revenue | 2005B-3 | State Street | June 26, 2023 |
| TBTA General Revenue | 2005B-4c | U.S. Bank National Assoc. | May 23, 2025 |
| TBTA General Revenue | TBTA 2018E Taxable | Bank of America, N.A. | December 5, 2025 |

According to the terms of the Credit and Liquidity Agreements, if the remarketing agent fails to remarket any of the bonds listed above that are tendered by the holders, the bank is required (subject to certain conditions) to purchase such unremarketed portion of the bonds. Bonds owned by the bank and not remarketed after a specified amount of time (generally 90 days) are payable to the bank as a term loan over five years in ten equal semiannual principal payments including interest thereon. As of December 31, 2022, there were no term loans outstanding.

**Bond Refundings**—From time to time, MTA Bridges and Tunnels issue refunding bonds to achieve debt service savings or other benefits. The proceeds of refunding bonds are generally used to purchase U.S. Treasury obligations that are placed in irrevocable trusts. The principal and interest within the trusts will be used to repay the refunded debt. The trust account assets and the refunded debt are excluded from the statement of net position.

At December 31, 2022 and 2021, the following amounts of MTA Bridges and Tunnels bonds, which have been refunded, remain valid debt instruments and are secured solely by and payable solely from their respective irrevocable trusts.

| | 2022 | 2021 |
|---|---|---|
| | (In thousands) | |
| MTA Bridges and Tunnels: | | |
| General Purpose Revenue Bonds | $ 160,365 | $ 457,995 |
| Special Obligation Subordinate Bonds | 43,640 | 59,520 |
| Total | $ 204,005 | $ 517,515 |

MTA Bridges and Tunnels had no refunding transactions that resulted in any gains/losses against aggregate debt service payments in 2022 and 2021.

Unamortized losses related to bond refundings were as follows (in millions):

| | December 31, 2020 | (Gain) Loss on Refunding | Current Year Amortization | December 31, 2021 | (Gain) Loss on Refunding | Current Year Amortization | December 31, 2022 |
|---|---|---|---|---|---|---|---|
| TBTA: | | | | | | | |
| General Revenue Bonds | $ 175 | $ - | $ (21) | $ 154 | $ - | $(17) | $137 |
| Subordinate Revenue Bonds | 25 | - | (3) | 22 | - | (2) | 20 |
| | 200 | - | (24) | 176 | - | (19) | 157 |
| Total | $ 200 | $ - | $ (24) | $ 176 | $ - | $(19) | $157 |

## 10. DEBT—SENIOR REVENUE/PMT BONDS/SALE TAX BONDS

Senior Revenue Bonds at December 31, 2022, consist of the following (in thousands):

| | Original Issuance | December 31, 2021 | Issued | Principal Repayments | December 31, 2022 |
|---|---|---|---|---|---|
| Series 2001B&C, 4.10%–5.25% | $ 296,400 | $ 89,025 | $ - | $ 6,600 | $ 82,425 |
| Series 2002F | 246,480 | 111,175 | - | 8,240 | 102,935 |
| Series 2003B | 250,000 | 137,320 | - | 9,265 | 128,055 |
| Series 2005A | 150,000 | 102,070 | - | - | 102,070 |
| Series 2005B | 800,000 | 561,600 | - | 3,300 | 558,300 |
| Series 2008B | 252,230 | 156,125 | - | 29,375 | 126,750 |
| Series 2009A-1 | 150,000 | 62,700 | - | 445 | 62,255 |
| Series 2009B - BAB | 200,000 | 200,000 | - | - | 200,000 |
| Series 2010A-2 - BAB | 280,400 | 271,890 | - | 8,870 | 263,020 |
| Series 2011A | 609,430 | 25,425 | - | 25,425 | - |
| Series 2012A | 231,490 | 156,835 | - | 5,420 | 151,415 |
| Series 2012B | 1,353,055 | 763,190 | - | 100,570 | 662,620 |
| Series 2013B | 257,195 | 142,540 | - | 13,045 | 129,495 |
| Series 2013C | 200,000 | 137,540 | - | 4,505 | 133,035 |
| Series 2014A | 250,000 | 180,985 | - | 5,330 | 175,655 |
| Series 2015A | 225,000 | 186,410 | - | 3,520 | 182,890 |
| Series 2015B | 65,000 | 57,545 | - | 1,425 | 56,120 |
| Series 2016A | 541,240 | 491,820 | - | 6,520 | 485,300 |
| Series 2017A | 300,000 | 300,000 | - | 13,415 | 286,585 |
| Series 2017B | 902,975 | 902,975 | - | - | 902,975 |
| Series 2017C | 720,990 | 720,990 | - | - | 720,990 |
| Series 2018A | 351,930 | 351,930 | - | - | 351,930 |
| Series 2018B | 270,090 | 270,090 | - | - | 270,090 |
| Series 2018C | 159,280 | 159,280 | - | - | 159,280 |
| Series 2018D | 125,000 | 98,985 | - | - | 98,985 |
| Series 2018E | 148,470 | 148,470 | - | - | 148,470 |
| Series 2019A | 150,000 | 150,000 | - | - | 150,000 |
| Series 2019B | 102,465 | 102,465 | - | - | 102,465 |
| Series 2019C | 200,000 | 200,000 | - | - | 200,000 |
| Series 2020A | 525,000 | 525,000 | - | - | 525,000 |
| Series 2021A | 400,000 | 400,000 | - | - | 400,000 |
| Series 2022A | - | - | 400,000 | - | 400,000 |
| | $ 10,714,120 | 8,164,380 | 400,000 | 245,270 | 8,319,110 |
| Add net unamortized bond (discount) and premium | | 762,803 | 37,764 | 69,123 | 731,444 |
| | | $ 8,927,183 | $ 437,764 | $ 314,393 | $ 9,050,554 |

Senior Revenue Bonds at December 31, 2021, consist of the following (in thousands):

| | Original Issuance | December 31, 2020 | Issued | Principal Repayments | December 31, 2021 |
|---|---|---|---|---|---|
| Series 2001B&C, 4.10%–5.25% | $ 296,400 | $ 95,370 | $ - | $ 6,345 | $ 89,025 |
| Series 2002F | 246,480 | 144,835 | 111,175 | 144,835 | 111,175 |
| Series 2003B | 250,000 | 146,225 | - | 8,905 | 137,320 |
| Series 2005A | 150,000 | 102,070 | - | - | 102,070 |
| Series 2005B | 800,000 | 564,900 | - | 3,300 | 561,600 |
| Series 2008B | 252,230 | 166,770 | 53,005 | 63,650 | 156,125 |
| Series 2009A-1 | 150,000 | 62,700 | - | - | 62,700 |
| Series 2009B - BAB | 200,000 | 200,000 | - | - | 200,000 |
| Series 2010A-2 - BAB | 280,400 | 280,400 | - | 8,510 | 271,890 |
| Series 2011A | 609,430 | 49,680 | - | 24,255 | 25,425 |
| Series 2012A | 231,490 | 162,045 | - | 5,210 | 156,835 |
| Series 2012B | 1,353,055 | 879,105 | - | 115,915 | 763,190 |
| Series 2013B | 257,195 | 180,550 | - | 38,010 | 142,540 |
| Series 2013C | 200,000 | 141,830 | - | 4,290 | 137,540 |
| Series 2014A | 250,000 | 186,110 | - | 5,125 | 180,985 |
| Series 2015A | 225,000 | 189,760 | - | 3,350 | 186,410 |
| Series 2015B | 65,000 | 58,905 | - | 1,360 | 57,545 |
| Series 2016A | 541,240 | 498,030 | - | 6,210 | 491,820 |
| Series 2017A | 300,000 | 300,000 | - | - | 300,000 |
| Series 2017B | 902,975 | 902,975 | - | - | 902,975 |
| Series 2017C | 720,990 | 720,990 | - | - | 720,990 |
| Series 2018A | 351,930 | 351,930 | - | - | 351,930 |
| Series 2018B | 270,090 | 270,090 | - | - | 270,090 |
| Series 2018C | 159,280 | 159,280 | - | - | 159,280 |
| Series 2018D | 125,000 | 98,985 | - | - | 98,985 |
| Series 2018E | 148,470 | 148,470 | - | - | 148,470 |
| Series 2019A | 150,000 | 150,000 | - | - | 150,000 |
| Series 2019B | 102,465 | 102,465 | - | - | 102,465 |
| Series 2019C | 200,000 | 200,000 | - | - | 200,000 |
| Series 2020A | 525,000 | 525,000 | - | - | 525,000 |
| Series 2021A | - | - | 400,000 | - | 400,000 |
| | $ 10,314,120 | 8,039,470 | 564,180 | 439,270 | 8,164,380 |
| Add net unamortized bond (discount) and premium | | 704,046 | 90,587 | 31,830 | 762,803 |
| | | $ 8,743,516 | $ 654,767 | $ 471,100 | $ 8,927,183 |

**Debt Service Requirements Senior Revenue:**

| Years Ending December 31 | Principal | Interest (In thousands) | Aggregate Debt Service |
|---|---|---|---|
| 2023 | $ 267,340 | $ 376,183 | $ 643,523 |
| 2024 | 301,330 | 362,572 | 663,902 |
| 2025 | 312,360 | 349,167 | 661,527 |
| 2026 | 342,235 | 334,176 | 676,411 |
| 2027 | 357,910 | 317,448 | 675,358 |
| 2028–2032 | 2,138,960 | 1,315,272 | 3,454,232 |
| 2033–2037 | 1,236,940 | 977,702 | 2,214,642 |
| 2038–2042 | 1,130,755 | 671,997 | 1,802,752 |
| 2043–2047 | 1,066,825 | 425,382 | 1,492,207 |
| 2048–2052 | 722,510 | 194,248 | 916,758 |
| 2053-2057 | 441,945 | 53,095 | 495,040 |
| | $ 8,319,110 | $ 5,377,242 | $ 13,696,352 |

PMT Bonds at December 31, 2022, consist of the following (in thousands):

| | Original Issuance | December 31, 2021 | Issued | Principal Repayments | December 31, 2022 |
|---|---|---|---|---|---|
| PMT 2021A | $ 1,238,210 | 1,238,210 | $ - | $ - | 1,238,210 |
| PMT 2021B | 369,195 | 369,195 | - | - | 369,195 |
| PMT 2021C | 856,585 | 856,585 | - | 8,360 | 848,225 |
| PMT 2022A | - | - | 592,680 | - | 592,680 |
| PMT 2022B | - | - | 1,000,015 | - | 1,000,015 |
| PMT 2022C | - | - | 927,950 | - | 927,950 |
| PMT 2022D | - | - | 765,690 | - | 765,690 |
| PMT 2022E | - | - | 700,200 | - | 700,200 |
| PMT 2022A-BAN | - | - | 951,370 | - | 951,370 |
| PMT 2022B-BAN | - | - | 766,540 | - | 766,540 |
| | $ 2,463,990 | 2,463,990 | 5,704,445 | 8,360 | 8,160,075 |
| Add net unamortized bond (discount) and premium | | 408,157 | 575,972 | 76,206 | 907,923 |
| | | $ 2,872,147 | $ 6,280,417 | $ 84,566 | $ 9,067,998 |

PMT Bonds at December 31, 2021, consist of the following (in thousands):

| | Original Issuance | December 31, 2020 | Issued | Principal Repayments | December 31, 2021 |
|---|---|---|---|---|---|
| PMT 2021A | - | - | 1,238,210 | $ - | 1,238,210 |
| PMT 2021B | - | - | 369,195 | - | 369,195 |
| PMT 2021C | - | - | 856,585 | - | 856,585 |
| | $ - | - | 2,463,990 | - | 2,463,990 |
| Add net unamortized bond (discount) and premium | | - | 408,157 | - | 408,157 |
| | | $ - | $ 2,872,147 | $ - | $ 2,872,147 |

**Debt Service Requirements PMT:**

| Years Ending December 31 | Principal | Interest (In thousands) | Aggregate Debt Service |
|---|---|---|---|
| 2023 | $ 31,625 | $ 373,285 | $ 404,910 |
| 2024 | 1,724,330 | 365,768 | 2,090,098 |
| 2025 | 21,365 | 287,770 | 309,135 |
| 2026 | 273,595 | 283,085 | 556,680 |
| 2027 | 434,095 | 275,635 | 709,730 |
| 2028–2032 | 1,088,460 | 1,251,061 | 2,339,521 |
| 2033–2037 | 368,940 | 1,142,652 | 1,511,592 |
| 2038–2042 | 794,690 | 986,176 | 1,780,866 |
| 2043–2047 | 1,318,970 | 702,708 | 2,021,678 |
| 2048–2052 | 1,842,045 | 326,652 | 2,168,697 |
| 2053-2057 | 261,960 | 59,395 | 321,355 |
| | $ 8,160,075 | $ 6,054,187 | $ 14,214,262 |

Sales Tax Bonds at December 31, 2022, consist of the following (in thousands):

| | Original Issuance | December 31, 2021 | Issued | Principal Repayments | December 31, 2022 |
|---|---|---|---|---|---|
| SALES TAX 2022A | $ - | - | $ 700,000 | $ - | 700,000 |
| | - | - | - | - | - |
| | $ - | - | 700,000 | - | 700,000 |
| Add net unamortized bond (discount) and premium | | - | 59,757 | 962 | 58,795 |
| | | $ - | $ 759,757 | $ 962 | $ 758,795 |

**Debt Service Requirements Sales Tax:**

| Years Ending December 31 | Principal | Interest (In thousands) | Aggregate Debt Service |
|---|---|---|---|
| 2023 | $ - | $ 34,212 | $ 34,212 |
| 2024 | - | 34,212 | 34,212 |
| 2025 | 2,015 | 34,162 | 36,177 |
| 2026 | 2,455 | 34,050 | 36,505 |
| 2027 | 2,925 | 33,915 | 36,840 |
| 2028–2032 | 22,635 | 166,666 | 189,301 |
| 2033–2037 | 39,005 | 159,049 | 198,054 |
| 2038–2042 | 60,415 | 146,737 | 207,152 |
| 2043–2047 | 64,745 | 132,269 | 197,014 |
| 2048–2052 | 162,435 | 104,028 | 266,463 |
| 2053-2057 | 220,470 | 58,779 | 279,249 |
| 2058-2062 | 122,900 | 16,936 | 139,836 |
| | $ 700,000 | $ 955,015 | $ 1,655,015 |

The above interest amounts include both fixed and variable rate calculations. The interest rate assumptions for variable rate bonds are as follows: variable rate bonds at an assumed rate of 4%; swapped bonds at the applicable synthetic fixed rate for the swapped portion and 4% otherwise; floating rate notes at the applicable synthetic fixed rate plus the current fixed spread to maturity for the swapped portion and 4% plus the current fixed spread to maturity for the portion that is not swapped.

## 11. DEBT—SUBORDINATE REVENUE BONDS

Subordinate revenue bonds had no new issuances in 2022 or 2021.

Subordinate Revenue Bonds at December 31, 2022, consist of the following (in thousands):

| | Original Issuance | December 31, 2021 | Retirements during 2022 | December 31, 2022 |
|---|---|---|---|---|
| Series 2002E | $ 756,095 | $ - | $ - | $ - |
| Series 2013A | 761,599 | 712,255 | (52,350) | 659,905 |
| Series 2013D | 313,975 | 83,265 | (23,975) | 59,290 |
| | $ 1,831,669 | 795,520 | (76,325) | 719,195 |
| Add net unamortized bond (discount) and premium | | (30,875) | (2,165) | (33,040) |
| | | $ 764,645 | $ (78,490) | $ 686,155 |

Subordinate Revenue Bonds at December 31, 2021, consist of the following (in thousands):

| | Original Issuance | December 31, 2020 | Retirements during 2021 | December 31, 2021 |
|---|---|---|---|---|
| Series 2002E | $ 756,095 | $ 36,080 | $ (36,080) | $ - |
| Series 2013A | 761,599 | 720,645 | (8,390) | 712,255 |
| Series 2013D | 313,975 | 110,645 | (27,380) | 83,265 |
| | $ 1,831,669 | 867,370 | (71,850) | 795,520 |
| Add net unamortized bond (discount) and premium | | (28,217) | (2,658) | (30,875) |
| | | $ 839,153 | $ (74,508) | $ 764,645 |

**Debt Service Requirements:**

| Years Ending December 31 | Principal | Interest | Aggregate Debt Service |
|---|---|---|---|
| | (In thousands) | | |
| 2023 | $ 81,115 | $ 23,330 | $ 104,445 |
| 2024 | 74,060 | 19,596 | 93,656 |
| 2025 | 78,070 | 16,014 | 94,084 |
| 2026 | 63,460 | 12,210 | 75,670 |
| 2027 | 66,915 | 9,037 | 75,952 |
| 2028–2032 | 355,575 | 11,371 | 366,946 |
| | $ 719,195 | $ 91,558 | $ 810,753 |

The above interest amounts include both fixed and variable rate calculations. The interest rate assumptions for variable rate bonds are as follows: variable rate bonds at an assumed rate of 4%; swapped bonds at the applicable synthetic fixed rate for the swapped portion and 4% otherwise; floating rate notes at the applicable synthetic fixed rate plus the current fixed spread to maturity for the swapped portion and 4% plus the current fixed spread to maturity for the portion that is not swapped.

## 12. BOND ANTICIPATION NOTES

On June 10, 2021, MTA Bridges and Tunnels issued $192,835 General Revenue Bond Anticipation Notes, Series 2021A. The net proceeds were issued to finance capital costs for the Central Business District Tolling Program.

| (In thousands) | December 31, 2021 | Issued | Principal Repayments and Retirements During 2022 | December 31, 2022 |
|---|---|---|---|---|
| Series 2021A | $ 192,835 | $ - | $ - | $ 192,835 |
| Add net unamortized bond premium | 32,823 | - | (8,501) | 24,322 |
| | $ 225,658 | $ - | $ (8,501) | $ 217,157 |

**Debt Service Requirements:**

| Years Ending December 31 | Principal | Interest (In thousands) | Aggregate Debt Service |
|---|---|---|---|
| 2023 | $ - | $ 9,642 | $ 9,642 |
| 2024 | - | 9,642 | 9,642 |
| 2025 | 192,835 | 9,642 | 202,477 |
| | $ 192,835 | $ 28,926 | $ 221,761 |

## 13. GASB 53—DERIVATIVE INSTRUMENTS

For the year ended December 31, 2022, the MTA Bridges and Tunnels is reporting gain, derivative instrument liabilities and deferred outflows from derivative instruments in the amounts of $13,789, $34,608 and $70,933, respectively. The gain of $13,789 is related to swaps on MTA bonds which is offset by a loss of $13,789 reflected in other operating income. Also recognized in the same period are derivative instrument assets of $3,446.

For the year ended December 31, 2021, the MTA Bridges and Tunnels is reporting gain, derivative instrument liabilities and deferred outflows from derivative instruments in the amounts of $8,965, $147,415 and $169,931, respectively. The gain of $8,965 is related to swaps on MTA bonds which is offset by a loss of $8,965 reflected in other operating income. Also recognized in the same period are derivative instrument assets of $3,467.

**GASB Statement No. 53—Accounting and Financial Reporting for Derivative Instruments**
**Summary Information as of December 31, 2022**

| | Bond Resolution | Series | Type of Derivative | Cash Flow or Fair Value Hedge | Effective Methodology | Trade/ Entered Date | Notional Amount as of 12/31/2022 (In millions) | Fair Values as of 12/31/2022 (In millions) |
|---|---|---|---|---|---|---|---|---|
| Investment Swap | MTA Transportation Revenue Bond | 2002G-1 | Pay-Fixed Swap | N/A | N/A | 4/1/2016 | $ 64.270 | $ (0.448) |
| | MTA Transportation Revenue Bond | 2022E | Pay-Fixed Swap | N/A | N/A | 4/1/2016 | 89.765 | (3.551) |
| Hedging Swaps | MTA Bridges & Tunnels Senior Revenue Bonds | 2018E (Citi 2002F) | Pay-fixed swap | Cash flow | Dollard Offset | 7/5/2005 | 186.100 | (6.851) |
| | MTA Bridges & Tunnels Senior Revenue Bonds | 2005A (COPS 2004A) | Pay-fixed swap | Cash flow | Synthetic Instrument | 4/1/2016 | 17.690 | (0.459) |
| | MTA Bridges & Tunnels Senior Revenue Bonds | 2005B | Pay-fixed swap | Cash flow | Synthetic Instrument | 7/5/2005 | 558.300 | (20.552) |
| | MTA Bridges & Tunnels Senior Revenue Bonds | 2001C | Pay-fixed swap | Cash flow | Synthetic Instrument | 4/1/2016 | 8.000 | (0.226) |

The fair value balances and notional amounts of derivative instruments outstanding at December 31, 2022, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2021, are as follows (in thousands):

| (In Millions) | Changes In Fair Value | | Fair Value at December 31, 2022 | | Notional Amount |
|---|---|---|---|---|---|
| | Classification | Amount | Classification | Amount | |
| **Government Activities** | | | | | |
| Cash Flow hedges— pay-fixed interest rate swaps | Deferred Inflow of resources | $(98.998) | | $ (28.088) | $ 770.090 |
| Investment swap— pay-fixed interest rate swaps | Investment income | 13.789 | | (3.999) | 154.035 |

The summary above reflects a total number of six (6) swaps and hedging relationships that were reviewed for GASB Statement No. 53 Hedge Accounting treatment. Of that total, four (4) were deemed effective using Synthetic Instrument Method.

For the four (4) hedging relationships, the Synthetic Instrument Method was utilized to determine effectiveness. Under the Synthetic Instrument Method, if the rate determined by dividing the historical Swap and Bond payments (Fixed Swap payments + Floating Bond payments—Floating Swap payments) by the hedge notional amount produces an "Actual Synthetic Rate" that is within 90% to 111% of the corresponding fixed swap rates then the hedging derivative instrument is deemed to be effective.

## 14. LEASES

MTA Bridges and Tunnels entered into various lease agreements that convey control of the right to use other entities' nonfinancial assets. Lease receivables and lease liabilities are measured at the present value of payments expected to be made during the lease term, using MTA Bridges and Tunnels incremental borrowing rate at the time of valuation ranging from 0.72% to 5.64% if an applicable stated or implicit rate is not available.

The initial measurement of MTA Bridges and Tunnels leased assets and lease liabilities for those agreements was as of January 1, 2021. The lease liability is reduced as payments are made, and an outflow of resources for interest on the liability is recognized. The lease asset is amortized on a straight-line basis over the shorter of the lease term or the useful life of the underlying asset.

For lessor leases, a lease receivable and deferred inflow of resources were measured as of January 1, 2021. Interest revenues are recognized on the lease receivable and an inflow of resources from the deferred inflow of resources are recognized on a straight-line basis over the term of the lease.

**As Lessor**

MTA Bridges and Tunnels leases garage spaces and bridges and tunnels easement rights to other entities. These leases have terms between 1 year to 39 years, with payments required monthly, quarterly, semi-annually, or annually. In addition, the Authority also receives payments for variable leases and operating expenses associated with spaces that are not included in the measurement of lease receivable.

The total amount of inflows of resources recognized for the year ended December 31, 2022 and 2021 is presented below (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease revenue | $ 1,909 | $ 1,688 |
| Interest revenue | 250 | 418 |
| Other variable revenue | 14 | 17 |

The balance of lease receivable as of December 31, 2022 and December 31, 2021 are as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Lease receivable - current | $ 1,463 | $ 1,514 |
| Lease receivable - noncurrent | 12,845 | 14,308 |
| Total lease receivables | $ 14,308 | $ 15,822 |

MTA Bridges and Tunnels did not recognize any revenue associated with residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021, respectively.

The principal and interest requirements to maturity for the lease receivable subsequent to December 31, 2022, are as follows (in thousands):

| Years Ending December 31 | Principal | Interest | Total |
|---|---|---|---|
| 2023 | $ 1,463 | $ 399 | $ 1,862 |
| 2024 | 1,247 | 369 | 1,616 |
| 2025 | 1,237 | 340 | 1,577 |
| 2026 | 1,334 | 308 | 1,642 |
| 2027 | 1,356 | 275 | 1,631 |
| 2028–2032 | 1,815 | 1,131 | 2,946 |
| 2033–2037 | 1,487 | 944 | 2,431 |
| 2038 - 2042 | 276 | 802 | 1,078 |
| 2043 - 2047 | 489 | 734 | 1,223 |
| 2048 - 2052 | 802 | 616 | 1,418 |
| 2053 - 2057 | 1,214 | 429 | 1,643 |
| 2058 - 2062 | 1,588 | 156 | 1,744 |
| Total | $ 14,308 | $ 6,503 | $ 20,811 |

**As Lessee**

MTA Bridges and Tunnels is a lessee of the 2 Broadway building lease. This lease has an initial stated term of approximately 50 years, with the right to extend the lease for two successive 15-year periods at a rental of at least 95% of fair market rent. MTA Bridges and Tunnels implicit borrowing rate at the time of valuation 9.11%.

The amount of lease expense recognized for variable payment not included in the measurement of lease liability was $2.7 million and $2.5 million for the years ended December 31, 2022 and 2021, respectively. MTA Bridges and Tunnels did not recognize any expense attributable to residual value guarantees and termination penalties for each of the years ended December 31, 2022 and 2021.

The principal and interest requirements to maturity for the lease receivable subsequent to December 31, 2022, are as follows (in thousands):

| Years Ending December 31 | Principal | Interest | Total |
|---|---|---|---|
| 2023 | (999) | 7,775 | $ 6,776 |
| 2024 | (429) | 7,843 | 7,414 |
| 2025 | (470) | 7,883 | 7,413 |
| 2026 | (515) | 7,928 | 7,413 |
| 2027 | (564) | 7,977 | 7,413 |
| 2028–2032 | 2,638 | 39,731 | 42,369 |
| 2033–2037 | 11,821 | 36,603 | 48,424 |
| 2038 - 2042 | 24,239 | 28,578 | 52,817 |
| 2043 - 2047 | 43,529 | 13,561 | 57,090 |
| 2048 - 2052 | 5,645 | 151 | 5,796 |
| Total | $ 84,895 | $158,030 | $242,925 |

On July 29, 1998, the MTA, (solely on behalf of MTA Long Island Rail Road and MTA Metro-North Railroad, MTA New York City Transit, and MTA Bridges and Tunnels) entered into a lease and related agreements whereby each agency, as sublessee, will rent, an office building at Two Broadway in lower Manhattan. The triple-net-lease has an initial stated term of approximately 50 years, with the right to extend the lease for two successive 15-year periods at a rental of at least 95% of fair market rent. Remaining payments under the lease approximate $996 million. Under the subleases, the lease is apportioned as follows: MTA New York City Transit, 68.7%, MTA, 21%; and MTA Bridges and Tunnels, 10.3%. However, the involved agencies have agreed to sub-sublease space from one another as necessary to satisfy actual occupancy needs. The agencies will be responsible for obligations under the lease based on such actual occupancy percentages. Actual occupancy percentages at December 31, 2022 for the MTA Mew York City Transit, MTA Bridges and Tunnels and MTA (including MTA Bus, MTA Construction and Development, and MTA Business Service Center) were 48.7%, 7.4% and 43.9%, respectively. The Authority's sublease is for a year-to-year term, automatically extended, except upon the giving of a non-extension notice by the Authority.

MTA pays the lease payments on behalf of the Authority and subsequently makes monthly chargebacks in the form of rental payments treated as management fees. During 2022 and 2021, the total of the rental payments charged to the Authority was $4.7 million and $4.5 million, respectively, less than the lease payment made by MTA on behalf of the Authority.

## 15. RISK MANAGEMENT

MTA Bridges and Tunnels is exposed to various risks of loss related to torts; theft of, damage to, and destruction of its assets; injuries to persons, including employees; and natural disasters.

MTA Bridges and Tunnels is self-insured up to $3.2 million per occurrence for liability arising from injuries to persons, excluding employees. MTA Bridges and Tunnels is self-insured for work related injuries to employees and for damage to third party property. MTA Bridges and Tunnels provides reserves to cover the self-insured portion of these claims, including a reserve for claims incurred but not reported. The annual cost arising from injuries to employees and damage to third-party property is included in "Retirement & other employee benefits" and "Insurance" in the accompanying statements of revenues, expenses, and changes in net position.

A summary of activity in estimated liability arising from injuries to persons, including employees, and damage to third-party property, as of December 31, 2022 and 2021, is as follows (in thousands):

| | 2022 | 2021 |
|---|---|---|
| Balance—beginning of year | $55,890 | $55,908 |
| Activity during the year: | | |
| Current year claims and changes in estimates | 7,036 | 5,582 |
| Claims paid | (6,522) | (5,600) |
| Balance—end of year | 56,404 | 55,890 |
| Less current portion | (4,874) | (6,741) |
| Long-term liability | $51,530 | $49,149 |

**Liability Insurance**— The First Mutual Transportation Assurance Company ("FMTAC"), an insurance captive subsidiary of MTA, operates a liability insurance program ("ELF") that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. For claims arising from incidents that occurred on or after November 1, 2006, but before November 1, 2009, the self-insured retention limits are: $8 million for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road, and MTA Metro-North Railroad; $2.3 million for MTA Long Island Bus and MTA Staten Island Railway; and $1.6 million for MTAHQ and MTA Bridges and Tunnels. For claims arising from incidents that occurred on or after November 1, 2009, but before November 1, 2012, the self-insured retention limits are: $9 million for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $2.6 million for MTA Long Island Bus and MTA Staten Island Railway; and $1.9 million for MTAHQ and MTA Bridges and Tunnels. Effective November 1, 2012 the self-insured retention limits for ELF were increased to the following amounts: $10 million for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $3 million for MTA Staten Island Railway; and $2.6 million for MTAHQ and MTA Bridges and Tunnels. Effective October 31, 2015 the self-insured retention limits for ELF were increased to the following amounts: $11 million for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; $3.2 million for MTA Staten Island Railway; MTAHQ and MTA Bridges and Tunnels. The maximum amount of claims arising out of any one occurrence is the total assets of the program available for claims, but in no event greater than $50 million. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF program for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying the other MTA Group entities above their specifically assigned self-insured retention with a limit of $50 million per occurrence with a $50 million annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. On December 31, 2022, the balance of the assets in this program was $174.04 million.

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords the MTA Group additional coverage limits of $357.5 million for a total limit of $407.5 million ($357.5 million excess of $50 million). In certain circumstances, when the assets in the program described in the preceding paragraph are exhausted due to payment of claims, the All-Agency Excess Liability Insurance will assume the coverage position of $50 million.

**Property Insurance**— Effective May 1, 2022, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2022, FMTAC directly insures property damage claims of the Related Entities* in excess of a $25 million per occurrence deductible, subject to an annual $75 million aggregate deductible. The total All Risk program annual limit is $500 million per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of $7.5 million per occurrence. In addition to the noted $25 million per occurrence self-insured deductible, MTA self-insures above that deductible for $85.731 million within the overall $500 million per occurrence property program as follows: $13.296 million (or 26.59%) of the primary $50 million layer, plus $17.127 million (or 34.25%) of the $50 million excess $50 million layer, plus $8.08 million (or 16.16%) of the $50 million excess $100 million layer, plus $2.845 million (or 5.69%) of the $50 million excess $150 million layer, plus $1.398 million (or 2.79%) of the $50 million excess $200 million layer, plus $10.559 million (or 21.11%) of the $50 million excess $250 million layer, plus $9.182 million (or 18.36%) of the $50 million excess $300 million layer, plus $6.247 million (or 12.49%) of the $50 million excess $350 million layer, plus $8.747 million (or 17.49%) of the $50 million excess $400 million layer, and $8.247 million (or 16.49%) of the $50 million excess $450 million layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the $500 million per occurrence noted above, FMTAC's property insurance program has been expanded to include a further layer of $100 million of fully collateralized earthquake coverage for an event of a certain index value and for storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three year period from May 12, 2020 to April 30, 2023. The expanded protection is reinsured by MetroCat Re Ltd. 2020-1, a Bermuda special purpose insurer independent from the MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2020-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values, and also for an earthquake event of a certain index value.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act ("TRIPRA") of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of $200 million. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of $215 million for any one occurrence and in the annual aggregate (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds $5 million and less than the $200 million TRIPRA trigger up to a maximum recovery of $200 million for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of $215 million. Recovery under the terrorism policy is subject to a deductible of $25 million per occurrence and $75 million in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed $75 million future losses in that policy year are subject to a deductible of $7.5 million. The terrorism coverages expire at midnight on May 1, 2023.

During 2022 there were FMTAC excess loss claim reimbursements of $0 to MTA Bridges and Tunnels. FMTAC has 1 claims for MTA Bridges and Tunnels at December, 2022. At December 31, 2022, FMTAC had $1.113 million of assets to insure current and future claims.

*Related entities are Triborough Bridge and Tunnel Authority, Metro-North Commuter Railroad Company, The Long Island Rail Road Company, New York City Transit Authority, Staten Island Rapid Transit Operating Authority, MTA Bus Company, MTA Construction & Development Company and MTA Grand Central Madison Concourse Operating Company.

## 16. COMMITMENTS AND CONTINGENCIES

At December 31, 2022 and 2021, MTA Bridges and Tunnels had unused standby letters of credit, relative to insurance, amounting to $1.81 million and $1.81 million, respectively.

MTA Bridges and Tunnels is involved in various litigations and claims involving personal liability claims and certain other matters. Although the ultimate outcome of these claims and suits cannot be predicted at this time, management does not believe that the ultimate outcome of these matters will have a material effect on the financial position, results of operations and cash flows of MTA Bridges and Tunnels.

Under the terms of federal grants, periodic audits are required, and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursements to the grantor agencies. While questioned costs may occur, ultimate repayments required of the MTA or the Authority have been infrequent in prior years.

As of December 31, 2022, $7,264 million has been committed to MTA Bridges and Tunnels Capital Program.

## 17. SWAP AGREEMENTS

**Swap Agreements Relating to Synthetic Fixed Rate Debt**—Fair value for the swaps is calculated in accordance with GASB Statement No. 72, utilizing the income approach and Level 2 inputs. It incorporates the mid-market valuation, nonperformance risk of either MTA Bridges and Tunnels or the counterparty, as well as bid/offer. The fair values were estimated using the zero-coupon method. This method calculates the future.

e net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swap.

**Swap Agreements Relating to Synthetic Fixed Rate Debt**

***Board-Adopted Guidelines***—The MTA adopted guidelines governing the use of swap contracts. The guidelines were amended and approved by the Board on March 13, 2013. The guidelines establish limits on the amount of interest rate derivatives instruments that may be outstanding and specific requirements that must be satisfied for a Related Entity to enter into a swap contract, such as suggested swap terms and objectives, retention of a swap advisor, credit ratings of the counterparties, collateralization requirements and reporting requirements.

***Objectives of Synthetic Fixed Rate Debt***—To achieve cash flow savings through a synthetic fixed rate, MTA Bridges and Tunnels has entered into separate pay-fixed, receive-variable interest rate swaps at a cost anticipated to be less than what MTA Bridges and Tunnels would have paid to issue fixed-rate debt, and in some cases where Federal tax law prohibits an advance refunding to synthetically refund debt on a forward basis.

***Terms and Fair Value***—The terms, fair values and counterparties of the outstanding swaps of MTA Bridges and Tunnels are reflected in the following tables (as of December 31, 2022).

| MTA Bridges and Tunnels Senior Lien Revenue Bonds | | | | | | | |
|---|---|---|---|---|---|---|---|
| Associated Bond Issue | Notional Amounts as of 12/31/2022 (In millions) | Effective Date | Fixed Rate Paid | Variable Rate Received | Fair Values as of 12/31/2022 (In millions) | Swap Termination Date | Counterparty |
| Series 2018E [7] | $ 186.100 | 04/01/16 | 3.076 % | 67% of one-month LIBOR [1] | $ (6.851) | 01/01/32 | Citibank, N.A. |
| Series 2005B-2a,b,c, 2005B-3 and 2005B-4a,b,c,d,e [1] | 558.300 | 07/07/05 | 3.076 | 67% of one-month LIBOR [1] | (20.552) | 01/01/32 | 33% each— JPMorgan Chase Bank, NA, BNP Paribas North America, Inc. and UBS AG |
| Total | $ 744.400 | | | | $ (27.403) | | |

| MTA Bridges and Tunnels Subordinate Revenue Bonds | | | | | | | |
|---|---|---|---|---|---|---|---|
| Associated Bond Issue | Notional Amounts as of 12/31/2022 (In millions) | Effective Date | Fixed Rate Paid | Variable Rate Received | Fair Values as of 12/31/2022 (In millions) | Swap Termination Date | Counterparty |
| Series 2005A | $ 17.690 | 04/01/16 | 3.09 % | Lesser of Actual Bond or 67% of one-month LIBOR | $ (0.459) | 01/01/30 | U.S. Bank N.A., Wells Fargo Bank, N.A. |
| Series 2001C [(6)] | 8.000 | 04/01/16 | 3.52 | 67% of one-month LIBOR [(1)] | (0.226) | 01/01/30 | U.S. Bank N.A., Wells Fargo Bank, N.A. |
| Total | $ 25.690 | | | | $ (0.685) | | |

(1) On February 19, 2009, MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2005B-1 were refunded. Notional amounts from the Series 2005B-1 swap were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2002F, MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B-1,2,3 and from November 1, 2027 through November 1, 2030, to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A-2,3.

(2) In accordance with a swaption entered on August 12, 1998, the Counterparty paid to MTA Bridges and Tunnels a premium of $22,740,000.

(3) On September 30, 2014, the TBTA Subordinate Revenue Variable Rate Refunding Bonds, Series 2000AB, together with the TBTA Subordinate Revenue Variable Rate Refunding Bonds Series 2000CD, were redesignated as the Series 2000ABCD Bonds and converted from a Weekly Mode to a Term Mode. The swap now hedges the portion of the Series 2000ABCD bonds that originally related to the Series 2000AB bonds.

(4) On December 18, 2012, MTA Variable Rate Certificates of Participation, Series 2004A associated with the swap in connection with Series 2004A Bonds, were redeemed. Notional amounts from the Series 2004A swap were reassigned to MTA Transportation Revenue Variable Rate Bonds, Series 2011B; and MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A-1.

(5) On November 19, 2013, MTA Variable Rate Certificates of Participation, Series 2004A associated with the swap in connection with Series 2004A Bonds, were redeemed. Notional amounts from the Series 2004A swap were reassigned to MTA Transportation Revenue Variable Rate Bonds, Series 2011B; and MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A-1.

(6) In accordance with a swaption entered on August 12, 1998, TBTA received an upfront option premium of $22.740, which is being amortized over the life of the swap agreement. Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C. Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and TBTA is responsible for 10.3% of the transaction.

(7) On October 27, 2021 the TBTA 2002F VRDB bond were remarketed to a Fixed Rate Mode. Since the bonds were fixed out, the hedging relationship with the TBTA Citi swap was terminated, and a new hedging relationship was established with the TBTA 2018E taxable VRDB bonds.

LIBOR: London Interbank Offered Rate
SIFMA: Securities Industry and Financial Markets Association Index
TRB: Transportation Revenue Bonds

**Counterparty Ratings**—The current ratings of the counterparties are as follows as of December 31, 2022:

| | Ratings of the Counterparty or its Credit Support Provider | | |
|---|---|---|---|
| **Counterparty** | **S&P** | **Moody's** | **Fitch** |
| U.S. Bank National Association | AA- | A1 | AA- |
| Wells Fargo Bank, N.A. | A+ | Aa2 | AA- |
| BNP Paribas North America, Inc. | A+ | Aa3 | AA- |
| Citibank, N.A. | A+ | Aa3 | A+ |
| JPMorgan Chase Bank, NA | A+ | Aa2 | AA |
| UBS AG | A+ | Aa3 | AA- |

**Swap Notional Summary**—The following table sets forth the notional amount of Synthetic Fixed Rate debt and the outstanding principal amount of the underlying floating rate series as of December 31, 2022 (in thousands):

| **Series** | **Outstanding Principal** | **Notional Amount** |
|---|---|---|
| TBTA 2005B-4 (a,b,c,d,e) | $ 186,100 | $ 186,100 |
| TBTA 2005B-3 | 186,100 | 186,100 |
| TBTA 2005B-2 (a,b,c) | 186,100 | 186,100 |
| TBTA 2005A | 102,070 | 17,690 |
| TBTA 2003B (1,2,3) | 128,055 | 50,895 |
| TBTA 2018E | 148,470 | 135,205 |
| TBTA 2001C | 82,425 | 8,000 |
| 2002G-1 | 64,270 | 64,270 |
| 2022E-2a | 99,560 | 89,765 |
| Total | $ 1,183,150 | $ 924,125 |

Except as discussed below under the heading "Rollover Risk," the swap agreements contain scheduled reductions to outstanding notional amounts that are expected to approximately follow scheduled or anticipated reductions in the principal amount of the associated bonds.

**Risks Associated with the Swap Agreements**—From MTA's and MTA Bridges and Tunnels' perspective, the following risks are generally associated with swap agreements:

***Credit Risk***—The risk that a counterparty becomes insolvent or is otherwise not able to perform its financial obligations. To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings. Generally, MTA Bridges and Tunnels' swap agreements contain netting provisions under which transactions executed with a single counterparty are netted to determine collateral amounts. Collateral may be posted with a third-party custodian in the form of cash, U.S. Treasury securities, or certain Federal agency securities. MTA Bridges and Tunnels requires its counterparties to fully collateralize if ratings fall below certain levels (in general, at the Baa1/BBB+ level), with partial posting requirements at higher rating levels (details on collateral posting discussed further under "Collateralization/Contingencies"). As of December 31, 2022, all the valuations were in liability positions to MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

The notional amount totals below include all swaps. The counterparties have the ratings set forth above.

| Counterparty | Amount (In thousands) | Notional Amount |
|---|---|---|
| JPMorgan Chase Bank, NA | $ 186,100 | 20.14 % |
| UBS AG | 186,100 | 20.14 |
| Citibank, N.A. | 186,100 | 20.14 |
| BNP Paribas North America, Inc. | 186,100 | 20.14 |
| U.S. Bank National Association | 89,863 | 9.72 |
| Wells Fargo Bank, N.A. | 89,862 | 9.72 |
| Total | $ 924,125 | 100 % |

***Basis Risk***—The risk that the variable rate of interest paid by the counterparty under the swap and the variable interest rate paid by MTA Bridges and Tunnels on the associated bonds may not be the same. If the counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under the swap agreement does not fully reimburse MTA Bridges and Tunnels for its interest payment on the associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there is a net benefit to MTA Bridges and Tunnels.

***Termination Risk***—The risk that a swap agreement will be terminated and MTA Bridges and Tunnels will be required to make a swap termination payment to the counterparty and, in the case of a swap agreement which was entered into for the purpose of creating a synthetic fixed rate for an advance refunding transaction may also be required to take action to protect the tax-exempt status of the related refunding bonds.

The ISDA Master Agreement sets forth certain termination events applicable to all swaps entered by the parties to that ISDA Master Agreement. MTA Bridges and Tunnels have entered separate ISDA Master Agreements with each counterparty that govern the terms of each swap with that counterparty, subject to individual terms negotiated in a confirmation. MTA Bridges and Tunnels is subject to termination risk if its credit ratings fall below certain specified thresholds or if MTA Bridges and Tunnels commits a specified event of default or other specified event of termination. If, at the time of termination, a swap was in a liability position to MTA Bridges and Tunnels, a termination payment would be owed by MTA Bridges and Tunnels to the counterparty, subject to applicable netting arrangements.

The ISDA Master Agreements entered with the following counterparties provide that the payments under one transaction will be netted against other transactions entered under the same ISDA Master Agreement:

- JPMorgan Chase Bank, NA with respect to the MTA Transportation Revenue Variable Rate Refunding Bonds, Series 2002D-2 and Series 2012G.

Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the transactions' fair values so that a single sum will be owed by, or owed to, the non-defaulting party.

***Collateralization***—Generally, the Credit Support Annex attached to the ISDA Master Agreement requires that if the outstanding ratings of MTA, MTA Bridges and Tunnels, MTA New York City Transit, or the counterparty falls to a certain level, the party whose rating falls is required to post collateral with a third-party custodian to secure its termination payments above certain threshold valuation amounts. Collateral must be cash or U.S. government or certain Federal agency securities.

The following tables set forth the ratings criteria and threshold amounts relating to the posting of collateral set forth for MTA, MTA Bridges and Tunnels, MTA New York City Transit, and the counterparty for each swap agreement. In most cases, the counterparty does not have a Fitch rating on its long-term unsecured debt, so that criteria would not be applicable in determining if the counterparty is required to post collateral.

The following tables set forth the Additional Termination Events for MTA Bridges and Tunnels and its counterparties.

**MTA Bridges and Tunnels Senior Lien**

| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
|---|---|---|
| BNP Paribas North America, Inc.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG | Below Baa2 (Moody's) or BBB (S&P) * | Below Baa1 (Moody's) or BBB+ (S&P) * |

* Note: Equivalent Fitch rating is replacement for Moody's or S&P.

**MTA Bridges and Tunnels Subordinate Lien**

| **Counterparty Name** | **MTA Bridges and Tunnels** | **Counterparty** |
|---|---|---|
| U.S. Bank National Association; Wells Fargo Bank, N.A. | Below Baa2 (Moody's) or BBB (S&P) * | Below Baa2 (Moody's) or BBB (S&P) ** |

* Note: Equivalent Fitch rating is replacement for Moody's or S&P. If not below Investment Grade, MTA Bridges and Tunnels may cure such Termination Event by posting collateral at a Zero threshold.

** Note: Equivalent Fitch rating is replacement for Moody's or S&P.

MTA Bridges and Tunnels' ISDA Master Agreements provide that the payments under one transaction will be netted against other transactions entered under the same ISDA Master Agreement. Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.

***Rollover Risk***—MTA and MTA Bridges and Tunnels are exposed to rollover risk on swaps that mature or may be terminated prior to the maturity of the associated debt. When these swaps terminate, MTA or MTA Bridges and Tunnels may not realize the synthetic fixed rate offered by the swaps on the underlying debt issues. The following debt is exposed to rollover risk:

| | | |
|---|---|---|
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells Fargo) | January 1, 2032 | January 1, 2030 |
| MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2018E (swap with Citibank, N.A.) | November 15, 2032 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.) | January 1, 2033 | January 1, 2032 |
| MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.) | November 1, 2041 | January 1, 2030 (U.S. Bank/Wells Fargo) January 1, 2032 (Citibank) |
| MTA Transportation Revenue variable Rate Bonds, Bond series 2022E (swaps with U.S. Bank / Wells Fargo) | November 1, 2041 | January 1, 2030 |

***Collateralization/Contingencies***—Under the majority of the swap agreements, MTA Bridges and Tunnels is required to post collateral in the event its credit rating falls below certain specified levels. The collateral posted is to be in the form of cash, U.S. Treasury securities, or certain Federal agency securities, based on the valuations of the swap agreements in liability positions and net of the effect of applicable netting arrangements. If MTA Bridges and Tunnels does not post collateral, the swaps may be terminated by the counterparties.

As of December 31, 2022, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was $31,162; as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

The following tables set forth the ratings criteria and threshold amounts applicable to MTA Bridges and Tunnels and its counterparties.

**MTA Bridges and Tunnels Senior Lien**

| **Counterparty** | **MTA Bridges and Tunnels Collateral Thresholds (Based on Highest Rating)** | **Counterparty Collateral Thresholds (Based on Highest Rating)** |
|---|---|---|
| BNP Paribas North America, Inc.; | Baa1/BBB+: $30 million | A3/A-: $10 million |
| Citibank, N.A.; | Baa2/BBB: $15 million | Baa1/BBB+ & below: Zero |
| JPMorgan Chase Bank, NA; | Baa3/BBB- & below: Zero | |

*Note: MTA Bridges and Tunnels thresholds based on Moody's, S&P, and Fitch ratings. Counterparty thresholds based on Moody's and S&P ratings; Fitch rating is replacement for Moody's or S&P.*

**MTA Bridges and Tunnels Subordinate Lien**

| Counterparty | MTA Bridges and Tunnels Collateral Thresholds (Based on Lowest Rating) | Counterparty Collateral Thresholds (Based on Lowest Rating) |
|---|---|---|
| U.S. Bank National Association; Wells Fargo Bank, N.A. | Baa3/BBB- & below: Zero *(Note: only applicable as cure for Termination Event)* | Aa3/AA-: $15 million<br>A1/A+ to A3/A-: $5 million<br>Baa1/BBB+ & below: Zero |

*Note: Thresholds based on Moody's and S&P ratings. Fitch rating is replacement for Moody's or S&P.*

***Swap Payments and Associated Debt***—The following tables contain the aggregate amount of estimated variable-rate bond debt service and net swap payments during certain years that such swaps were entered into in order to: protect against the potential of rising interest rates; achieve a lower net cost of borrowing; reduce exposure to changing interest rates on a related bond issue; or, in some cases where Federal tax law prohibits an advance refunding, achieve debt service savings through a synthetic fixed rate. As rates vary, variable-rate bond interest payments and net swap payments will vary. Using the following assumptions, debt service requirements of MTA's and MTA Bridges and Tunnel's outstanding variable-rate debt and net swap payments are estimated to be as follows:

- It is assumed that the variable-rate bonds would bear interest at a rate of 4.0% per annum.
- The net swap payments were calculated using the actual fixed interest rate on the swap agreements.

**MTA Bridges and Tunnels**

| Years Ending December 31 | Variable-Rate Bonds Principal | Variable-Rate Bonds Interest | Net Swap Payments | Total |
|---|---|---|---|---|
| | | (In millions) | | |
| 2023 | $ 28.6 | $ 33.8 | $ (6.8) | $ 55.6 |
| 2024 | 57.2 | 31.5 | (6.4) | 82.3 |
| 2025 | 30.4 | 30.3 | (6.4) | 54.3 |
| 2026 | 31.5 | 29.1 | (6.3) | 54.3 |
| 2027 | 32.9 | 27.8 | (6.5) | 54.2 |
| 2028–2032 | 681.8 | 68.5 | (16.5) | 733.8 |
| 2033–2037 | 12.4 | 2.5 | | 14.9 |
| 2038–2042 | - | 1.0 | - | 1.0 |

## 18. RELATED PARTY TRANSACTIONS

MTA Bridges and Tunnels and other affiliated MTA agencies receive support from MTA in the form of budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services, some of which are charged back.

The resulting receivables and payables from the above transactions are recorded in the statement of net position.

The Metropolitan Transportation Authority ("MTA") and the Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels") entered into a Payroll Mobility Tax Financing Agreement (the "Financing Agreement"), dated as of April 9, 2021, to provide the mechanism by which MTA will deposit, allocate and transfer certain payroll mobility taxes ("Mobility Tax Receipts") and certain fees, surcharges and taxes ("Aid Trust Account Receipts," and together with the Mobility Tax Receipts, "PMT Receipts") in order to share the PMT receipts on a parity basis with MTA Bridges and Tunnels. The Financing Agreement ensures that sufficient amounts will be available for MTA to (i) provide MTA Bridges and Tunnels, or the trustee on behalf of MTA Bridges and Tunnels, with the PMT Receipts necessary for MTA Bridges and Tunnels to timely perform its obligations under the Triborough Bridge and Tunnel Authority Payroll Mobility Tax Obligation Resolution and certain related resolutions, each adopted on March 17, 2021, and (ii) retain, or provide to the trustee under the MTA PMT Resolution on its own behalf, the PMT Receipts necessary for MTA to timely perform its obligations under the Metropolitan Transportation Authority Payroll Mobility Tax Obligation Resolution and certain related resolutions, each adopted on November 18, 2020. The aforementioned resolutions were adopted for the purpose of issuing from time to time one or more series of bonds, notes or other obligations secured by the Financing Agreement and the PMT Receipts.

Triborough Bridge and Tunnel Authority issued bonds backed by payroll mobility tax revenues. The proceeds of these bonds are sent to MTA for the capital needs of New York City Transit and Commuter Rails. The debt service costs associated with these bonds are collected by MTA from New York state and sent to Triborough Bridge and Tunnel Authority, which are then used to pay the bond holders. The total loan receivable for PMT as of December 31, 2022 is $7,892 million.

In July 2022, the Authority issued its inaugural series of Sales Tax Revenues Bonds under the Special Obligation Resolution Authorizing Sales Tax Revenue Obligations (TBTA Capital Lockbox- City Sales Tax) ("Sales Tax Revenue Bond Resolution"). The Sales Tax Revenue Bonds, 2022A obligations were issued to (1) finance approved transit and commuter projects included in the 2020-2024 MTA capital program and (2) to pay certain financing, legal and miscellaneous expenses. The projects funded under the 2022A issuance were not for the benefit of the Authority. The Authority transferred a portion of the proceeds of the 2022A issuance to the MTA and recorded this transaction as a transfer to the MTA in the Authority's Statement of Revenues, Expenses and Changes in Net Position for the year ended December 31, 2022. The Authority is responsible for the payment of all debt service related to the 2022A issuance from the receipts of internet taxes revenues received as part of the City Sales Tax.

Due from/to MTA and affiliated agencies consists of the following at December 31, 2022 and 2021 (in thousands):

| | 2022 | | 2021 | |
|---|---|---|---|---|
| | **Receivable** | **(Payable)** | **Receivable** | **(Payable)** |
| Due from (due to) MTA | $ 4,124 | $ (186,551) | $ 10,225 | $ (508,824) |
| Loan receivable due from (due to) MTA | 7,892,378 | - | 2,088,314 | - |
| Due from (due to) affiliated agencies | 825 | (82,534) | - | (86,213) |
| | $ 7,897,327 | $ (269,085) | $ 2,098,539 | $ (595,037) |

## 19. NOVEL CORNAVIRUS (COVID-19)

On March 12, 2020, the World Health Organization declared the COVID-19 outbreak to be a pandemic in the face of the global spread of the virus. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was first detected in China, and has since spread globally, including to the

United States and to New York State. On March 7, 2020, Governor Cuomo declared a Disaster Emergency in the State of New York. On March 13, 2020, President Trump declared a national state of emergency as a result of the COVID-19 pandemic. By order of Governor Cuomo ("New York State on PAUSE"), effective March 22, 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The PAUSE order was lifted on May 15, 2020 for five New York regions that met the requirements to start opening. However, a new order was signed by Governor Cuomo on May 15, 2020 extending the PAUSE to June 13, 2020 for New York City, Long Island, and the Hudson Valley. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a sharp decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. A significant development has been the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15, 2021 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. Traffic crossings at MTA Bridges and Tunnels facilities are nearly at pre-pandemic levels.

***Coronavirus Aid, Relief and Economic Security Act ("CARES Act")***—The CARES Act is a $2.2 trillion economic stimulus bill passed by Congress and signed into law by the President on March 27, 2020 in response to the economic fallout of the COVID-19 pandemic in the United States. The CARES Act through the Federal Transit Administration's ("FTA") formula funding provisions are providing approximately $4 billion to MTA. Funding will be provided at a 100% Federal share, with no local match required, and is available to support operating, capital and other expenses generally eligible under those programs and incurred beginning on January 20, 2020, to prevent, prepare for, and respond to the COVID-19 pandemic, including operating service for essential workers, such as medical personnel and first responders. On May 8, 2020, the FTA approved MTA's initial grant application of $3.9 billion. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately $98 million in additional formula grant allocations to MTA for a CARES Act grant total of $4.010 billion. As of December 31, 2020, a total of $4.010 billion has been released to MTA for operating assistance that occurred from January 20, 2020 through July 31, 2020. The MTA has received all CARES Act funding as provided in the first congressional relief package.

***Federal Reserve Bank of New York's Municipal Liquidity Facility LLC ("MLF")***— Due to the COVID-19 pandemic, the Federal Reserve established the MLF in April 2020 as a source of emergency financing by being available to purchase up to $500 billion of short-term notes from state and local governments and certain public entities to ensure they had access to credit during the COVID-19 pandemic. MTA was able to utilize the MLF twice before the MLF window closed at the end of December 2020.On August 26, 2020, MTA directly placed with the MLF $450.72 million Transportation Revenue BANs, Series 2020B, which were issued to retire existing Transportation Revenue BANs maturing on September 1, 2020.The MTA subsequently retired the MLF $450.72 million Transportation Revenue BANs, Series 2020B, with an issuance of Dedicated Tax Funds bonds on March 1, 2022.MTA issued into the MLF a second time by directly placing $2.907 billion Payroll Mobility Tax BANs issued for working capital on December 17, 2020.The $2.907 billion MLF loan matures in December, 2023. In December 2022, the MTA Board authorized the MTA to place MTA funds and unspent proceeds in an Interim Redemption Subaccount, for the purpose of redeeming the BANs at or before maturity. Subsequently, MTA transferred $2.907 billion into the Interim Redemption Subaccount pursuant to such Board approval.

***Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA")***—On December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA") which includes $900 billion in supplemental appropriations for COVID-19, $14 billion of which will be allocated to support the transit industry during the COVID-19 public health emergency was signed into law. The supplemental finding will be provided a 100 percent federal share, with no local match required. CRRSAA through FTA's formula funding provisions has provided $4.1 billion to MTA. This federal relief offsets operating deficits in 2021. The funds were received in late December 2021 of $0.6 billion and January 2022 of $3.5 billion.

***Federal Emergency Management Agency ("FEMA") Reimbursement***—The MTA is eligible for FEMA payments which are expected to cover expenses related to the COVID-19 pandemic, over and above normal emergency costs that are not covered by other federal funding. An estimated $783.4 million of direct COVID-19-related expenses incurred from the start of the pandemic through July 1, 2022, was submitted by MTA to the New York State Department of Budget (DOB), which is the agency managing Covid-19 related expense reimbursement from FEMA.

## 20. SUBSEQUENT EVENTS

On January 12, 2023, MTA Bridges and Tunnels issued $764,950 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Refunding Green Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction will be used (i) to refund certain MTA Transportation Revenue Bonds and MTA Dedicated Tax Fund Bonds and (ii) to pay certain financing, legal, and miscellaneous expenses associated with the Series 2023A Bonds.

On February 14, 2023, MTA Bridges and Tunnels issued $828,225 Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction will be used (i) to refund certain outstanding bonds of MTA Bridges and Tunnels and (ii) pay certain financing, legal, and miscellaneous expenses.

On March 14, 2023, MTA Bridges and Tunnels issued $1,253,750 Triborough Bridge and Tunnel Authority Sales Tax Revenue Bonds, Series 2023A ("the Series 2023A Bonds"). Proceeds from the transaction will be used (i) to finance approved transit and commuter project included in the 2020-2024 Capital Program and (ii) finance a portion of the capital costs of the Central Business District Tolling and (iii) pay certain financing, legal and miscellaneous expenses.

On March 16, 2023, MTA purchased $1,032,146 for three portfolios of State and Local Governments Securities (SLGS) sufficient to pre-pay all or a portion of interest due on certain MTA Dedicated Tax Bond Funds, MTA Transportation Revenue Bonds, and TBTA Payroll Mobility Tax Senior Lien Bonds through November 15, 2026. The funds were deposited in three escrow accounts. The establishment of the Escrow Fund is not intended to constitute an economic or legal defeasance of the Bonds and the MTA and TBTA retains the ability, in its sole discretion, to withdraw in whole or in part the amounts deposited in the Escrow Fund at any time should such amounts be needed for any other authorized purpose.

The breakdown of the portfolios were allocated as follows: Dedicated Tax Bond funds, Series 2010A-2, together with the Series 2009C Bonds, $181,749; MTA Transportation Revenue Bonds, Series 2020E Bonds, together with the Series 2006B, the Series 2010A, Series 2010B-1, Series 2010C-1, Series 2010E and the Series 2020D Bonds, $582,681; TBTA Payroll Mobility Tax Senior Lien Bonds Subseries 2022D-2 Bonds and, together with the Series 2022C and the Series 2022D-1a Bonds, $267,716.

**Increase 2023 Fare and Toll Revenue Targets** - MTA is proposing a 2023 fare and toll increase yielding approximately 5.5% in additional fare and toll revenue. This action is estimated to generate a total of $128.28 million.

**Congestion Price-** The Biden administration Friday granted long-awaited federal approval to New York's Metropolitan Transportation Authority's first-in-the-nation congestion pricing plan. The Federal Highway Administration approved the MTA's environmental assessment for the Central Business District Tolling Program, commonly known as congestion pricing, and released a draft "finding of no significant impact" that will be up for public review for 30 days, after which the FHWA will make it final determination.

* * * * * *

**REQUIRED SUPPLEMENTARY INFORMATION**

## TRIBOROGH BRIDGE AND TUNNEL AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
### SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF NET PENSION LIABILITY IN THE NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
### AT JUNE 30,
### (In millions)

| | NYCERS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
| Authority's proportion of the net pension liability | 0.924 % | 0.933 % | 1.212 % | 1.222 % | 1.155 % | 1.308 % | 1.266 % | 1.205 % |
| Authority's proportionate share of the net pension liability | $ 167.41 | $ 59.82 | $ 255.54 | $ 226.29 | $ 203.71 | $ 271.61 | $ 307.60 | $ 243.90 |
| Authority's actual covered-employee payroll | $ 122.95 | $ 114.46 | $ 121.31 | $ 157.46 | $ 126.57 | $ 130.30 | $ 133.89 | $ 127.48 |
| Authority's proportionate share of the net pension liability as a percentage of the Authority's covered-employee payroll | 136.16 % | 52.26 % | 210.65 % | 143.71 % | 160.95 % | 208.450 % | 229.741 % | 191.329 % |
| Plan fiduciary net position as a percentage of the total pension liability | 81.27 % | 93.14 % | 76.93 % | 78.83 % | 78.83 % | 74.80 % | 69.57 % | 73.12 % |

Note: This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

## TRIBOROGH BRIDGE AND TUNNEL AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
### SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO THE NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
### FOR THE YEARS ENDED DECEMBER 31,
### (In thousands)

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|
| Contractually required contribution | $ 31,973 | $ 34,591 | $ 40,790 | $ 48,538 | $ 38,697 | $ 41,272 | $ 44,609 | $ 41,812 | $ 33,023 | $ 33,461 |
| Contributions in relation to the contractually required contribution | 31,973 | 34,591 | 40,790 | 48,538 | 38,697 | 41,272 | 44,609 | 41,812 | 33,023 | 33,461 |
| Contribution deficiency (excess) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Authority's covered-employee payroll | $122,952 | $119,482 | $126,895 | $164,110 | $133,494 | $144,992 | $137,900 | $150,652 | $167,988 | $132,095 |
| Contributions as a percentage of covered-employee payroll | 26.00 % | 28.95 % | 32.14 % | 29.58 % | 28.99 % | 28.47 % | 32.35 % | 27.75 % | 19.66 % | 25.33 % |

**Notes to Authority's Contributions to NYCERS:**

Significant methods and assumptions used in calculating the actuarially determined contributions of an employer's proportionate share in a Cost Sharing, Multiple-Employer pension plan, the NYCERS Plan, should be presented as notes to the schedule. Factors that significantly affect trends in the amounts reported are changes of benefit terms, changes in the size or composition of the population covered by the benefit terms, or the use of different assumptions. Following is a summary of such factors:

***Changes of Benefit Terms***

There were no changes of benefit terms in the June 30, 2021 funding valuation.

***Changes of Assumptions***

There were no changes of benefit assumptions in the June 30, 2021 funding valuation.

# TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
## (Component Unit of the Metropolitan Transportation Authority)

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
### SCHEDULE OF THE AUTHORITY'S PROPORTIONATE SHARE OF THE NET OPEB LIABILITY IN THE MTA OPEB PLAN
### AT DECEMBER 31,
### (In millions)

| **Plan Measurement Date (December 31):** | **2021** | **2020** | **2019** | **2018** | **2017** |
|---|---|---|---|---|---|
| MTA Bridges and Tunnels proportion of the net OPEB liability | 3.64 % | 4.05 % | 3.85 % | 4.09 % | 4.06 % |
| MTA Bridges and Tunnels proportionate share of the net OPEB liability | $ 908.111 | $ 987.443 | $ 813.359 | $ 801.555 | $ 823.748 |
| MTA Bridges and Tunnels covered payroll | $ 119.482 | $ 126.895 | $ 164.110 | $ 133.494 | $ 112.716 |
| MTA Bridges and Tunnels proportionate share of the net OPEB liability as a percentage of its covered payroll | 760.04 % | 778.16 % | 495.62 % | 600.44 % | 730.82 % |
| Plan fiduciary net position as a percentage of the total OPEB liability | 0 % | 0 % | 1.93 % | 1.76 % | 1.79 % |

**Note:** This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

## TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
### (Component Unit of the Metropolitan Transportation Authority)

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
### SCHEDULE OF THE AUTHORITY'S CONTRIBUTIONS TO THE MTA OPEB PLAN
### FOR THE YEARS ENDED DECEMBER 31:
### (In thousands)

| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|
| Actuarially determined contribution | N/A | N/A | N/A | N/A | N/A | N/A |
| Actual employer contribution [1] | $ 32,898 | $ 28,855 | $ 29,318 | $ 29,314 | $ 28,291 | $ 26,407 |
| Contribution deficiency (excess) | N/A | N/A | N/A | N/A | N/A | N/A |
| Covered payroll | $122,952 | $119,482 | $126,895 | $164,110 | $ 133,494 | $ 112,716 |
| Actual contribution as a percentage of covered payroll | 26.76 % | 24.15 % | 23.10 % | 17.86 % | 21.19 % | 23.43 % |

[1] Actual employer contribution includes the implicit rate of subsidy adjustment of $1,763, $1,290, $2,495, $3,782, 3,650 and $3,450, for the years ended December 31, 2022, 2021, 2020, 2019, 2018 and 2017 respectively.

**Notes to Schedule of the MTA Bridges and Tunnels Contribution to the OPEB Plan:**

***Methods and Assumptions Used to Determine Contribution Rates:***

| | | | | | |
|---|---|---|---|---|---|
| Valuation date | July 1, 2021 | July 1, 2019 | July 1, 2019 | July 1, 2018 | July 1, 2017 |
| Measurement date | December 31, 2021 | December 31, 2020 | December 31, 2019 | December 31, 2018 | December 31, 2017 |
| Discount rate | 2.06%—net of expenses | 2.12%—net of expenses | 2.74%—net of expenses | 4.10%—net of expenses | 3.44%—net of expenses |
| Inflation | 2.25% | 2.25% | 2.50% | 2.50% | 2.50% |
| Actuarial cost method | Entry age normal | Entry age normal | Entry age normal | Entry age normal | Entry age normal |
| Amortization method | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll | Level percentage of payroll |
| Normal cost increase factor | 4.25% | 4.25% | 4.50% | 4.50% | 4.50% |
| Investment rate of return | 2.06% | 2.12% | 5.75% | 6.50% | 6.50% |

***Changes of Benefit Terms***—In the July 1, 2021 actuarial valuation, there were no changes to the benefit terms.

***Changes of Assumptions***—In the July 1, 2021 actuarial valuation, there was a change in assumptions. The discount rate used to measure liabilities was updated to incorporate GASB 75 guidance and changed to reflect the current municipal bond rate.

**Note:** This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

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**Appendix E – TBTA**
**Independent Engineer's Report**

Robert F. Kennedy Bridge

**APPENDIX E**

# History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority

Stantec

Prepared for:
Triborough Bridge and Tunnel Authority

Prepared by:
Stantec Consulting Services, Inc.

April 28, 2023

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April 29, 2022

To the Triborough Bridge and Tunnel Authority:

In accordance with your request, Stantec Consulting Services Inc. (Stantec) conducted this annual study to develop projections of traffic, toll revenues, and expenses for the toll bridge and tunnel facilities operated by the Triborough Bridge and Tunnel Authority (TBTA), and to provide an overview of the physical conditions of each facility. We have reviewed the bridge and tunnel inspection reports provided by TBTA and discussed TBTA's ongoing maintenance and capital programs with TBTA's Business Unit engineering staff responsible for those programs.

This report provides a summary of past traffic and revenue performance of the TBTA facilities and information related to potential future traffic and revenue for a ten-year period. The projections presented in this report have taken into account: (1) the general physical condition of TBTA's toll facilities; (2) traffic and toll revenue data, reflecting the twenty (20) toll increases since 1972, including the most recent toll increase effective April 11, 2021; (3) the impact of the E-ZPass electronic toll collection system; (4) the impact of systemwide Cashless Tolling implementation; (5) the toll structure; (6) planned and possible future toll increases; (7) economic, population, employment, and other demographic forecasts in the New York Metropolitan Area; (8) current fuel availability and prices; (9) the traffic capacities of the bridges, tunnels and the existing roadway network that feeds the facilities in terms of the potential for future growth of peak versus non-peak period traffic; (10) current and programmed construction activities on TBTA's facilities and the arterial highway network serving the New York Metropolitan Area, including the toll-free Harlem and East River bridges; (11) mass transit network projects; (12) the implementation of split tolling at the Verrazzano -Narrows Bridge on December 1, 2020; and (13) the ongoing impact of the COVID-19 pandemic and associated governmental restrictions ("pandemic").

The response to the pandemic starting in early 2020 affected the United States and global economy causing unemployment in the United States to rise abruptly to levels not seen in recent history. The national and local governments took a series of actions including work restrictions and pandemic relief packages throughout 2020 and into early 2021. In March 2021, former Mayor Bill de Blasio announced that the 80,000 City municipal workers that had been working remotely could begin to return to the office on May 3, 2021. However, the onset of the delta and omicron ("Omicron") variants of COVID-19 at the end of summer 2021 and December 2021, respectively, delayed the return to office for many private companies. Consequently, many of these firms opened their doors for employees towards the end of winter 2022. As part of the response to the pandemic, many employers have adopted greater flexibility; allowing their staff to work at least part-time from remote locations.

As of the date of this report, preliminary audited traffic and revenue data are available for the period through February 2022, as well as unaudited traffic volumes through April 25, 2022.

The effects of the Central Business District Tolling Program (described later in this report) have not been included in the analysis prepared by Stantec for this report as the program is still under development and insufficient information is available to make realistic assumptions regarding any impacts of the program on the TBTA facilities or projected revenues. However, such a program could have an observable impact on travel patterns and a tangible impact on TBTA revenue, none of which is reflected in this report.

Stantec's previous Independent Engineer Report entitled "History and Projection of Traffic, Toll Revenues and Expenses and Review of Physical Conditions of the Facilities of Triborough Bridge and Tunnel Authority" (2021 Report), dated April 30, 2021, was published roughly one year into the pandemic. In 2021, actual total toll revenues for the TBTA facilities were $2.150 billion, or 5.4 percent higher than our 2021 forecast of $2.040 billion and 31.1 percent higher than actual 2020 toll revenue; such 2020 revenues having been particularly impacted by the onset of the pandemic. Total revenue traffic in 2021 was 307.3 million vehicles, which was 2.7 percent higher than our 2021 forecast of 299.3 million vehicles and 21.4 percent higher than actual 2020 traffic.

The full set of comprehensive data provided through February 2022 was used in preparing our analysis through 2032. Stantec receives daily preliminary unaudited traffic data from the TBTA. Although the preliminary unaudited data from March 1, 2022, through April 25, 2022, were reviewed, these data were not directly used in the future analysis due to insufficient level of available detail and because preliminary unaudited data are still subject to change.

## TRANSPORTATION INFRASTRUCTURE

The New York Metropolitan Area's transportation infrastructure consists of an extensive network of highways, tunnels, and bridges (both tolled and toll-free), regional bus and commuter rail, and the transit system in The City of New York ("New York City" or the "City").

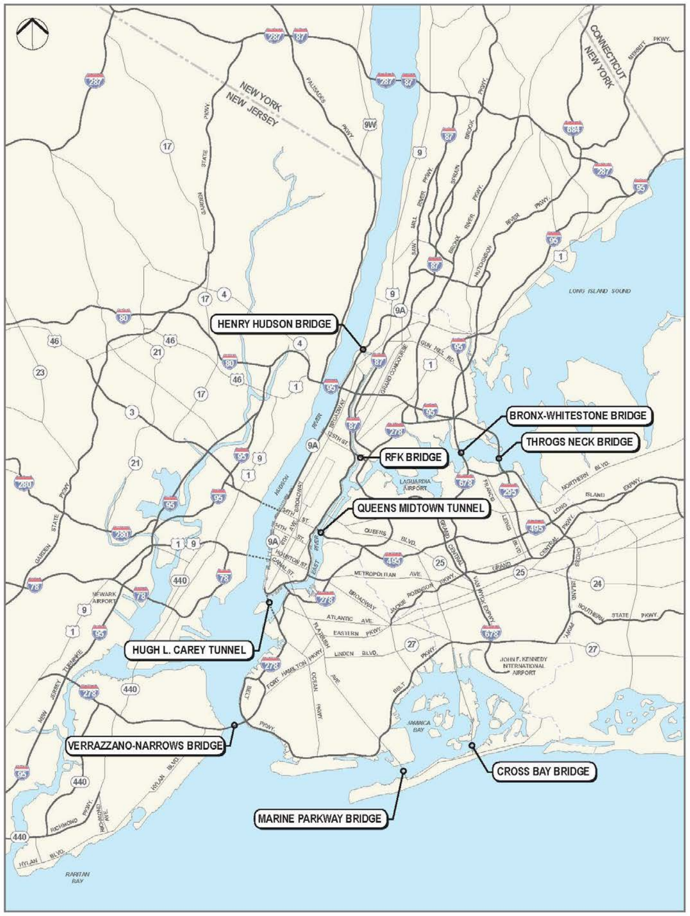
### TBTA Facilities

TBTA operates nine toll facilities within New York City, consisting of seven bridges and two tunnels that provide vital links across the City's rivers and bays. In 2021, these facilities carried 307.3 million total toll-paying vehicles and generated $2.150 billion in total toll revenue. The locations of the facilities are shown in the context of the regional highway network on the following map (Figure 1).





**Figure 1 TBTA Toll Facilities Location Map**



The facilities are briefly described as follows:

*Verrazzano-Narrows Bridge* - a two-level suspension bridge that crosses the entrance to New York Harbor and connects Brooklyn and Staten Island, with seven lanes of traffic on the upper level, including a reversible HOV lane, and six lanes of traffic on the lower level. The fully reversible lane on the upper level was implemented in September 2017. Split tolling on this bridge was implemented on December 1, 2020.

*Robert F. Kennedy (RFK) Bridge* (formerly the *Triborough Bridge*) - a three-bridge structure with connecting viaducts or elevated expressways, which crosses the East River, the Harlem River, and Bronx Kill connecting the boroughs of Queens, Manhattan, and the Bronx. Opened to traffic in 1936, it generally carries eight traffic lanes between Queens and the Bronx crossing Astoria Park, Wards Island and Randall's Island. The bridge widens out to nine lanes over Astoria Park and Wards Island to provide dedicated exit lanes for Hoyt Avenue and Wards Island from the Queens bound roadway. The bridge also generally carries six traffic lanes between Randall's Island and Manhattan. These three major crossings are interconnected by viaducts and the Randall's Island Interchange, which facilitates traffic flow in two directions. A new ramp was opened to traffic on November 23, 2020, providing an alternate direct connection from the RFK Bridge to the northbound Harlem River Drive.

*Bronx-Whitestone Bridge* - a suspension bridge, with three lanes of traffic in each direction, which crosses the East River connecting the boroughs of Queens and the Bronx.

*Throgs Neck Bridge* - a suspension bridge with three lanes of traffic in each direction, which crosses the upper East River connecting the boroughs of Queens and the Bronx.

*Queens Midtown Tunnel* - a twin-tube tunnel with each tube carrying two lanes of traffic under the East River between the boroughs of Queens and Manhattan. During normal morning commuting hours, three lanes operate inbound into Manhattan.

*Hugh L. Carey Tunnel* (formerly the *Brooklyn-Battery Tunnel*) - a twin-tube tunnel with each tube carrying two lanes of traffic under the East River connecting the southern tip of Manhattan with Brooklyn. During normal commuting hours, three lanes operate in the peak traffic direction.

*Henry Hudson Bridge* - a two-level steel arch bridge with three southbound lanes on its lower deck and three northbound lanes on its upper deck, which crosses the Harlem River to connect the northern tip of Manhattan with the Spuyten Duyvil section of the Bronx.

*Marine Parkway - Gil Hodges Memorial Bridge* (*Marine Parkway*) - a four-lane crossing of the Rockaway Inlet that connects the Rockaway peninsula in Queens with Brooklyn.

*Cross Bay Veterans Memorial Bridge* (*Cross Bay*) - a precast post-tensioned concrete T-girder bridge connecting the Rockaway peninsula in Queens with the Queens mainland, via Broad Channel. The bridge has three lanes of traffic in each direction crossing Beach Channel in Jamaica Bay, dropping to two lanes to align with the Cashless Tolling gantries and Cross Bay Boulevard.





### Metropolitan Area Arterial Network

The New York Metropolitan Area is served by an extensive network of highway facilities. Many of the bridges and tunnels operated by TBTA are links in the Interstate highway network, as these limited-access expressways pass through the City to serve both local and long-distance traffic. These regional facilities are also shown in Figure 1.

The Verrazzano-Narrows Bridge is adjacent to I-278 (Staten Island, Gowanus, and Brooklyn-Queens Expressways), which connects with the Hugh L. Carey Tunnel and the RFK Bridge. The Queens Midtown Tunnel joins I-495 (Long Island Expressway) with Manhattan. The RFK Bridge joins I-87 (Major Deegan Expressway) and I-278 (Bruckner Expressway) with I-278/Grand Central Parkway in Queens and the FDR and Harlem River Drives in Manhattan. The Bronx-Whitestone Bridge carries traffic between the Hutchinson River and Merritt Parkways and Long Island via I-678 (Whitestone and Van Wyck Expressways) and the Cross Island Parkway. The Throgs Neck Bridge carries traffic between I-95 (New England Thruway and George Washington Bridge) and Long Island via I-295. The Henry Hudson Bridge is part of the Henry Hudson Parkway (Route 9A), a major commuter route into Manhattan from the extensive parkway network in western Westchester County and beyond.

In addition to TBTA facilities and their expressway/parkway connections, the City's toll-free East River bridges — Brooklyn, Manhattan, Williamsburg, and Ed Koch Queensboro — also connect Manhattan with Brooklyn and Queens; and nine toll-free bridges over the Harlem River connect Manhattan with the Bronx. Unlike the TBTA facilities, the approaches to these bridges are mostly surface arterials, such as Flatbush Avenue and Queens Boulevard. Only a few have expressway ramp connections (such as the Brooklyn-Queens Expressway connections to the Brooklyn, Manhattan, and Williamsburg Bridges). The Alexander Hamilton Bridge, as part of I-95, connects the Trans-Manhattan Expressway and the Cross Bronx Expressway.

### Other Regional Toll Facilities

TBTA is one of a number of toll authorities that operate bridge, tunnel, and highway facilities in the New York Metropolitan Area. The agency whose facilities are geographically closest to TBTA's bridges and tunnels is the Port Authority of New York and New Jersey (the "Port Authority"). The Port Authority's George Washington Bridge is linked to the RFK, Bronx-Whitestone, and Throgs Neck Bridges via the expressway system in the Bronx, to the RFK Bridge via the Harlem River Drive in Manhattan, and to the Henry Hudson Bridge via the Henry Hudson Parkway in Manhattan, while the Bayonne Bridge, Goethals Bridge, and Outerbridge Crossing are linked to the Verrazzano-Narrows Bridge via the expressway system in Staten Island. Motorists using the Port Authority's two tunnels — Holland and Lincoln — must traverse surface streets (in Manhattan) to reach TBTA's and the City's East River crossings. The other toll authorities in the region and the toll facilities they operate are the New York State Thruway Authority's (the "Thruway") Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge) and several New York State Thruway System sections, New York State Bridge Authority (five upstate Hudson River bridges), and the New Jersey Turnpike Authority (Garden State Parkway and New Jersey Turnpike).

*The E-ZPass System*

All of these authorities, together with many others outside of the New York Metropolitan Area, are linked through the E-ZPass Interagency Group ("E-ZPass Group") originally designed to better serve the regional traveler through a common electronic toll collection tag. To further expand its footprint, the E-ZPass Group streamlined its membership categories to align with the future needs of national interoperability. Since March 8, 2018, a "Sponsored Affiliate" membership category was added, permitting public and private toll road operators to become interoperable with E-ZPass Group members by using equipment that is compatible with the E-ZPass system and allowing them to use a sponsoring Full Member's customer service center for transaction processing. The E-ZPass Group is also conducting ongoing discussions about regional electronic toll interoperability with representatives of toll agencies in the central, southeastern, and western states, exploring solutions that would allow the regions to process each other's transactions. E-ZPass and its impact on the TBTA facilities are discussed further in this report.

*Cashless Tolling in the Region*

All nine of the TBTA's bridges and tunnels are exclusively "Cashless Tolling" crossings as described below. The Port Authority's Staten Island crossings (Bayonne Bridge, Goethals Bridge, and Outerbridge Crossing), Holland Tunnel, and George Washington Bridge's Palisades Interstate Parkway and lower level toll lanes are also cashless. As of April 2022, the cash collection of tolls is temporarily restored at the Lincoln Tunnel and upper level of the George Washington Bridge. Cash collection will continue at these facilities until mid-2022 when the cashless system will be fully installed. Additionally, the entire New York State Thruway System became fully cashless by November 2020. Under Cashless Tolling, toll equipment is mounted on gantries, traditional toll plazas are demolished, and roadways reconfigured so that traffic flows freely across the facilities. Tolls continue to be paid using E-ZPass tags which are mounted on vehicles (typically windshields) and associated with E-ZPass accounts; the gantry-based E-ZPass antennas read the on-board tags and tolls are electronically debited from the associated E-ZPass accounts. For vehicles without E-ZPass tags, license plate images are taken and matched with information from the applicable Department of Motor Vehicles ("DMV") so that toll bills can be sent to registered owners under the authorities' Tolls by Mail program.

## Regional Public Transportation

In addition to the TBTA facilities, most of the public transportation facilities within the City and the suburban counties north and east of the City are part of the Metropolitan Transportation Authority ("MTA") system. These include the New York City Transit Authority and the Manhattan and Bronx Surface Transit Operating Authority (its subsidiary), MTA Bus Company, Staten Island Rapid Transit Operating Authority, Metro-North Commuter Railroad Company, and the Long Island Rail Road Company.

For those TBTA facilities directly serving Manhattan — Henry Hudson Bridge, RFK Bridge, Queens Midtown Tunnel, and Hugh L. Carey Tunnel — motorists can, for the most part, choose to use public transit as an alternative. For the outlying bridges, however, the choice is more difficult due to more





limited availability of public transportation options or different trip characteristics (e.g., trip purpose, trip origin and destination).

## The Central Business District Tolling Program

In April 2019, New York State enacted the MTA Reform and Traffic Mobility Act, which establishes the Central Business District ("CBD") Tolling Program, the goals of which are to reduce traffic congestion in the Manhattan CBD, improve air quality, and provide a stable and reliable funding source for the repair and revitalization of MTA's public transportation systems. TBTA has been directed to establish the CBD Tolling Program. The program will operate in the CBD, defined as Manhattan south of and inclusive of 60th Street, not including the FDR Drive or the West Side Highway (which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street). TBTA has entered into an MOU with New York City Department of Transportation ("NYCDOT") to coordinate the planning, design, installation, construction and maintenance of the CBD Tolling Program infrastructure.

In October 2019, TBTA awarded to TransCore LLP a contract to design, build, operate, and maintain the toll system equipment and infrastructure required to implement the CBD Tolling Program in NYC ("DBOM contract").

Authorization is required from the Federal Highway Administration ("FHWA") under its Value Pricing Pilot Program ("VPPP") to implement the CBD Tolling Program on federal-aid roadways within the CBD. FHWA approval to participate in the VPPP makes this project subject to National Environmental Policy Act ("NEPA") review. On March 30, 2021, FHWA determined that an Environmental Assessment is the appropriate level of environmental review required under NEPA. Because FHWA regulations provide that final design and construction cannot proceed before FHWA issues an environmental finding, the project is proceeding in two phases – preliminary design and final design – the latter of which is subject to receipt of FHWA approval.

After the early design phase is complete and upon issuance of the second notice to proceed, TransCore will complete the final design, build the infrastructure and install the toll system equipment. Once operational, TransCore will be responsible for operating and maintaining the infrastructure and toll system for an additional six years under the DBOM contract. The total cost of this DBOM contract is $507 million, which includes incentive payments to encourage on-time delivery.

The construction and implementation costs for the CBD Tolling Program are being funded through available sources of money including, among others, the recently enacted Real Estate Transfer Tax (Mansion Tax) and Internet Marketplace Tax, all of which are expected to be reimbursed through net operating revenues generated through the program when it is operational.

The MTA is expected to release its draft Environmental Assessment for the CBD Tolling Program in May 2022. Since details relating to the tolling structure, tolling rates and possible credits, as well as the date of implementation, of the CBD Tolling Program have not been established, Stantec is unable to assess the impact of the future CBD Tolling Program on either transactions or revenues for TBTA at this time.

## TOLL COLLECTION ON THE TBTA FACILITIES

The nine TBTA toll facilities are divided into three toll pricing structures: major crossings, minor crossings, and the Henry Hudson Bridge. The major crossings for this purpose include the RFK Bridge, Bronx-Whitestone Bridge, Throgs Neck Bridge, Queens Midtown Tunnel, Hugh L. Carey Tunnel, and the Verrazzano-Narrows Bridge. As of December 1, 2020, the Verrazzano-Narrows Bridge implemented split tolling, with one-way and round-trip toll rates matching those at other major crossings. Previously, tolls at the Verrazzano-Narrows Bridge were only collected in the westbound direction. The minor crossings are the Marine Parkway Bridge and Cross Bay Bridge. The Henry Hudson Bridge is the only facility limited to vehicles that are authorized to use parkways.

### Present and Proposed Toll Structures and Operation

The current toll structure, in place since the April 11, 2021, toll increase, is shown in Table 1. Toll rates are determined using a basic rate as modified by variables specific to a number of factors, including:

- crossing used,
- vehicle classification,
- toll payment method, and
- place of residence.

This study uses the phrase "Tolls by Mail" ("TBM") to refer to crossing rates charged for the use of fare media other than E-ZPass by the New York E-ZPass Customer Service Center ("NYCSC") customers, historic cash customers through September 29, 2017, and current TBM customers. (See 21 NYCRR §1021.1). As presented in Table 1, E-ZPass toll rates apply only to properly mounted customer tags issued by the NYCSC (this includes TBTA, the Port Authority, the Thruway, the Buffalo and Fort Erie Public Bridge Authority Peace Bridge, and New York State Bridge Authority).

Effective April 11, 2021, a "NYCSC Mid-Tier" ("Mid-Tier"), toll rate was introduced. The Mid-Tier toll rate is charged to NYCSC E-ZPass customers when their E-ZPass tag is not properly mounted while crossing TBTA toll facilities and are therefore identified through their license plate being matched to their E-ZPass account. The Mid-Tier toll rate is higher than the E-ZPass toll rate that is charged to E-ZPass NYCSC customers when their E-ZPass tag is properly mounted, but lower than the full toll charged to customers without a NYCSC E-ZPass tag or account. The goal of the new Mid-Tier toll rate is to incentivize NYCSC E-ZPass customers to properly mount their E-ZPass tag. The Mid-Tier toll rate will offset the additional costs incurred by TBTA to process these tolls. NYCSC E-ZPass customers subject to the Mid-Tier toll rate that subsequently properly mount their E-ZPass tag will resume paying the lowest E-ZPass toll rate.

TBM toll rates are charged to non-NYCSC E-ZPass customers (effective July 12, 2009), as well as to TBM customers at all nine TBTA facilities, reflecting the systemwide implementation of Cashless Tolling completed in 2017. Under the TBM program, license plate images for vehicles without E-ZPass tags are matched with information from the applicable DMV and a toll bill is mailed to the vehicle's owner. Only NYCSC E-ZPass commercial and passenger customers are eligible for the lower E-ZPass toll rates. Any motorist, regardless of residence, can obtain a NYCSC transponder.



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## Table 1 Current Toll Rates at TBTA Facilities, Effective Since April 11, 2021

| Classification | RFK Bridge<br>Bronx-Whitestone Bridge<br>Throgs Neck Bridge<br>Queens Midtown Tunnel<br>Hugh L. Carey Tunnel<br>Verrazzano-Narrows Bridge[(a)] | | | Henry Hudson Bridge | | | Marine Parkway-<br>Gil Hodges Memorial Bridge<br>Cross Bay Veterans Memorial Bridge | | |
|---|---|---|---|---|---|---|---|---|---|
| | TBM/<br>Non-NYCSC<br>E-ZPass | Mid-Tier<br>(NYCSC)[(c)] | E-ZPass<br>(NYCSC)[(b)] | TBM/<br>Non-NYCSC<br>E-ZPass | Mid-Tier<br>(NYCSC)[(c)] | E-ZPass<br>(NYCSC)[(b)] | TBM/<br>Non-NYCSC<br>E-ZPass | Mid-Tier<br>(NYCSC)[(c)] | E-ZPass<br>(NYCSC)[(b)] |
| Two-axle vehicles, including: Passenger vehicles, SUVs, station wagons, self-propelled mobile homes, ambulances, hearses, vehicles with seating capacity of not more than 15 adult persons (including the driver) and trucks with maximum gross weight of 7,000 lbs. and under | $10.17 | $8.36 | $6.55 | $7.50 | $4.62 | $3.00 | $5.09 | $3.77 | $2.45 |
| Each additional axle costs | 4.28 | 4.28 | 4.28 | 3.21 | 3.21 | 3.21 | 3.21 | 3.21 | 3.21 |
| The following reduced rate prepaid charges are presently available for the two-axle vehicles referenced above: | | | | | | | | | |
| Charge per crossing for E-Tokens | | | | | | | 3.39[(d)] | | |
| Charge per crossing for E-Tokens for registered Rockaway Peninsula/Broad Channel Residents using an eligible vehicle | | | | | | | 2.20[(d)] | | |
| Registered Rockaway Residents using an eligible vehicle | | | | | | | | | 1.60[(e)] |
| Charge per crossing for registered Staten Island Residents using an eligible vehicle | | | 3.68[(d)] | | | | | | |
| Charge per crossing for VNB for registered Staten Island Residents using an eligible vehicle through paying with E-Tokens -- | 5.24[(d)] | | | | | | | | |
| All two-axle vehicles greater than 7,000 lbs. and buses (other than franchise buses and motor homes) | 20.35 | 16.10 | 11.84 | (f) | | | 10.17 | 8.05 | 5.92 |
| 3 Axle | 33.51 | 26.46 | 19.40 | | | | 16.76 | 13.23 | 9.70 |
| 4 Axle | 41.89 | 33.35 | 24.80 | | | | 20.94 | 16.67 | 12.40 |
| 5 Axle | 55.05 | 43.69 | 32.33 | | (f) | (f) | 27.53 | 21.85 | 16.17 |
| 6 Axle | 63.43 | 50.58 | 37.72 | | | | 31.72 | 25.29 | 18.87 |
| 7 Axle | 78.98 | 62.12 | 45.25 | | | | 39.49 | 31.06 | 22.63 |
| Each additional axle above 7 | 11.97 | 9.77 | 7.56 | | | | 5.99 | 4.88 | 3.78 |
| Two-axle franchise buses | 9.90 | 7.32 | 4.74 | | | | 4.82 | 3.60 | 2.37 |
| Three-axle franchise buses | 10.98 | 8.31 | 5.63 | | | | 5.62 | 4.30 | 2.97 |
| Motorcycles | 4.28 | 3.57 | 2.85 | 4.28 | 3.17 | 2.05 | 4.28 | 3.17 | 2.05 |
| Each additional axle | 1.80 | 1.75 | 1.70 | 1.80 | 1.75 | 1.70 | 1.80 | 1.75 | 1.70 |

Notes:

(a) Split tolling was implemented at the Verrazzano-Narrows Bridge on December 1, 2020.

(b) E-ZPass crossing charges apply to NYCSC E-ZPass customers only when using their properly mounted NYCSC E-ZPass tag; customers of other E-ZPass CSCs are charged the TBM toll. Any motorist, regardless of residence, can obtain a NYCSC transponder.

(c) Mid-Tier crossing charges apply to NYCSC E-ZPass customers only when not using their properly Mounted NYCSC E-ZPass tag; For crossing charges posted to NYCSC E-ZPass accounts based on license plates; and for NYCSC third-party account providers.

(d) Tolls are charged per transaction for E-Tokens using a registered E-ZPass tag.

(e) Effective April 1, 2012, eligible Rockaway Peninsula and Broad Channel residents ("Rockaway Residents") using E-ZPass at the Cross Bay Bridge (CBB) receive a full rebate of the Rockaway Resident E-ZPass toll from the MTA. It is likely that the MTA will continue the CBB rebate program at its current level only if there is sufficient funding to do so. Should there not be sufficient funding to continue the CBB rebate program at its current level, the rebate program would likely revert to the level that existed prior to April 1, 2012, where Rockaway Residents paid the Rockaway Resident E-ZPass toll for the first two trips and received the rebate only for subsequent trips taken during a calendar day using the same E-ZPass tag.

(f) Passage prohibited except with NYCDOT permit.

*Passenger Car Tolls*

As noted, TBTA crossings are separated into three categories for toll pricing structure purposes: major crossings, minor crossings, and the Henry Hudson Bridge. The single trip passenger car TBM toll is $10.17 for the major crossings. The minor crossing passenger car TBM toll is $5.09 on the Marine Parkway and Cross Bay Bridges, which is half the level ($10.17) of those on the major crossings. On the Henry Hudson Bridge, the passenger car toll is $7.50 for TBM customers. All tolls are collected in each direction. As of December 1, 2020, the Verrazzano-Narrows Bridge implemented split tolling, with one-way and round-trip toll rates matching those at other major crossings. Starting in 1986, tolls at the Verrazzano-Narrows Bridge were only collected in the westbound (Staten Island-bound) direction in accordance with Section 324(a) of the federal Department of Transportation and Related Appropriations Act of 1986. In December 2019, Section 126 of the federal Further Consolidated Appropriations Act, 2020 eliminated this one-way tolling and restored split tolling.

As noted earlier in this report, on April 11, 2021, TBTA implemented a Mid-Tier toll rate for NYCSC E-ZPass customers with improperly mounted E-ZPass tags. The single trip passenger car NYCSC Mid-Tier toll is $8.36 for the major crossings. The minor crossing passenger car NYCSC Mid-Tier toll is $3.77 on the Marine Parkway and Cross Bay Bridges. On the Henry Hudson Bridge, the passenger car NYCSC Mid-Tier toll is $4.62.

Tolls for passenger cars are reduced by TBTA under the following programs: (1) NYCSC E-ZPass; (2) E-Tokens required by Sections 553-f, 553-h, and 553-i of the New York Public Authorities Law; (3) place of residence/crossing used; (4) place of residence; and (5) some combination of the foregoing. The MTA also has toll rebate programs for certain eligible residents using NYCSC E-ZPass at the Cross Bay and Verrazzano-Narrows Bridges. MTA reimburses TBTA in full for these rebates with a combination of its own funds, New York State appropriated funds, and the Outer Borough Transportation Account ("OBTA") created in 2018 under Public Authorities Law Section 1270-i. Beginning in 2020, the OBTA provides rebates to Queens residents using the Cross Bay Bridge and Bronx residents crossing the Henry Hudson Bridge, and partly funds the Staten Island Resident rebate at the Verrazzano-Narrows Bridge as described in greater detail below under the heading, "Outer Borough Transportation Account Rebates."

Nonstop Cashless Tolling has been implemented at all TBTA crossings, enabling a free flow of traffic past overhead gantries that include vehicle classification equipment, license plate image cameras and E-ZPass sensors. For vehicles without an E-ZPass, a TBM invoice is sent to the vehicle's registered owner. Under the current toll schedule, passenger cars equipped with a properly mounted NYCSC E ZPass tag receive a $3.62 reduction per trip at all major crossings, a $2.64 reduction at the Cross Bay and Marine Parkway Bridges, and a $4.50 reduction at the Henry Hudson Bridge when compared to the standard, undiscounted rate. Passenger cars with NYCSC E-ZPass accounts but improperly mounted or missing tags are subject to the Mid-Tier toll rate and receive a lower toll rate reduction: a $1.81 reduction per trip at major crossings, a $1.32 reduction at the Cross Bay and Marine Parkway Bridges, and a $2.88 reduction at the Henry Hudson Bridge. Passenger cars equipped with a transponder not issued by the NYCSC pay the same standard,



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undiscounted toll rate as TBM customers. It should be noted that any motorist, regardless of residence, can obtain a NYCSC transponder and avail themselves of the E-ZPass discounts.

*Resident Toll Discounts for Passenger Cars*

TBTA provides toll discounts to Rockaway Residents on the Cross Bay and Marine Parkway Bridges and registered residents of Staten Island ("Staten Island Residents") on the Verrazzano-Narrows Bridge by means of resident E-Tokens and NYCSC E- ZPass. Under the current toll schedule, eligible Rockaway Residents paying with an E-Token using a registered E-ZPass tag receive a $1.70 reduction per trip at the Cross Bay and Marine Parkway Bridges. Rockaway Residents using a registered Rockaway Resident E-ZPass tag receive a $3.49 reduction per trip at the Cross Bay and Marine Parkway Bridges. Eligible Staten Island Residents paying with an E-Token using a registered E-ZPass tag receive a $4.93 reduction per trip at the Verrazzano-Narrows Bridge.

*Tolls for Vehicles over 7,000 Pounds*

The toll charges for vehicles over 7,000 pounds are a function of the number of axles as well as the crossing used. For the major crossings, the present TBM rate for these vehicles is $20.35 for two axles, increasing to $78.98 for a seven-axle vehicle. These vehicles receive a reduction of approximately 42 percent with a properly mounted NYCSC E-ZPass and a 21 percent reduction in the Mid-Tier category. Vehicles with more than seven axles pay a TBM rate of $11.97 for each additional axle over seven, a properly mounted NYCSC E-ZPass rate of $7.56 for each additional axle over seven, and a Mid-Tier rate of $9.77 for each additional axle over seven. Vehicles with three to six axles pay varying rates, which increase with the number of axles, as shown in Table 1.

For the minor crossings, the two-axle TBM rate for vehicles over 7,000 pounds is $10.17, increasing to $39.49 for a seven-axle vehicle. These vehicles presently receive a reduction of approximately 42 percent with a properly mounted NYCSC E-ZPass tag and a 21 percent reduction in the Mid-Tier category. Vehicles with three to six axles pay varying rates, which increase with the number of axles, as shown in Table 1. Vehicles with more than seven axles pay a TBM rate of $5.99 for each additional axle over seven, a properly mounted NYCSC E-ZPass rate of $3.78 for each additional axle over seven, and a Mid-Tier rate of $4.88 for each additional axle over seven. Commercial vehicles are not permitted on the Henry Hudson Bridge without a NYCDOT permit.

The MTA also has a partial toll rebate program for NYCSC E-ZPass business and commercial customers using eligible vehicles at the Verrazzano-Narrows Bridge. As of April 11, 2021, this partial rebate is 15 percent of tolls transacted on eligible vehicles.

*MTA's Toll Rebate Programs*

Toll rebate programs have been and remain available for: (1) registered Rockaway Residents for use of the Cross Bay Bridge; (2) Staten Island Residents participating in the Staten Island Resident ("SIR") E-ZPass discount program (the "SIR Rebate Program") for use of the Verrazzano-Narrows Bridge; and (3) commercial vehicles participating in the Verrazzano-Narrows Bridge Commercial Rebate Program ("VNB Commercial Rebate Program" and, together with the SIR Rebate Program, the "VNB Rebate Programs"). In this section there is a discussion of the two toll rebate programs approved by the MTA Board in December 2019 for Queens residents over the Cross Bay Bridge and Bronx residents over the Henry Hudson Bridge. The MTA toll rebate programs are available only to residents with registered NYCSC E-ZPass tags, and to commercial vehicles with more than 20 trips per month across the Verrazzano-Narrows Bridge using the same NYCSC E-ZPass account. These rebate programs do not affect TBTA revenues since TBTA collects the full toll, with a portion paid by the motorist and the remainder paid by the MTA with a combination of its own funds and New York State funds.

Cross Bay Bridge Rebate Program

A toll rebate program for the benefit of E-ZPass customers who are Rockaway Residents was implemented by the MTA on January 1, 1998, for use on the Cross Bay Bridge. This program was modified from July 23, 2010, to March 31, 2012, during which eligible Rockaway Residents were charged the reduced resident toll rate for the first two trips over the Cross Bay Bridge and only subsequent trips during the same calendar day using the same E-ZPass tag were eligible for the rebate. The full rebate was restored on April 1, 2012. In May 2021, the MTA reimbursed the TBTA approximately $4.0 million in toll rebates relating to the Cross Bay Bridge rebate program. In February 2022, the MTA reimbursed the TBTA approximately $4.0 million in toll rebates relating to the Cross Bay Bridge rebate program.

Verrazzano-Narrows Bridge Rebate Programs

Since 2014, MTA has had two toll rebate programs at the Verrazzano-Narrows Bridge: the SIR Rebate Program, available for residents of Staten Island participating in the SIR E-ZPass toll discount plan, and the VNB Commercial Rebate Program, available for commercial vehicles making more than ten trips per month using the same NYCSC E-ZPass account. Since they are partially funded by the State, the VNB Rebate Programs follow the New York State Fiscal Year.

In December 2019, the federal Further Consolidated Appropriations Act 2020 was enacted, eliminating the one-way tolling requirement at the Verrazzano-Narrows Bridge and restoring split tolling so that tolls could be collected in the Staten Island-bound and Brooklyn-bound directions, this was implemented on December 1, 2020. In March 2020, the MTA Board approved changing the method of toll collection at the Verrazzano-Narrows Bridge to split tolling and authorized TBTA to make the required revisions to the toll schedule regulation under the New York State Administrative Procedure Act. As a result, the SIR Rebate Program was changed so that the effective, post-rebate toll for Staten Island residents was $2.75 in each direction (from $5.50 in the Staten Island-bound direction) and the VNB Commercial Rebate Program's eligibility threshold was changed to more than 20 trips per month in either direction for trucks and other commercial vehicles using the same NYCSC E-ZPass account (from ten trips a month, collected Staten-Island bound). In February 2021, the MTA Board adopted increases in the SIR resident discount toll and eliminated the minimum trip threshold so that the resident toll would increase to $3.68 (from $3.44). The State, in the fiscal year 2021-22 budget, appropriated additional funding to keep the effective toll after rebate at $2.75, increasing the rebate to $0.93 (from $0.69).

As a result of the change to the SIR resident toll and MTA rebate program, the projected annualized cost of the 2021-2022 VNB Rebate Program is approximately $33.4 million with $7.0



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million for the 2021-2022 VNB Commercial Rebate Program and $26.4 million for the 2021-2022 SIR Rebate Program. The MTA's annual contribution is $7.0 million ($3.5 million for the resident rebate and $3.5 million for the commercial rebate), with the balance provided by the State's contribution via appropriations to MTA.

The money to fund a year's estimated costs for the VNB Rebate Programs is transferred by MTA to TBTA during the New York State Fiscal Year. The 2022-2023 VNB Rebate Programs will be implemented as specified herein only for such periods during which both (a) MTA's total financial responsibility, net of New York State actions or available offsets, does not exceed $7 million for the 2022-2023 SIR Rebate and VNB Commercial Rebate Programs and (b) New York State provides (i) at least $7 million for the 2022-2023 SIR Rebate Program and VNB Commercial Rebate Program and (ii) New York State provides such additional funds as are necessary to keep the effective post-rebate SIR E-ZPass toll at $2.75 under the 2022-2023 SIR Rebate Program. If, as a result of unexpected toll transaction activity, TBTA estimates that such MTA and State funds allocated to MTA for the 2022-2023 VNB Rebate Programs, net of offsets, will be insufficient to fund the 2022-2023 VNB Commercial Rebate Program for the full program year, TBTA may reduce the rebate amount under such program to a percentage that is forecast to be payable in full for the remainder of the program year with the available funds, as allowed by the February 2021 MTA Board resolution. However, in the event that such MTA and State funds allocated to MTA for the 2022-2023 VNB Rebate Programs are fully depleted at any time during the 2022-2023 VNB Rebate Programs annual period, the 2022-2023 VNB Rebate Programs will cease, and Staten Island residents will be charged the applicable resident discount toll and trucks and other commercial vehicles will be charged the applicable NYCSC E-ZPass toll for the Verrazzano-Narrows Bridge.

The VNB Rebate Programs will continue into future years provided that (a) MTA's annual period contribution does not exceed $7 million, (b) the MTA Board approves a budget that includes MTA's contribution to such program, and (c) New York State provides to MTA funds sufficient for at least half the expenses of each continuing annual period.

Under the 2021-2022 SIR Rebate Program, for Staten Island Residents crossing the Verrazzano-Narrows Bridge, MTA will rebate $0.93 of the $3.68 SIR E-ZPass toll paid in each direction. As a result of these MTA toll rebates and due to an appropriation in the New York State Fiscal Year 2021-22 enacted budget, Staten Island residents will pay an effective post-rebate toll of $2.75 per trip under the current SIR toll rates collected at the VNB starting on April 11, 2021.

Under the 2022 2023 SIR Rebate Program, for Staten Island Residents crossing the Verrazzano Narrows Bridge, MTA will rebate $0.93 of the $3.68 SIR E ZPass toll paid in each direction. As a result of these MTA toll rebates and due to an appropriation in the New York State Fiscal Year 2022 23 enacted budget, Staten Island residents will pay an effective post rebate toll of $2.75 per trip under the current SIR toll rates collected at the VNB from April 1, 2022, through March 31, 2023.

Under the 2020-2021 VNB Commercial Rebate Program, the rebate was 15 percent of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month (after implementation of split tolling) across the Verrazzano-Narrows Bridge, using the same NYCSC E-ZPass Account and the $7 million allocation was sufficient in covering the cost of the rebate.

Under the 2022-2023 VNB Commercial Rebate Program, the rebate is 15 percent of the E-ZPass toll for trucks and other commercial vehicles with more than twenty trips per month across the Verrazzano-Narrows Bridge, using the same NYCSC E-ZPass Account. Implementing a 15 percent rebate of the E-ZPass toll for trucks and other eligible commercial vehicles is expected to ensure that the $7 million allocated for the 2022-2023 VNB Commercial Rebate Program is sufficient to provide funding from April 1, 2022, through March 31, 2023.

*Outer Borough Transportation Account Rebates*

Henry Hudson Bridge Bronx Resident Rebate Program and Cross Bay Bridge Queens Resident Rebate Program

Two new MTA toll rebate programs relating to MTA Bridges and Tunnels' crossings were approved by the MTA Board in December 2019. They are (i) a Queens resident rebate for passenger vehicles with E-ZPass tags using the Cross Bay Bridge, and (ii) a Bronx resident rebate for passenger vehicles with E-ZPass tags using the Henry Hudson Bridge. In each case, the E-ZPass toll will be charged to the customer's NYCSC resident E-ZPass account, and then an immediate credit will be issued by the MTA for the amount of the toll using funds in the OBTA established under Section 1270-i (3) of the Public Authorities Law. Due to the impacts of the pandemic on traffic, the funding for these rebate programs was not available in 2020-2021 and implementation of the two rebate programs has been delayed until a future date when OBTA funds may become available.

### Cashless Tolling System

The E-ZPass Electronic Toll Collection ("ETC") system has been fully installed at all TBTA bridges and tunnels since December 1996. When a vehicle with an E-ZPass tag enters the toll payment area, an electronic reader identifies the tag code at the toll facility and the toll is deducted from the customer's account. TBTA had over 5.953 million E-ZPass tags in use in 2020 (compared to 5.826 million in December 2019). As of December 2021, E-ZPass participation rates were 95.0 percent of toll-paying traffic TBTA-wide. The total number of active E-ZPass Group tags in use for all participating agencies as of December 31, 2021, was over 49.0 million.

With the introduction of E-ZPass at all TBTA crossings, toll plaza operations improved, and vehicle-hours of delay were reduced. This, in turn, led to even more motorists enrolling in E-ZPass. With the implementation of Cashless Tolling at all TBTA facilities by fall 2017 and the subsequent removal of TBTA toll plazas, throughput capacity increased to levels comparable to the capacity of a free-flowing lane of traffic (about 1,800 vehicles per hour).

Table 2 lists the year-end TBTA-wide E-ZPass participation rates starting in 2012, the sixteenth year since all nine crossings had E-ZPass in operation. Implementation of E-ZPass started in October 1995 on the Verrazzano-Narrows Bridge and was phased in gradually on the remaining crossings through December 1996. Also shown are the participation rates for each of the facilities for December 2021.

As Cashless Tolling was fully implemented by the end of 2017, E-ZPass participation rates increased considerably, with the year-end TBTA-wide E-ZPass participation rate increasing by 7.4 percent





from 2016 to 2017. This change was far greater than the 0.8 percent decrease to 2.3 percent increase year-end over year-end experienced TBTA-wide over the rest of the previous 10-year period. In 2021, there was a 0.3 percent increase in year-end TBTA-wide E-ZPass participation rates compared to 2020. E-ZPass participation rates continue to be above 90 percent at each facility.

**Table 2 Year-End E-ZPass Participation Rates**

| Year | Year-End E-ZPass Participation Rates for all TBTA Facilities | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Percent Participation (All TBTA Facilities) | 81.5% | 83.8% | 84.5% | 85.6% | 86.2% | 93.6% | 94.6% | 95.5% | 94.7% | 95.0% |

| TBTA Facility | Year-End TBTA E-ZPass Participation Rate by Facility (2021) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Throgs Neck | Bronx-Whitestone | Robert F. Kennedy | Queens Midtown | Hugh L. Carey | Verrazzano-Narrows | Henry Hudson | Marine Parkway | Cross Bay |
| Percent Participation | 94.0% | 93.6% | 94.6% | 95.8% | 96.2% | 95.7% | 95.2% | 96.9% | 95.8% |

Source: TBTA data.

### TBTA's Role in E-ZPass

TBTA was a founding member of the E-ZPass Group. Originally comprised of toll authorities in Delaware, Pennsylvania, New Jersey, and New York, the E-ZPass Group now encompasses 35 toll agencies in 19 states, including five international border crossings. Since the inception of the E-ZPass Group more than 20 years ago, customers of the member E-ZPass Group agencies have been able to use their E-ZPass tags on any E-ZPass-equipped facility operated by another E-ZPass Group member. In 2021, the E-ZPass Group processed over 3.6 billion toll transactions. As the E-ZPass Group has grown, the E-ZPass customer base has increased, helping to increase usage of E-ZPass on TBTA facilities.

The transportation network includes, in addition to TBTA, the following agencies and bridges:

- The six interstate crossings of the Port Authority;
- New Jersey Turnpike and Garden State Parkway operated by the New Jersey Turnpike Authority;
- New York State Thruway including the Governor Mario M. Cuomo Bridge (formerly the Tappan Zee Bridge);
- The five bridges of the New York State Bridge Authority (from Bear Mountain northward);
- The Buffalo and Fort Erie Public Bridge Authority's Peace Bridge;
- The Thousand Island Bridges of the Thousand Island Bridge Authority;
- The three bridges of the Niagara Falls Bridge Commission;
- The Atlantic City Expressway (operated by the South Jersey Transportation Authority);

- The four toll bridges between New Jersey and Pennsylvania operated by the Delaware River Port Authority;
- The seven toll bridges between New Jersey and Pennsylvania operated by the Delaware River Joint Toll Bridge Commission;
- The Delaware Memorial Bridge between New Jersey and Delaware operated by the Delaware River and Bay Authority; and
- The two toll bridges between New Jersey and Pennsylvania operated by the Burlington County Bridge Commission.

Also included are the toll facilities operated by the following agencies and companies across the United States:

- Cape May County Bridge Commission (New Jersey)
- Central Florida Expressway Authority
- Cline Avenue Bridge (Chicago)
- Delaware Department of Transportation
- The Florida Turnpike Enterprise
- Illinois State Toll Highway Authority
- Indiana Toll Road Concession Company, LLC
- Kane County Department of Transportation (Illinois)
- Kentucky Public Transportation Infrastructure Authority
- Maine Turnpike Authority
- Massachusetts Department of Transportation
- Maryland Transportation Authority
- Minnesota Department of Transportation
- New Hampshire Department of Transportation
- North Carolina Turnpike Authority
- Ohio Turnpike and Infrastructure Commission
- The Pennsylvania Turnpike Commission
- Rhode Island Turnpike and Bridge Authority
- State Roads and Toll Authority (Georgia)
- Skyway Concession Company (Chicago)
- Virginia Department of Transportation
- West Virginia Parkway Authority

With the exception of TBTA customers enrolled in the E-ZPass Pay Per Trip plan[1], all TBTA E-ZPass customers must pre-pay their E-ZPass accounts. These pre-payments are based on a customer's E-ZPass usage at both TBTA and other E-ZPass Group member toll facilities. Through the E-ZPass Group inter-operability agreements, TBTA and other member agencies transfer E-ZPass payments to each other on a routine basis. For 2021, TBTA transferred $1.2 billion to, and received $656.1 million from, other members within the E-ZPass Group.

[1] This plan enables customers to set up an E-ZPass account without a pre-paid balance. Those interested in the program pay for their tolls each day through Automated Clearing House deductions from their checking accounts.





### Cashless, Open Road Tolling ("Cashless Tolling")

TBTA completed full implementation of Cashless Tolling on September 30, 2017. Cashless Tolling eliminates traditional toll plazas by allowing tolls to be collected in a free-flow environment through E-ZPass sensors and license-plate cameras mounted on overhead gantries. Drivers without E-ZPass receive a TBM invoice mailed to the vehicle's registered owner.

In spring 2016, TBTA began asking the DMV to suspend the vehicle registrations of violators who fail to pay their tolls and violation fees or have them dismissed or transferred in response to violation notices for five toll violations within 18 months, in accordance with the initial DMV regulation for persistent or habitual toll violators. In January 2017, the DMV changed its regulation for persistent or habitual violators so that vehicle registrations can be suspended for three toll violations within five years and commercial vehicle registrations can be suspended for $200.00 or more in unpaid tolls within five years.

TBTA employs and develops measures to enhance collection and enforcement of tolls under the Cashless Tolling system. License plate recognition technology on gantries and in patrol vehicles is used for the detection of persistent toll violators and toll violation enforcement. Additionally, TBTA continues to issue exclusion orders barring the vehicles of out-of-state toll violation scofflaws from TBTA facilities and for those persistent violators, engages in summonsing vehicle operators and towing those vehicles from TBTA facilities.

In April 2017, the New York State DMV received legislative authorization to enter into reciprocal compacts with other states to suspend the vehicle registrations of persistent toll violators. This allows MTA Bridges and Tunnels to have the home states of the out-of-state violators suspended, or place holds on vehicle registrations for toll violations committed on MTA Bridges and Tunnels' facilities. MTA Bridges and Tunnels entered into such an agreement with Massachusetts and began submitting registration hold packages to the Massachusetts Registry of Motor Vehicles in February 2020 to place holds on the registrations of toll-evading Massachusetts owners. In time, MTA Bridges and Tunnels anticipates being able to discontinue issuing exclusion orders to out-of-state toll violators barring their vehicles from MTA Bridges and Tunnels facilities.

TBTA has continually undertaken efforts to increase E-ZPass market share and to assist customers in managing toll bill payments and E-ZPass accounts. The "Tolls NY" is a smartphone application (app), which had a soft launch in mid-June 2020 and was officially launched in December 2020 through a TBTA press release, highlighting the functionality available to E-ZPass and TBM customers for managing their accounts. As of the end of 2021, there were more than 1.4 million installations of Tolls NY.

## Passenger Car Toll Rate Trends and Inflation

Since 1971, toll rates have increased periodically on the TBTA facilities. Table 3 displays passenger car toll rates for the nine TBTA bridges and tunnels over the past 50 years. Tolls are shown for cash passenger car transactions from 1971 to implementation of Cashless Tolling at each facility and TBM transactions thereafter and for all E-ZPass transactions from 1996, when E-ZPass was introduced on the TBTA system, until July 12, 2009. Effective July 12, 2009, only NYCSC E-ZPass customers are eligible for the lower E-ZPass rate and non-NYCSC E-ZPass customers paid the TBM toll rate. From 2009 through 2020, Table 3 shows the cash or TBM rate and the NYCSC E-ZPass rate on each of the TBTA's facilities. Beginning in 2021, Table 3 shows the cash or TBM rate, the NYCSC E-ZPass rate, and the Mid-Tier toll rate on each of the TBTA's facilities.

*Passenger Car Toll Rate Trends*

Since 1982, passenger car toll rates have been separated into four categories, as follows:

- Major crossings – RFK, Bronx-Whitestone, and Throgs Neck Bridges, and the Queens Midtown and Hugh L. Carey Tunnels;
- Minor crossings – Marine Parkway and Cross Bay Bridges;
- Henry Hudson Bridge (treated as a minor crossing prior to the 2008 toll increase) – a crossing restricted to passenger vehicles; and
- Verrazzano-Narrows Bridge – a major crossing with one-way toll collection from 1986 through November 30, 2020. Split tolling was implemented on December 1, 2020.

In general, tolls for vehicles over 7,000 pounds have also been adjusted upward when passenger car toll rates were increased. Notable exceptions occurred in 1987 and 1989 when these toll rates were not raised while there was a general increase for passenger cars.

Over the years, TBTA has implemented various resident toll discount programs at the Cross Bay, Marine Parkway, and Verrazzano-Narrows Bridges. The MTA also has toll rebate programs for certain eligible residents using NYCSC E-ZPass at the Cross Bay and Verrazzano-Narrows Bridges, as well as a toll rebate program for eligible NYCSC E-ZPass commercial customers at the Verrazzano-Narrows Bridge. While the rebate programs do not have an effect on revenues, due to MTA reimbursements as noted above, the toll discount programs have a negative effect on revenues, in part offset by a positive effect on traffic by attracting additional traffic to the facilities.



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### Table 3 Historical Trends in Cash, TBM and E-ZPass Passenger Car Toll Rates

| Year | Verrazzano-Narrows Bridge | RFK, Bronx-Whitestone and Throgs Neck Bridges, and Queens Midtown and Hugh L. Carey Tunnels[a] | Henry Hudson Bridge | Marine Parkway-Gil Hodges Memorial and Cross Bay Veterans Memorial Bridges |
|---|---|---|---|---|
| 1971 | $0.50 | $0.25 | $0.10 | $0.10 |
| 1972 – 1975 | $0.75 | $0.50 | $0.25 | $0.25 |
| 1975 – 1980 | $1.00 | $0.75 | $0.50 | $0.50 |
| 1980 – 1982 | $1.00 | $1.00 | $0.60 | $0.75 |
| 1982 – 1984 | $1.25 | $1.25 | $0.90 | $0.90 |
| 1984 – 1986 | $1.50 | $1.50 | $0.90 | $0.90 |
| 1986 – 1987 | $1.75[b] | $1.75 | $1.00 | $1.00 |
| 1987 – 1989 | $2.00[b] | $2.00 | $1.00 | $1.00 |
| 1989 – 1993 | $2.50[b] | $2.50 | $1.25 | $1.25 |
| 1993 – 1996 | $3.00[b] | $3.00 | $1.50 | $1.50 |
| 1996 – 2003[c] | $3.50 / $3.00[b] | $3.50 / $3.00 | $1.75 / $1.25 | $1.75 / $1.25 |
| 2003 – 2005 | $4.00 / $3.50[b] | $4.00 / $3.50 | $2.00 / $1.50 | $2.00 / $1.50 |
| 2005 – 2008 | $4.50 / $4.00[b] | $4.50 / $4.00 | $2.25 / $1.75 | $2.25 / $1.50 |
| 2008 | $5.00 / $4.15[b] | $5.00 / $4.15 | $2.75 / $1.90 | $2.50 / $1.55 |
| 2009[d] | $5.50 / $4.57[b] | $5.50 / $4.57 | $3.00 / $2.09 | $2.75 / $1.71 |
| 2010 – 2013[f] | $6.50 / $4.80[b] | $6.50 / $4.80 | $4.00 / $2.20[e] | $3.25 / $1.80 |
| 2013-2014[g] | $7.50 / $5.33[b] | $7.50 / $5.33 | $5.00 / $2.44 | $3.75 / $2.00 |
| 2015-2016[h] | $8.00 / $5.54[b] | $8.00 / $5.54 | $5.50 / $2.54 | $4.00 / $2.08 |
| 2017-2018[i] | $8.50 / $5.76[b][l] | $8.50 / $5.76[l] | $6.00 / $2.64[l] | $4.25 / $2.16[l] |
| 2019-2020[j] | $9.50 / $6.12[b] | $9.50 / $6.12 | $7.00 / $2.80 | $4.75 / $2.29 |
| 2020-2022[k] | $10.17 / $8.36 / $6.55[m] | $10.17 / $8.36 / $6.55 | $7.50 / $4.62 / $3.00 | $5.09 / $3.77 / $2.45 |

Notes:
(a) At the Hugh L. Carey Tunnel, the cash passenger car toll rates were $0.35 in 1971 and $0.70 in 1972.
(b) From March 20, 1986, through November 30, 2020, round-trip tolls (twice the amount shown) were collected on the Verrazzano-Narrows Bridge in only the westbound direction. During this period of time, eastbound traffic used the bridge toll-free. Amounts shown were the equivalents of collecting tolls in each direction. Split tolling began at the Verrazzano-Narrows Bridge on December 1, 2020. The toll is no longer doubled in the westbound direction and tolls are collected in each direction of travel.
(c) E-ZPass introduced to all TBTA facilities in December 1996. For the periods 1996-2003 through 2020, the cash/TBM toll rate is shown first, followed by the E-ZPass rate.
(d) Effective July 12, 2009, when the lower E-ZPass rate became available only to NYCSC E-ZPass customers.
(e) Beginning November 10, 2012, customers without E-ZPass tags at the Henry Hudson Bridge paid via the TBM program. Full Cashless Tolling began at the Henry Hudson Bridge in November 2016.
(f) Toll increase effective December 30, 2010.
(g) Toll increase effective March 3, 2013.
(h) Toll increase effective March 22, 2015.
(i) Toll increase effective March 19, 2017.
(j) Toll increase effective March 31, 2019.
(k) Toll increase effective April 11, 2021, with Mid-Tier toll introduced. The TBM/non-NYSCS E-ZPass toll rate is shown first, followed by the Mid-Tier rate, and then E-ZPass NYCSC rate.
(l) Customers without E-ZPass tags receive toll bills under the TBM program. Cash collection was eliminated when Cashless Tolling was implemented in 2017 at the Queens Midtown and Hugh L. Carey Tunnels in January, at the Cross Bay and Marine Parkway Bridges in April, at the RFK Bridge in June, at the Verrazzano-Narrows Bridge in July and at the Bronx-Whitestone and Throgs Neck Bridges in September.
(m) Split tolling was implemented on the Verrazzano-Narrows Bridge on December 1, 2020.

*Inflation*

The Consumer Price Index Urban ("CPI-U"), compiled by the US Department of Labor, Bureau of Labor Statistics ("BLS") for United States Cities, is often used to compare toll rate increases. Since most of the transactions on TBTA facilities are made by customers using an E-ZPass tag registered with the NYCSC, we have compared cumulative CPI-U alongside the TBTA major crossing passenger car NYCSC E-ZPass toll rates. The comparison starts in 1996 when E-ZPass was instituted on TBTA facilities. As indicated in Table 4 TBTA E-ZPass tolls in April 2021 (after the April 11th toll increase) are 2.2 times higher than the 1996 E-ZPass toll rate while the CPI-U is 1.8 times higher than the 1996 level. If adjusted for changes in the CPI-U, current tolls are 1.3 times higher than the 1996 rate.

The beginning of 2022 had the highest inflation increase in several decades. In March 2022, the CPI-U was 305.0, a 4.3 percent increase over the annual 2021 CPI-U of 292.3. This was caused by several factors including supply chain constraints, labor shortages, and sharply higher gas prices.

**Table 4 E-ZPass Passenger Toll Rates versus Consumer Price Index**

| Year | Consumer Price Index [a] | RFK, Bronx-Whitestone, Throgs Neck, and Verrazzano- Narrows [k] Bridges and Queens Midtown and Hugh L. Carey Tunnels | Tolls Adjusted to 1982 - 1984 dollars[b] |
|---|---|---|---|
| 1996[c] | 166.90 | 3.00 | 1.80 |
| 2003 | 197.80 | 3.50 | 1.77 |
| 2005 | 212.70 | 4.00 | 1.88 |
| 2008 | 235.80 | 4.15 | 1.76 |
| 2009[d] | 236.80 | 4.57 | 1.93 |
| 2010[e] | 240.90 | 4.80 | 1.99 |
| 2013[f] | 256.80 | 5.33 | 2.08 |
| 2015[g] | 260.60 | 5.54 | 2.13 |
| 2017[h] | 268.50 | 5.76 | 2.15 |
| 2019[i] | 278.20 | 6.12 | 2.20 |
| 2021[j] | 286.50 | 6.55 | 2.29 |
| Ratio 2021/1996 | 1.72 | 2.18 | 1.27 |

Notes:
(a) New York Metropolitan Statistical Area: New York–Northern New Jersey-Long Island, NY-NJ-CT-PA, All Urban Consumers, All Items. Base period: 1982-1984 = 100.0. Not seasonally adjusted. Source: BLS.
(b) The current toll divided by the CPI and expressed in dollars.
(c) E-ZPass introduced to all TBTA facilities in December 1996.
(d) Effective July 12, 2009, when the lower E-ZPass rate became available only to NYCSC E-ZPass customers.
(e) Effective December 30, 2010.
(f) Effective March 3, 2013.
(g) Effective March 22, 2015.
(h) Effective March 19, 2017.
(i) Effective March 31, 2019.
(j) Effective April 11, 2021.
(k) Split tolling was implemented on December 1, 2020.





## HISTORICAL TRAFFIC, REVENUES AND EXPENSES AND ESTIMATED/BUDGETED NUMBERS FOR 2021

Historical traffic, toll revenues, and expenses were reviewed for the nine TBTA bridges and tunnels. Over the last 51 years from 1970 through 2021, paid traffic volumes on the crossings have ranged from a low of 218 million in 1976 to a high of 329 million in 2019. As displayed in Figure 2A/2B, the growth of traffic and revenue has been affected by the region's overall growth in population and employment, offset by the impact of 20 periodic toll increases (through the end of 2021 and represented by the boxes in the graph). By 2000, after 10 toll increases and 18 percent higher traffic volume, toll revenues had increased more than 13-fold, from $72 million in 1970 to $941 million in 2000. Revenues declined to $915 million in 2001 primarily due to the closures and restrictions on TBTA facilities following the September 11 terrorist attack on the World Trade Center and the regional decline in employment.

A toll increase in December 2010 resulted in increased annual revenue in 2011. In 2012, toll revenues were $1.491 billion, $11 million less than the 2011 level of $1.502 billion, primarily due to temporary closures caused by Superstorm Sandy, partially offset by modest improvements in the regional and national economies. Toll revenues in 2013 increased to $1.645 billion primarily due to the rebound from Superstorm Sandy and the March 2013 toll increase. In 2014, total toll revenues for the TBTA facilities were $1.676 billion, 1.9 percent higher than 2013 toll revenues. That increase in toll revenue was attributed to a continuing modest economic recovery and the March 2013 toll increase. Toll revenues in 2015 were $1.809 billion (7.9 percent higher than 2014 toll revenues) primarily due to the March 2015 toll increase, generally overall favorable weather conditions, relatively low gas prices, and a continued modest recovery in the economy. In 2016, these conditions continued resulting in traffic reaching a then historical high of 307 million vehicles, which was a 3.2 percent increase from the previous year. Toll revenues in 2016 were $1.870 billion, 3.4 percent higher than 2015 toll revenues. In 2017, with a toll increase in March, traffic surpassed the 2016 historical high with 310 million vehicles, a 0.9 percent increase from the previous year. Toll revenues in 2017 were $1.912 billion, 2.2 percent higher than 2016 toll revenues. In 2018, traffic continued to surpass the historical high with 322 million vehicles, a 4.0 percent increase from the previous year. Toll revenues in 2018 were $1.965 billion, 2.8 percent higher than 2017 toll revenues. In 2019, traffic continued to surpass the historical high with 329 million vehicles, a 2.2 percent increase from the previous year. Toll revenues in 2019 were $2.071 billion, 5.4 percent higher than 2018 toll revenues. In 2020, due to the impact of the pandemic, traffic dropped to 253 million vehicles, a 23.1 percent decrease from the previous year. Toll revenues in 2020 were $1.640 billion, 20.8 percent lower than 2019 toll revenues. Major regional toll facilities such as those operated by the Port Authority and Thruway have experienced similar trends in traffic reduction and recovery throughout the duration of the pandemic. In 2021, significant pandemic related traffic recovery occurred resulting in 307 million vehicles, a 21.4 percent increase from the previous year (6.7 percent below pre-pandemic 2019 traffic). Toll revenues in 2021 were $2.150 billion, 31.1 percent higher than 2020 toll revenue (3.8 percent above pre-pandemic 2019 toll revenues). The April 2021 toll increase contributed to this increase in toll revenue.

Also note in Figure 2A/2B that, prior to the onset of the pandemic, despite the periodic toll increases, the traffic trend through 2019 was generally upward. Tepid economic conditions (related to the 2008-2009 recession) led to modest declines in total transactions in the years through 2012. After 2012, even with the lingering effects of the 2008-2009 recession, the economy began to show positive signs of growth with increasing employment levels and decreases in gasoline prices, resulting in a return to transaction growth. Overall traffic at TBTA facilities continued to increase to historically high levels despite the periodic toll increases implemented in March 2013, March 2015, March 2017, and March 2019. Beginning in March 2020, the impact of the pandemic and associated government-imposed closures along with other actions caused significant decreases in traffic on all TBTA facilities. Although there has been some recovery in traffic, it has not returned to the historically high levels seen in the years immediately prior to the pandemic. According to the National Bureau of Economic Research, a recession began in February 2020 and lasted two months, concluding the longest economic expansion in US history. Overall traffic at TBTA facilities also increased even with the April 2021 toll increase, which occurred in the midst of the pandemic.

Other noticeable declines in traffic have occurred during the fuel crises of the 1970s and during the economic recessions in the late 1980s, early 1990s, all periods of difficult and prolonged economic downturns.



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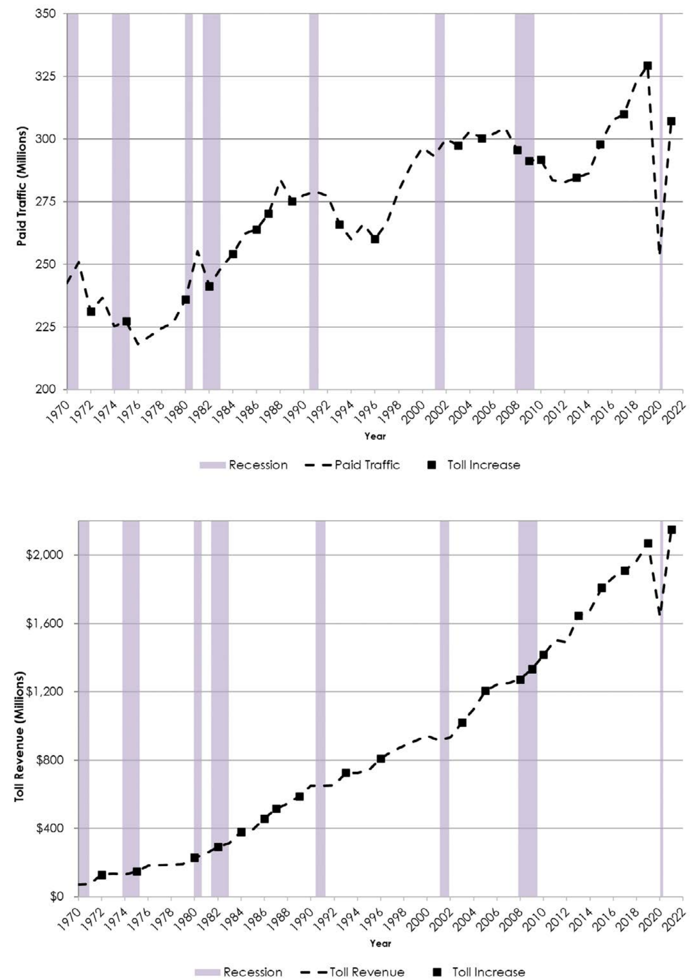
**Figure 2A/2B Aggregated TBTA Facilities Paid Traffic and Toll Revenue, 1970 to 2021**




Source: TBTA data.

## Traffic and Toll Revenue, 2011 to 2021

Table 5 lists the traffic and toll revenue recorded for each of the nine TBTA crossings for the most recent 11-year time period, 2011-2021. Total TBTA traffic and toll revenue are shown in Table 6. Within this 11-year period toll-paying traffic reached historic peaks three times, first in 2017 with 310 million crossings, again in 2018 with 322 million crossings, and once more in 2019 with 329 million crossings. Due to the ongoing pandemic, toll-paying traffic decreased to 253 million crossings in 2020, followed by significant recovery to 307 million vehicles in 2021.

The first toll increase within this most recent 11-year time period occurred on March 3, 2013. In general, the historical pattern has been that when toll rates are increased, traffic declines slightly and then begins to rise until the next rate increase. However, TBTA traffic following the March 2013, March 2015, March 2017, March 2019, and April 2021 toll increases has not followed the typical historical pattern. Lower gasoline prices, among other factors, resulted in a 0.7 percent increase in traffic following the March 2013 toll increase, a 4.0 percent increase in traffic following the March 2015 toll increase, a 0.9 percent increase in traffic following the March 2017 toll increase, a 2.2 percent increase in traffic following the March 2019 toll increase, and a 21.4 percent increase in traffic following the April 2021 toll increase (which of course also included significant traffic recovery from the first year of the pandemic). The five toll increases reflected in Table 5 and Table 6 in 2013, 2015, 2017, 2019, and 2021 are evident in the jump in average tolls in the years following the increase. The historical relationship between toll increases and their effects on TBTA traffic volumes is further discussed in the Toll Impacts and Elasticity section of this report.

In 2011, traffic decreased by 2.8 percent from 291.7 million to 283.5 million whereas toll revenue increased by 6.0 percent from $1.417 billion to $1.502 billion. The reduction in toll traffic was a result of severe winter weather, high gas prices, Tropical Storm Irene in August 2011 (tolls were not collected for approximately two days at the Marine Parkway, Cross Bay, Verrazzano-Narrows, Throgs Neck, and Bronx-Whitestone Bridges) overall flat growth in travel (which occurred nationally in the few years following the Great Recession) and the December 2010 increase in toll rates, among other factors.

In 2012, traffic volumes decreased by 0.3 percent to 282.6 million and toll revenues decreased 0.7 percent to $1.491 billion. The reduction in toll traffic and toll revenue is primarily due to Superstorm Sandy, which occurred on October 29, 2012, and resulted in travel restrictions on transportation facilities in the New York City area.

In 2013, overall traffic volumes increased by 0.7 percent to 284.5 million and toll revenues increased by 10.3 percent to $1.645 billion as a result of the March 3, 2013, toll increase. Traffic and revenue continued to grow slightly in 2014 by 0.6 percent to 286.4 million. 2014 revenue grew by 1.9 percent to $1.676 billion.





### Table 5 Annual Toll-Paying Traffic and Toll Revenue by Facility, 2011 to 2021

(000s)[a]

| Year | Verrazzano-Narrows Bridge | | | | RFK Bridge | | | | Bronx-Whitestone Bridge | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Traffic | | Revenue | Average Toll[c] | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume[b] | Percent Change | | | Volume | Percent Change | | | Volume | Percent Change | | |
| 2011 | 66,020 | -3.1% | $330,886 | 5.01 | 57,510 | -4.3% | $339,791 | 5.91 | 37,643 | -8.3% | $230,669 | 6.13 |
| 2012 | 65,626 | -0.6% | $326,797 | 4.98 | 57,239 | -0.5% | $336,781 | 5.88 | 39,478 | 4.9% | $240,236 | 6.09 |
| 2013 | 65,035 | -0.9% | $352,370 | 5.42 | 58,224 | 1.7% | $376,769 | 6.47 | 39,558 | 0.2% | $264,174 | 6.68 |
| 2014 | 64,007 | -1.6% | $345,466 | 5.40 | 59,902 | 2.9% | $393,622 | 6.57 | 38,488 | -2.7% | $260,756 | 6.77 |
| 2015 | 66,215 | 3.5% | $372,347 | 5.62 | 62,227 | 3.9% | $422,756 | 6.79 | 42,062 | 9.3% | $294,022 | 6.99 |
| 2016 | 69,756 | 5.3% | $393,017 | 5.63 | 62,921 | 1.1% | $428,083 | 6.80 | 45,816 | 8.9% | $320,486 | 7.00 |
| 2017 | 71,922 | 3.1% | $416,459 | 5.79 | 63,810 | 1.4% | $437,335 | 6.85 | 46,023 | 0.5% | $327,320 | 7.11 |
| 2018 | 74,809 | 4.0% | $433,121 | 5.79 | 66,398 | 4.1% | $448,600 | 6.76 | 47,958 | 4.2% | $332,715 | 6.94 |
| 2019 | 76,102 | 1.7% | $454,303 | 5.97 | 66,880 | 0.7% | $461,797 | 6.90 | 49,561 | 3.3% | $350,778 | 7.08 |
| 2020 | 62,789 | -17.5% | $386,978 | 6.16 | 50,416 | -24.6% | $355,004 | 7.04 | 38,958 | -21.4% | $282,204 | 7.24 |
| 2021 | 75,255 | 19.9% | $511,298 | 6.79 | 61,178 | 21.3% | $462,395 | 7.56 | 48,459 | 24.4% | $375,583 | 7.75 |

| Year | Throgs Neck Bridge | | | | Hugh L. Carey Tunnel | | | | Queens Midtown Tunnel | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume | Percent Change | | | Volume | Percent Change | | | Volume | Percent Change | | |
| 2011 | 40,391 | 2.6% | $266,307 | 6.59 | 16,570 | 2.9% | $87,879 | 5.30 | 28,481 | 0.1% | $158,668 | 5.57 |
| 2012 | 39,376 | -2.5% | $260,468 | 6.61 | 15,902 | -4.0% | $83,814 | 5.27 | 27,759 | -2.5% | $153,825 | 5.54 |
| 2013 | 39,958 | 1.5% | $291,433 | 7.29 | 16,547 | 4.1% | $95,549 | 5.77 | 27,850 | 0.3% | $168,982 | 6.07 |
| 2014 | 40,840 | 2.2% | $302,110 | 7.40 | 16,940 | 2.4% | $99,135 | 5.85 | 28,998 | 4.1% | $178,631 | 6.16 |
| 2015 | 42,189 | 3.3% | $324,702 | 7.70 | 17,655 | 4.2% | $106,881 | 6.05 | 28,697 | -1.0% | $182,382 | 6.36 |
| 2016 | 43,245 | 2.5% | $335,732 | 7.76 | 17,961 | 1.7% | $109,250 | 6.08 | 26,824 | -6.5% | $171,121 | 6.38 |
| 2017 | 43,694 | 1.0% | $344,882 | 7.89 | 17,510 | -2.5% | $105,649 | 6.03 | 25,065 | -6.6% | $158,683 | 6.33 |
| 2018 | 44,347 | 1.5% | $344,565 | 7.77 | 18,799 | 7.4% | $113,395 | 6.03 | 27,552 | 9.9% | $173,021 | 6.28 |
| 2019 | 44,182 | -0.4% | $356,533 | 8.07 | 19,421 | 3.3% | $121,645 | 6.26 | 30,344 | 10.1% | $199,624 | 6.58 |
| 2020 | 34,277 | -22.4% | $293,274 | 8.56 | 14,786 | -23.9% | $93,783 | 6.34 | 19,875 | -34.5% | $134,251 | 6.75 |
| 2021 | 37,556 | 9.6% | $345,622 | 9.20 | 19,308 | 30.6% | $132,409 | 6.86 | 26,006 | 30.8% | $190,332 | 7.32 |

| Year | Henry Hudson Bridge | | | | Marine Parkway-Gil Hodges Memorial Bridge | | | | Cross Bay Veterans Memorial Bridge | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll | Traffic | | Revenue | Average Toll |
| | Volume | Percent Change | | | Volume | Percent Change | | | Volume | Percent Change | | |
| 2011 | 22,185 | -3.8% | $59,246 | 2.67 | 7,523 | -4.0% | $14,003 | 1.86 | 7,148 | -6.3% | $14,139 | 1.98 |
| 2012 | 21,939 | -1.1% | $57,828 | 2.64 | 7,829 | 4.1% | $15,698 | 2.00 | 7,498 | 4.9% | $15,535 | 2.07 |
| 2013 | 21,830 | -0.5% | $62,444 | 2.86 | 7,814 | -0.2% | $16,633 | 2.13 | 7,712 | 2.9% | $16,840 | 2.18 |
| 2014 | 22,235 | 1.9% | $64,879 | 2.92 | 7,399 | -5.3% | $15,578 | 2.11 | 7,553 | -2.1% | $16,269 | 2.15 |
| 2015 | 23,194 | 4.3% | $71,388 | 3.08 | 7,753 | 4.8% | $16,906 | 2.18 | 7,954 | 5.3% | $17,517 | 2.20 |
| 2016 | 24,620 | 6.2% | $76,309 | 3.10 | 7,902 | 1.9% | $17,263 | 2.18 | 8,300 | 4.3% | $18,431 | 2.22 |
| 2017 | 25,555 | 3.8% | $85,424 | 3.34 | 7,977 | 1.0% | $17,451 | 2.19 | 8,441 | 1.7% | $18,655 | 2.21 |
| 2018 | 25,831 | 1.1% | $83,836 | 3.25 | 8,072 | 1.2% | $17,396 | 2.15 | 8,522 | 1.0% | $18,575 | 2.18 |
| 2019 | 26,050 | 0.8% | $88,947 | 3.41 | 8,259 | 2.3% | $18,421 | 2.23 | 8,598 | 0.9% | $19,361 | 2.25 |
| 2020 | 17,726 | -32.0% | $59,958 | 3.38 | 6,968 | -15.6% | $16,560 | 2.38 | 7,389 | -14.1% | $17,741 | 2.40 |
| 2021 | 23,861 | 34.6% | $90,857 | 3.81 | 7,655 | 9.9% | $20,189 | 2.64 | 8,016 | 8.5% | $21,185 | 2.64 |

Source: TBTA data.

Notes:

(a) Toll rate increases occurred on March 3, 2013, March 22, 2015, March 19, 2017, March 31, 2019, and April 11, 2021.

(b) Split tolling was implemented on December 1, 2020. Previously, westbound toll traffic volume was doubled since traffic was not registered in the eastbound direction.

(c) Prior to December 2020, the average toll was calculated on the basis of revenues divided by doubled westbound volume.

**Table 6 Summary of Annual Paid Traffic and Toll Revenue, 2011 to 2021**

| Year | Total Paying Traffic Volume (000s) | Percent Change | Total Toll Revenue (000s) | Percent Change | Average Toll |
|---|---|---|---|---|---|
| 2011 | 283,471 | - | 1,501,589 | - | 5.30 |
| 2012 | 282,647 | -0.3% | 1,490,982 | -0.7% | 5.28 |
| 2013[a] | 284,528 | 0.7% | 1,645,193 | 10.3% | 5.78 |
| 2014 | 286,361 | 0.6% | 1,676,445 | 1.9% | 5.85 |
| 2015[a] | 297,946 | 4.0% | 1,808,901 | 7.9% | 6.07 |
| 2016 | 307,346 | 3.2% | 1,869,693 | 3.4% | 6.08 |
| 2017[a] | 309,997 | 0.9% | 1,911,857 | 2.3% | 6.17 |
| 2018 | 322,290 | 4.0% | 1,965,223 | 2.8% | 6.10 |
| 2019[a] | 329,397 | 2.2% | 2,071,411 | 5.4% | 6.29 |
| 2020 | 253,184 | -23.1% | 1,639,753 | -20.8% | 6.48 |
| 2021[a] | 307,296 | 21.4% | 2,149,869 | 31.1% | 7.00 |

Source: TBTA data.
Notes:
(a) Toll rate increases occurred on March 3, 2013, March 22, 2015, March 19, 2017, March 31, 2019, and April 11, 2021.

Note that traffic on the Bronx-Whitestone and Throgs Neck Bridges has been of similar magnitude over the years. These two bridges generally serve similar areas in the Bronx and Queens, and historically traffic has shifted back and forth to the crossing providing the better level of service, at times based on lane restrictions due to construction activity. Lane closures associated with the replacement of the Bronx approach spans of the Bronx-Whitestone Bridge, which occurred for most of 2010 and 2011 and resulted in a reduction of travel lanes on the bridge. As a result, some motorists diverted onto the Throgs Neck Bridge in order to avoid congestion. This trend continued in 2013 and 2014 during the Queens approach structure replacement project on the Bronx-Whitestone Bridge where a reduction in travel lanes on the bridge resulted in motorists again diverting to the Throgs Neck Bridge to avoid congestion.

The March 22, 2015, toll increase resulted in an overall increase in toll revenue from $1.676 billion in 2014 to $1.809 billion, an increase of 7.9 percent. The increase in traffic is attributed to a continuing modest economic recovery, generally overall favorable weather conditions, and relatively low gas prices, all of which appeared to offset the impacts associated with the toll increase.

In 2016, traffic volumes increased by 3.2 percent to 307.3 million vehicles. The increase in traffic is attributed to a continued modest recovery of the economy, favorable gas prices, and generally overall favorable weather conditions throughout the year. Another possible factor for the increase in year over year traffic is the substantial increase in housing construction activity throughout the City as developers were motivated to secure 421-a property tax exemptions before the program's expiration in January 2016.





The March 19, 2017, toll increase resulted in an overall increase in toll revenue of 2.3 percent from $1.870 billion in 2016 to $1.912 billion in 2017. Traffic volumes increased by 0.9 percent to a new historical high of 310.0 million vehicles. The increase in traffic is attributed to continued growth of the economy and sustained favorable gasoline prices.

In 2018, traffic volumes increased by 4.0 percent to a new historical high of 322.3 million vehicles. Revenue grew by 2.8 percent from $1.912 billion in 2017 to $1.965 billion in 2018. The increase in traffic is attributed to continued growth of the economy and sustained favorable gasoline prices.

The March 31, 2019, toll increase resulted in an overall increase in toll revenue of 5.4 percent from $1.965 billion in 2018 to $2.071 billion in 2019. Traffic volumes increased by 2.2 percent to a new historical high of 329.4 million vehicles. The increase in traffic is attributed to continued growth of the economy and sustained favorable gasoline prices.

In 2020, traffic volumes decreased by 23.1 percent to 253.2 million vehicles. In 2020, toll revenue decreased by 20.8 percent from $2.071 billion in 2019 to $1.640 billion. The decrease in both traffic and revenue was caused by the ongoing pandemic and related government actions.

The April 11, 2021, toll increase, combined with significant pandemic related recovery, resulted in an overall increase in toll revenue of 31.1 percent from $1.640 billion in 2020 to $2.150 billion in 2021. 2021 annual traffic volumes increased by 21.4 percent to 307.3 million vehicles. The increase in traffic is predominantly attributed to pandemic recovery and related changes in commuting behavior.

Preliminary audited data for January and February 2022 indicate that traffic on the TBTA facilities increased by 15.8 percent over the same period in 2021. It is important to note that January 2022 traffic, although better than January 2021, experienced a more dramatic pandemic-related traffic reduction than the prior several months at the end of 2021 due to a surge of COVID-19 cases related to the Omicron variant. By February and March 2022, the number of pandemic cases diminished to a level not seen since the summer of 2021. When comparing preliminary audited February 2022 and preliminary unaudited March 2022 traffic to February and March 2021 numbers, there is a significantly greater improvement in 2022 over the previous year than seen in January 2022. Pandemic cases began rising again quickly at the beginning of April 2022, but preliminary data show that this has not yet affected traffic on TBTA facilities. Estimated changes by facility are shown below in Table 7.

### Table 7 Estimated Changes in January - February Traffic, 2021 to 2022

| Facility | Percent Increase January - February 2021 to 2022[(a)] |
|---|---|
| Throgs Neck Bridge | 13.1% |
| Bronx-Whitestone Bridge | 14.7% |
| RFK Bridge | 12.9% |
| Queens Midtown Tunnel | 29.6% |
| Hugh L. Carey Tunnel | 33.8% |
| Verrazzano-Narrows Bridge | 11.1% |
| Henry Hudson Bridge | 21.5% |
| Marine Parkway-Gil Hodges Memorial Bridge | 15.3% |
| Cross Bay Veterans Memorial Bridge | 6.3% |
| Total | 15.8% |

Notes:
(a) Based on preliminary audited traffic data for January and February 2022 (subject to final audit).

## Traffic by Facility and Vehicle Class, 2021

TBTA maintains traffic counts for each crossing in 14 categories, ranging from passenger cars to trucks with seven axles. Displayed in Table 8 are the 2021 traffic volumes by facility. Passenger cars totaled 284.5 million crossings and represented 92.6 percent of the total toll-paying vehicles (that percentage has remained relatively constant over time). Of the TBTA facilities, the Verrazzano-Narrows Bridge registered the highest toll-paying traffic volume of 75.3 million vehicles. The lowest toll-paying volume, 7.7 million vehicles, was recorded at the Marine Parkway Bridge.



HISTORY AND PROJECTION OF TRAFFIC, TOLL REVENUES AND EXPENSES AND REVIEW OF PHYSICAL CONDITIONS OF THE FACILITIES OF TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

### Table 8 Traffic by Facility and Vehicle Classification, 2021

(000s)[(a, b)]

| Facility | 1 Passenger Cars | 2 Pass. Cars w/one-axle Trailer | 3 Pass. Cars w/two-axle Trailer | 4 Trucks 2 Axles | Franchise Buses | | 6 Trucks 3 Axles | 7 Trucks 4 Axles |
|---|---|---|---|---|---|---|---|---|
| | | | | | 5 2 Axles | 11 3 Axles | | |
| Throgs Neck Bridge | 32,731 | 81 | 77 | 1,884 | 1 | 6 | 373 | 328 |
| Bronx-Whitestone Bridge | 45,180 | 30 | 21 | 1,656 | 42 | 115 | 350 | 198 |
| RFK Bridge | 56,415 | 37 | 24 | 2,992 | 5 | 249 | 609 | 146 |
| Queens Midtown Tunnel | 24,153 | 9 | 5 | 1,287 | 3 | 239 | 225 | 18 |
| Hugh L. Carey Tunnel | 18,061 | 5 | 2 | 542 | 1 | 424 | 188 | 12 |
| Verrazzano-Narrows Bridge | 69,637 | 51 | 52 | 2,781 | 90 | 299 | 648 | 299 |
| Henry Hudson Bridge[(c)] | 23,575 | 9 | 5 | 220 | 0 | 0 | 4 | 2 |
| Marine Parkway Bridge | 7,360 | 5 | 2 | 214 | 6 | 1 | 23 | 6 |
| Cross Bay Bridge | 7,420 | 7 | 3 | 322 | 8 | 111 | 96 | 8 |
| Total | 284,531 | 234 | 192 | 11,898 | 155 | 1,445 | 2,517 | 1,018 |
| Percent of Paid Vehicles | 92.6% | 0.1% | 0.1% | 3.9% | 0.1% | 0.5% | 0.8% | 0.3% |

| Facility | 8 Trucks 5 Axles | 9 Motor-cycles | 12 Trucks 6 Axles | 13 Trucks 7 Axles | 14 Other Vehicles | Total Toll- Paying Vehicles | 10 Non-Revenue Vehicles[(d)] | Total Vehicles |
|---|---|---|---|---|---|---|---|---|
| Throgs Neck Bridge | 1,916 | 47 | 65 | 45 | 0 | 37,556 | 106 | 37,663 |
| Bronx-Whitestone Bridge | 780 | 67 | 15 | 5 | 0 | 48,459 | 113 | 48,572 |
| RFK Bridge | 544 | 135 | 18 | 5 | 0 | 61,178 | 247 | 61,425 |
| Queens Midtown Tunnel | 10 | 56 | 0 | 0 | 0 | 26,006 | 109 | 26,115 |
| Hugh L. Carey Tunnel | 3 | 69 | 1 | 0 | 0 | 19,308 | 126 | 19,435 |
| Verrazzano-Narrows Bridge | 1,213 | 120 | 62 | 3 | 0 | 75,255 | 225 | 75,480 |
| Henry Hudson Bridge[(c)] | 1 | 45 | 0 | 0 | 0 | 23,861 | 54 | 23,915 |
| Marine Parkway Bridge | 24 | 14 | 1 | 0 | 0 | 7,655 | 28 | 7,684 |
| Cross Bay Bridge | 18 | 24 | 0 | 0 | 0 | 8,016 | 23 | 8,040 |
| Total | 4,508 | 578 | 161 | 58 | 1 | 307,296 | 1,032 | 308,328 |
| Percent of Paid Vehicles | 1.5% | 0.2% | 0.1% | 0.0% | 0.0% | 100.0% | | |

Source: TBTA
Notes:
(a) Totals may not add due to rounding.
(b) Based on preliminary actual data, subject to final audit.
(c) Truck passage prohibited except with NYCDOT permit.
(d) Includes police, fire, and other emergency vehicles and TBTA vehicles.

## Monthly Traffic, 2021

Monthly variations in traffic volumes on the nine crossings have been attributed to several factors historically, including severe weather, either winter or tropical storms, which result in lower volumes and, conversely, traffic reaches its highest levels during the summer months when recreational travel peaks. Traffic volumes also typically decline, or traffic growth slows in the aftermath of a toll increase. Furthermore, individual facilities can be affected by construction projects on the facility itself or its approaches, and on adjacent arterials or competing bridges. The limited number of crossings in the region, however, largely sustains the overall demand for TBTA's bridges and tunnels. In addition to these normal impacts, there are extraordinary events such as the effects of the September 11th, 2001, attack on the World Trade Center, Superstorm Sandy, and the pandemic.

The data in Table 9 indicate that total traffic on the nine crossings in 2021 peaked in June. August was the second highest month in 2021. The monthly variations on the nine crossings in 2021 ranged from 23 percent and 19 percent below the annual average daily traffic in February and January, respectively, to 10 percent and 8 percent above in June and August, respectively.

### Table 9 Monthly Traffic Variations, 2021

| Month | Average Daily Toll-Paying Traffic[a] | | | | | | | | | | Ratio to AADT [b], [c] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Throgs Neck Bridge | Bronx-Whitestone Bridge | RFK Bridge | Queens Midtown Tunnel | Hugh L. Carey Tunnel | Verrazzano-Narrows Bridge | Henry Hudson Bridge | Marine Pkwy Bridge | Cross Bay Bridge | Total | |
| January | 87,841 | 104,739 | 136,646 | 52,889 | 40,024 | 175,671 | 46,547 | 15,722 | 17,815 | 677,893 | 0.81 |
| February | 81,223 | 100,789 | 131,836 | 53,003 | 39,521 | 167,586 | 46,390 | 14,573 | 17,063 | 651,984 | 0.77 |
| March | 97,813 | 121,192 | 158,380 | 66,222 | 48,847 | 194,458 | 59,255 | 18,014 | 20,839 | 785,020 | 0.93 |
| April | 102,816 | 129,292 | 167,399 | 65,894 | 52,156 | 204,918 | 66,223 | 19,285 | 21,898 | 829,881 | 0.99 |
| May | 104,879 | 138,369 | 173,249 | 70,831 | 52,071 | 212,571 | 69,166 | 21,922 | 23,008 | 866,068 | 1.03 |
| June | 109,109 | 147,651 | 185,247 | 78,043 | 56,581 | 224,868 | 73,587 | 26,432 | 26,314 | 927,832 | 1.10 |
| July | 110,684 | 145,989 | 179,997 | 76,246 | 53,096 | 219,824 | 67,194 | 25,733 | 25,509 | 904,272 | 1.07 |
| August | 109,441 | 146,848 | 180,131 | 76,597 | 54,749 | 219,337 | 70,703 | 24,500 | 23,827 | 906,133 | 1.08 |
| September | 107,974 | 143,144 | 179,956 | 79,898 | 57,909 | 213,540 | 73,021 | 23,028 | 23,431 | 901,899 | 1.07 |
| October | 109,665 | 141,207 | 177,092 | 80,064 | 61,853 | 217,548 | 74,397 | 21,718 | 22,216 | 905,758 | 1.08 |
| November | 108,561 | 141,311 | 175,246 | 79,924 | 60,386 | 213,808 | 73,122 | 21,002 | 21,286 | 894,647 | 1.06 |
| December | 103,176 | 130,532 | 163,892 | 74,220 | 56,800 | 207,327 | 63,831 | 19,328 | 20,039 | 839,145 | 1.00 |
| AADT[c] | 102,894 | 132,765 | 167,611 | 71,249 | 52,899 | 206,179 | 65,374 | 20,974 | 21,963 | 841,908 | 1.00 |

Notes:
(a) Totals may not add due to rounding.
(b) Annual Average Daily Traffic (AADT).
(c) For total traffic on the nine crossings. The ratio to AADT is the quotient of a month's AADT and the annual average for the year; e.g., a ratio to AADT of 0.77 signifies that the monthly traffic is 23 percent below the AADT for 2021.





## Changes in Monthly Traffic, 2020 to 2021

Table 10 lists the monthly average daily traffic changes that have occurred between 2020 and 2021.

### Table 10 Changes in Monthly Average Daily Traffic, 2020 to 2021

| Month | Percent Change Comparing 2020 Monthly Average Daily Traffic to 2021 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Throgs Neck Bridge | Bronx-Whitestone Bridge | RFK Bridge | Queens Midtown Tunnel | Hugh L. Carey Tunnel | Verrazzano-Narrows Bridge | Henry Hudson Bridge | Marine Pkwy Bridge | Cross Bay Bridge |
| January | -17.2% | -17.0% | -16.5% | -29.7% | -17.1% | -9.8% | -27.1% | -19.3% | -15.0% |
| February | -26.5% | -21.5% | -22.6% | -33.7% | -23.7% | -15.6% | -30.5% | -23.9% | -17.7% |
| March | 18.1% | 28.5% | 29.5% | 30.2% | 42.2% | 27.5% | 43.7% | 18.6% | 20.5% |
| April | 106.5% | 156.8% | 168.6% | 241.8% | 283.9% | 123.5% | 341.2% | 90.3% | 79.5% |
| May | 42.0% | 88.6% | 81.4% | 144.5% | 130.3% | 63.2% | 170.6% | 43.9% | 34.9% |
| June | 12.9% | 50.0% | 37.0% | 71.6% | 51.5% | 32.8% | 82.6% | 23.0% | 16.8% |
| July | 5.7% | 27.8% | 21.3% | 42.2% | 22.1% | 19.5% | 32.2% | -3.6% | -2.6% |
| August | 2.8% | 18.2% | 17.3% | 29.6% | 17.7% | 14.2% | 26.0% | -3.6% | -2.4% |
| September | 2.0% | 15.2% | 13.7% | 27.2% | 17.6% | 9.8% | 21.5% | 2.0% | 4.0% |
| October | 6.4% | 15.2% | 12.0% | 24.7% | 24.2% | 13.9% | 23.9% | 15.6% | 7.6% |
| November | 12.9% | 24.7% | 19.0% | 38.4% | 34.6% | 19.0% | 36.9% | 18.3% | 9.4% |
| December | 17.2% | 21.1% | 18.1% | 35.2% | 31.8% | 14.9% | 31.7% | 17.8% | 10.2% |
| Annual | 9.9% | 24.7% | 21.7% | 31.2% | 30.9% | 20.2% | 35.0% | 10.2% | 8.8% |

As previously mentioned, the pandemic was the primary cause of the large reductions in monthly traffic starting in March 2020. The significant growth in traffic seen beginning in March 2021 is related to pandemic recovery. However, in August 2021 and December 2021, the COVID-19 delta and Omicron variants, respectively, tempered some of the recovery.

## Operating Expenses, 2011 to 2021

Table 11 displays the historical operating expenses for the TBTA facilities from 2011 through 2021. TBTA divides operating expenses into two major categories: labor and non-labor. Labor includes salaries, overtime and fringe benefits, net of capital reimbursements. Major maintenance, some bridge painting, outside services, insurance, TBTA's share of the NYCSC, and other non-personnel expenses are included in non-labor.

TBTA labor expenses increased from $208.3 million in 2011 to $238.4 million in 2021, an increase of $30.1 million. The increase was entirely due to higher actuarial assessments of pension commitments ($10.8 million) and increases in net costs for fringe benefits including health and welfare benefits for current employees and retirees, workers' compensation, and others ($15.3 million). Payroll costs, including regular wages and overtime pay, declined by $10.1 million over this period. Year-end headcount in 2011 was 1,584, and it fell to 1,114 at year-end 2021. This was the result, over the eleven-year period shown, of numerous managerial initiatives aimed at achieving operational efficiencies, several MTA-wide workforce consolidation efforts, and headcount reductions achieved solely through attrition that were realized through the move to Cashless Tolling.

### Table 11 Historical Operating Expenses, 2011 to 2021

| Year | Operating Expenses (000s)[a] | | | Percent Change |
|---|---|---|---|---|
| | Labor[b] | Non-Labor[c] | Total | |
| 2011 | 208,343 | 150,503 | 358,846 | -6.4% |
| 2012 | 220,576 | 157,463 | 378,039 | 5.3% |
| 2013 | 220,692 | 188,804 | 409,496 | 8.3% |
| 2014 | 238,528 | 205,224 | 443,752 | 8.4% |
| 2015 | 235,099 | 217,660 | 452,759 | 2.0% |
| 2016 | 243,436 | 221,418 | 464,854 | 2.7% |
| 2017 | 248,347 | 241,838 | 490,185 | 5.4% |
| 2018 | 243,115 | 258,150 | 501,265 | 2.3% |
| 2019 | 252,269 | 259,158 | 511,427 | 2.0% |
| 2020 | 227,823 | 214,389 | 442,212 | -13.5% |
| 2021 | 238,362 | 227,651 | 466,013 | 5.4% |

Source: TBTA
Notes:
(a) Totals may not add due to rounding.
(b) Labor includes salaries, overtime and fringe benefits, net of capital reimbursements.
(c) Non-labor includes the following categories: major maintenance and supplies, bridge painting, outside services, insurance, power, leases and rentals and other expenses.

Non-labor includes the following categories: major maintenance and supplies, bridge painting, outside services, insurance, power, leases and rentals and other expenses. Non-labor expenses increased from $150.5 million in 2011 to $227.7 million in 2021. Most of this growth is attributable to back-office costs for administering E-ZPass toll collection, along with the introduction of TBM at the Henry Hudson Bridge in 2012 and the expansion of TBM to all facilities in 2017. Over this eleven-year period, TBTA has been successful in negotiating lower unit costs for E-ZPass tags and has achieved contracted efficiency savings associated with running the NYCSC, which also administers the TBM program. However, the growth in overall transactions have driven up NYCSC expenses, credit/debit card transaction fees (which have also been impacted by higher E-ZPass and TBM tolls) and the costs of maintaining toll collection equipment. Expenses in other areas have generally grown at rates approximating CPI-U inflation.

The following is a brief discussion of the major year-to-year shifts in operating expenses.

In 2011, total operating expenses decreased for the third year in a row. Expenses in 2011 decreased 6.4 percent from 2010, with the majority of the decrease attributed to reductions in non-labor expenses.

Total operating expenses for 2012 increased $19.2 million, or 5.3 percent from 2011 primarily due to the emergency response and facility restoration efforts associated with Superstorm Sandy totaling $11.7 million. In addition, pension costs were greater by $8.5 million due to a revised





valuation by the New York City Office of the Actuary that included a drop in the assumed rate of investment return, from 8 percent to 7 percent, retroactive to July 2011.

Total operating expenses for 2013 increased $31.5 million, or 8.3 percent above 2012 primarily due to: $12.6 million in additional bond issuance costs associated with the implementation of Government Accounting Standards Bureau 65, which requires that certain expenses that were previously allowed to be amortized over the life of the bonds must now be realized in full when incurred; $5.2 million in Superstorm Sandy restoration costs; $4.4 million in higher insurance premiums; additional credit/debit card fees of $2.7 million due to the March increase in E-ZPass tolls; and another $2.7 million in NYCSC costs stemming from account growth and the first full year of Cashless Tolling at the Henry Hudson Bridge.

Total operating expenses for 2014 increased $34.3 million, or 8.4 percent above 2013 primarily resulting from: $13.3 million in additional wage and associated fringe benefit costs primarily stemming from payments and provisions for actual and projected union contract settlements retroactive to 2009; an actuarial adjustment of $3.8 million for Workers' Compensation; $9.5 million to fund additional major maintenance and bridge painting projects; and a total increase of $6.5 million in property and general liability insurance premiums.

In 2015, total operating expenses were $452.8 million, which was $9.0 million, or 2.0 percent above 2014 expenses. Labor expenses declined by $3.4 million, or 1.4 percent, primarily due to unfilled vacancies throughout the year and the transfer of 53 technology positions to the MTA as part of an agency-wide IT consolidation effort. Non-labor expenses grew by $12.4 million, or 6.1 percent, primarily due to additional major maintenance and bridge painting projects and higher credit card fees associated with the toll increase implemented on March 22, 2015.

In 2016, total operating expenses were $464.9 million, which was $12.1 million, or 2.7 percent above 2015 expenses. Labor expenses increased by $8.3 million, or 3.5 percent, primarily due to wage inflation and actuarial adjustments to pension expenses. Non-labor expenses grew by $3.8 million, or 1.7 percent, which was slightly above the national inflation rate of 1.3 percent. Growth exceeded inflation primarily due to additional major maintenance projects and higher bond issuance costs.

In 2017, total operating expenses were $490.2 million, which was $25.3 million, or 5.4 percent above 2016 operating expenses. Labor expenses increased by $4.9 million, or 2.0 percent, primarily due to wage inflation. Non-labor expenses grew by $20.4 million, or 9.2 percent, primarily due to implementation costs for Cashless Tolling and back-office costs for administering the TBM program.

Total operating expenses in 2018 were $501.3 million, which was 2.3 percent above costs in 2017. Labor expenses declined by 2.1 percent primarily due to vacant positions and headcount reductions achieved solely through attrition that were realized through the move to Cashless Tolling. Non-labor costs increased by 6.7 percent primarily due to a full year's facility-wide impact on back-office and other non-labor costs related to Cashless Tolling operations.

Total operating expenses peaked in 2019 at $511.4 million, which was 2.0 percent above costs in 2018. Labor expenses grew by 3.8 percent primarily due to revised actuarial assessments of pension costs and higher healthcare costs. Non-labor costs increased by only 0.4 percent. Higher tolling operations and collections costs due to increased traffic and the toll increase implemented in March 2019 were almost entirely offset by efficiencies achieved across a variety of maintenance projects and other operating contracts.

Total operating expenses in 2020 were $442.2 million, which was 13.5 percent below costs in 2019. Labor expenses decreased by 9.7 percent primarily due to restricted hiring and attrition. Non-labor costs decreased by 17.3 percent. Most of the non-labor savings are due to a program of significant additional savings actions that reduced reliance on outside consultants and contractors, and non-service-related expenses. In addition, fewer toll transactions due to the pandemic led to reduced toll processing costs. Although total year-over-year operating expenses decreased in 2020, TBTA incurred some new operating expenses because of the pandemic. This includes $1.4 million for Personal Protective Equipment ("PPE"), cleaning and sanitizing contracts, and janitorial supplies for buildings and vehicles to comply with Centers of Disease Control and Prevention guidelines.

Total operating expenses in 2021 were $466.0 million, which was 5.4 percent above costs in 2020. Labor expenses increased by 4.6 percent primarily through lower payroll, overtime, and associated fringe benefits costs associated with vacancies. Non-labor costs increased by 6.2 percent primarily due to increased professional service contract commitments and materials and supplies. These increased non-labor costs were offset by lower costs related to maintenance and other operating contracts (closure of E-ZPass walk-in centers and reduced E-ZPass customer activity) as well as reductions in overall business expenses.

## FACTORS AFFECTING TRAFFIC GROWTH

A previous section of this report identified the historical trends in traffic, revenue, and expenses of the nine TBTA bridges and tunnels. Before developing the analyses, past practice has been to consider factors affecting future traffic, including the projected trends in employment and population, fuel availability and prices, TBTA and regional construction impacts, the capacity constraints in the regional highway network, and toll and elasticity impacts.

Urbanomics, Inc. ("Urbanomics") was contracted as a subconsultant to Stantec to prepare short- and long-term employment and population forecasts in the New York Metropolitan Area. Additionally, Urbanomics researched other factors affecting future traffic, including labor force conditions, housing construction conditions, Manhattan office market conditions, motor vehicle registrations, and fuel availability and prices. The information provided by Urbanomics was incorporated into Stantec's traffic and toll revenue analyses.

This section of the report concludes with a summary of the assumptions and conditions upon which the traffic and toll revenue analyses were based.





### Employment, Population, and Motor Vehicle Registrations

In keeping with federal requirements mandating the preparation of long-term demographic and socioeconomic forecasts for travel demand modeling purposes, the New York Metropolitan Transportation Council ("NYMTC") prepares and periodically updates employment and population forecasts for the 10-county NYMTC territory[2] and 21 surrounding counties in New York, New Jersey, and Connecticut. The latest forecasts available, which are included in the following tables, were released in October 2020 and range from 2010 to 2055 on a 5-year interval basis.

NYMTC's Socioeconomic and Demographic ("SED") Forecasts are long-term in scope with the intention of providing reliable projections of future socioeconomic conditions over a 40-year period. Due to the structure of forecasts, which are projected in 5-year intervals, NYMTC does not attempt to reliably forecast cyclical trends in the economy as related to business cycles and natural disasters. Development of the forecasts began in 2018 and were finalized at the height and early recovery period of the pandemic and associated recession. Reliable data detailing the extent of the economic damage was not yet available for analysis during the forecasting process, therefore only future NYMTC forecasts will reliably incorporate historic data that fully capture the impact of the pandemic on regional employment and population trends.

Given the unavailability of adequate local data, a near-term adjustment to the 2055 SED Forecasts employment projections was prepared by Urbanomics. This addresses the economic damage associated with the pandemic based on the consensus of key regional stakeholders and informed by near-term trends in unemployment and deaths, reactions from other major metropolitan planning organizations, and professional opinions from several of the nation's leading economists. The agreed-upon uniform adjustment to the 2055 SED Forecasts was applied at the county-level in the employment model to create a "lag" in employment in 2020, roughly back to 2017 levels with full recovery (return to projected employment trend line) occurring over the five-year period from 2025 to 2030. Using inputs from the employment model as part of the population model's labor force sub-model, the population model was adjusted due to pandemic impacts as part of the labor force reconciliation process that establishes the population-employment balance. The NYMTC forecasting approach begins with modeling of the regional growth in employment relative to national trends and forecasts prepared by IHS Global Insight, Moody's Analytics ("Moody's"), and the BLS, calibrated at the county level on an industry-specific basis (IHS Markit, now part of S&P Global and Moody's are major vendors of economic and financial analysis, forecasts, and market intelligence worldwide). Employment then drives population growth which is forecasted at the sub-regional and county levels by a model that includes fertility, mortality, and recent past trends in net migration and induced labor force growth.

Typically, traffic volumes in the region are affected by changes in employment and population. The demand on TBTA facilities normally tends to be influenced less by regional employment and population trends than other toll facilities because available water crossings are limited. Motor

[2] The 10-County NYMTC Territory includes the five boroughs of New York City as well as Nassau, Suffolk, Rockland, Westchester and Putnam Counties.

vehicle registrations are another indicator of trends in traffic volumes. To better understand how these indicators may influence traffic volumes on TBTA crossings over the long term, Stantec first reviewed historical trends and forecasts by NYMTC and others, and then adjusted traffic analyses in the short term to account for current economic conditions.

*Employment Trends and Projections*

Traditionally, job growth has had an impact on traffic generation. Generally, when the economy is robust and jobs are growing, there is an increase in traffic. Conversely, when employment trends downward, traffic volumes generally decline. However, the rate of decline depends upon the severity of employment losses.

Table 12 depicts the long-term trend in total employment in the region since 1980. The region is defined as consisting of 31 counties that comprised the commuter-shed: the five boroughs of the City; 9 suburban counties of New York State in Long Island and the Mid-Hudson; 14 counties of northern and central New Jersey; and 3 counties of Connecticut.

As Table 12 shows, since 1980, the City has shown consistent employment growth in each decade, having recovered from the mid-1970s losses during the 1990s and reaching a long-term high of 6.0 million jobs in 2019 before swiftly falling during the pandemic to 5.6 million jobs in 2021. The Long Island and Mid-Hudson suburbs have reflected continuous growth in the decades since 1980, expanding from 1.9 million jobs in 1980 to 2.9 million in 2021. Similar rates of suburban growth occurred in New Jersey and Connecticut during those years. Between 1980 and 2021, New Jersey added 1.4 million jobs while Connecticut gained 271,700 jobs and the New York suburbs grew by 954,500 jobs.

While annual employment growth over the past decade through February 2020 exceeded annual growth from 1980 to 2010 in New York City and New Jersey suburban counties, with the New York and Connecticut suburban counties not far behind, significant job losses associated with the pandemic resulted in a sharp reversal of recent trends. Only the City had a higher annual growth rate from 2010 through 2021 while the suburban counties all had significantly lower growth rates versus years past. Among the four sub-regions, the City accounted for the largest employment base in 2021 with 40.2 percent of 13.8 million regional jobs, followed by New Jersey with 30.8 percent, the New York suburbs with 20.8 percent and Connecticut with 8.3 percent.

Due to travel and work restrictions associated with the pandemic, over the months from February to April 2020, the City lost 926,600 wage/salary jobs (-19.8 percent). However, by January 2022, the post-February 2020 decline had been reduced to a loss of 317,400 jobs (-6.8 percent). Job losses were less intense in the suburban regions with wage/salary job reductions from February 2020 to January 2021 of -5.3 percent in the New York suburban counties, -3.5 percent in the New Jersey suburban counties and -2.7 percent in the Connecticut suburban counties.





National survey data from the BLS indicates that the share of workers carrying out their work from home is steadily declining. Monthly survey data from May 2020 to February 2022 indicate that the share among US workers aged 16 or over that reported teleworking due to the pandemic dropped from 35.4 percent in May to just 13.0 percent in February 2022. Although management, professional, and related occupation workers[3] are more likely to telework, the share of such workers at the national level also dropped by nearly 34.5 percentage points over that period from 57.4 percent to 22.9 percent.

As the region's workforce is increasingly becoming vaccinated against COVID-19, local employers expect more workers to return to the City's office buildings. The various waves of COVID-19 infections over the past two years have resulted in periodic setbacks in companies' return to office plans. A sizeable number of workers who had returned to their offices in the early fall of 2021 went back to remote work during December 2021 and January 2022 at the height of the Omicron variant spread. This was followed by the most recent push to return to in-office work in February and March 2022.

According to the Partnership for New York City's monthly Return to Office Survey, in the month of January 2022, just 16 percent of employers reported that average daily attendance at Manhattan offices exceeded 50 percent.[4] The Omicron variant had peaked during this month and the majority of employers (75%) indicated that that they had delayed their return-to-office plans. However, 38 percent of employers indicated that they expected average daily attendance will likely exceed 50% at some point in Q1 2022. A number of major employers announced they would encourage return to office plans or hybrid work schedules in their New York City offices in February and March 2022 including American Express, Meta, Microsoft, Goldman Sachs, JPMorgan Chase, Citigroup, HSBC, Wells Fargo, UBS, and BNY Mellon.[5,6] According to Kastle Systems, an office security firm, roughly 37 percent of New York City workers went into the office in March 2022, a high for the pandemic era but still 80 percent below pre-pandemic occupancy trends[7] and well below the 50 percent attendance anticipated by the Partnership for New York City's monthly Return to Office Survey in that quarter. The Partnership for New York City reported that in their February and March 2022 survey of nearly 10,000 local workers, survey respondents reported that personal safety issues were now the top concern for returning to in-office employment with 43% of respondents indicating it was their top obstacle compared with just 29% that considered COVID-19 the top barrier to in-office work.[8]

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[3] Including workers employed in the industries of Information; Finance & Insurance; Real Estate, Rental & Leasing; Professional & Technical Services; Management, Administrative & Waste Services.

[4] Author Unknown. (2022 January). Return to Office Survey Results. *Partnership for New York City*.

[5] Goldberg, E. (2022, March 10). A Two-Year, 50-Million-Person Experiment in Changing How We Work. *New York Times*.

[6] Lananh, N. (2022, April 4). Wall Street's Rigid Culture Bends to Demands for Flexibility at Work. *New York Times*.

[7] Rubinstein, D. & Hong, N. (2022, April 11). As Remote Work Becomes Permanent, Can Manhattan Adapt? *New York Times*.

[8] Morning Consult. (2022 March). Poll Reveals Employees Will Resist Return to Office until City and Subways are Safe. *Partnership for New York City*. Pg 36.

As of April 12, 2022, the New York Times' Dana Rubinstein and Nicole Hong reported that "the list of companies permanently changing the way they work keeps growing longer, making the five-day-a-week trek into Manhattan an increasingly fading corporate practice." Other firms with sizeable New York City offices have recently announced long term plans for remote-option employment with little pressure to return to in-office employment. These firms include PwC, a global consulting firm headquartered in Manhattan; Quinn Emanuel Urquhart & Sullivan, a large law firm; Verizon; and Penguin Random House, a publisher.[9] JPMorgan Chase, the City's largest employer and a vocal proponent of in-office work, expected half of its 271,000 employees to work in-office five days a week in March, a reversal from the firm's December 2021 intention of a full in-office staff during the early months of 2022.[10]

As of April 22, 2022, over 6.5 million (78%) of New York City residents had been fully vaccinated against COVID-19 and 7.2 million (87%) had received at least one vaccine dose according to the New York City Health Department.

[9] Barron, J. (2022, April 12). Wall The Ups and Downs of Remote Work in New York. *New York Times*.

[10] Rubinstein, D. & Hong, N. (2022, April 11). As Remote Work Becomes Permanent, Can Manhattan Adapt? *New York Times*.



HISTORY AND PROJECTION OF TRAFFIC, TOLL REVENUES AND EXPENSES AND REVIEW OF PHYSICAL CONDITIONS OF THE FACILITIES OF TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**Table 12 Employment Trends**

Number of Jobs (000s)[a]

| Year | New York City | New York Region[b] | New Jersey Region[c] | Connecticut Region[d] | NYC and All Regions[e] |
|---|---|---|---|---|---|
| 1980 | 3,614.0 | 1,918.6 | 2,828.2 | 869.3 | 9,230.1 |
| 1990 | 3,962.3 | 2,343.6 | 3,419.2 | 1,001.7 | 10,726.8 |
| 2000 | 4,300.3 | 2,565.7 | 3,741.5 | 1,084.2 | 11,691.7 |
| 2005 | 4,411.1 | 2,720.0 | 3,951.1 | 1,109.0 | 12,191.2 |
| 2010 | 4,788.6 | 2,640.0 | 3,952.7 | 1,111.3 | 12,492.6 |
| 2015[f] | 5,599.4 | 2,660.1 | 4,274.3 | 1,185.7 | 13,719.5 |
| 2019 | 6,036.0 | 2,860.9 | 4,491.2 | 1,191.6 | 14,579.8 |
| 2020 | 5,442.5 | 2,859.1 | 4,156.9 | 1,118.1 | 13,576.6 |
| 2021 | 5,556.1 | 2,873.1 | 4,250.2 | 1,141.0 | 13,820.4 |
| Average Annual Percent Change | | | | | |
| 1980 to 1990 | 0.9% | 2.0% | 1.9% | 1.4% | 1.5% |
| 1990 to 2000 | 0.8% | 0.9% | 0.9% | 0.8% | 0.9% |
| 2000 to 2005 | 0.5% | 1.2% | 1.1% | 0.5% | 0.8% |
| 2005 to 2010 | 1.7% | 0.5% | 0.0% | 0.0% | 0.7% |
| 2010 to 2015 | 3.2% | 1.5% | 1.6% | 1.3% | 2.2% |
| 2015 to 2019 | 1.9% | 1.8% | 1.2% | 0.1% | 1.5% |
| 2019 to 2020 | -9.8% | -0.1% | -7.4% | -6.2% | -6.9% |
| 2020 to 2021 | 2.1% | 0.5% | 2.2% | 2.0% | 1.8% |

Source: New York Metropolitan Transportation Council, New York State Department of Labor, Connecticut Department of Labor, New Jersey Department of Labor and Workforce Development, BLS, and United States Bureau of Economic Analysis.

Notes:
(a) Historic employment estimates are modeled using data inputs from the BLS Current Employment Statistics Program (CES) Quarterly Census of Employment and Wages (QCEW) program as well as the Bureau of Economic Analysis' Table 25N Proprietors statistics. Final revisions to statewide and local area CES data, called a "Benchmark," are made each March for the previous five years based on payroll tax reports submitted by employers covered by the Unemployment Insurance program to individual states. In March 2022, the BLS released its 2021 re-benchmarked CES data with revisions to employment of specific industries going back as far as 1990.
(b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.
(c) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.
(d) Consists of the following counties: Fairfield, Litchfield, and New Haven.
(e) Totals may not add due to rounding.
(f) In 2015, the City of New York changed its methodology of reporting local government workers to reflect the geographic distribution of the workforce more accurately.

NYMTC prepared a series of 40-year employment forecasts, released in final form in October 2020. This is the latest available forecast from NYTMC. Forecasted trends are compressed to 5-year intervals, which masks cyclical trends between these years, a common practice in long term forecasting. Given the unavailability of adequate local data, a near-term adjustment to the 2055 employment forecasts was prepared to address the economic damage associated with the pandemic based on the consensus of key regional stakeholders informed by near-term trends in unemployment and deaths, reactions from other major metropolitan planning organizations, and professional opinions from several of the nation's leading economists. The agreed-upon uniform adjustment to the 2055 employment forecasts was applied at the county-level in the employment model to create a "lag" in employment in 2020, roughly back to 2017 levels with full recovery (return to projected employment trend line) occurring before 2025.

NYMTC projects regional employment growth would increase at an average annual rate of 0.45 percent between 2015 and 2055. From 2020 to 2025, NYMTC projects annual employment growth of 0.38 percent, rising to 0.56 percent from 2025 to 2030. Based on spring 2020 employment trends prior to the job recovery that ensued in the following months, NYMTC forecasted a full recovery to pre-pandemic levels at some point over the five-year period from 2020 to 2025 with a return to the long-term growth trendline expected in 2030. While NYMTC only projects in five-year increments and therefore does not forecast employment on a quarterly or annual basis, Moody's forecasts provide more specific detail. The Q4 2021 forecasts prepared by Moody's, the same source for one of several drivers used in the NYMTC employment model, project a total job increase of 3.9 percent in 2022 and 1.6 percent in 2023 for the New York metropolitan area. Based on the extent of the local monthly job recovery and stimulus activity, Moody's expects a recovery to the 2019 high in 2023. NYMTC's employment projections from its current employment forecast are presented in Table 13.

**Table 13 NYMTC Employment Projections**

(000s)(a)

| Year | New York City | New York Region (b) | New Jersey Region (c) | Connecticut Region (d) | NYC and All Regions |
|---|---|---|---|---|---|
| Average Annual Percent Change | | | | | |
| 2015 to 2020 | 1.19% | 0.41% | 0.35% | 0.14% | 0.70% |
| 2020 to 2025 | 0.38% | 0.39% | 0.39% | 0.37% | 0.38% |
| 2025 to 2030 | 0.57% | 0.52% | 0.60% | 0.50% | 0.56% |
| 2030 to 2035 | 0.46% | 0.44% | 0.48% | 0.42% | 0.46% |
| 2035 to 2040 | 0.44% | 0.30% | 0.33% | 0.30% | 0.37% |
| 2040 to 2045 | 0.39% | 0.31% | 0.36% | 0.31% | 0.36% |
| 2045 to 2050 | 0.48% | 0.28% | 0.38% | 0.33% | 0.40% |
| 2050 to 2055 | 0.47% | 0.28% | 0.37% | 0.32% | 0.39% |
| **2015 to 2055** | **0.55%** | **0.36%** | **0.41%** | **0.33%** | **0.45%** |

Source: New York Metropolitan Transportation Council

Notes:

(a) Future employment projections are modeled using an amalgam of data inputs from IHS Global Insight, Moody's, State DOLs, US BLS's Current Employment Statistics Program (CES) Quarterly Census of Employment and Wages (QCEW) program, and the US Census Bureau's American Community Survey.

(b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.

(c) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.

(d) Consists of the following counties: Fairfield, Litchfield, and New Haven.

Based on national forecasts to 2044, regional forecasts to 2050, and pandemic recovery expectations, the existing regional outlook suggested that jobs would expand by 0.45 percent annually over the period from 2015 to 2055, as mentioned above, roughly half the annual average growth rate of 0.99 percent that occurred between 1980 and 2021. Employment in the City was expected to expand at an annual rate of 0.55 percent, slightly greater than the 0.38 percent annual average gain projected in the suburban regions of New Jersey, Connecticut, and New York. According to NYMTC, with a full pandemic recovery to 2019 levels expected no later than 2025, no sub-regions were projected to experience a period of interim employment losses, as each





tends to grow with cyclical contractions and expansions ranging between 0.14 and 1.19 percent annually on average over the period from 2015 to 2055.

*Labor Force Conditions*

Prior to the pandemic, the region had nearly recovered from the 2007-2009 recession in terms of unemployment and wages with unemployment rates below 2007 pre-recession levels and rising inflation-adjusted wages nearing 2007 levels. Sharp monthly job losses in 2020 contributed to among the worst short-term unemployment levels the region has seen since the Great Depression, however monthly trends show recovery well underway since the second half of 2020 (see Figure 3). The BLS reported that the City's annual average jobless rate had increased from 3.9 percent in 2019 to 12.3 percent in 2020 and has since fallen to 10.1 percent in 2021. On average in 2021, 401,800 residents were unemployed in a labor force of nearly 4.0 million, with 339,700 of these workers having lost jobs between 2019 and 2021. The City's rate of unemployment in 2021 was considerably higher than that of the three suburban regions. The New York suburban region had the lowest unemployment rate at 4.9 percent, followed by the Connecticut suburban region (6.5 percent) and the New Jersey suburban region (6.7 percent). Recent labor force conditions are summarized in Table 14.

**Table 14 Labor Force[a] Conditions, 2019 to 2021**

| Year | New York City | New York Suburban Region[b] | New Jersey Suburban Region[c] | Connecticut Suburban Region[d] |
|---|---|---|---|---|
| Labor Force | | | | |
| 2019 | 4,070,500 | 2,630,900 | 3,621,900 | 1,049,500 |
| 2020 | 3,909,800 | 2,591,700 | 3,594,900 | 1,025,500 |
| 2021 | 3,975,100 | 2,551,600 | 3,529,600 | 986,300 |
| Employed | | | | |
| 2019 | 3,913,000 | 2,539,300 | 3,503,500 | 1,011,700 |
| 2020 | 3,428,900 | 2,375,300 | 3,251,500 | 944,900 |
| 2021 | 3,573,300 | 2,426,500 | 3,291,600 | 921,700 |
| Unemployed | | | | |
| 2019 | 157,400 | 91,600 | 118,400 | 37,800 |
| 2020 | 480,900 | 216,400 | 343,400 | 80,600 |
| 2021 | 401,800 | 125,100 | 238,100 | 64,600 |
| Unemployment Rate | | | | |
| 2019 | 3.9% | 3.5% | 3.3% | 3.6% |
| 2020 | 12.3% | 8.3% | 9.6% | 7.9% |
| 2021 | 10.1% | 4.9% | 6.7% | 6.5% |

Source: BLS, Local Area Unemployment Statistics (LAUS) Program.
Notes:
(a) This table includes the jobs of self-employed (i.e., non-payroll) workers, some of which are part-time jobs, as reported by the US Department of Commerce and BLS. These non-payroll jobs are added to the payroll employment.
(b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.
(c) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.
(d) Consists of the following counties: Fairfield, Litchfield, and New Haven.

Monthly unemployment rates shown in Figure 3 illustrate the depth of job losses during the spring of 2020 followed by the expected improvement in unemployment rates from the peak spring 2020 levels. The March 2020 executive orders by the governors of New York State, New Jersey and Connecticut to close non-essential businesses contributed to sharply increased rates of regional unemployment. Over the following year and a half, the City and the suburban counties gradually reopened to business. On July 20, 2021, the City entered Phase 4, the final stage of its reopening strategy. Although most business restrictions loosened over the summer, strict vaccine requirements for adults and older children remained in place for high-risk areas. During fall 2021 many New York City workers returned to in-office employment. By early October 2021, pandemic restrictions had eased for vaccinated workers and consumers while a wide range of indoor activities remained off-limits to unvaccinated residents. At the end of December 2021, the City became the first US city to issue a general vaccine mandate for all private-sector employees, an expansion of the November 2021 mandate for public-sector employees to cover all workers within the City's five boroughs. On March 7, 2022, in response to a sharp decline in Omicron variant cases and widespread participation in vaccination programs, the City suspended its Key to NYC rules, eliminating vaccine requirements for restaurants, fitness facilities, and entertainment venues and mask-wearing requirements for grades K-12 students. Over these months, the City's monthly

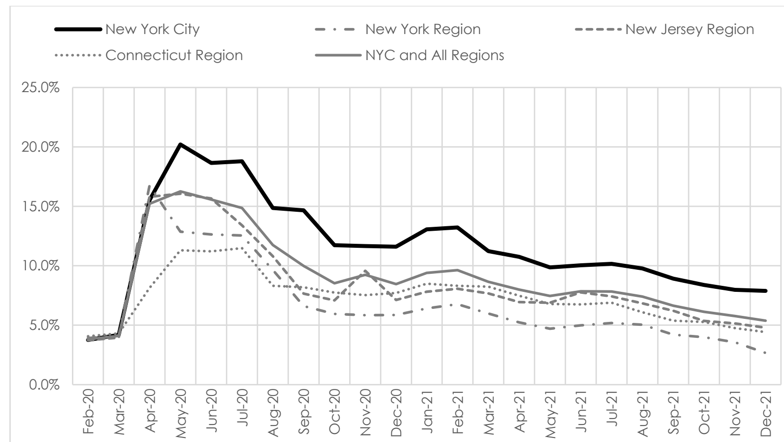




unemployment rate climbed from 3.8 percent in February 2020 to 20.2 percent in May 2020, falling back down to 7.9 percent in December 2021.

Among the suburban counties, unemployment rates rose the least in the Connecticut counties during the early months of the pandemic. However, by the later months of 2020, the Connecticut region's unemployment rate increased to levels above that of the New Jersey and New York suburban counties. During the latter half of 2020 and through 2021, the New York suburban counties had the lowest unemployment rate among the five regions, reaching a low of 2.7 percent in December 2021. Unemployment rates declined in all regions from February to December 2021.

**Figure 3 Monthly Unemployment Rates, February 2020 to December 2021**




Source: BLS, Local Area Unemployment Statistics (LAUS) Program.
Notes:
(a) This figure includes the jobs of self-employed (i.e., non-payroll) workers, some of which are part-time jobs, as reported by the US Department of Commerce and BLS. These non-payroll jobs are added to the payroll employment.
(b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.
(c) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.
(d) Consists of the following counties: Fairfield, Litchfield, and New Haven.

Over the 12-month period from January 2021 to January 2022, the City added 312,800 Nonfarm jobs (a measure of the number of U.S. workers in the economy that excludes proprietors, private household employees, unpaid volunteers, farm employees, and the unincorporated self-employed) with 306,300 jobs gained in the private sector. Given the massive losses incurred in 2020, job gains in 2021 largely represented a recovery of recent past losses, rather than serving as evidence of long-term growth trends. Only the major industry sector of Natural Resources, Mining and Construction saw job losses over this period (-8,100). Job gains were largest in the following sectors: Accommodation and Food Services (+110,900); Professional, Scientific, and Technical Services (+32,200); Health Care and Social Assistance (+32,000); Administrative and Support and Waste Management (+24,900); Information (+24,300); Arts, Entertainment, and Recreation (+23,300); Retail Trade (+20,000); Transportation and Warehousing (+13,900); and Other Services (including Religious, Grant Making, Civic and Professional occupations (+10,100).

Several industries added less than 10,000 jobs including: Educational Services (+8,000); Government Services (+6,500); Wholesale Trade (+5,700); Manufacturing (+4,200); Management of Companies and Enterprises (+2,600); Finance and Insurance (+1,800); Utilities (+300); and Real Estate and Rental and Leasing (+200).

*Housing Construction*

In the housing market, annual building permits authorizing new housing construction modestly increased in the City to 19,900 units in 2021, a gain of 500 units or +2.7 percent over 2020 (as shown in Table 15). The number of permits approved in 2021 was down 25.0 percent or -6,600 units from the recent peak of 26,500 permits issued in 2019. Annual average growth in housing permits has expanded over the period from 2016 to 2021 by 4.1 percent. The largest number of permits issued in the period since 2016 has occurred in Brooklyn (42,600 units), followed by the Bronx (28,500 units) and Queens (27,600 units).

**Table 15 Housing Building Permits Issued within the City, 2016 – 2021**

| Borough | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total, 2016-2021 | Average Annual Growth (2016-2021) | Annual Growth (2020-2021) |
|---|---|---|---|---|---|---|---|---|---|
| **Bronx** | 4,003 | 5,401 | 3,698 | 5,541 | 4,461 | 5,348 | 28,452 | 6.0% | 19.9% |
| **Brooklyn** | 4,503 | 6,130 | 8,445 | 9,696 | 6,802 | 7,013 | 42,589 | 9.3% | 3.1% |
| **Manhattan** | 4,024 | 4,811 | 3,584 | 5,512 | 1,896 | 3,165 | 22,992 | -4.7% | 66.9% |
| **Queens** | 2,838 | 5,104 | 4,577 | 5,137 | 5,840 | 4,087 | 27,583 | 7.6% | -30.0% |
| **Staten Island** | 901 | 685 | 606 | 661 | 408 | 310 | 3,571 | -19.2% | -24.0% |
| **Total** | 16,269 | 22,131 | 20,910 | 26,547 | 19,407 | 19,923 | 125,187 | 4.1% | 2.7% |

Source: US Census Bureau, Building Permit Survey.

*Office Market*

In other property markets, notably office, Cushman & Wakefield reported that leasing activity had recovered modestly in 2021 from an all-time low of 12.8 million square feet in 2020 up to 18.6 million square feet in 2021. Although an improvement, this was down significantly from 34.7 million square feet in 2019. Recovering off a historical high in Manhattan unemployment, demand for office space remained very low in the fourth quarter of 2021 with New York City office-using employment roughly 72,600 jobs below the February 2020 total, despite gains of 66,300 office jobs over the past twelve months. Roughly one-third of new lease activity was drawn from the sectors of technology, advertising, media and information services, primarily in large spaces of 10,000 SF square feet or more. Financial services firms comprised another third of new leasing activity.





Increasing vacancies in sublease space put further pressure on asking rents. The overall vacancy rate, including both direct and sublet vacancies climbed from 11.1 percent in Q4 2019, to 15.2 percent in Q4 2020 and 20.4 percent in Q4 2021 (see Table 16). Manhattan's office submarkets were disproportionately impacted by the pandemic with areas such as Murray Hill, Times Square South, the West Side, Hudson Square/West Village, Madison/Union Square, and the Insurance district of Wall Street hit the hardest. Since Q4 2019, the vacancy rate has increased by 11.3 percentage points in Midtown South compared with a gain of 9.4 percentage points in Downtown and 8.8 percentage points in Midtown as a whole. In both Midtown South and Downtown, sublet vacancies more than doubled in area.

**Table 16 Manhattan Office Market Overall Vacancy Rates, Q4 2019- Q4 2021**

| SUBMARKET | Q4 2019 | Q4 2020 | Q4 2021 | 2019-2021 Percentage Point Change |
|---|---|---|---|---|
| East Side/UN | 12.2% | 13.5% | 19.5% | +7.3% |
| Grand Central | 13.1% | 18.2% | 22.1% | +9.0% |
| Madison/Fifth | 16.0% | 20.9% | 22.7% | +6.7% |
| Murray Hill | 10.2% | 15.5% | 23.0% | +12.8% |
| Park Avenue | 11.0% | 15.9% | 19.0% | +8.0% |
| Penn Station | 8.3% | 11.4% | 14.0% | +5.7% |
| Sixth Avenue/Rock Center | 8.7% | 10.9% | 13.8% | +5.1% |
| Times Square South | 11.3% | 18.4% | 23.2% | +11.9% |
| West Side | 13.2% | 17.2% | 26.8% | +13.6% |
| **MIDTOWN TOTALS** | **11.6%** | **15.8%** | **20.4%** | **+8.8%** |
| Chelsea | 9.3% | 12.9% | 16.0% | +6.7% |
| Greenwich/NoHo | 6.2% | 12.7% | 14.9% | +8.7% |
| Hudson Square/West Village | 6.5% | 15.1% | 16.7% | +10.2% |
| Madison/Union Square | 8.4% | 16.1% | 23.8% | +15.4% |
| SoHo | 13.1% | 14.8% | 19.1% | +6.0% |
| **MIDTOWN SOUTH TOTALS** | **8.5%** | **14.8%** | **19.8%** | **+11.3%** |
| City Hall | 8.9% | 8.8% | 9.9% | +1.0% |
| Financial East | 12.9% | 13.0% | 21.5% | +8.6% |
| Financial West | 19.9% | 18.8% | 26.9% | +7.0% |
| Insurance | 9.2% | 12.0% | 30.6% | +21.4% |
| TriBeCa | 3.0% | 6.3% | 12.6% | +9.6% |
| World Trade | 11.9% | 17.3% | 19.3% | +7.4% |
| **DOWNTOWN TOTALS** | **11.7%** | **13.7%** | **21.1%** | **+9.4%** |
| **MANHATTAN TOTALS** | **11.1%** | **15.2%** | **20.4%** | **+9.3%** |

Note: Overall vacancies include both direct and sublet vacancies.
Source: Cushman & Wakefield, Office Marketbeat, Q4 2019, Q4 2020 & Q4 2021.

With reduced demand, Cushman & Wakefield reported that Class A rental rates decreased by 4.4 percent from $79.82 in 2019 to $76.29 per square foot in 2021 (-4.4%), while average rental rates for all classes edged down from $73.41 per square foot in 2019 to $69.67 in 2021 (-5.1%). Net absorption for the borough's office market was down from 2.6 million square feet in 2019 to -19.4 million square feet in 2021 as businesses released no longer needed space. Manhattan's inventory of office space decreased from 408.9 million square feet in 2019 to 408.3 million square feet in 2021, a net loss of 530,000 square feet likely due to renovations and conversions from office to other uses. As of March 2022, City leaders and New York State legislators are continuing to evaluate the feasibility of a proposal to override local zoning regulations to incentivize the conversion of commercial buildings, including office and hotel properties, in Midtown Manhattan into housing. These incentives would apply to class B and C office buildings as well as hotels with fewer than 150 rooms over a 5-year period.

During the fourth quarter of 2021, Cushman & Wakefield reported that 17.0 million square feet of office space was under construction or proposed to start in Manhattan. Table 17 identifies 14 office buildings being built or announced for development between 2022 and 2025. In the aggregate, these buildings will contribute over 22.1 million gross square feet of space to the Manhattan market if all are completed within the next three years. Four towers are expected to exceed 2.5 million square feet each, while seven others will range between one and two million square feet. In 2022, four buildings were expected to account for 6.0 million square feet of construction, followed by the build out of 5.1 million square feet in 2023, 6.6 million in 2024, and 4.3 million square feet in 2025. This data is current as of 2022; many developers have not yet shared their construction intentions under current pandemic conditions.

**Table 17 Major Manhattan Office Buildings Proposed for Completion by 2025[a]**

| Year of Project Completion | Address | Developer/Occupant | Gross Square Feet |
|---|---|---|---|
| 2022 | 50 Hudson Yards (415 10 Ave) | Related | 2,900,000 |
| | 2 Madison West (435 West 31 St) | Brookfield | 1,700,000 |
| | 550 Washington St | Oxford Properties | 1,300,000 |
| | 46 Gansevoort St | Wm Bottliev & Aurora Capital | 100,000 |
| 2023 | 66 Hudson Blvd (The Spiral) | Tishman Speyer | 2,850,000 |
| | 261 11th Ave | L & L & Normandy | 500,000 |
| | 3 Hudson Blvd (555 West 34th St) | Moinian/Boston Properties | 1,800,000 |
| 2024 | 5 World Trade Center (130 Liberty St) | Port Authority of NY & NJ | 1,300,000 |
| | 200 Greenwich Street (WTC #2) | Silverstein Properties | 2,800,000 |
| | 1 Madison Ave | SL Green | 1,250,000 |
| | 99 Hudson Blvd (444 11th Ave) | Tishman Speyer | 1,300,000 |
| 2025 | 270 Park Ave | JP Morgan Chase | 2,500,000 |
| | 424-434 5th Ave (Lord & Taylor) | Amazon | 630,000 |
| | 4 Hudson Square (137 Varick) | Disney/Silverstein Properties | 1,200,000 |

Source: New York Building Congress & Moody's Analytics REIS.
Notes: (a) Current as of March 2022.

*Population Trends and Projections*

Since 1980, US Census data indicate that the City's population has increased by 1.7 million persons to 8.8 million residents in 2020 (see Table 18). In recent years, the City has continued to be a desirable place of residence for many young professionals, foreign immigrants and international investors who maintain multiple residences, as well as the City's long-standing residents who have aged in place. All five of the City's boroughs are now more populous than in 1980. While the City's population has recorded historical periods of contraction, the commuter suburbs of New York,





New Jersey and Connecticut have grown largely continuously over the past 40 years. Compared to 8.8 million residents in the City, northern and central New Jersey now houses 7.4 million residents while the nine counties of Long Island and the Mid-Hudson are home to 5.3 million residents. Over the period from 1980 to 2020, the New Jersey region saw an increase of 1.6 million residents and the New York region added 782,700. The Connecticut region, with 2.0 million residents, has added 282,200 residents since 1980. All subregions experienced modest population losses from a peak year in 2017 to 2019 according to annual estimates benchmarked to the 2010 Census. However, the 2020 Census, the latest data available, identified strong growth in the region over the period from 2010 to 2020.

Recent population losses during the latter half of the past decade in the New York City metropolitan area follow national trends for major urban areas where residents have emigrated elsewhere due to increased living costs and slow salary growth. As public spaces, entertainment venues, and restaurants closed and white-collar employment transitioned from office buildings in central business districts to remote home-based work locations during the spring and summer of 2020, outward migration accelerated from the New York metropolitan area, especially among young adults. At that time, realtors reported increased suburban home purchases and rental lease signings in the outer suburban areas of the region as apartment vacancies in Midtown West and the Upper West Side climbed upward.

According to Moody's Analytics REIS, a leading real estate analytics data provider, the most recent low point in apartment rental demand was in March 2021 when a high of 10,111 vacant units was estimated in the City and vacancy rates peaked at 4.3 percent. In the following months, the apartments market experienced a swift recovery as vacancy rates edged down to 3.5% in January 2022, well below 2019 vacancy rates and median asking rents climbed to recent records at $3,943 per unit compared with $3,655 in January 2019. Along with New York City, many major US cities and their central business districts saw multifamily absorption and rent growth in the second half of 2021. During the early months of the pandemic, many of the inner suburban counties experienced household outmigration but this trend ultimately reversed in the fall of 2020 according to Moody's. From Q4 2020 to Q4 2021, both the City and the suburban counties experienced continuous, albeit moderate household formation growth. While areas such as Suffolk and Sullivan counties in New York, Hunterdon and Somerset counties in New Jersey, and Litchfield County in Connecticut saw increases in single-family home sales prices in 2020, it is not yet clear whether increased demand in those areas is the result of a growing appetite for secondary homes or long-term relocations of year-round residents.

Population change was further affected by the direct loss of life due to the pandemic as COVID-19 infections spread quickly in the New York City metropolitan area earlier than in other large urban areas of the United States. The City, in particular, was in effect the laboratory for treatment protocols. According to the Central for Disease Control and Prevention, COVID-19 related deaths, both in total and per capita (39.4 per 10,000), were highest in New York City compared with the surrounding suburban counties. The Connecticut suburban counties (29.6 per 10,000) fared better than the New York and New Jersey suburban counties (35.6 and 34.8 per 10,000, respectively). While the regional death toll early in the pandemic was devastating, the treatment protocols established, and the rollout of widespread vaccinations have curtailed the excess morbidity rate. As of March 2022, just over half of COVID-19 deaths in the entire Tri-State area occurred in 2020 (52.5%) while another 35.3 percent occurred in 2021, and 12.1 percent in early 2022.

**Table 18 Population Trends 1980 to 2020**
(000s)

| Year | New York City | New York Region (a) | New Jersey Region (b) | Connecticut Region (c) | NYC and All Regions |
|---|---|---|---|---|---|
| 1980 | 7,071.6 | 4,537.1 | 5,856.8 | 1,725.2 | 19,190.8 |
| 1990 | 7,322.6 | 4,635.2 | 6,079.5 | 1,806.0 | 19,843.2 |
| 2000 | 8,008.3 | 4,933.1 | 6,661.8 | 1,888.8 | 21,491.9 |
| 2005 | 8,013.4 | 5,059.8 | 6,830.6 | 1,933.7 | 21,837.5 |
| 2010 | 8,175.1 | 5,123.7 | 6,946.4 | 1,969.2 | 22,214.5 |
| 2015 | 8,550.4 | 5,192.8 | 7,116.4 | 1,991.1 | 22,850.8 |
| 2016 | 8,537.7 | 5,182.0 | 7,110.1 | 1,983.6 | 22,813.4 |
| 2017 | 8,622.7 | 5,203.6 | 7,175.3 | 1,992.5 | 22,994.2 |
| 2018 | 8,398.7 | 5,161.4 | 7,093.1 | 1,982.6 | 22,635.8 |
| 2019 | 8,336.8 | 5,157.3 | 7,071.1 | 1,978.4 | 22,543.7 |
| 2020 | 8,804.2 | 5,319.8 | 7,412.6 | 2,007.4 | 23,544.0 |
| Average Annual Percent Change | | | | | |
| 1980 to 1990 | 0.3% | 0.2% | 0.4% | 0.5% | 0.3% |
| 1990 to 2000 | 0.9% | 0.6% | 0.9% | 0.4% | 0.8% |
| 2000 to 2005 | 0.0% | 0.5% | 0.5% | 0.5% | 0.3% |
| 2005 to 2010 | 0.4% | 0.3% | 0.3% | 0.4% | 0.3% |
| 2010 to 2015 | 0.9% | 0.3% | 0.5% | 0.2% | 0.6% |
| 2015 to 2016 | -0.1% | -0.2% | -0.1% | -0.4% | -0.2% |
| 2016 to 2017 | 1.0% | 0.4% | 0.9% | 0.4% | 0.8% |
| 2017 to 2018 | -2.6% | -0.8% | -1.1% | -0.5% | -1.6% |
| 2018 to 2019 | -0.7% | -0.1% | -0.3% | -0.2% | -0.4% |
| 2019 to 2020 | 5.6% | 3.2% | 4.8% | 1.5% | 4.4% |

Source: US Census Bureau.
Notes:
(a) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.
(b) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.
(c) Consists of the following counties: Fairfield, Litchfield, and New Haven.

NYMTC prepared a series of 40-year population forecasts, released in final form in October 2020 and presented in Table 19. Between 2015 and 2055, NYMTC projects a 0.33 percent annual rate of growth, compared to the region's annual average historic growth of 0.51 percent from 1980 to 2020. The City is expected to account for an estimated 40 percent of future regional annual growth. The New Jersey suburbs are expected to have 36 percent of the increase, while Long Island and the Mid-Hudson are expected to account for 18 percent of the total. The Connecticut region, by contrast, will likely account for only 6 percent of the regional growth.



HISTORY AND PROJECTION OF TRAFFIC, TOLL REVENUES AND EXPENSES AND REVIEW OF PHYSICAL CONDITIONS OF THE FACILITIES OF TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

Population growth traditionally will positively affect traffic demand on crossings, although employment trends appear to have had a more noticeable effect on traffic volumes at TBTA facilities. However, TBTA traffic variations do not always correlate year by year with regional demographic trends, as in this instance where pandemic impacts on behavior as well as reduced transit service have increased TBTA crossings. As evident, demand for TBTA facilities has been strong overall and NYMTC's long-term regional population projections indicate a trend for such demand to increase over the projected period. Any losses due to short-term fluctuations in employment due to the pandemic were projected to be offset by other years that will be characterized by growth. In general, an upward trend is expected over the long term through the end of NYMTC's current forecast period in 2055.

**Table 19 Population Projections**
(000s) (a)

| Year | New York City | New York Region (b) | New Jersey Region (c) | Connecticut Region (d) | NYC and All Regions |
|---|---|---|---|---|---|
| Average Annual Percent Change | | | | | |
| 2015 to 2020 | 0.42% | 0.06% | 0.25% | -0.02% | 0.25% |
| 2020 to 2025 | 0.64% | 0.21% | 0.33% | 0.16% | 0.41% |
| 2025 to 2030 | 0.40% | 0.31% | 0.35% | 0.24% | 0.35% |
| 2030 to 2035 | 0.24% | 0.69% | 0.67% | 0.52% | 0.50% |
| 2035 to 2040 | 0.20% | 0.48% | 0.52% | 0.33% | 0.37% |
| 2040 to 2045 | 0.19% | 0.23% | 0.40% | 0.16% | 0.26% |
| 2045 to 2050 | 0.15% | 0.27% | 0.39% | 0.12% | 0.25% |
| 2050 to 2055 | 0.11% | 0.26% | 0.38% | 0.12% | 0.23% |

Source: New York Metropolitan Transportation Council.
Notes:
(a) Forecast is the most recent available, unchanged from the previous year.
(b) Consists of the following counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster and Westchester.
(c) Consists of the following counties: The 13 counties of the North Jersey Transportation Planning Authority (Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, Warren) plus Mercer County of the Delaware Valley Regional Planning Commission.
(d) Consists of the following counties: Fairfield, Litchfield, and New Haven.

*Motor Vehicle Registrations*

The trend in motor vehicle registrations in an area has been a predictor of growth or stability in levels of vehicular traffic. Motor vehicle registrations in New York State, New Jersey and Connecticut peaked in 2005 and dropped sharply following the financial crisis. By 2011 Tri-State registrations neared peak 2005 levels though they have declined in recent years. Over the period from 2010 to 2020, registrations in the Tri-State area dropped by 507,900 with a loss of 949,400 registrants in New Jersey while the City added 213,000 registrants, New York State added 721,500 registrants and Connecticut lost 280,000 registrants (see Table 20). From 2020 to 2021, registrations have increased by 3.0 and 3.2 percent in the City and New York State, respectively. Increased personal vehicle travel in urban areas is considered one among many near-term impacts from the pandemic as commuters seek to avoid close contact with others during travel.

Although motor vehicle registrations are not projected for future years, auto sales increased nationally following the 2007-2009 recession due to pent-up demand with a record number of annual sales in 2015 and 2016. According to the United States Bureau of Economic Analysis, monthly auto sales declined marginally in recent years from a peak in 2016 as average monthly finance rates for 48-month new auto loans increased from a 50-year low in November 2015 of 4.0 percent to 5.5 percent in November 2019. A sharp dip in sales occurred in 2020 as consumer confidence plummeted, although sales numbers remained above annual levels from 2008 to 2012. By end of year 2021, consumer confidence had returned to pre-pandemic levels but was declining in the early months of 2022 due to concerns about fast-rising inflation. Global supply constraints, particularly the semiconductor chip shortage, contributed to low vehicle inventories and demand-induced rising prices at US car dealerships from 2020 through the present. In February 2022, total vehicle sales had slumped to 2012 levels while domestic automobile production continued a long-term decline that has been in motion since 2016, now at levels last seen during periods of sharply curtailed demand such as the early months of the 2020 pandemic and the 2009 recession. The outlook for future motor vehicle registrations will continue to depend on a revival of automobile production and stable consumer confidence levels as demand remains strong in the near-term.

**Table 20 Motor Vehicle Registrations**

(000s)[(a)]

| Year | New York City | New York State[(b)] | New Jersey | Connecticut |
|---|---|---|---|---|
| **2010** | 1,962 | 10,603 | 6,956 | 3,148 |
| **2011** | 1,961 | 10,431 | 7,940 | 2,829 |
| **2012** | 1,978 | 10,449 | 7,911 | 2,706 |
| **2013** | 2,016 | 10,674 | 7,061 | 2,856 |
| **2014** | 2,057 | 10,904 | 6,874 | 2,866 |
| **2015** | 2,107 | 10,639 | 5,939 | 2,842 |
| **2016** | 2,162 | 11,122 | 5,941 | 2,842 |
| **2017** | 2,189 | 10,857 | 6,058 | 2,826 |
| **2018** | 2,186 | 11,482 | 6,055 | 2,880 |
| **2019** | 2,182 | 11,389 | 6,033 | 2,879 |
| **2020** | 2,175 | 11,325 | 6,006 | 2,868 |
| **2021** | 2,242 | 11,689 | N/A | N/A |
| Average Annual Growth | | | | |
| **2010-2020** | 1.0% | 0.7% | -1.5% | -0.9% |
| **2011-2021** | 1.3% | 1.1% | N/A | N/A |

Source: United States Federal Highway Administration and New York State Department of Motor Vehicles

Notes:
(a) This represents the most recent available data for New Jersey and Connecticut.
(b) Including New York City.





Annual year-end motor vehicle registrations for the period from 2016 through 2021 are shown for each of the City's five boroughs in Table 21. The annual change in citywide registrations increased from a 1.2 percent increase from 2016 to 2017 to a 3.0 percent gain from 2020 to 2021 as pandemic-related transit safety concerns drove commuters away from public transit towards personal vehicles. From 2016 to 2021, the City gained 79,200 registrations; Brooklyn saw the largest gain in new registrations (+51,100), followed by the Bronx (+10,700), Staten Island (+9,700), and Queens (+8,700). Only Manhattan saw a decrease in the number of registrations, a drop of 1,000 vehicles. It is worth noting that the availability and usage levels of for-hire services have had impacts on traffic and contributed to a portion of the increase in vehicular travel in recent years although this upward trend appears to be leveling off. For example, the number of unique ride-hailing vehicles dispatched in the City (including for-hire Uber, Lyft, Juno and Via vehicles as well as black car, limo and livery vehicles) increased from 36,800 in 2015 to a peak of 104,670 vehicles in December 2018. Ride-hailing vehicles have since declined to a low of 28,100 vehicles in April 2020, climbing back up to 82,300 vehicles in December 2021.

**Table 21 New York City Motor Vehicle Registrations, 2016 to 2021**

| Borough | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2020 - 2021 Growth | 2016-2021 Average Annual Rate of Change |
|---|---|---|---|---|---|---|---|---|
| Bronx | 284,084 | 288,788 | 290,055 | 288,754 | 287,166 | 294,792 | 2.7% | 0.7% |
| Brooklyn | 512,374 | 521,434 | 524,701 | 535,265 | 544,623 | 563,485 | 3.5% | 1.9% |
| Manhattan | 256,017 | 254,572 | 250,270 | 248,322 | 251,147 | 255,005 | 1.5% | -0.1% |
| Queens | 830,603 | 841,513 | 837,319 | 831,600 | 817,102 | 839,323 | 2.7% | 0.2% |
| Staten Island | 279,271 | 283,067 | 283,928 | 277,617 | 275,154 | 288,928 | 5.0% | 0.7% |
| Total | 2,162,349 | 2,189,374 | 2,186,273 | 2,181,558 | 2,175,192 | 2,241,533 | 3.0% | 0.7% |

Source: New York State Department of Motor Vehicles

## Fuel Availability and Prices

Traffic and revenue at TBTA crossings have been affected in varying degrees by the availability and price of gasoline since 1970. Volatility driven by major events have contributed to fuel shortages and increases in gasoline prices. Such events include the 1973-1974 period due to the Organization of the Petroleum Exporting Countries ("OPEC") oil embargo and reduced OPEC output in 1979 associated with disruptions during the Iranian Revolution, during the first war in the Persian Gulf in the early 1990's and during the war in Iraq in the 2000's. During the mid to late 2000's reduced local supplies due to damage to refineries caused by Hurricane Katrina in 2005 caused near-record prices followed by a sharp reduction in prices during the 2007-2009 recession as global demand declined. Figures 4A/4B illustrate the trend in rolling average[11] monthly VMT and gas prices since 2011.

[11] 12-month rolling averages (using average values of the past 12 months instead of single months of data) were utilized in Figures 3A/3B to smooth out cyclical and seasonal month-to-month trends.

Major events affecting gas prices over the past decade include the Arab Spring pro-democracy protests and uprisings of 2010 to 2013 that resulted in rapidly rising gas prices amid local toll increases and local economic weakness, during which reductions in traffic volumes at TBTA crossings occurred; the 2014-16 collapse in oil prices due to booming U.S. shale oil production and aggressive regional economic recovery from the Great Recession; and, the current pandemic resulting in an unprecedented short-term decline in global travel activity and energy usage followed by a dramatic recovery in consumption in 2021 and 2022 where oil producers and refineries were unable to keep up to pace with increasing demand.

During the second week of July 2008, the average price of regular grade gasoline was the highest recorded price yet at that time at $4.114 per gallon in the U.S. and $4.179 in the City. Prices then dropped in the second half of 2008, remaining steady through 2009 and increasing through 2010. The next peak, during the second week of May 2011, saw prices at $3.965 per gallon in the U.S. and $4.069 in the City. After falling to the lowest prices in a decade in April 2020 due to a near-halt in travel activity and sharply reduced consumer demand, energy prices rose sharply over the following 23 months as oil producers and refineries were unable to ramp up production to meet rising demand amid geopolitical tensions in the Middle East and Europe. As of April 18, 2022, the U.S. Energy Information Administration ("EIA") stated that the price of regular grade gasoline averaged $4.066 per gallon nationally, and $3.968 in the City, down modestly from all-time highs recorded during the week of March 14, 2022. See the discussion of the factors contributing to changes in price and availability of gasoline below.

Sharp increases in the price of gasoline in 2008 and 2011 resulted in decreases in Vehicle Miles Traveled ("VMT") in the United States and in the New York metropolitan area. Data from the FHWA indicates that VMT decreased between 2007 and 2008 by 1.9 percent nationally and by 4.1 percent in New York State. In 2011, largely in response to the recession, national VMT was 2.6 percent below the 2007 level and New York State VMT was 7.1 percent below 2007. From 2014 to 2019 national travel demand continued to increase by an average annual rate of 1.5 percent as statewide levels decreased by 1.4 percent. At the national level, low gas prices contributed to increased travel, while VMT declined in New York State as average transit ridership increased and new travel options including car shares, bike shares and taxi-booking services emerged.

In 2020, pandemic-related travel restrictions contributed to a sharp drop in travel across the nation with an annual decline in VMT of 13.2 percent nationally and 16.6 percent in New York State where travel restrictions were longer and more intense than in other areas of the country. The recovery in VMT from 2020 to 2021 somewhat made up for the prior year losses, however national and New York State VMT remained 3.2 and 8.3 percent below 2019 levels, respectively. In the City, TBTA total transactions declined by 23.1 percent from 2019 to 2020 following annual average gains of 2.9 percent over the period from 2014 to 2019. In 2021, TBTA transactions increased by 21.4 percent over the previous year, but remained 6.7 percent lower than 2019 levels.

Factors contributing to changes in the price and availability of gasoline are both upward and downward and each has an unknown element that contributes to uncertainty. These factors include:





- Russia's invasion of Ukraine and subsequent sanctions on Russia and other related actions created significant market uncertainties and instability in gasoline availability and prices; these factors are partially reflected in current oil prices. Along with already low oil supplies and increasing demand, the EIA reported that commercial oil inventories in the Organization for Economic Co-operation and Development ended in February at the lowest levels since mid-2014. The EIA has reported that the pandemic had already created "greater-than-usual uncertainty" in its forecasting, and "this uncertainty has increased significantly following Russia's invasion of Ukraine." EIA researchers have noted several potential actions that could significantly impact oil markets in the near-term including additional nations banning imports of Russian energy, the announcement of further sanctions against Russia, independent actions by corporations that may impact Russia's oil production capabilities, and non-Russian producers could also increase output in response to higher prices. On March 31, 2022, President Biden announced the largest release of oil reserves in the history of the United States, putting one million additional barrels on the market per day on average over the months from April through September 2022. Although the Kingdom of Saudi Arabia ("the Kingdom") and the United Arab Emirates have so far not agreed to rapidly increase crude production to offset impacts from sanctions on Russia in a similar response to the 1990s oil shocks, the OPEC+ alliance continues to raise its quotas for the months ahead due to pressure from key customers including the United States. According to the latest data available as of April 18, 2022, the Kingdom's February crude oil exports were the highest on record since April 2020 with exports expected to continue to expand in the months ahead.

- Dependence on imported crude oil – Generally, the United States' dependence on imported fuel has continued to fall as the country continues to increase its reliance on domestic resources. The EIA, in the April 2022 Short-Term Energy Outlook ("STEO"), reported their outlook remains subject to heightened levels of uncertainty resulting from a variety of factors, including Russia's invasion of Ukraine, the production decisions of OPEC, and the rate at which U.S. oil and natural gas producers increase drilling.

- On April 12, 2022, the EIA projected that daily domestic crude oil production will average 12.01 million barrels per day in 2022 and will reach 12.95 million barrels per day in 2023, a record high last exceeded in 2019.

- Use of substitute fuels – Since 2010 the use of biofuels, including biomass-based diesel, ethanol and biofuel losses and co-products, has increased in the United States as domestic production has ramped up following reductions in foreign imports since 2013. In February 2022 the EIA reported that both biofuel and petroleum-based motor fuel consumption would exceed 2019 levels in 2022.

- This trend is expected due to regulatory support such as the federal Renewable Fuel Standard program which sets annual domestic renewable fuel volume targets. Increased levels of domestic production and net imports of biomass-based diesel were expected given the renewal of the biodiesel blender's tax credit in December 2019. Fluctuations in biofuel imports have an impact on the need for gasoline.

- Motor vehicle fuel efficiency – The projected real-world model year 2021 fuel economy of 25.3 miles per gallon ("mpg"), will be slightly less than the 2020 model year fuel economy of 25.4 mpg. However, if achieved, will be second-highest level year, after 2020, of fuel efficiency since the EPA began its analysis of light-duty automotive vehicles in 1975. In April 2010, both the National Highway Traffic Safety Administration and the EPA raised the fleet-wide Corporate Average Fuel Economy requirements to a real-world fuel economy of approximately 36 mpg for new vehicles in 2025. In December 2021, the EPA finalized new greenhouse gas standards for passenger vehicles effective for Model Years 2023 through 2026, resulting in a fleetwide real-world average of about 40 mpg in 2026, considerably higher than the Year 2026 32 mpg requirement under the earlier Trump Administration SAFE Vehicles Rules finalized in 2020. The EPA also proposed stronger standards for heavy-duty vehicles starting in model year 2027 on March 7, 2022, which would reduce nitrogen oxide emissions from trucks by as much as 60 percent in 2045.

- In recent years, electric vehicles ("EV") have increased in popularity, rising from 0.75 percent of total US light-vehicle deliveries in Q1 2018 to 3.4 percent in Q4 2021 while hybrid, plug-in hybrid, and electric vehicle sales in total increased in share from roughly 6 percent in Q1 2018 to 11 percent in Q4 2021. While the U.S. government had altered its system for regulatory credits associated with the sales of EVs in early 2020 as SAFE emissions regulations were set into policy, in March 2022, the EPA reinstated California's authority under the Clean Air Act to implement its own greenhouse gas emission standards and zero emission vehicle sales mandate, thereby continuing the practice of generating regulatory credits for the sales of EVs now followed by 14 states, including New York, New Jersey, and Connecticut.

- In its April 2022 STEO, the EIA forecasted the national price of regular grade gasoline to average $3.74 per gallon in 2022, compared with $3.02 per gallon in 2021. Although average prices stood at $4.091per gallon in mid-April, the EIA forecasts the national price of regular grade gasoline to peak on a quarterly basis at $3.97 per gallon during the second quarter of 2022, subject to change based on conditions in Russia's invasion of Ukraine, future events, and sanctions. It is notable that global demand for oil declined somewhat from mid-March to mid-April due to rising pandemic case numbers in Asia, Europe and, Australia followed by total lockdowns in Shanghai and other major Chinese cities.

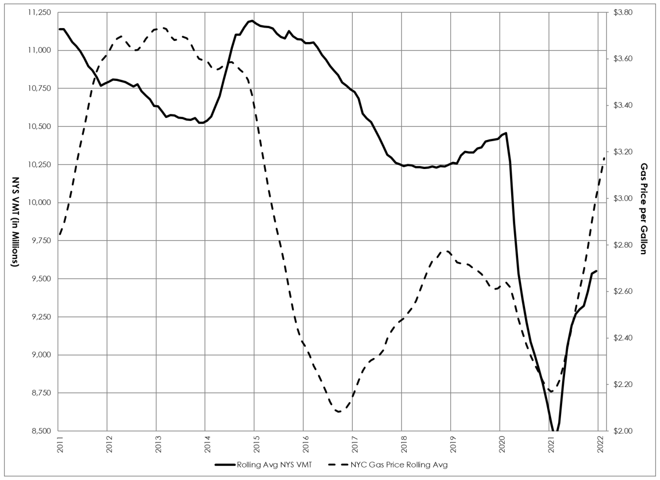
- The EIA's forecast for the Brent Crude Oil Spot Price, one of the major benchmarks used in pricing oil, is expected to peak in the second quarter of 2022 at $107.65 per barrel, however various investment banks and consultancies have forecasted far higher prices including forecasts of $135 per barrel on average in 2022 by Goldman Sachs as well as worst-case scenario forecasts of $200 per barrel by Barclays and Oslo-based consultancy Rystad Energy. After the U.S. announced it would ban imports of Russian energy and the U.K. said it would phase out Russian products by the end of 2022, the Brent Crude Oil Spot Price rose on March 8, 2022, to a long-term peak of $133.18 per barrel, later falling to $110.39 per barrel on March 14, 2022. Notably, crude oil prices were not expected to peak before sanctions took effect on March 26, 2022.

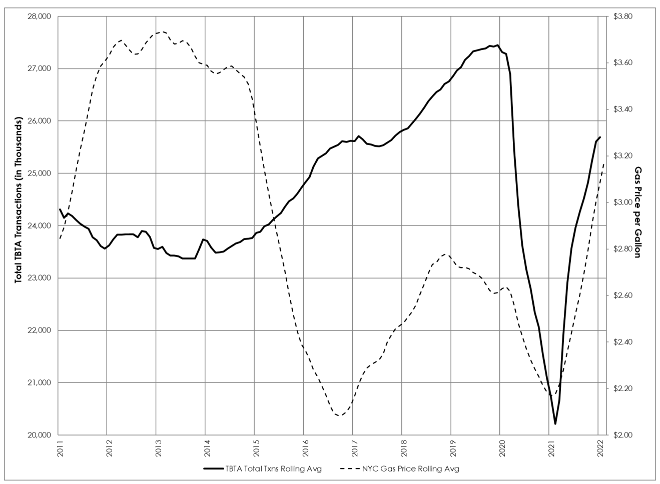




Depicted on the following page is Figure 4A/4B, which illustrates the historical relationship between gas prices and travel. As shown with both New York State VMT and TBTA Total Transactions, a reduction in the price of gas generally has correlated with a rise in vehicular travel demand. Similarly, a rise in the price of gas generally has correlated with a reduction in vehicular travel demand. However, Figure 4B shows that the rise in monthly transactions began prior to the drop in gas price, indicating that although gas prices can affect travel, the recent increases in transactions cannot entirely be attributed to the movement in gas prices.

**Figure 4A/4B New York City Gas Prices Compared to New York State VMT and TBTA Bridges and Tunnels Total Transactions**





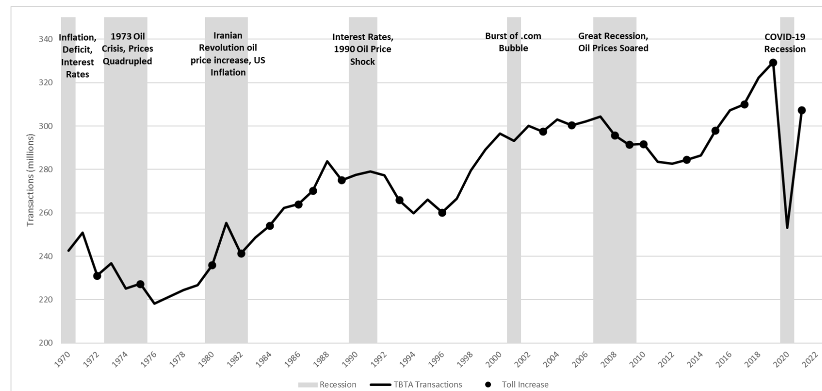



*Review of March 2022 Gas Prices*

Following a sharp reduction in TBTA transactions throughout most of 2020 due to pandemic travel restrictions, recent trends in the latter half of 2020 and 2021 suggest an extended period of recovery in travel is currently underway. Despite fast-rising fuel prices, this trend continued in the second half of 2021 and early 2022.

As mentioned earlier, among several factors, Russia's invasion of Ukraine and subsequent sanctions on Russia and other related actions created significant market uncertainties about the potential for future oil supply disruptions. Based on travel patterns during previous sharp increases in oil price and disruptions in oil supply, discretionary travel could decline and there may be fewer recreational trips. Also, the reduced non-work travel could also make the toll-free alternatives more competitive. In order to estimate the effects of the sudden spike in oil prices in the first few months of 2022 on our ten-year forecast, Stantec studied how gas prices and TBTA traffic trends have related to one another over the past 50 years. Figure 5 below shows TBTA transactions and recessions from 1970 through 2022 (as shown earlier in the report) with the addition of a brief recession description.

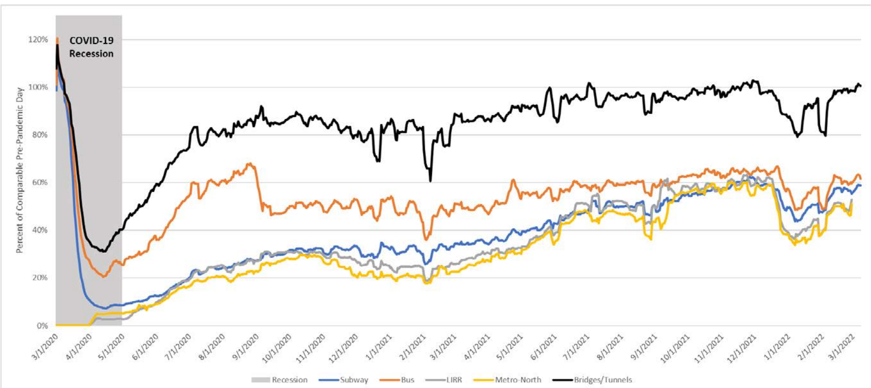
**Figure 5 TBTA Transactions Through Recessions**




A majority of recessions throughout the last 50 years were adjacent to periods with oil price spikes. Based on this analysis, Stantec's forecast assumes that an economic downturn is approaching as a result of the current sharp gas price increase. The possible extents of this economic downturn will be further studied as part of a series of sensitivities discussed later in this report.

Figure 6 depicts the pandemic related recovery of the various modes of travel in the City compared to a pre-pandemic day. As shown in the graph, there is still a large proportion of people that potentially have yet to return to travel for various reasons. The continued low level of transit use supports that observation. The strong return of travel on TBTA facilities compared to transit trips also indicates a general preference for personal vehicles. This suggests that there is continued room for increasing vehicle travel on TBTA facilities. Our base forecast assumes that a significant portion of lost vehicular trips due to oil prices will be replaced by the post pandemic return to normal travel.

**Figure 6 MTA Ridership and Traffic Estimates – March 2020 through March 2022**




### Toll Increase Impacts, Collection Methods, and Elasticity

Tolls that are increased periodically can affect traffic usage, especially if they outpace the rate of inflation and in those instances where competing facilities provide a good alternative. Elasticity, as used herein, is the relationship between the change in traffic volume and the toll rate change. It represents the relative decrease in traffic in response to a given increase in toll. Elasticity is expressed as a negative value and the higher the absolute value, the more apt a facility is to lose traffic, which can be attributable to diversions to competing facilities, switches in travel modes, consolidation of trips, and elimination of trips. Elasticity, in this sense, is used to analyze the relationship between tolls and use, i.e., when tolls are increased, motorists react, and travel patterns may change.

Elasticity factors vary, demonstrating that users react differently to toll increases depending on influencing conditions. On the TBTA crossings, elasticity tends to be influenced by the proximity of the toll-free City bridges and other considerations. The low elasticity factors for the Throgs Neck and Bronx-Whitestone Bridges indicate their relative isolation from the nearest toll-free competitor, the Ed Koch Queensboro Bridge. On the East River at the RFK Bridge and at the Queens Midtown and Hugh L. Carey Tunnels, elasticity increases as the degree of toll-free competition increases. The TBTA tunnels tend to lose traffic particularly when the competing crossings are operating under reasonable levels of traffic service and providing motorists with viable toll-free alternatives during



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non-peak periods. In addition, trip purpose influences demand; i.e., peak-period, work-related trips are less elastic than off-peak or discretionary trips that have fewer travel-time constraints. The effects of construction on main thoroughfares and feeder routes also affect drivers' choices of toll facilities.

Two sets of forecasts were developed for this report: one at constant (current) tolls and the second factoring in toll increases in March 2023 and March 2025 as included in the MTA 2022-2025 Financial Plan adopted by the MTA Board in February 2022. Elasticity factors used for the analyses in this report are based on factors Stantec developed from analyzing the elasticity exhibited following the March 2017 toll increase. Despite the pandemic, Stantec does not anticipate any changes to the usual driver behavior caused by a toll increase.

To evaluate the impact of any toll increase on transactions, transactional data at each of the TBTA facilities are split into four groups by payment type: NYCSC E-ZPass customers, non- NYCSC E-ZPass customers, NYCSC Mid-Tier E-ZPass customers (effective with the April 11, 2021, toll increase), and TBM customers. Stantec then estimated the revenue split by payment type; this enabled the tracking of the average toll rate throughout the months following the toll increase. The conversion to Cashless Tolling also occurred throughout 2017 at eight of the nine facilities and greatly induced cash customers to switch to E-ZPass. Overall E-ZPass usage increased by 3.4 percent (Throgs Neck Bridge) to 6.6 percent (RFK Bridge) in 2017 with the conversion to Cashless Tolling, which is a combination of background growth and payment method shifts, which vary by facility. Background growth rates were studied using historical and projected population growth, fuel prices, and VMT. Incorporating these various factors, seasonal trends in the data were also reviewed to determine the patterns and length of the toll increase impact. This process, generally, isolated the background growth and Cashless Tolling effects from the toll increase elasticities.

When reviewing changes in usage exhibited after the March 2017 toll increase, Stantec recognizes that it was unlike most prior toll increases in that, generally, total transactions at TBTA facilities continued to increase. This indicated, in Stantec's opinion, that the sensitivity to toll increases was diminishing and the background growth was increasing. Our analysis of the previous toll increases, prior to the existence of Cashless Tolling, found that cash motorists are more sensitive to toll rates when compared to E-ZPass users; indicating a significantly higher elasticity for cash customers than for E-ZPass customers. With regard to tolling elasticities, TBM customers are expected to behave more like E-ZPass customers than traditional cash customers, as there is no direct cash transaction at the toll gantry for either customer. Stantec made separate analyses for both the E-ZPass customers and for the TBM customers. As a result, Stantec has seen that based on historical data, elasticity rates for TBM customers may continue to be closer to those found for E-ZPass customers as behavior stabilizes between the two collection methods. Elasticity factors used to develop Stantec's analyses of toll revenue including the recent toll increase and a future potential toll increase are shown in Table 22.

As discussed earlier, there was a significant shift from cash to E-ZPass in response to the implementation of Cashless Tolling. In 2018, the unprecedented shift to E-ZPass continued with total E-ZPass market share reaching 94.6 percent by December 2018. In December 2019, E-ZPass market share remained at 95.5 percent. In December 2020, E-ZPass market share was 94.7 percent. As of December 2021, E-ZPass market share was 95.0. January 2022 E-ZPass market share increased to 95.2 percent. Stantec estimates that while this shift will continue throughout the duration of the forecast, at these higher participation levels, the incremental changes will be smaller.

Any toll increases or other adjustments are subject to future action by the TBTA Board. However, for purposes of the calculations provided, we have assumed toll increases in accordance with the 2022-2025 MTA Financial Plan. This plan includes projected toll increases on March 1, 2023, and March 1, 2025. Accordingly, the revenue analysis with the toll increase laid out in this report includes a 5.7 percent toll increase on March 1, 2023, and a 5.6 percent toll increase on March 1, 2025, to achieve a 4 percent revenue yield for the years 2023 and 2025. Further, it was assumed that truck tolls would be increased proportionately, and that the relationships between TBM and NYCSC E-ZPass tolls for passenger cars would remain the same as those implemented for the toll increase on April 11, 2021.

As previously noted, the NYCSC Mid-Tier toll is a new toll rate effective with the April 11, 2021, toll increase and is charged to NYCSC E-ZPass customers who do not properly mount their E-ZPass tag when crossing TBTA facilities. It was assumed that these customers will have a similar behavior to E-ZPass customers since they often do not realize their improperly mounted E-ZPass was not read and therefore have the same elasticity. It is also assumed that a small portion NYCSC customers subject to the higher Mid-Tier toll rate will properly mount their E-ZPass tag in order to pay the lowest E-ZPass toll rate.

**Table 22 Elasticity Factors**

| Facility | Elasticity Factors[a] | | |
|---|---|---|---|
| | TBM | E-ZPass | Mid-Tier |
| Throgs Neck Bridge | -0.152 | -0.087 | -0.087 |
| Bronx-Whitestone Bridge | -0.152 | -0.087 | -0.087 |
| RFK Bridge | -0.152 | -0.134 | -0.134 |
| Queens-Midtown Tunnel | -0.188 | -0.130 | -0.130 |
| Hugh L. Carey Tunnel | -0.226 | -0.178 | -0.178 |
| Verrazzano-Narrows Bridge | -0.174 | -0.011 | -0.011 |
| Henry Hudson Bridge | -0.165 | -0.099 | -0.099 |
| Marine Parkway Bridge | -0.116 | -0.033 | -0.033 |
| Cross Bay Bridge | -0.163 | -0.020 | -0.020 |

Notes:
(a) For each 1% increase in toll, the volume is expected to decrease by the elasticity factor, e.g., for each 1% increase in the TBM toll at the Queens Midtown Tunnel, TBM traffic would decrease by 0.188%.





As for the impacts of the potential future toll increases on traffic demand, the elasticity factors from Table 22, as described previously, were used by Stantec to calculate changes in traffic, as shown in Table 23. These traffic impacts represent the reduction in volume from the corresponding annual traffic levels that would be expected in the constant tolls scenario Future transactions are calculated by adding background growth to existing transactions, and, when there is a toll increase, factoring in traffic loss due to toll elasticity (excluding any additional impacts which might occur as a result of the pandemic).

## Table 23 Estimated Percent Change in Average Toll Rates and Traffic in 2023 and 2025

| Facility | Elasticity Factors | | | Estimated Percent Change with 2023 Toll Increase | | | | | | Estimated Percent Change with Assumed 2025 Toll Increase | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Average Toll Rate | | | Traffic | | | Average Toll Rate | | | Traffic | | |
| | TBM | E-ZPass | Mid-Tier | TBM | E-ZPass | Mid-Tier | TBM | E-ZPass | Mid-Tier | TBM | E-ZPass | Mid-Tier | TBM | E-ZPass | Mid-Tier |
| Throgs Neck Bridge | -0.152 | -0.087 | -0.087 | 5.7% | 5.7% | 5.7% | -0.9% | -0.5% | -0.5% | 5.6% | 5.6% | 5.6% | -0.9% | -0.5% | -0.5% |
| Bronx-Whitestone Bridge | -0.152 | -0.087 | -0.087 | 5.7% | 5.7% | 5.7% | -0.9% | -0.5% | -0.5% | 5.6% | 5.6% | 5.6% | -0.9% | -0.5% | -0.5% |
| RFK Bridge | -0.152 | -0.134 | -0.134 | 5.7% | 5.7% | 5.7% | -0.9% | -0.8% | -0.8% | 5.6% | 5.6% | 5.6% | -0.9% | -0.8% | -0.8% |
| Queens-Midtown Tunnel | -0.188 | -0.130 | -0.130 | 5.7% | 5.7% | 5.7% | -1.1% | -0.7% | -0.7% | 5.6% | 5.6% | 5.6% | -1.1% | -0.7% | -0.7% |
| Hugh L. Carey Tunnel | -0.226 | -0.178 | -0.178 | 5.7% | 5.7% | 5.7% | -1.3% | -1.0% | -1.0% | 5.6% | 5.6% | 5.6% | -1.3% | -1.0% | -1.0% |
| Verrazzano-Narrows Bridge | -0.174 | -0.011 | -0.011 | 5.7% | 5.7% | 5.7% | -1.0% | -0.1% | -0.1% | 5.6% | 5.6% | 5.6% | -1.0% | -0.1% | -0.1% |
| Henry Hudson Bridge | -0.165 | -0.099 | -0.099 | 5.7% | 5.7% | 5.7% | -0.9% | -0.6% | -0.6% | 5.6% | 5.6% | 5.6% | -0.9% | -0.6% | -0.6% |
| Marine Parkway Bridge | -0.116 | -0.033 | -0.033 | 5.7% | 5.7% | 5.7% | -0.7% | -0.2% | -0.2% | 5.6% | 5.6% | 5.6% | -0.6% | -0.2% | -0.2% |
| Cross Bay Bridge | -0.163 | -0.020 | -0.020 | 5.7% | 5.7% | 5.7% | -0.9% | -0.1% | -0.1% | 5.6% | 5.6% | 5.6% | -0.9% | -0.1% | -0.1% |

## Availability of Capacity on TBTA Facilities

Stantec's assessment of TBTA's bridges and tunnels indicates that historically during most, if not all hours of the day, most facilities are operating below carrying capacity and more growth can be accommodated. The exception is the Queens Midtown Tunnel where historical data show the capacity is somewhat constrained during specific hours within peak periods. This may limit potential traffic growth during these specific times, but the great majority of the hours have sufficient available capacity to absorb any volume growth that may occur. Overall, wherever capacity constraints are observed, TBTA acts wherever feasible to alleviate those constraints through targeted investments.

TBTA completed the implementation of Cashless Tolling at all of its facilities by fall 2017. The Cashless Tolling system utilizes tolling equipment mounted on overhead gantries to capture E-ZPass tag-reads and license plate images in an environment without traditional toll plazas, enabling customers to traverse tolling areas in free-flow fashion.

Actual traffic observed after the conversion to Cashless Tolling and subsequent removal of traditional toll plazas showed that the removal of the toll booths eliminated any localized queuing and congestion associated with cash collection and E-ZPass interventions. The conversion to Cashless Tolling, however, does not address any recurring upstream or downstream congestion issues that exist at some facilities. These capacity constraints are typically located outside TBTA's jurisdictional boundaries but can impact traffic flow within the tolling areas during peak commuter and recreational periods. Flow through the former plaza areas continues to be affected by these off-site conditions even with the facilities operating in a Cashless Tolling environment. TBTA completed a study to identify post Cashless Tolling traffic improvements that will mitigate some of these off-site constraints to the extent feasible and in coordination with NYCDOT and New York State Department of Transportation (NYSDOT). The results of the study have helped inform TBTA's capital plan with current and future planned capital projects which will address some of the identified post Cashless Tolling traffic bottlenecks that serve to constrain capacity at certain facilities.

## TBTA and Regional Operational and Construction Impacts

KC Engineering and Land Surveying, P.C. ("KC Engineering") was contracted as a subconsultant to Stantec to perform an analysis of current and planned projects in the New York City area. Traffic volumes on TBTA facilities are in some instances influenced by construction and rehabilitation projects involving roadways and bridges in the New York City area.

Major projects that result in long-term closures on the competing bridges may increase volumes on TBTA's facilities. Also, long-term lane closures on the roadway network serving the TBTA crossings or on the TBTA crossings themselves may affect TBTA traffic volumes or cause traffic to shift from the affected crossing to either another TBTA facility or to one of the City's toll-free bridges. For example, when replacement of the Queens Approach structure on the Bronx Whitestone Bridge began in 2011, some traffic diverted to the Throgs Neck Bridge, as the Bronx Whitestone Bridge





and the Throgs Neck Bridge serve similar traffic and a delay on one of the bridges results in a shift to the other crossing. A number of roadway construction/rehabilitation projects, over the past few years, have influenced traffic volumes on TBTA facilities, and future construction will also affect traffic. The following descriptions also highlight area construction activities and measures that have influenced TBTA volumes and other planned and proposed projects that may affect traffic during the forecast period. Information on future non-TBTA construction activity was obtained from MTA, NYSDOT, NYCDOT, NYMTC, and the Port Authority.

*Construction on TBTA Facilities*

TBTA has an active program of regional transportation planning and coordinates closely with regional partners on all projects in common corridors. TBTA is part of a regional Interagency Program Coordination group that meets regularly to discuss ongoing and future projects in order to coordinate and align projects among the regional agencies to minimize adverse regional traffic impacts of construction by different regional agencies.

In general, the majority of construction activities programmed for the TBTA facilities are scheduled to take place during off-peak hours, including nighttime and weekend lane closures in the tunnels. They are expected to have minimal impacts on daily bridge and/or tunnel traffic.

Ongoing construction projects at each of the TBTA facilities include the following:

- The **Verrazzano-Narrows Bridge** is undergoing steel repairs on the suspended spans which are planned for completion in April 2022. Rehabilitation of the Staten Island and Brooklyn approach upper level elevated ramps is ongoing and is planned to be completed in the fall of 2022. Safety fence installation at the upper and lower level suspended spans is ongoing and planned to be completed in late 2022. In addition, there is an ongoing bridge preservation program which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items.

- The **Cross Bay Bridge** is undergoing the installation of a power monitoring system which is planned to be completed in the summer of 2022. In addition, there is an ongoing bridge preservation program which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items.

- The **Marine Parkway Bridge** is undergoing on-grade light pole replacement and a facility wide painting program both of which are planned to be completed in late 2022. Installation of a power monitoring system is ongoing and planned to be completed in the summer of 2022. Tower elevator replacement is ongoing and planned to be completed in 2023. In addition, there is an ongoing bridge preservation program which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items.

- The **Bronx-Whitestone Bridge** is undergoing facility wide painting and miscellaneous structural rehabilitation which are planned to be completed in 2024. In addition, there is an ongoing bridge preservation program which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items. As noted below, the Bronx-Whitestone Bridge and the Throgs Neck Bridge serve similar traffic corridors and some of the same traffic, and delays on one of the bridges result in a shift to the other crossing.

- The **Throgs Neck Bridge** suspended span deck replacement construction contract was awarded in late 2018. Staged construction of the roadway deck is in progress with the use of a movable barrier to implement a reversible lane. Three lanes are being maintained throughout construction in the peak direction to maximize traffic flow. This traffic management strategy has been successfully deployed on recent projects at TBTA's other suspension bridges and has been effective in minimizing traffic impacts. The deck replacement and associated painting work is planned to be completed in late 2022. In addition, a construction contract for the Approach Viaducts structural rehabilitation was awarded in 2019 and is planned to be completed in the late summer of 2023. There is also an ongoing bridge preservation program at the TNB which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items. As noted above, the Bronx-Whitestone Bridge and the Throgs Neck Bridge serve similar traffic corridors and some of the same traffic, and a delay on one of the bridges results in a shift to the other crossing.

- The **Henry Hudson Bridge** structural steel repairs and full overcoating of the steel structure were substantially completed in March 2022. A project to upgrade the Dyckman Street and Kappock Street electrical substations is ongoing and is planned to be completed in 2024. In addition, there is an ongoing bridge preservation program which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items.

- The **RFK Bridge** power resiliency and flood mitigation project was substantially completed in March 2022. A project to perform superstructure steel upgrades for all facility structures except the suspended spans is ongoing and planned to be substantially complete in the summer of 2022. A project to demolish the remaining occupied spaces beneath the Manhattan Plaza structure is ongoing and planned to be completed in the fall of 2022. A project to perform structural repairs to the Manhattan Plaza and FDR Ramp is also ongoing and planned to be completed in the summer of 2022. A project to paint the Manhattan Plaza and Junction Structure in ongoing and planned to be completed in spring of 2023. A project to construct a new ramp connection to the Harlem River Lift Span sidewalk and to upgrade the lift span fenders is ongoing and planned to be completed in late 2023. In addition, there is also an ongoing bridge preservation program at the RFK which includes bridge washing, cleaning of drainage systems, joint repairs, roadway striping, and other miscellaneous as needed maintenance items.





- The **Queens Midtown Tunnel** has an ongoing tunnel preservation program which includes cleaning of drainage systems, cleaning of plaza walls, and other miscellaneous as needed maintenance items.

- The **Hugh L. Carey Tunnel** project to rehabilitate the Manhattan Blower Building façade was completed in February 2022. There is an ongoing tunnel preservation program which includes cleaning of drainage systems, cleaning of plaza walls, and other miscellaneous as needed maintenance items.

*Competing East River Crossings Construction*

Programmed construction along competing East River crossings include:

- **Ed Koch Queensboro Bridge** – The project to replace the upper level roadway deck started in 2018 and is expected to be completed by June 2024. Permanent lane closures began on the Manhattan-bound upper roadway in February 2022, with the right lane closed at all times and left lane closed during off-peak periods. Permanent Queens-bound upper roadway closures are anticipated to follow in winter 2022. This project has resulted in a slight increase in traffic volumes at the Queens Midtown Tunnel.

- **Brooklyn Bridge** – In September 2021, NYCDOT opened a new protected two-way bike lane on the bridge. The bike lane was created by repurposing one of the three Manhattan-bound lanes on the bridge. This permanent change may result in increased usage of the Hugh L. Carey Tunnel and, to a lesser extent, the Queens Midtown Tunnel. Rehabilitation of towers and approach arches on the Brooklyn Bridge began in fall 2019 and is expected to be completed in spring 2024. Occasional lane closures will take place to inspect and repair bridge components. Currently there are weekend single lane closures and weekday off-peak single and double lane closures to do maintenance on the cables. This project may result in increased usage of the Hugh L. Carey Tunnel.

*Other Major Bridge and Roadway Construction*

During the forecast period, several major roadway and bridge projects, which are part of NYMTC's current Transportation Improvement Program (TIP) for federal Fiscal Years 2020-2024, will potentially have traffic implications for the TBTA facilities.

Other bridges, roads, and overpasses programmed for construction include:

- **Madison Avenue Bridge** – Rehabilitation of the Madison Avenue Bridge over the Harlem River began at the end of 2018 and is expected to end in May 2023. The project includes electrical, mechanical, and miscellaneous operating system-related work. Minimal diversions to the RFK Bridge are anticipated.

- **Broadway Bridge** – Reconstruction of the bridge was scheduled to start in early 2019, however, problems with the operating system of the bridge delayed the start of the project. Installation of shielding in preparation for demolition work began in late 2019 and is almost complete. The project is scheduled to be completed in July 2027. The project's scope of work includes a major rehabilitation of the roadway deck, superstructure steel and substructure elements of the vertical lift span, as well as the approach spans. It will also include the replacement and rehabilitation of electrical and mechanical components of the vertical lift span, as well as replacement of the existing fender system with a new larger and stronger one. The project will involve single lane closures from 7am-3pm every day. A second lane will be closed during off-peak periods. Minimal diversions to the Henry Hudson Bridge are anticipated.

- **I-87/Major Deegan Expressway** – Rehabilitation of various overpasses along the Major Deegan Expressway from East 160th Street to East 232nd Street is scheduled for design and construction through 2026. Construction of the 138th Street bridge began in summer 2021 and is anticipated to be completed in early 2025.

  The Major Deegan Expressway between West 161st Street and the Alexander Hamilton Bridge project includes the addition of a northbound auxiliary lane and the replacement of the northbound and southbound viaducts to improve traffic flow and safety along the corridor. The Depot Place Bridge over the Expressway will also be rehabilitated as part of this project. This project began in 2019 and is expected to be substantially completed in spring 2022.

  These projects may result in minimal diversions to the RFK Bridge.

- **I-95/Cross Bronx Expressway** – Several rehabilitation projects are in development for the Cross Bronx Expressway.

  The rehabilitation of the six Cross Bronx Expressway bridges (replacement of deck and superstructure) over the Sheridan Expressway and Amtrak right-of-way from Boston Road to the Bronx River Parkway is a potential design-build project with construction currently scheduled to begin in fall 2024 and to be completed in spring 2028.

  A project to replace the ramp structure carrying the northbound Sheridan Blvd to the westbound Cross Bronx Expressway over the Bronx River will address structural deficiencies. This project will also provide maintenance repairs of four Cross Bronx Expressway bridges between Sheridan Blvd. and Crotona Ave. to address flag conditions and assure safety of traveling public. This project began summer 2021 and is anticipated to be completed in winter 2022/2023.

  The rehabilitation of the Arthur Avenue and 176th Street bridges over the Cross Bronx Expressway is currently under development. Construction is scheduled to begin in fall 2030 and be completed in spring 2032.

  The rehabilitation of the E.L. Grant Highway, Nelson Avenue, and Jesup Avenue bridges over the Cross Bronx Expressway is currently under development. The project, which includes deck and bearings replacement and steel repairs to address structural deficiencies and extend the



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service life of the structures, is scheduled to begin in spring 2029 and be completed in summer 2031.

The rehabilitation of Jerome Avenue and East 174th Street Bridges over the Cross Bronx Expressway (to extend the service life of the two bridges) is scheduled to begin in winter 2030/2031 and end in fall 2031. The scope of work will include replacement of the bridge decks/slabs, the repair of superstructures, the repair of concrete substructures, the replacement of bearings, and the repair of other deteriorated elements to assure continued safe operations.

The rehabilitation of the Cross Bronx Expressway over Webster Avenue, Third Avenue, and the Metro-North Railroad is scheduled to begin in late 2026 and end in spring 2029. The scope will include replacing the concrete deck and replacing/repairing other deteriorated bridge elements to ensure continued safe operations.

Active Traffic Demand Management strategies are to be implemented along the Cross Bronx Expressway corridor to enhance safety, mobility, and reliability. Construction is scheduled to begin in early 2024 and be completed in fall 2026.

These projects may result in minimal diversions to the RFK, Bronx-Whitestone, and/or the Throgs Neck bridges.

- **I-278/Bruckner Expressway** – The Bruckner Expressway/Sheridan Boulevard Interchange project consists of reconstruction of the Bruckner Expressway viaduct and the related ramps to address the poorly rated deck, deteriorated concrete columns, repair/replacement of the bearings, pedestals and other minor work elements. The project will be completed under three contracts.

  *Contract 1* includes two elements:

  **A) Bruckner Expressway/Sheridan Boulevard Interchange** – The Bruckner Expressway will be widened east of the interchange over the Amtrak Bridge to carry a third lane in both directions of the Bruckner Expressway through the interchange. The bridge deck over Amtrak will need to be widened to accommodate the additional lanes.

  **B) Hunts Point Truck Access Improvements** – New ramp connections will be constructed between Edgewater Road and both the Sheridan Boulevard (both directions) and the northbound/eastbound Bruckner Expressway. A new deck will be constructed over the Bruckner Expressway and Amtrak to provide the new connections. The Hunts Point Avenue ramp to the northbound Sheridan Expressway would be permanently closed and all on-ramp traffic will be rerouted to Edgewater Road to access the northbound Sheridan Boulevard.

  A design-build contract was awarded in summer 2019 and construction began in early 2020. Contract 1 is scheduled to be substantially completed in winter 2022/2023.

*Contract 2* includes deck replacement of the Bruckner Expressway from East 141st Street to Barretto Street, widening of the Bruckner Expressway from East 149th Street to Barretto Street to maintain three lanes in both directions, removal of the westbound Bruckner Expressway off-ramp to East 138th Street, and a new westbound Bruckner Expressway interchange at Leggett Avenue, including new on- and off-ramps for improved access to Hunts Point. Other improvements to Bruckner Boulevard below the viaduct are included in this contract. A design-build contract was awarded in March 2021 and construction is expected to be substantially completed in fall 2023.

*Contract 3* includes deck replacement of the Bruckner Expressway between Barretto Street and the Sheridan Boulevard interchange. A third lane will be added along both directions of the Bruckner Expressway between these segments, which would now provide a continuous third lane along both directions of the Bruckner Expressway between the Bronx River and East 149th Street. A pedestrian bridge at Bryant Avenue will also be replaced. Construction on this contract is scheduled to begin in summer 2022 and be completed spring 2026.

These projects may impact traffic at the RFK, Bronx Whitestone, and Throgs Neck bridges.

- **I-95/Bruckner Expressway** – The addition of a fourth northbound lane from Exit 8B (to Orchard Beach/City Island) to Exit 9 (to northbound Hutchinson River Parkway) and a northbound Hutchinson River Parkway exit ramp to Co-Op City at Bartow Avenue in Bronx County, NYC began in winter 2021 and is anticipated to be completed in winter 2023/2024.

  Construction to repair and replace deteriorated components of the Bruckner Expressway Bridge over Rosedale Avenue is expected to begin in winter 2022/2023 and end in summer 2025.

  The Unionport Bridge, which carries the northbound and southbound Bruckner Expressway service roads over the Westchester Creek, is under construction and undergoing a complete replacement. The new bridge would be expanded from four to six lanes and all of the approaches will be completely rebuilt. Traffic flow has been maintained on two temporary vertical lift bridges and is expected to continue uninterrupted through the estimated four-year construction period, which is anticipated to be completed in winter 2023/2024.

  These projects may result in minimal diversions to the RFK, Bronx-Whitestone, and/or the Throgs Neck bridges.

- **Bronx River Parkway** – This project involves the removal and installation of a new Bronx River Parkway Bridge over the Metro-North Railroad near 236th Street. A replacement with highway realignment is being considered. Construction began in spring 2021 and is anticipated to be completed in late summer 2024.

  Replacement of three deteriorated bridges on the Bronx River Parkway, specifically the two-span bridge over AMTRAK/CSX (near the Cross Bronx Expressway interchange), the single





span bridge over East Tremont Avenue and the seventeen-span viaduct over East 180th Street/Morris Park Avenue and along the NYCTA's East 180th Street subway yard is expected to begin in summer 2023 and is expected to be completed in summer 2027. The project will improve the roadway geometry, eliminate the structural deficiencies and provide standard travel lanes and shoulders. In addition, the project will provide a fully ADA compliant shared-use path and a new exit ramp structure spanning over the AMTRAK/CSX tracks.

These projects may result in minimal diversions to the RFK, Bronx-Whitestone, and/or the Throgs Neck bridges.

- **I-278/Gowanus Expressway** – The rehabilitation of the bridge carrying Fort Hamilton Parkway over the Gowanus Expressway will correct structural deficiencies, extend service of the structure and ensure safety. Construction is anticipated to begin in summer 2024 and be completed in summer 2026.

  Minimal impact to traffic at the Verrazano-Narrows Bridge and Hugh L. Carey Tunnel may occur.

- **Hutchinson River Parkway** – The rehabilitation of the Westchester Avenue bridge over the Hutchinson River Parkway will repair abutments, piers, approaches, steel superstructure and replace the reinforced concrete deck. Currently under construction, the project is expected to be completed by fall 2022.

  Minimal impact to traffic at the Bronx-Whitestone Bridge may occur.

- **I-278/Brooklyn-Queens Expressway (BQE)** - The replacement of four bridge decks over the BQE from South 3rd Street to Grand Street in Kings County, which will replace concrete decks, repair concrete substructures, and repair other deteriorated elements, is in development with construction expected to begin in spring 2030 and expected to be completed in fall 2033. This project has potential for lane closures that could impact traffic at the Hugh L. Carey Tunnel and Verrazzano-Narrows Bridge.

  The project to replace the existing concrete deck with a new concrete deck over the BQE at 47th Street (Queens) will repair or replace the existing steel supports to extend the service life of this section of the BQE. Construction is anticipated to begin in spring 2025 and to be completed in summer 2027.

- **BQE Triple Cantilever Project** – The long-term plan for the BQE is being redeveloped following the release of the Expert Panel Report. NYCDOT continues structural monitoring and evaluation of the BQE and conducting repairs on an ongoing basis.

  The project to rehabilitate the Brooklyn-Queens Expressway from Atlantic Avenue to Sands Street in the Borough of Brooklyn implements some of the recommendations of the Expert

Panel Report. It will extend the service life of the structures by preventing further water infiltration. The project will address conditions at joints, soffits substructure and deck. NYCDOT will also install "weigh-in-motion" technology to automatically fine overweight trucks, which put undue strain on the structure. Construction is expected to begin in summer 2022 and anticipated to be completed in 2026. In order to reduce loads on the structure, operational changes were implemented in late August 2021 that reduced lanes down from three to two lanes in each direction between Atlantic Avenue and the Brooklyn Bridge. The lane reductions resulted in traffic back-ups on the Gowanus Expressway that back-up to the Verrazzano-Narrows Bridge. There is an interim repair project identified for the cantilevered section (span 4 & 34) over Grace Court and Clark Street anticipated to begin in spring 2023 which may have additional significant traffic impacts.

- **Belt Parkway** – The rehabilitation of four Belt Shore Parkway bridges over Sheepshead Bay Road, Ocean Avenue, Bedford Avenue and Nostrand Avenue to bring them to state of good repair. The bridges are currently in preliminary design, will move to final design in 2023 and are expected to start construction in 2025.

  Reconstruction of the 17th Avenue Pedestrian Bridge and 27th Avenue Pedestrian Bridge over the Belt Parkway started in the fall of 2021 with an expected date of completion in early summer 2024. The 17th Avenue Bridge was closed in November 2021 and demolition plan is in development. The bridge will be replaced on the same alignment as the existing bridge and is anticipated to be in-place at the end of 2022. The 27th Avenue Bridge will be built on a new alignment allowing the existing bridge to remain open during construction.

  These projects may result in some impacts to traffic at the Verrazzano-Narrows Bridge, Cross Bay Bridge, and Marine Parkway Bridge.

- **I-278 (BQE)/Grand Central Parkway Interchange**- The project to reconstruct the Grand Central Parkway and BQE (east leg) interchange at Astoria Blvd started in summer 2020 and is expected to be completed in summer 2022 while the reconstruction of BQE and Grand Central Parkway (west leg) interchange is expected to start in mid-2024 and be completed in mid-2027.

- **Grand Central Parkway** – The Kew Gardens Interchange reconstruction – Phase IV project will replace highway viaducts and ramp structures; realign ramps and add highway shoulders; install multi-use path for pedestrian and bicycle usage along the Kew Gardens Interchange (an intersection of the Grand Central Parkway, the Van Wyck Expressway, the Jackie Robinson Parkway and Union Turnpike) located in central Queens. The contract was awarded in October 2018 and is estimated to be completed in early summer 2022.

  The planned rehabilitation of the Grand Central Parkway Bridge over Winchester Boulevard and ramp over the Cross Island Parkway is scheduled to begin in late 2024 and be completed in summer 2027.



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  The safety and mobility improvements project on the eastbound Grand Central Parkway at Long Island Expressway interchange involves construction of an auxiliary lane between the entrance ramp from Eastbound Long Island Expressway (I-495) and 69th Road/Jewel Avenue ramp (Exit 11) on the Eastbound Grand Central Parkway. In addition, pavement will be resurfaced and guiderails, pavement markings and signs panels will be upgraded. Construction is anticipated to begin in winter 2024/2025 and be completed in fall 2026.

  These projects may result in minimal impacts to traffic at the RFK Bridge and Queens Midtown Tunnel.

- **I-678/Van Wyck Expressway** – The rehabilitation of the Roosevelt Avenue Bridge began in January 2016 and is expected to be completed in early spring 2023. Major reconstruction plans include installation of new girders, a new deck, new lighting, and an approximate two-foot widening of the sidewalk to allow for a bike lane. One lane in each direction would be available to traffic.

  The Van Wyck Expressway/Long Island Expressway Interchange structural rehabilitation project will replace the concrete deck, perform corrective repairs of bridge steel and concrete elements on the College Point Boulevard ramp and replace the concrete deck and repair concrete piers on selected spans of the Van Wyck Expressway viaduct over the Long Island Expressway. The project began in fall 2020 and is expected to be completed in summer 2024. Three lanes of traffic will be maintained on the Van Wyck Expressway during peak hours and parking will be maintained underneath the viaduct (up to 80 parking spaces will be eliminated/relocated at any one time).

  These projects may result in minimal impacts to traffic at the Bronx-Whitestone Bridge and RFK Bridge.

- **Van Wyck Expressway/JFK Airport Access Improvements** – This project will widen Van Wyck Expressway (VWE) from three to four lanes (five lanes at some locations) in each direction from Queens Boulevard to 133rd Avenue in the vicinity of John F. Kennedy (JFK) Airport located in Queens County, New York City. This project will replace overpass bridges and Long Island Rail Road (LIRR) bridges; install new pavement, noise and retaining walls and other associated elements as part of the contract. The project consists of 3 contracts:
  - Contract 1 - Replace/retrofit 9 bridges between Hillside Avenue and 133rd Avenue, relocate the NB VWE Exit 3 Ramp 400 feet to the south and relocate the North Conduit Avenue Entrance Ramp to WB Belt Parkway 200 feet to the east. Reconstruction of the bridges will accommodate an additional future lane. Construction began in summer 2020 and will end December 2023.
  - Contract 2 - Retrofit and replace three LIRR bridges over the VWE north of Atlantic Avenue and replace the Atlantic Avenue roadway bridge over the VWE. Reconstruction of the bridges will accommodate an additional future lane. Construction began January 2021 and will end summer 2024.

  - Contract 3 - Widen the VWE between Federal Circle JFK and Hoover Avenue to add one managed use lane, replace VWE mainline bridges below 133rd Avenue, and construct retaining walls, build new ramps and reconstruct existing ramps. Construction is expected to begin spring 2022 and end spring 2025.

  These projects may result in minimal impacts to traffic at the Bronx-Whitestone Bridge, Throgs Neck Bridge, the Queens Midtown Tunnel, and the RFK Bridge.

- **I-495/Long Island Expressway** – A project will construct an auxiliary lane on the eastbound Long Island Expressway to connect the entrance ramp from the Clearview Expressway with the exit ramp to Springfield Boulevard. The provision of a continuous lane for entering and exiting traffic will alleviate congestion and reduce delays. This project will also include the replacement of the Oceania Street Bridge over the Long Island Expressway. Construction is expected to begin in spring 2022 and last until summer 2024.

  An active traffic management system on the Eastbound and Westbound Long Island Expressway, between the Queens Midtown Tunnel and Main Street, Queens is currently under development. The system will result in improved safety, reduced congestion and delays, and improved route choices. Construction is expected to begin in winter 2022/2023 and be completed in summer 2024.

  A safety improvements project is planned for the Long Island Expressway from 48th Street to Little Neck Parkway. Construction is expected began in fall 2021 and will be completed in early 2024. This project includes:
  - Acceleration/deceleration lane improvements at six (6) locations along the expressway corridor: 1) Westbound LIE: Exit Ramp to Kissena Boulevard, 2) Eastbound LIE: Entrance Ramp from Kissena Boulevard, 3) Eastbound LIE: Exit Ramp to Utopia Parkway, 4) Westbound LIE: Entrance Ramp from Utopia Parkway, 5) Eastbound LIE: Entrance Ramp from Utopia Parkway, 6) Westbound LIE: Exit Ramp to Francis Lewis Boulevard.
  - Construction of auxiliary lanes at three (3) locations along the expressway corridor: 1) Westbound LIE: Main Street to College Point Boulevard, 2) Westbound LIE: Kissena Boulevard to Main Street 3) Eastbound LIE: Main Street to Kissena Boulevard.
  - Installation of traffic safety appurtenances or equipment along the expressway corridor at various locations from 48th Street to Little Neck Parkway. (e.g., reflective markers/delineators on guiderail/concrete barriers, object markers on abutments, guiderail/concrete barriers, and impact attenuators).

  These projects may result in minimal impacts to traffic at the Queens Midtown Tunnel and Bronx-Whitestone Bridge.

- **Route 9A/West Side Highway** – Rehabilitation of the ramp to Northbound Henry Hudson Parkway bridge over Amtrak West Site near 158th street in New York County is planned. Project



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  work includes a reinforced concrete deck, steel stringers, flood beams, pier columns, cap beams, and an electrical system. Construction is estimated to be completed around 2027.

  This project may result in minimal impacts to traffic at the Henry Hudson Bridge.

- **Harlem River/FDR Drive** – Rehabilitation of three bridges on the Harlem River Drive between 135th and 139th streets is anticipated to begin fall 2025 and end spring 2028.

  Replacement of the deck on the Trans-Manhattan Expressway Connector ramp is currently in design. Construction is expected to begin in summer 2025 and is projected to be completed in summer 2033.

  FDR Drive, northbound from East 42nd to 49th Street is scheduled for rehabilitation. Currently under design, construction is expected to begin in late 2023 and be completed in 2029.

  The Eastside Coastal Resiliency project from Montgomery Street to 25th Street involves construction of flood walls, tide gates along the FDR and the raising of East River Park as well as storm water work on west side of FDR, east of FDR Drive and replacement of two pedestrian bridges over the FDR. The Delancey Street bridge was replaced March 2022. Construction started in spring 2021 and is anticipated to be completed in 2026.

  These projects may result in minimal adverse impacts to traffic at the RFK Bridge, the Queens Midtown Tunnel and Hugh L. Carey Tunnel.

- **I-278/Staten Island Expressway** – The planned rehabilitation of the bridges carrying the Staten Island Expressway (I-278) over Richmond Avenue in the Borough of Staten Island will correct the bridges' structural deficiencies while extending the service life of the bridges. Construction is expected to begin in spring 2022 and be completed in winter 2024/2025

  The rehabilitation of the Woolley Avenue and Bradley Avenue Bridges over Staten Island Expressway in Richmond County, NY will extend the service life of these bridges to ensure safer travel. Construction is expected to begin in spring 2022 and complete in spring 2024.

  These projects may result in minimal adverse impacts to traffic at the Verrazzano-Narrows Bridge.

- **Holland Tunnel** – In February 2018, the Port Authority authorized $364.2 million for a rehabilitation and resiliency project for the Holland Tunnel to repair and restore critical mechanical, electrical and plumbing systems damaged by Superstorm Sandy, and to install protective measures to mitigate future flooding in the facility. Construction began in April 2020. One tube at a time will be closed for two years overnight (11pm – 5am) all nights except Saturday, which started with the eastbound tunnel. Closures of the westbound tunnel are expected to begin in 2023. Potential lane closures may result in a minimal impact to the traffic at the Hugh L. Carey Tunnel and the Verrazzano-Narrows Bridge.

- **Lincoln Tunnel Helix Replacement** – In 2015, the Lincoln Tunnel Helix went through a three-year rehabilitation program which has extended its estimated service life to 2025. Currently in the planning stage, the Port Authority is evaluating replacement of the Lincoln Tunnel Helix. The purpose of the project is to replace the aging and deteriorated structure with a new roadway that meets current highway and safety standards. If the project proceeds, construction is anticipated to start in 2025 and end in 2032. This project may result in a minimal increase in traffic at the Hugh L. Carey Tunnel and the Verrazzano-Narrows Bridge.

- **George Washington Bridge Rehabilitation** – Ongoing and planned projects include suspender ropes replacement and rehabilitation of the main cables (2017-2026), rehabilitation of Trans-Manhattan Expressway (TME) median barriers (2018-2023), rehabilitation of 178th Street and 179th Street ramps and bus ramps (2017-2025), main span upper level structural steel rehabilitation (2019-2024), upper level eastbound main span pavement rehabilitation (2019-2024), rehabilitation of six TME overpass bridges in Manhattan (starting 2024), Rehabilitation of Structural Steel Lead Paint Removal and Recoating Underside LL (2019-2025 – three contracts of which one was completed and the next starts this year), Rehabilitation of Center and Lemoine Bridges (2022-2026), Intelligent Transportation System Replacement of Signs and Field Devices (2019-2021). Rehabilitation of upper-level spans over Hudson Terrace and New Jersey anchorage which began in 2016 has been completed. Hydrant and Water System B work was also completed. The remaining projects may result in minimal traffic impacts to the RFK Bridge.

- **Gowanus Canal Superfund Site** – In 2010, Gowanus Canal, an EPA Superfund site was added to the National Priorities List as a hazardous waste site requiring clean up. In September 2013, the EPA issued its Record of Decision, which explained the remediation plan for the Gowanus Canal. The project involves removing contaminated sediment from the canal via dredging, installing a cap, and restoring the 5th Street basin. It is anticipated that active construction will occur over a six- to ten-year period. Dredging of the canal began in late 2020 just south of the Carroll Street bridge and will continue between the Carroll and Union Street bridges, followed by dredging north of the Union Street bridge and then between the Carroll and 3rd Street bridges. The project will necessitate frequent bridge openings. Temporary traffic disruptions will occur at 3rd Street, Union Street and 9th Street during bridge openings which will continue through mid-2023, with extended closures during periods of heavy construction activity. Huntington Street east of Smith Street will be closed through September 2021, with additional closures if needed. Proposed plans for Hamilton Avenue over Gowanus Canal are not yet available so it is not possible to assess the impact to traffic at the Hugh L. Carey Tunnel.

*Transit Improvements*

Significant transit improvements, when completed, are expected to affect TBTA traffic levels during the forecast period through the year 2032.



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- **MTA Second Avenue Subway** – Construction of Phase 1 started in April 2007 and service opened to the public on January 1, 2017. Service from new stations at East 96th, East 86th, and East 72nd Streets along Second Avenue now connects to the 63rd Street station at Lexington Avenue. The 2015-2019 Capital Program includes funding to complete design and begin initial construction of Phase 2 (125th Street to 96th Street). The 2020-2024 Capital Program includes funding, which together with anticipated, but not yet approved federal grants, is expected to construct Phase 2 of the Second Avenue Subway. Phase 2 is currently in the engineering stage and construction of the new stations is expected to be completed in 2029.

- **MTA/LIRR East Side Access** – This project will result in a new connection from the LIRR Main and Port Washington lines in Queens to a new LIRR terminal beneath Grand Central Terminal in Manhattan. Project completion is scheduled for December 2022. MTA anticipates that some travelers to Manhattan's East Side will shift to the LIRR from other modes and may result in a decrease in traffic to the Queens Midtown Tunnel and the RFK Bridge.

- **Penn Station Access** – The Penn Station Access project would take Metro-North's New Haven Line directly to Penn Station using Amtrak's Hell Gate line and will add four new stations in the East Bronx (Co-Op City (near I-95), Morris Park (near Jacobi Hospital), Parkchester/Van Nest & Hunts Point). A design-build contract was awarded in December 2021 and construction is expected to be completed in 2027. This project may result in some travelers between Manhattan and the Bronx shifting to the Metro-North from other modes and may result in a decrease in traffic to the RFK Bridge.

- **The Gateway Program (Amtrak)** – The Gateway Program is a comprehensive program of strategic rail infrastructure improvements designed to improve current services and create new capacity that will allow the doubling of passenger trains running under the Hudson River. The program will increase track, tunnel, bridge, and station capacity, eventually creating four mainline tracks between Newark, New Jersey, and Penn Station, New York, including a new, two-track Hudson River tunnel. Due to the high level of traffic in the existing Hudson River Tunnel (450 trains per weekday, 600,000 riders), taking one of its two tubes out of service for necessary repairs would reduce total capacity for Amtrak and NJ TRANSIT from 24 trains per hour to approximately six trains per hour in the peak direction. This very significant reduction in capacity would impact New York and New Jersey commuters who cross the Hudson on a daily basis along with Amtrak passengers. This Program will allow NJ TRANSIT and Amtrak to continue to operate and maintain existing levels of passenger rail service in the new tunnel while the North River Tunnel is taken out of service for critical rehabilitation and repairs. This Program is currently in the planning stages and has reached 30% design. Procurement materials for Package 1 (Tunnel Boring & Civil Works) are currently under development.

  The Hudson Tunnel Component of the Gateway Program includes the design and construction of a new Hudson River rail tunnel serving Penn Station, New York, and the rehabilitation and modernization of the existing North River Tunnel which incurred serious and ongoing damage during Super Storm Sandy. This project is currently in the environmental review phase. A Draft Environmental Impact Statement was released in July 2017. A draft Final Environmental Impact

Statement was submitted to USDOT in December 2018 and has been under review since that submittal. The preliminary schedule as of the August 2019 FY21 Financial Plan submittal to USDOT, aims to complete the new tunnel in 2029 to enable the planned rehabilitation of the existing tubes to be completed in 2030. Unexpected closures in existing tubes for emergency repairs during weekday hours may force some rail commuters to switch to PATH trains, buses, or cars. Federal funding is not yet committed to fully finance this project. TBTA facilities may experience a sporadic increase in usage with commuters choosing to travel to/from the City via any of the tolled Hudson River bridges and tunnel facilities or the Verrazzano-Narrows Bridge.

- **AirTrain extension to LGA** – This Port Authority capital project will provide a new AirTrain service between the LGA airport and a new intermodal station at Willets Point with connections to LIRR and MTA-NYCT ("7" Subway line). The project is still in conceptual design stage. LGA AirTrain received Port Authority Board Project Authorization of $2.05 billion in October 2019. In October 2021, Governor Hochul asked the Port Authority to put the project on hold and review alternatives. Fourteen alternative options were released in March 2022 and are currently being reviewed by stakeholders. If the project proceeds, it may reduce traffic at the RFK Bridge and the Queens Midtown Tunnel as some airport travelers and employees may shift to the LIRR or subway.

All of the information presented herein for planned construction dates are based on the best available data.

### Summary of Assumptions and Conditions

TBTA traffic, toll revenues and expenses have been analyzed by Stantec on the basis of the historical record of traffic, toll revenues and expenses, the capacities of the TBTA facilities, traffic growth forecasts, the historic traffic elasticity due to toll variations, impacts of construction projects and the following assumptions and conditions, which we believe are reasonable. Stantec accepts the findings of Urbanomics and KC Engineering and remains responsible for the incorporation of their analyses into this study. It is noted, the following presents information related to potential future traffic and revenue for a ten-year period.

Notwithstanding the above, the forecast analyses assume:

- All TBTA facilities will be operated efficiently and maintained in a state of good repair in order to attract customers and to sustain traffic demand levels.
- The TBTA 2020-2024 Capital Program that was approved by the MTA Board on September 25, 2019, will be carried out throughout the analysis period. Future capital programs sufficient to maintain the structural integrity of bridges and tunnels will be adopted and implemented throughout the forecast period.
- Electronic toll payment by E-ZPass will continue to be available on all TBTA crossings, and the payment of revenue in full to TBTA will continue to be in accordance with current interagency agreements. As of the end of 2021, 94.7 percent of all tolls paid on TBTA facilities were E-ZPass





transactions. As a result of the E-ZPass participation rate increases that have been experienced at the TBTA facilities, future growth in E-ZPass market share is planned to be limited. However, a small number of customers are expected to shift to NYCSC accounts so that the toll discounts can be captured. It is projected that E-ZPass participation rates will experience small annual growth until a maximum of 98 percent is reached.

- Since the exact date of activation, tolling structure, tolling rates, and possible credits have not yet been established for the CBD Tolling Program, Stantec cannot draw any meaningful and dependable conclusions about the potential impacts of congestion pricing initiatives on usage of TBTA facilities and, therefore, Stantec is unable to include the effects of the CBD Tolling Program into its forecast.
- Competing East River crossings will continue to operate toll-free and be maintained in efficient operating condition. At this time, it is too uncertain for Stantec to draw any meaningful conclusions about the potential impacts of tolling the competing East River crossings on TBTA facilities.
- For the forecast with current tolls, the present toll schedule that began on April 11, 2021, will be in effect during the remainder of the analysis period through 2032. For the analysis with toll increases, tolls on TBTA facilities will be increased on March 1, 2023, and March 1, 2025, and are projected to yield an estimated 4 percent in revenue compared to the current toll analysis, in accordance with the 2022-2025 MTA Financial Plan.
- Capacity constraints on the local and arterial highway networks which may be somewhat mitigated by stagnant traffic growth in the near term will, however, continue to limit traffic growth on the nine TBTA crossings. This is reflected in conservative growth rates used for TBTA traffic prior to evaluating the adverse effects related to the pandemic.
- Although City and the State of New York budget difficulties continue, highway/crossing improvements, in general, for the competing bridges and highway network will be made in accordance with the plans and schedules described herein.
- Major TBTA roadway and structural improvements will continue to be performed during nighttime and non-peak hours, and/or in the off-peak direction, and approaches to the nine TBTA crossings will not be significantly impaired by construction work.
- Normal background growth assumptions post pandemic are based on trends in regional employment and population, forecast by NYMTC through 2055. This forecast assumes they will be realized in the long term for the Tri-State area and in the City.
- Stantec's forecasts also considered a continued recovery towards pre-pandemic traffic levels. In the near term. The continued lifting of restrictions will result in increased travel on TBTA facilities.
- Stantec's forecast assumes that there is likely to be some level of economic downturn as a result of the current sharp gas price increases. This is consistent with historical patterns back to 1972. The compounding influence of pandemic recovery (positive to traffic levels) and fuel price impacts (negative to traffic growth) offset each other, and our short-term forecast is for flat levels of growth.

- LIRR East Side Access may shift some Long Island auto commuters to rail after its planned completion in December 2022.
- Current TBTA reduced rate toll programs and MTA rebate programs remain in effect at current projected levels, including reduced rates for NYCSC E-ZPass and E-Token customers and for Staten Island residents at the Verrazzano-Narrows Bridge and for Rockaway residents at the Cross Bay and Marine Parkway Bridges. TBTA's reduced rate programs provide, by statute, a toll rate lower than the TBM rate for Staten Island residents using resident E-Tokens to cross the Verrazzano-Narrows Bridge and for Rockaway residents using resident E-Tokens and non-residents using minor E-Tokens to cross the Cross Bay and Marine Parkway Bridges. The reduced rate programs provide, by MTA Board policy, a toll rate lower than the TBM rate to non-resident NYCSC E-ZPass customers. TBTA's reduced rate programs also provide, by MTA Board Policy, a toll rate lower than the NYCSC E-ZPass rate to Staten Island residents crossing the Verrazzano-Narrows Bridge, to Queens residents crossing the Cross Bay Bridge, and to Bronx residents crossing the Henry Hudson Bridge. The MTA's rebate programs lower the effective toll rates below the reduced rates discussed above for Rockaway residents at the Cross Bay Bridge and Staten Island residents and certain commercial vehicles with NYCSC commercial and business accounts at the Verrazzano-Narrows Bridge by using a combination of MTA funds and New York State funds to pay for all or a portion of the toll. TBTA's "reduced rate" programs and MTA's rebate programs both result in increased traffic. TBTA's toll revenue is impacted unfavorably by charging a reduced rate for residents but there are no adverse revenue impacts stemming from the rebate programs because the rebate values are fully reimbursed by MTA and New York State.
- No other reduced rate toll programs will be introduced that would adversely affect the TBTA toll facilities' revenue stream.
- Stantec assumes the economy to be cyclical and thus it will both grow and contract at certain points within the forecast period.
- No future natural disaster or local, state or national emergency will occur that would materially alter travel patterns and divert traffic from the TBTA facilities.
- The forecast accounts for estimated changes in both vehicular demand and transit demand due to the pandemic, related government actions, and economic impacts.
- The forecast does not account for major policy changes that would limit the use of personal vehicles, consequently altering the proportion of vehicle use versus transit use related to the effects of the pandemic.

While the forecast is made and presented year by year by Stantec, this presentation is intended to show trends on the basis of our analysis of historical data as well as the assumptions and conditions set forth above. Variations in the year-to-year forecasted results may occur and such variations may be significant.



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## PROJECTED TRAFFIC, REVENUES, AND EXPENSES

Current and future traffic and toll revenues are estimated for the 11-year (2022-2032) analysis period for each TBTA facility based on historical trends in traffic and toll revenue, elasticity factors for the future toll increase, toll collection operations, capacities of the nine crossings, facility maintenance, E-ZPass participation levels, externalities such as area bridge and roadway improvement plans and regional demographic projections, and the assumptions and conditions summarized previously. Trends in operating expenses for the toll facilities, TBTA's 2022 budget, 2022-2025 MTA Financial Plan, and growth estimates based on the Consumer Price Index and historical trends are reflected in the future operating expense forecast. Future operating expense estimates are used to develop net toll revenue projections over the forecast period.

### Traffic and Toll Revenue, 2022

Stantec's development of the traffic and toll revenue estimates for 2022 considered the previous economic conditions reported for the region, fuel prices, unusual weather events, construction projects, and based on current information, the ongoing pandemic, and post-pandemic projected behavioral changes such as continued remote home-based work.

Actual data through February 2022 was available for use in the analysis. The forecast for the remainder of 2022 estimates that the base traffic levels at TBTA facilities for the remaining ten months of calendar year 2022 will be 2.7 percent more than volumes in the same months of 2021, as traffic continues to recover from the pandemic.

The range of percent changes are shown in Table 24 for the forecast. In January and February 2022, traffic increased at all of the facilities when compared to January and February 2021.

**Table 24 Potential Changes in Annual Traffic, 2021 to 2022**

| Facility | Percent Change January - February 2021 to 2022[a] | Percent Change March - December 2021 to Forecast 2022 | Percent Change Full Year 2021 to Forecast 2022 |
|---|---|---|---|
| Throgs Neck Bridge | 13.1% | 0.3% | 2.0% |
| Bronx-Whitestone Bridge | 14.7% | 2.7% | 4.2% |
| RFK Bridge | 12.9% | 2.8% | 4.1% |
| Queens Midtown Tunnel | 29.6% | 2.8% | 6.0% |
| Hugh L. Carey Tunnel | 33.8% | 7.0% | 10.2% |
| Verrazzano-Narrows Bridge | 11.1% | 2.4% | 3.6% |
| Henry Hudson Bridge | 21.5% | 4.3% | 6.3% |
| Marine Parkway-Gil Hodges Memorial Bridge | 15.3% | 2.3% | 3.9% |
| Cross Bay Veterans Memorial Bridge | 6.3% | 0.5% | 1.2% |
| Total | 15.8% | 2.7% | 4.4% |

Notes:
(a) Based on preliminary audited traffic data for January and February 2022 (subject to final audit) and unaudited traffic volumes through April 27, 2022.

As shown in Table 24, total 2022 traffic is forecasted to increase at an average rate of 4.4 percent for the full year.

The resulting traffic and toll revenue is presented in Table 25. The toll revenue in 2022 is based on average toll rates developed from the new toll schedule in effect as of April 11, 2021, and the 2021 and projected 2022 distribution by vehicle class and payment method.

In 2022, Table 25 shows there is a 4.4 percent increase in traffic, a 4.9 percent increase in the systemwide average toll, and a 9.5 percent increase in systemwide revenue over 2021, which reflects actual performance through February 2022 and projected traffic volumes for the remainder of the year.

**Table 25 2022 Toll-Paying Traffic and Toll Revenue**

| Facility | Traffic (millions) | Average Toll | Revenue (millions) |
|---|---|---|---|
| Throgs Neck Bridge | 38.3 | $9.68 | $370.7 |
| Bronx-Whitestone Bridge | 50.5 | $8.39 | $423.4 |
| RFK Bridge | 63.7 | $8.16 | $520.1 |
| Queens Midtown Tunnel | 27.6 | $7.62 | $210.0 |
| Hugh L. Carey Tunnel | 21.3 | $7.14 | $152.1 |
| Verrazzano-Narrows Bridge[a] | 78.0 | $6.68 | $520.6 |
| Henry Hudson Bridge | 25.4 | $4.01 | $101.8 |
| Marine Parkway-Gil Hodges Memorial Bridge | 8.0 | $3.22 | $25.6 |
| Cross Bay Veterans Memorial Bridge | 8.1 | $3.27 | $26.5 |
| Total | 320.7 | $7.33 | $2,350.7 |
| Percent Change | | | |
| 2021-2022 (All Facilities) | 4.4% | 4.9% | 9.5% |

Notes:
(a) Split tolling was implemented at the Verrazzano-Narrows Bridge on December 1, 2020.

Table 25 provides the transition between the historical traffic and revenue data presented earlier in the report and the 10-year analyses in Table 26 and Table 27.

### Traffic and Toll Revenue at Current Tolls

Traffic and toll revenues were first projected on the basis that the tolls placed into effect on April 11, 2021, will be continued throughout the forecast period. The methodology employed by Stantec to analyze traffic was based on the development of an annual growth rate for each facility (based on historical traffic trends), the construction activity (historical and projected) throughout the highway network (bridges, tunnels, and arterials), and the traffic capacity constraints in the transportation network. From these reference levels, estimates of the impacts of the pandemic and other economic factors, such as a spike in gas prices and consequent economic downturn, were made based on traffic trends since the onset of the pandemic in March 2020. The forecast, represented in Table 26 below, is a projection of traffic and revenue through 2032. The forecast assumes that a "new normal" will occur beginning in 2025. At this point,



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the negative effects of the pandemic and economic downturn will be complete, however, there is slightly less traffic utilizing the TBTA facilities than would have been projected if the pandemic had never occurred. This is caused by the increased working from home habits that are becoming a permanent behavioral change for New York City commuters.

Starting with the calculation for 2022 as a reference base, Stantec projected the traffic and toll revenue for the analysis period through 2032 (at constant tolls at the current rates established on April 11, 2021), as shown in Table 26. As previously discussed, this is based on the actual change in traffic on each facility in January and February 2022 and Stantec's projections by facility for the February through December period.

Changes in traffic volumes are in the range of 1.2 to 10.2 percent in 2022 depending on the facility. For 2023, traffic is forecast to increase at 2.0 percent systemwide, with growth rates varying by facility. For 2024, traffic is calculated to increase at 0.3 percent annually, with growth rates varying by facility.

The forecast is based on specific assumptions regarding potential changes in traffic volume, both from pandemic-related behaviors, as well as both shorter-term and longer-term economic impacts. As part of the assumed economic downturn, Stantec is forecasting no additional pandemic related recovery for the remainder of 2022. Once the recovery has occurred, the economy is assumed to be cyclical and thus will both grow and contract in certain periods; this trendline growth assumption accounts for the overall growth pattern through these cycles. Impacts associated with a general increase in total (NYCSC and non-NYCSC) E-ZPass usage and toll increases are computed separately.

Construction related impacts are expected to affect three TBTA facilities during the ten-year forecast period. It's anticipated that additional traffic will reroute to the Hugh L. Carey tunnel due to construction on the BQE and Brooklyn Bridge. After construction is completed, most of the traffic that switched the tunnel are expected to return back to the BQE and Brooklyn Bridge. Additionally, construction on the Throgs Neck Bridge causes a loss of traffic on that facility, some of which reroutes to the Bronx Whitestone Bridge. The effects of this construction are seen through 2022 following by a shift back to the usual split.

### Traffic and Toll Revenue with Assumed 2023 and 2025 Toll Increases

The traffic analysis with assumed toll increases in 2023 and 2025 was built upon the base analysis (from Table 26), to which the elasticity impacts (from Table 22) were applied. In accordance with the 2022-2025 MTA Financial Plan, Stantec applied the appropriate projected future increase in toll rates (from Table 23) effective March 1, 2023 (a 5.7 percent toll increase) and March 1, 2025 (a 5.6 percent toll increase) to calculate the corresponding toll revenues. The traffic and revenue analyses with the planned toll increases in 2023 and 2025 are presented in Table 27.

## Table 26 Traffic and Toll Revenue Forecast at Current Tolls

| Year | Throgs Neck Bridge | Bronx-Whitestone Bridge | RFK Bridge | Queens Midtown Tunnel | Hugh L. Carey Tunnel | Verrazzano-Narrows [(a)] Bridge | Henry Hudson Bridge | Marine Parkway-Gil Hodges Bridge | Cross Bay Bridge | All Facilities |
|---|---|---|---|---|---|---|---|---|---|---|
| Traffic Change | | | | | | | | | | |
| 2021-2022 | 1.99% | 4.17% | 4.13% | 6.00% | 10.24% | 3.59% | 6.32% | 3.87% | 1.22% | 4.37% |
| 2022-2023 | 8.36% | -0.25% | 1.38% | 1.50% | 0.61% | 1.22% | 2.23% | 1.52% | 1.70% | 1.96% |
| 2023-2024 | 1.83% | -1.33% | 0.39% | 0.88% | 0.72% | 0.22% | 0.18% | 0.57% | 0.45% | 0.32% |
| 2024-2025 | 0.54% | 0.28% | 0.40% | 0.90% | 0.72% | 0.23% | 0.18% | 0.58% | 0.46% | 0.41% |
| 2025-2026 | 0.10% | 0.10% | 0.10% | 0.10% | 0.50% | 0.10% | 0.10% | 0.10% | 0.10% | 0.13% |
| 2026-2027 | 0.10% | 0.10% | 0.10% | 0.10% | -8.00% | 0.10% | 0.10% | 0.10% | 0.10% | -0.44% |
| 2027-2028 | 0.10% | 0.10% | 0.10% | 0.10% | -2.00% | 0.10% | 0.10% | 0.10% | 0.10% | -0.03% |
| 2028-2029 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2029-2030 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2030-2031 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2031-2032 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| Annual Traffic (millions) | | | | | | | | | | |
| 2021 | 37.6 | 48.5 | 61.2 | 26.0 | 19.3 | 75.3 | 23.9 | 7.7 | 8.0 | 307.3 |
| 2022 | 38.3 | 50.5 | 63.7 | 27.6 | 21.3 | 78.0 | 25.4 | 8.0 | 8.1 | 320.7 |
| 2023 | 41.5 | 50.4 | 64.6 | 28.0 | 21.4 | 78.9 | 25.9 | 8.1 | 8.3 | 327.0 |
| 2024 | 42.3 | 49.7 | 64.8 | 28.2 | 21.6 | 79.1 | 26.0 | 8.1 | 8.3 | 328.1 |
| 2025 | 42.5 | 49.8 | 65.1 | 28.5 | 21.7 | 79.3 | 26.0 | 8.2 | 8.3 | 329.4 |
| 2026 | 42.5 | 49.9 | 65.2 | 28.5 | 21.8 | 79.3 | 26.1 | 8.2 | 8.3 | 329.8 |
| 2027 | 42.6 | 49.9 | 65.2 | 28.5 | 20.1 | 79.4 | 26.1 | 8.2 | 8.3 | 328.4 |
| 2028 | 42.6 | 50.0 | 65.3 | 28.6 | 19.7 | 79.5 | 26.1 | 8.2 | 8.4 | 328.3 |
| 2029 | 42.7 | 50.0 | 65.4 | 28.6 | 19.7 | 79.6 | 26.1 | 8.2 | 8.4 | 328.6 |
| 2030 | 42.7 | 50.1 | 65.4 | 28.6 | 19.7 | 79.7 | 26.2 | 8.2 | 8.4 | 328.9 |
| 2031 | 42.7 | 50.1 | 65.5 | 28.7 | 19.7 | 79.7 | 26.2 | 8.2 | 8.4 | 329.3 |
| 2032 | 42.8 | 50.2 | 65.6 | 28.7 | 19.8 | 79.8 | 26.2 | 8.2 | 8.4 | 329.6 |
| Average Toll | | | | | | | | | | |
| 2021 | $9.29 | $7.83 | $7.63 | $7.39 | $6.92 | $6.53 | $3.87 | $2.69 | $2.69 | $6.99 |
| 2022 | $9.68 | $8.39 | $8.16 | $7.62 | $7.14 | $6.68 | $4.01 | $3.22 | $3.27 | $7.33 |
| 2023 | $9.33 | $8.13 | $7.93 | $7.45 | $7.01 | $6.60 | $3.88 | $2.92 | $2.96 | $7.15 |
| 2024 | $9.01 | $7.87 | $7.69 | $7.31 | $6.90 | $6.54 | $3.79 | $2.61 | $2.64 | $6.96 |
| 2025 | $8.88 | $7.77 | $7.59 | $7.26 | $6.86 | $6.51 | $3.75 | $2.50 | $2.52 | $6.89 |
| 2026 | $8.85 | $7.75 | $7.57 | $7.24 | $6.85 | $6.51 | $3.74 | $2.47 | $2.49 | $6.87 |
| 2027 | $8.85 | $7.75 | $7.57 | $7.24 | $6.85 | $6.50 | $3.74 | $2.47 | $2.49 | $6.87 |
| 2028 | $8.85 | $7.75 | $7.56 | $7.24 | $6.85 | $6.50 | $3.73 | $2.47 | $2.49 | $6.87 |
| 2029 | $8.85 | $7.74 | $7.56 | $7.24 | $6.85 | $6.50 | $3.73 | $2.47 | $2.49 | $6.87 |
| 2030 | $8.85 | $7.74 | $7.56 | $7.24 | $6.85 | $6.50 | $3.73 | $2.47 | $2.49 | $6.87 |
| 2031 | $8.85 | $7.74 | $7.56 | $7.24 | $6.85 | $6.50 | $3.73 | $2.47 | $2.49 | $6.87 |
| 2032 | $8.85 | $7.74 | $7.56 | $7.24 | $6.85 | $6.50 | $3.73 | $2.47 | $2.49 | $6.87 |
| Toll Revenue (millions) | | | | | | | | | | |
| 2021 | $348.9 | $379.5 | $466.7 | $192.2 | $133.6 | $491.4 | $92.3 | $20.6 | $21.6 | $2,146.9 |
| 2022 | $370.7 | $423.4 | $520.1 | $210.0 | $152.1 | $520.6 | $101.8 | $25.6 | $26.5 | $2,350.7 |
| 2023 | $387.3 | $409.4 | $512.0 | $208.5 | $150.2 | $520.6 | $100.5 | $23.6 | $24.4 | $2,336.5 |
| 2024 | $380.7 | $391.2 | $498.3 | $206.4 | $148.9 | $517.0 | $98.4 | $21.2 | $21.9 | $2,284.0 |
| 2025 | $377.5 | $387.4 | $494.2 | $206.7 | $149.1 | $516.2 | $97.6 | $20.4 | $21.0 | $2,269.9 |
| 2026 | $376.5 | $386.5 | $493.1 | $206.5 | $149.6 | $516.2 | $97.4 | $20.2 | $20.8 | $2,266.8 |
| 2027 | $376.8 | $386.7 | $493.5 | $206.6 | $137.6 | $516.6 | $97.4 | $20.2 | $20.8 | $2,256.3 |
| 2028 | $377.1 | $387.1 | $493.9 | $206.8 | $134.8 | $517.0 | $97.5 | $20.2 | $20.8 | $2,255.3 |
| 2029 | $377.5 | $387.4 | $494.3 | $207.0 | $134.9 | $517.5 | $97.6 | $20.2 | $20.8 | $2,257.3 |
| 2030 | $377.8 | $387.7 | $494.8 | $207.2 | $135.1 | $518.0 | $97.7 | $20.3 | $20.8 | $2,259.4 |
| 2031 | $378.1 | $388.1 | $495.2 | $207.4 | $135.2 | $518.5 | $97.7 | $20.3 | $20.9 | $2,261.4 |
| 2032 | $378.5 | $388.4 | $495.7 | $207.6 | $135.3 | $519.0 | $97.8 | $20.3 | $20.9 | $2,263.5 |

Notes:
(a) Split tolling was implemented at the Verrazzano-Narrows Bridge on December 1, 2020.



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## Table 27 Traffic and Toll Revenue Forecast with Assumed 2023 and 2025 Toll Increases

| Year | Throgs Neck Bridge | Bronx-Whitestone Bridge | RFK Bridge | Queens Midtown Tunnel | Hugh L. Carey Tunnel | Verrazzano-Narrows [(a)] Bridge | Henry Hudson Bridge | Marine Parkway-Gil Hodges Bridge | Cross Bay Bridge | All Facilities |
|---|---|---|---|---|---|---|---|---|---|---|
| Traffic Change | | | | | | | | | | |
| 2021-2022 | 1.99% | 4.17% | 4.13% | 6.00% | 10.24% | 3.59% | 6.32% | 3.87% | 1.22% | 4.37% |
| 2022-2023 | 7.89% | -0.68% | 0.72% | 0.86% | -0.26% | 1.14% | 1.73% | 1.35% | 1.57% | 1.52% |
| 2023-2024 | 1.76% | -1.40% | 0.28% | 0.76% | 0.57% | 0.21% | 0.09% | 0.54% | 0.43% | 0.25% |
| 2024-2025 | 0.11% | -0.15% | -0.24% | 0.27% | -0.14% | 0.15% | -0.31% | 0.41% | 0.34% | -0.01% |
| 2025-2026 | 0.03% | 0.02% | -0.01% | -0.01% | 0.36% | 0.09% | 0.02% | 0.07% | 0.08% | 0.05% |
| 2026-2027 | 0.10% | 0.10% | 0.10% | 0.10% | -8.00% | 0.10% | 0.10% | 0.10% | 0.10% | -0.43% |
| 2027-2028 | 0.10% | 0.10% | 0.10% | 0.10% | -2.00% | 0.10% | 0.10% | 0.10% | 0.10% | -0.03% |
| 2028-2029 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2029-2030 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2030-2031 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| 2031-2032 | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% | 0.10% |
| Annual Traffic (millions) | | | | | | | | | | |
| 2021 | 37.6 | 48.5 | 61.2 | 26.0 | 19.3 | 75.3 | 23.9 | 7.7 | 8.0 | 307.3 |
| 2022 | 38.3 | 50.5 | 63.7 | 27.6 | 21.3 | 78.0 | 25.4 | 8.0 | 8.1 | 320.7 |
| 2023 | 41.3 | 50.1 | 64.2 | 27.8 | 21.2 | 78.8 | 25.8 | 8.1 | 8.2 | 325.6 |
| 2024 | 42.0 | 49.4 | 64.3 | 28.0 | 21.4 | 79.0 | 25.8 | 8.1 | 8.3 | 326.4 |
| 2025 | 42.1 | 49.4 | 64.2 | 28.1 | 21.3 | 79.1 | 25.8 | 8.1 | 8.3 | 326.4 |
| 2026 | 42.1 | 49.4 | 64.2 | 28.1 | 21.4 | 79.2 | 25.8 | 8.1 | 8.3 | 326.5 |
| 2027 | 42.1 | 49.4 | 64.2 | 28.1 | 19.7 | 79.3 | 25.8 | 8.1 | 8.3 | 325.1 |
| 2028 | 42.2 | 49.5 | 64.3 | 28.1 | 19.3 | 79.4 | 25.8 | 8.2 | 8.3 | 325.0 |
| 2029 | 42.2 | 49.5 | 64.4 | 28.2 | 19.3 | 79.4 | 25.8 | 8.2 | 8.3 | 325.4 |
| 2030 | 42.3 | 49.6 | 64.4 | 28.2 | 19.3 | 79.5 | 25.9 | 8.2 | 8.3 | 325.7 |
| 2031 | 42.3 | 49.6 | 64.5 | 28.2 | 19.3 | 79.6 | 25.9 | 8.2 | 8.4 | 326.0 |
| 2032 | 42.4 | 49.7 | 64.6 | 28.3 | 19.4 | 79.7 | 25.9 | 8.2 | 8.4 | 326.3 |
| Average Toll | | | | | | | | | | |
| 2021 | $9.29 | $7.83 | $7.63 | $7.39 | $6.92 | $6.53 | $3.87 | $2.69 | $2.69 | $6.99 |
| 2022 | $9.68 | $8.39 | $8.16 | $7.62 | $7.14 | $6.68 | $4.01 | $3.22 | $3.27 | $7.33 |
| 2023 | $9.76 | $8.50 | $8.29 | $7.80 | $7.34 | $6.91 | $4.05 | $3.05 | $3.09 | $7.47 |
| 2024 | $9.50 | $8.30 | $8.10 | $7.71 | $7.28 | $6.90 | $3.98 | $2.75 | $2.78 | $7.34 |
| 2025 | $9.80 | $8.57 | $8.37 | $8.01 | $7.58 | $7.19 | $4.12 | $2.75 | $2.78 | $7.60 |
| 2026 | $9.84 | $8.61 | $8.41 | $8.06 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.64 |
| 2027 | $9.84 | $8.61 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.64 |
| 2028 | $9.84 | $8.61 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.64 |
| 2029 | $9.84 | $8.61 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.63 |
| 2030 | $9.83 | $8.61 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.63 |
| 2031 | $9.83 | $8.60 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.63 |
| 2032 | $9.83 | $8.60 | $8.41 | $8.05 | $7.62 | $7.24 | $4.14 | $2.74 | $2.76 | $7.63 |
| Toll Revenue (millions) | | | | | | | | | | |
| 2021 | $348.9 | $379.5 | $466.7 | $192.2 | $133.6 | $491.4 | $92.3 | $20.6 | $21.6 | $2,146.9 |
| 2022 | $370.7 | $423.4 | $520.1 | $210.0 | $152.1 | $520.6 | $101.8 | $25.6 | $26.5 | $2,350.7 |
| 2023 | $403.5 | $426.3 | $532.2 | $216.8 | $155.9 | $544.5 | $104.6 | $24.6 | $25.5 | $2,433.8 |
| 2024 | $399.4 | $410.3 | $521.4 | $216.0 | $155.5 | $544.9 | $102.9 | $22.3 | $23.0 | $2,396.0 |
| 2025 | $412.5 | $423.1 | $537.5 | $224.9 | $161.6 | $569.0 | $106.2 | $22.4 | $23.1 | $2,480.4 |
| 2026 | $414.3 | $425.1 | $539.9 | $226.3 | $163.1 | $573.4 | $106.7 | $22.3 | $23.0 | $2,494.2 |
| 2027 | $414.6 | $425.4 | $540.3 | $226.4 | $150.1 | $573.8 | $106.8 | $22.4 | $23.0 | $2,482.8 |
| 2028 | $415.0 | $425.8 | $540.8 | $226.7 | $147.0 | $574.3 | $106.8 | $22.4 | $23.0 | $2,481.7 |
| 2029 | $415.4 | $426.2 | $541.3 | $226.9 | $147.2 | $574.8 | $106.9 | $22.4 | $23.0 | $2,484.0 |
| 2030 | $415.7 | $426.6 | $541.8 | $227.1 | $147.3 | $575.4 | $107.0 | $22.4 | $23.0 | $2,486.3 |
| 2031 | $416.1 | $426.9 | $542.3 | $227.3 | $147.5 | $575.9 | $107.1 | $22.4 | $23.1 | $2,488.6 |
| 2032 | $416.5 | $427.3 | $542.8 | $227.5 | $147.6 | $576.5 | $107.2 | $22.5 | $23.1 | $2,490.9 |

Notes:
(a) Split tolling was implemented at the Verrazzano-Narrows Bridge on December 1, 2020.

### Effects of Second Avenue Subway Construction in Forecast Years

The foregoing tables forecasting traffic and toll revenues incorporate estimated effects of the continued construction of the Second Avenue Subway. Phase 2 of the project, which would extend the Second Avenue Subway north to 125th Street, is currently in the design phase. Environmental reviews are also ongoing.

Activity associated with such construction could result in changes to traffic patterns, possibly resulting in a shift of traffic volumes from the RFK Bridge to other TBTA facilities, as well as the toll-free East River Bridges or a diversion to mass transit. Such changes in traffic patterns could have an adverse effect on the forecasts.

Various stages of the project will result in visible construction activity on segments of Second Avenue at any given time. In addition, tunnel construction, either through the use of a tunnel boring machine or cut-and-cover, will affect vehicular activity not only on Second Avenue, but also on adjacent avenues and streets.

### Cashless Tolling Accounting in Forecast Years

Consistent with current TBTA practices, the foregoing tables of traffic and toll revenues assume that revenues associated with TBM transactions will be accounted for within the month that the transaction takes place. A liability on the balance sheet will be maintained to offset the toll revenue associated with TBM revenues and this liability will decrease as tolls are collected. Therefore, there is no delay in revenue collection assumed in our forecast due to the implementation of Cashless Tolling.

### Operating Expenses

The projection of operating expenses for 2021 through 2031 is shown in Table 29. Total operating expenses, consisting of labor and non-labor, are estimated to increase from $583.5 million in 2022 to $774.2 million in 2032. Labor expenses consist of wages, salaries, overtime and fringe benefits. Non-labor expenses include items such as maintenance, tolling operations, supplies, utilities and other expenses. The table includes operating expenses budgeted by TBTA for 2022, operating expenses projected by TBTA through 2025 and Stantec's projections of operating expenses from 2026 through 2032. In 2022, expenses have been budgeted by TBTA at $583.5 million, an increase of 25.2 percent over 2021 expenses of $466.0 million. These expenses are split into the following categories: labor expenses of $293.1 million (an increase of 23.0 percent over 2021) and non-labor expenses of $290.4 million (an increase of 27.6 percent over 2021). Labor expenses are higher primarily due to the filling of 2021 vacancies, contractual payroll adjustments, and inflationary increases to fringe benefits. The major factors behind growth in non-labor expenses are anticipated increases in major maintenance, including bridge painting projects that will not be eligible for capital funding, higher E-ZPass expenses associated with expected continued growth in usage, and general inflationary adjustments. Stantec does not project any variation in operating expenses resulting from the reduced traffic levels brought about by periodic toll increases.





At this point Stantec is unable to determine the effects of the pandemic and related government actions on 2022 or future year operating expenses for the TBTA. As a result, Stantec is assuming for purposes of this study that the operating expenses listed in Table 28 and Table 29 will not change throughout the duration of our forecast.

**Table 28 Projected Operating Expenses**
(millions)

| Year | Labor[(a)] | Non-Labor[(b)] | Total[(c)] |
|---|---|---|---|
| 2022[(d)] | $293.1 | $290.4 | $583.5 |
| 2023[(d)] | $301.3 | $293.4 | $594.7 |
| 2024[(d)] | $308.6 | $300.7 | $609.3 |
| 2025[(d)] | $316.7 | $312.9 | $629.5 |
| 2026[(e)] | $326.2 | $322.2 | $648.4 |
| 2027[(e)] | $336.0 | $331.9 | $667.9 |
| 2028[(e)] | $346.0 | $341.9 | $687.9 |
| 2029[(e)] | $356.4 | $352.1 | $708.5 |
| 2030[(e)] | $367.1 | $362.7 | $729.8 |
| 2031[(e)] | $378.1 | $373.6 | $751.7 |
| 2032 [(e)] | $389.5 | $384.8 | $774.2 |

Notes:
(a) Salaries, overtime and fringe benefits, net of capital reimbursement.
(b) Non-labor includes the following categories: maintenance and supplies, outside services, insurance, power, leases, rentals and other expenses.
(c) Totals may not add due to rounding.
(d) Budgeted by TBTA for 2022 and from TBTA estimates for 2023-2025.
(e) Forecasted by Stantec for 2026-2032.

### Net Revenues from Toll Operations

Finally, the projected operating expenses were deducted from the respective toll revenue calculations to produce the two sets of estimated net toll revenues (before debt service on outstanding TBTA obligations), one at current tolls and the other with toll increases in 2023 and 2025, as shown in Table 29. For 2022, net toll revenue under either scenario is estimated at $1.77 billion. By 2032, annual net toll revenue is estimated to be between $1.49 to $1.72 billion, depending on the number of toll increases included in the forecast.

**Table 29 Net Toll Revenue Forecast**
(millions)

| Year | Gross Toll Revenues | | Operating Expenses | Net Toll Revenues | |
|---|---|---|---|---|---|
| | Current Tolls | With 2023 Toll Increase | | Current Tolls | With 2023 Toll Increase |
| 2022 | $2,350.7 | $2,350.7 | $583.5 | $1,767.2 | $1,767.2 |
| 2023 | $2,336.5 | $2,433.8 | $594.7 | $1,741.8 | $1,839.1 |
| 2024 | $2,284.0 | $2,396.0 | $609.3 | $1,674.7 | $1,786.7 |
| 2025 | $2,269.9 | $2,480.4 | $629.5 | $1,640.4 | $1,850.9 |
| 2026 | $2,266.8 | $2,494.2 | $648.4 | $1,618.4 | $1,845.7 |
| 2027 | $2,256.3 | $2,482.8 | $667.9 | $1,588.5 | $1,815.0 |
| 2028 | $2,255.3 | $2,481.7 | $687.9 | $1,567.4 | $1,793.8 |
| 2029 | $2,257.3 | $2,484.0 | $708.5 | $1,548.8 | $1,775.5 |
| 2030 | $2,259.4 | $2,486.3 | $729.8 | $1,529.6 | $1,756.5 |
| 2031 | $2,261.4 | $2,488.6 | $751.7 | $1,509.7 | $1,736.9 |
| 2032 | $2,263.5 | $2,490.9 | $774.2 | $1,489.2 | $1,716.6 |

## Sensitivity Analysis

Stantec performed two sensitivity analyses to estimate the upper and lower range of possible transaction and revenue outcomes resulting from different rates of pandemic recovery and varying levels of economic downturn related to the recent spike in gas prices. Both severity and duration, as well as trends seen throughout the first two years of the pandemic were taken into account when determining the limits of these ranges.

- Sensitivity 1 (Aggressive Recovery): Under this condition, pandemic-related traffic recovery outpaces the effects of a gas spike related economic downturn and a slightly higher level of people returning to work at their offices.

- Sensitivity 2 (Economic Downturn and Longer Duration Recovery): Under this condition, a more severe economic downturn begins later in 2022 and lasts through 2023. Recovery then occurs through 2028 to a lower new normal due to a reduced level of workers returning to the office.

Under both sensitivities, average tolls towards the end of the ten-year forecast will remain roughly 0.2 percent higher than an equivalent scenario without a pandemic or any economic downturn. This is due to Stantec's assumption that, in the long term, personal vehicle trips will permanently be slightly reduced with more person-days of working from home than before the pandemic.

Despite the likelihood that more people will work from home post-pandemic than did in 2019, it is still assumed that many people will drive using the available capacity on TBTA facilities.

Table 30 and Figure 7 below compare the annual revenue under each sensitivity analysis for current and constant tolls. Table 31 and Figure 8 compare the annual revenue under each sensitivity analysis with assumed toll increases in 2023 and 2025.





**Table 30 Annual Revenue Sensitivity Analysis, Current Tolls**
(millions)

| Year | Forecast | Sensitivity 1 | Sensitivity 2 | Sensitivity 1 vs. Forecast | Sensitivity 2 vs. Forecast |
|---|---|---|---|---|---|
| 2022 | $2,350.7 | $2,380.7 | $2,334.9 | 1.3% | -0.7% |
| 2023 | $2,336.5 | $2,371.8 | $2,280.1 | 1.5% | -2.4% |
| 2024 | $2,284.0 | $2,315.7 | $2,235.0 | 1.4% | -2.1% |
| 2025 | $2,269.9 | $2,298.5 | $2,222.4 | 1.3% | -2.1% |
| 2026 | $2,266.8 | $2,295.3 | $2,228.2 | 1.3% | -1.7% |
| 2027 | $2,256.3 | $2,284.7 | $2,236.1 | 1.3% | -0.9% |
| 2028 | $2,255.3 | $2,283.7 | $2,238.4 | 1.3% | -0.7% |
| 2029 | $2,257.3 | $2,285.7 | $2,240.4 | 1.3% | -0.7% |
| 2030 | $2,259.4 | $2,287.8 | $2,242.5 | 1.3% | -0.7% |
| 2031 | $2,261.4 | $2,289.9 | $2,244.5 | 1.3% | -0.7% |
| 2032 | $2,263.5 | $2,292.0 | $2,246.5 | 1.3% | -0.7% |

**Figure 7 Annual Revenue Sensitivity Analysis, Constant Tolls**
(millions)

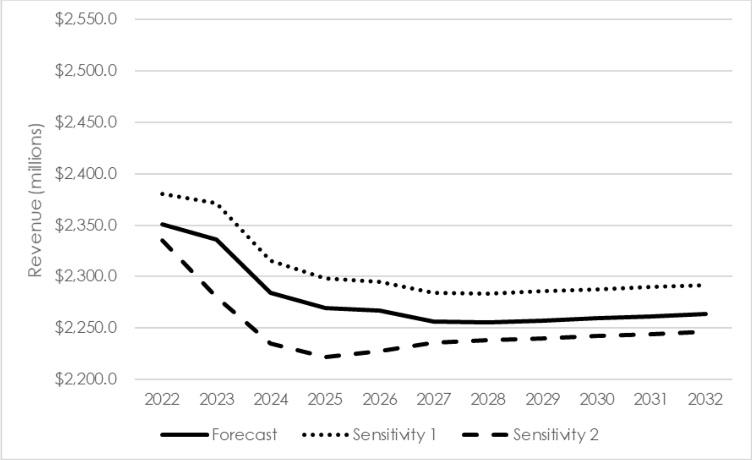


**Table 31 Annual Revenue Sensitivity Analysis with Assumed 2023 and 2025 Toll Increases**
(millions)

| Year | Forecast | Sensitivity 1 | Sensitivity 2 | Sensitivity 1 vs. Forecast | Sensitivity 2 vs. Forecast |
|---|---|---|---|---|---|
| 2022 | $2,350.7 | $2,380.7 | $2,334.9 | 1.3% | -0.7% |
| 2023 | $2,433.8 | $2,470.6 | $2,375.2 | 1.5% | -2.4% |
| 2024 | $2,396.0 | $2,429.2 | $2,344.6 | 1.4% | -2.1% |
| 2025 | $2,480.4 | $2,511.5 | $2,428.5 | 1.3% | -2.1% |
| 2026 | $2,494.2 | $2,525.5 | $2,451.7 | 1.3% | -1.7% |
| 2027 | $2,482.8 | $2,514.0 | $2,460.5 | 1.3% | -0.9% |
| 2028 | $2,481.7 | $2,512.9 | $2,463.2 | 1.3% | -0.7% |
| 2029 | $2,484.0 | $2,515.2 | $2,465.4 | 1.3% | -0.7% |
| 2030 | $2,486.3 | $2,517.6 | $2,467.7 | 1.3% | -0.7% |
| 2031 | $2,488.6 | $2,519.9 | $2,470.0 | 1.3% | -0.7% |
| 2032 | $2,490.9 | $2,522.2 | $2,472.3 | 1.3% | -0.7% |

Notes:
(a) Includes assumed 2023 toll increase on March 1, 2023, and assumed 2025 toll increase on March 1, 2025.

**Figure 8 Annual Revenue Sensitivity Analysis with Assumed 2023 and 2025 Toll Increases**
(millions)

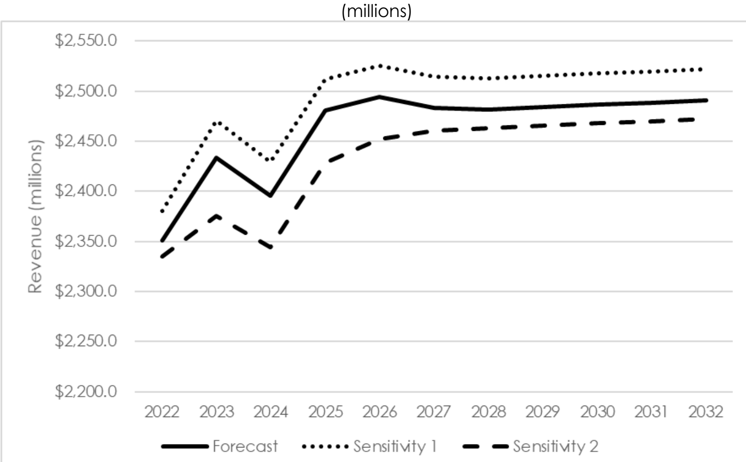
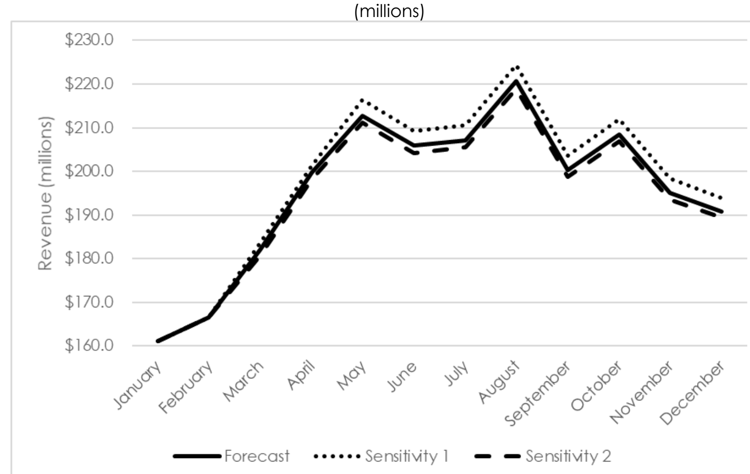







Figure 9 below compares the forecasted monthly distribution of traffic in 2022 to both Sensitivity 1 and Sensitivity 2.

**Figure 9 2022 Monthly Revenue Sensitivity Analysis**
(millions)




The results of the sensitivity analysis show that the TBTA network is reasonably stable, and the system can absorb additional stress without detrimental effects. The onset of an economic downturn and extended pandemic related recovery, as shown in Sensitivity 2, are not expected to cause significant losses in traffic and revenue.

## REVIEW OF PHYSICAL CONDITIONS

The facilities under TBTA's jurisdiction include the two tunnels and seven bridges listed in Table 32, together with facilities on Randall's Island and a parking garage in Manhattan near the Hugh L. Carey Tunnel. Some of these crossings have been in service since the 1930s, i.e., the RFK, Henry Hudson, Marine Parkway-Gil Hodges Memorial, and Bronx-Whitestone Bridges. The Queens Midtown Tunnel opened to traffic in 1940. The Hugh L. Carey Tunnel opened to traffic in 1950. Two bridges opened to traffic in the 1960s: the Throgs Neck in 1961 and the Verrazzano-Narrows in 1964 (lower level in 1969). The present Cross Bay Bridge opened to traffic in 1970 replacing the previous structure that had been in service since 1939. The aging of the TBTA facilities will influence the overall upkeep and capital improvements that will be necessary to maintain the infrastructure over the forecast period and beyond. Table 33 lists TBTA's capital investments for each facility between 1992 and 2021, and within 2021 itself.

**Table 32 Opening Dates of TBTA Facilities**

| Facility | Open to Traffic | Years in Use |
|---|---|---|
| RFK Bridge | 1936 | 86 |
| Bronx-Whitestone Bridge | 1939 | 83 |
| Throgs Neck Bridge | 1961 | 61 |
| Henry Hudson Bridge | 1936 | 86 |
| Queens Midtown Tunnel | 1940 | 82 |
| Hugh L. Carey Tunnel | 1950 | 72 |
| Verrazzano-Narrows Bridge | 1964 | 58 |
| Cross Bay Veterans Memorial Bridge | 1970 | 52 |
| Marine Parkway-Gil Hodges Memorial Bridge | 1937 | 85 |

Stantec reviewed material pertaining to the physical condition of TBTA's seven bridges and two tunnels. The material reviewed includes pertinent sections and updates to the following:

- TBTA's Capital Investments at each facility during the year 2021;
- Ongoing Rehabilitation & Maintenance Projects;
- Biennial and Special In-Lieu of Interim Bridge Inspection Reports;
- Tunnel Inspection Reports;
- Rehabilitation Projects addressing recommendations on previous inspection reports; and
- Repairs to alleviate flagged conditions on previous inspection reports.

**Table 33 Capital Investments by Facility, 1992 through 2020[a]**

(Millions of dollars – Includes Superstorm Sandy Capital Investments)

| Facility | Total by Facility 1992 through 2021[b] |
|---|---|
| Bronx-Whitestone Bridge | $971.71 |
| Cross Bay Veterans Memorial Bridge | $200.88 |
| Henry Hudson Bridge | $605.34 |
| Marine Parkway-Gil Hodges Memorial Bridge | $390.23 |
| RFK Bridge | $2,209.73 |
| Throgs Neck Bridge | $1,127.50 |
| Verrazzano-Narrows Bridge | $1,546.63 |
| Hugh L. Carey Tunnel | $992.92 |
| Queens Midtown Tunnel | $752.20 |
| Agency Wide[c] | $788.70 |
| Total | $9,585.84 |

Notes:
(a) Values are as of December 31, 2021.
(b) Data from TBTA.
(c) Agency wide refers to projects that have been, or will be, carried out at two or more facilities.





### Inspection Reports, Flagged[12] Conditions and Rehabilitation Projects

The review by Stantec of the pertinent material consists of the following subtasks:

- Comparison of condition ratings of the current inspection reports with the previous inspection reports to note significant changes in observed deterioration, and repairs to priority conditions from previous inspections, if any.
- Review of the current TBTA Capital Program to verify that the repairs recommended by the latest inspection reports are being addressed.
- Review of TBTA's Routine Maintenance Program to verify that the maintenance-related recommendations of the current inspection reports are being addressed.

TBTA's seven bridges and two tunnel facilities undergo periodic condition inspections. Bridges and tunnels are inspected biennially per federal and State mandate, with interim yearly inspections of any components that require monitoring. The purpose of the biennial inspection program is to maintain the safety and structural integrity of bridges and tunnels.

Bridge and Tunnel Inspections. NYSDOT maintains a program of comprehensive bridge and tunnel management, maintenance and inspection applicable to TBTA's bridges and tunnels. That program includes the uniform codes for bridge inspection and tunnel inspection, which:

- meet or exceed applicable federal law;
- require that bridges and tunnels be inspected at least every two years in accordance with the provisions of that code;
- prescribe qualifications for licensed professional engineers who inspect bridges and tunnels; and
- require that all bridge and tunnel inspections be performed or supervised by such persons.

Bridge and tunnel inspection reports must be filed with NYSDOT who may close bridges or tunnels found unsafe for public use. TBTA is in compliance with the NYSDOT program.

TBTA's Bridge Inspection Program was assessed from 2006 to 2007 by an independent engineering firm well known in the field of structural inspection and appraisal, which noted that "the program is meeting the minimum State and federal standards" and "in several respects the program exceeds the minimum standards" and "with respect to the accuracy, clarity, and thoroughness of the reports generated, we find them to be of the highest quality."

[12] The New York State Bridge Inspection Manual defines the following "flags" for reporting purposes: Red Flag – A structural flag that is used to report the failure or potential failure of a primary structural component that is likely to occur within two years from the current inspection. Red Flag PIA (Prompt Interim Action) – A designation that is made when a Red Flag condition is considered extremely serious and in need of immediate attention. This designation requires appropriate action by the responsible party within twenty-four hours. Yellow Flag - A structural flag that is used to report a potentially hazardous structural condition which if left unattended could become a clear and present danger within two years from the current inspection, or the actual or imminent failure of a non-critical structural component, where such failure may reduce the reserve capacity or redundancy of the bridge but would not result in a structural collapse. Safety Flag PIA (Prompt Interim Action) – A flag that is used to report a condition presenting a clear and present danger to vehicular or pedestrian traffic but poses no danger of structural failure or collapse. Safety Flag PIA can be issued on closed bridges where conditions present a threat to vehicular or pedestrian traffic underneath the structure or in the immediate vicinity. This designation requires appropriate action by the responsible party within twenty-four hours.

The TBTA bridges and tunnels were last inspected, and their physical condition appraised in 2020-2021 by various consultants and in-house inspection staff, under the New York State Biennial Bridge and Tunnel Inspection Program, as shown in Table 34. Separate underwater and substructure inspections were performed in accordance with the five-year cycles of NYSDOT to obtain riverbed contours and to assess potential scour conditions at the substructure.

These ongoing inspections, performed by the inspection consultants and, in some cases, in-house inspection staff, consist of close visual examination, 100 percent hands-on inspection of designated critical elements, sounding concrete, and taking appropriate measurements to determine the physical conditions of the bridges and tunnels. All bridge inspections beginning in 2017 and continuing thereafter were performed in accordance with the updated 2017 New York State Bridge Inspection Manual and the AASHTO Manual for Bridge Element Inspection. All tunnel inspections beginning in 2017 and continuing thereafter were performed in accordance with the FHWA's National Tunnel Inspection Standards (NTIS), the 2015 Specifications for the National Tunnel Inventory, and the 2015 Tunnel Operations, Maintenance, Inspection and Evaluation Manual; and NYSDOT Technical Advisory, TA 16-001.

Under these guidelines, all bridge and tunnel components are inspected and assigned a quantitative condition rating. Any priority conditions are reported immediately to the TBTA for prompt attention. The ratings are reviewed by TBTA personnel to assess what components of the bridge or tunnel require more comprehensive inspection and rehabilitation. Required rehabilitation needs are then packaged and awarded as contracts under the Capital and Maintenance Programs. Bridge and tunnel components which warrant more frequent monitoring due to their condition are monitored annually with a special in-lieu of interim inspection.

After performing a comparison of the individual overall ratings of the current inspection reports against the previous inspection reports, it was noted that there has been no significant change in the overall ratings and the bridges and tunnels remain in Fair to Good condition.

TBTA has an ongoing seismic retrofit program to identify and implement necessary seismic retrofits in order to bring critical facilities to current seismic code standards. This program has made substantial progress in identifying necessary seismic upgrades and incorporating them into various capital facility rehabilitation design and construction projects when applicable. This effort was maintained in the 2015-2019 Capital Program and will continue in the approved 2020-2024 Capital Program.

While the majority of the inspection work is performed by consultants, some of the smaller structures are inspected by qualified in-house inspection staff. Table 3 lists the consulting engineering firms as well as the in-house inspection unit who performed the 2020 and 2021 biennial bridge or special in lieu of interim inspections and the 2019 tunnel inspections for each facility.





**Table 34 Facility Inspection Firms**

| Facility | Consulting Firm (Inspection Year) |
|---|---|
| RFK Bridge | WSP / Hardesty & Hanover / In-House (2020, 2021), WSP / Stantec (2018 & 2019) |
| Throgs Neck Bridge | Thornton Tomasetti (2021), HNTB (2020, 2019) |
| Bronx-Whitestone Bridge | Stantec (2021), Thornton Tomasetti (2020, 2019) |
| Henry Hudson Bridge | HNTB (2021), Hardesty & Hanover (2020, 2019) |
| Queens Midtown Tunnel | Stantec (2021), HNTB (2019) |
| Queens Midtown Tunnel facility approach bridges | In-House (2021), Hardesty & Hanover (2020, 2019) |
| Hugh L. Carey Tunnel | Stantec (2021), HNTB (2019) |
| Verrazzano-Narrows Bridge | HNTB / Prime (2021), HNTB / Prime (2020), Hardesty & Hanover / AI Engineers (2020, 2019) |
| Marine Parkway-Gil Hodges Memorial Bridge | Hardesty & Hanover / In-House (2021), WSP (2020, 2019) |
| Cross Bay Veterans Memorial Bridge | Hardesty & Hanover / In-House (2021), WSP / In-House (2020, 2019) |

The firms listed are well known in the field of structural inspection and appraisal. Copies of pertinent sections of the final inspection reports for the various facilities were requested and made available by TBTA.

*Current Work Under Both Capital Programs*

Funds previously programmed for TBTA's 2015-2019 Capital Program are summarized in Table 35. The plan, which totals $2.935 billion, separates this amount into specific projects by facility as well as agency-wide projects. Comparisons between the 2015-2019 Capital Program planned projects and total repair item lists for each facility, as prepared by inspection consultants in the biennial reports, confirm that the 2015-2019 Capital Program gives high priority to key rehabilitation projects. By prioritizing necessary facility rehabilitation projects, TBTA addressed all high priority recommendations in the current 2015-2019 Capital Program or maintenance programs that were not addressed as part of the previous 2010-2014 Capital Program so that all of these high priority needs will continue to be met. The approved 2020-2024 Capital Program, shown in Table 36 at $3.327 billion, is underway. The CBD Tolling Program is projected to cost approximately $503 million to implement, although TBTA expects to be fully reimbursed from non-toll revenues in the CBD Tolling Lockbox.

**Table 35 TBTA 2015-2019 Capital Program by Facility**

(In Millions of Dollars) (a)

| Facility | 2015-2019(b) | Percent |
|---|---|---|
| Bronx-Whitestone Bridge | $177.99 | 6% |
| Cross Bay Veterans Memorial Bridge | $87.55 | 3% |
| Henry Hudson Bridge | $283.73 | 10% |
| Marine Parkway-Gil Hodges Memorial Bridge | $21.65 | 1% |
| RFK Bridge | $470.14 | 16% |
| Throgs Neck Bridge | $681.96 | 23% |
| Verrazzano-Narrows Bridge | $602.61 | 20% |
| Hugh L. Carey Tunnel | $137.49 | 5% |
| Queens Midtown Tunnel | $88.95 | 3% |
| Agency Wide(b) | $383.02 | 13% |
| Total | $2,935.09 | 100% |

Notes:
(a) Values are as of December 31, 2021.
(b) Agency wide refers to projects that have been, or will be, carried out at two or more facilities.

**Table 36 Capital Investments 2020-2024 Capital Program by Facility**

(In Millions of Dollars)(a)

| Facility | 2020-2024 | Percent |
|---|---|---|
| Bronx-Whitestone Bridge | $110.42 | 4% |
| Cross Bay Veterans Memorial Bridge | $52.79 | 2% |
| Henry Hudson Bridge | $64.51 | 2% |
| Marine Parkway-Gil Hodges Memorial Bridge | $85.08 | 3% |
| RFK Bridge | $709.75 | 25% |
| Throgs Neck Bridge | $241.43 | 9% |
| Verrazzano-Narrows Bridge | $1,127.55 | 40% |
| Hugh L. Carey Tunnel | $52.72 | 2% |
| Queens Midtown Tunnel | $46.25 | 1% |
| Agency Wide(b) | $333.15 | 12% |
| Total | $2,823.87 | 100% |
| Central Business District Tolling Program (CBDTP) | $503 | 100% |
| GRAND TOTAL (2020-2024 Capital Program) | $3,327 | |

Notes:
(a) Values are as of December 31, 2021.
(b) Agency wide refers to projects that have been, or will be, carried out at two or more facilities.





*Bronx-Whitestone Bridge ("BWB")*

During the 2021 Biennial Bridge Inspection of the BWB, a total of nineteen (19) yellow flags were issued. Of these nineteen (19) yellow flags, three (3) were reissued yellow flags and sixteen (16) were new yellow flags. No red flags were issued during the 2021 Biennial Bridge Inspection. The BWB is in overall good condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing or planned projects in the approved 2020-2024 Capital Program at the BWB include:

- Fender Protection Around Tower Piers and Installation of Fire Standpipe Connection from Tower Pedestals to Roadway Level. Construction was awarded in late 2019 and was completed in late 2021.
- Miscellaneous Structural Rehabilitation and Painting Construction was awarded in late 2021 and is projected to be completed in late 2024.
- Bridge structural lighting, power redundancy and resiliency improvements. Design contract was awarded in May 2020. Construction is under procurement and planned to begin in late 2022.
- Cable Dehumidification and Miscellaneous Work. Funding is programmed for preliminary design and planned to begin later in the 2020-2024 Program. Construction is planned for in the 2025-2029 Capital Program.

*Henry Hudson Bridge ("HHB")*

During the 2021 Biennial Bridge Inspection of the HHB, a total of three (3) yellow flags were issued. Of the three (3) yellow flags, two (2) were reissued yellow flags and one (1) was new. All three (3) yellow flags were removed before the completion of the inspection. The HHB is in overall fair to good condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the HHB include:

- Structural Rehabilitation Consisting of High Priority Structural Steel Repairs – Phase I is complete. Phase II construction was awarded in late 2019 and was completed in March 2022.
- Replacement of Overcoat System – Construction was awarded in late 2019 and was completed in March 2022.
- Dyckman Street and Kappock Substation Upgrades. Construction was awarded in late 2021, is ongoing and is projected to be completed in 2024.
- Installation of maintenance catwalks and lighting in Dyckman Street Bridge abutments. This project was completed in October 2021.
- Upper Level North Abutment and Retaining Wall Rehabilitation. Design is planned for the 2020-2024 Capital Program. Construction is currently planned to be advanced into the 2020-2024 program to begin in 2023.

*Hugh L. Carey Tunnel ("HCT")*

The Routine NTIS Tunnel inspection of the HCT was performed in 2021. During the Routine 2021 NTIS inspection, there were no deficiencies noted that required the issue of any flags. During the 2021 Biennial Inspection of the Governor's Island Pedestrian Bridge (part of the HCT Facility), the two (2) yellow flags issued in 2019 were still active. Outstanding flags for this facility remain at two (2). The HCT is in overall fair to good condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the HCT include:

- Rehabilitation of HCT Ventilation Systems – Construction was awarded in 2018 and was completed in the fall of 2021.
- Rehabilitation of the Ventilation Buildings – Design contract was awarded in late 2019 and was completed in late 2021. Identified rehabilitation needs are being addressed in various small construction projects. Funded from the capital program, a construction project to address façade rehabilitation at the Manhattan Blower Building was awarded in March 2021 and was completed in February 2022. Remaining identified needs are being addressed via the operating budget.
- Rehabilitation of Tunnel Entrance/Exit – Manhattan. Design is planned to begin in late 2022. Construction is currently planned to be advanced into the 2020-2024 Capital Program to begin in 2024.
- Installation of Fire Suppression System. Preliminary design funding is programmed for 2023 with construction planned for the 2025-2029 Capital Program.

*Queens Midtown Tunnel ("QMT")*

The Routine NTIS Tunnel Inspection of the QMT and the Biennial Inspection of the QMT approach bridges were performed in 2021. No flags were issued during the 2021 Routine Inspection. The QMT and the QMT approach bridges are in fair to good conditions.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the QMT include:

- Rehabilitation of the Ventilation Buildings – Design contract was awarded in late 2019 and was completed in late 2021. Identified rehabilitation needs include the Relocation of QMT Refueling Station and QSB Switchgear which will be awarded in mid-2022, funded in the 2020-2024 Capital Program.
- Installation of Fire Suppression System. Preliminary design funding is programmed for 2023 with construction planned for the 2025-2029 Capital Program.





*Robert F. Kennedy Bridge ("RFK"))*

The Biennial Inspection was performed at the RFK (Group A and Group B) in 2020. For Group A, a total of one-hundred-twenty-four (124) yellow structural flags were issued during the 2020 biennial inspection. This represents a 7% decrease from the previous biennial inspection in 2018 (134 flags). Thirty-five (35) of these flags are new and eighty-nine (89) superseded 2018 yellow structural flags. During the 2021 special in-lieu of interim inspection, six (6) flags were removed, and one hundred eighteen (118) yellow flags remain active.

For Group B, there was a total of 19 flags during the 2020 biennial inspection. This represents a 47% decrease from the previous biennial inspection in 2018 (36 flags). Nine (9) flags issued were new, while the remaining 10 flags were reissued from the previous biennial inspection. During the 2020 Biennial Inspection, one (1) yellow flag was removed. In addition, during the 2021 special in-lieu of interim inspection, four (4) flags were removed, and one (1) yellow flag was issued. A total of fifteen yellow flags remain active.

The RFK is in overall fair to good condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the RFK include:

- Miscellaneous Structural Repair – Phase I construction was substantially completed in 2016. The Phase II construction contract was awarded in late 2019, is ongoing, and is projected to be completed in the summer of 2022.
- Seismic and Wind Load Study – The study was awarded in December 2012 and was completed in 2015. Conceptual design was awarded in 2017 and final design was awarded in 2018. Construction for Phase I (superstructure upgrades for all facility structures except the suspended spans) was awarded in late 2019, is ongoing, and is projected to be completed in summer of 2022.
- Painting of Lift Span and Bronx Truss Steel – Construction contract was awarded in 2019, is ongoing, and is projected to be completed in the summer of 2022.
- Construction of New Harlem River ramp sidewalk connection and Lift Span Fender Upgrades. Design-Build project was awarded in late 2021, is ongoing, and is projected to be completed in late 2023.
- RFK Facility wide painting program – Phase 1 of this project addressing the Junction Structure is ongoing and is projected to be completed in the summer of 2022. Phase 2, Painting of the Queens Approach, is planned to begin construction in the fall of 2022.
- Flood Mitigation at RFK – Installation of flood windows, flood doors, and removable flood barriers at the Robert Moses Building – This project is ongoing and is projected to be completed in the fall of 2022.
- Power Resiliency at RFK Bridge – Substation upgrade. Project was awarded in 2020 and was completed in March 2022.
- Concrete Repairs at Queens Approach Structure – Construction contract was awarded in 2019 and was completed in late 2021.

- Demolition of the Former Bronx Plaza West Widening (Facility Interoperability Improvements) – Construction contract was awarded in 2020 and was completed in the summer of 2021.
- Demolition of the remaining occupied space under the Manhattan Plaza – Project was awarded in late 2021 and is projected to be completed in the fall of 2022.
- Suspended Span Retrofit. Preliminary design was awarded in late 2020 and is ongoing with construction planned for 2023.
- Ward's Island/Queens Anchorage Rehabilitation – In-house design is ongoing with construction planned for 2023.
- Reconstruct/Relocate Randall's Island Ramps (Queens to Randall's Ramp and Randall's to Manhattan Ramp) - In house design is ongoing with construction planned for late 2022. Widening of Southbound FDR Drive (125 St to 116 St) - Design was awarded in 2021. Construction is currently planned to be advanced into the 2020-2024 Capital Program to begin in 2023.

*Throgs Neck Bridge ("TNB")*

During the 2021 Biennial Bridge Inspection of the Throgs Neck Bridge, a total of one hundred and seventeen (117) structural flags were issued. Of these one hundred and seventeen (117) flags, one (1) was a structural red flag and one hundred and sixteen (116) were structural yellow flags. Ninety-five (95) of the yellow flags were re-issued, along with one (1) structural red flag, and twenty (21) were new yellow flags. During the 2021 Biennial Inspection, fifty-eight (58) flags were removed, including the red flag. The TNB is in overall fair condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the TNB include:

- Approach Viaducts Seismic Retrofit & Structural Rehabilitation Construction contract was awarded in 2019. It is an ongoing project and is projected to be completed summer of 2023.
- Replacement of Grid Decks on Suspended Span and Painting on Suspended Span – Construction contract was awarded in 2018, is ongoing, and is projected to be completed in late 2022.
- Anchorage and Tower Protection – Preliminary design contract was awarded in late 2019 and is ongoing. Construction is funded in the 2020-2024 Capital Program and is projected to begin in 2023.
- Study for Bronx-Queens Viaduct Replacement – Study was awarded in 2017 and was completed in March 2021.
- Miscellaneous Structural Rehabilitation – In house design is ongoing with construction planned for late 2022.
- TNB Facility-Wide Painting Program – Painting of the towers is planned to begin in 2023.
- Flood Mitigation at TNB – Installation of flood doors, flood window and removable flood barriers. This project is ongoing and is projected to be completed in the fall of 2022.





*Verrazzano-Narrows Bridge ("VNB")*

The Biennial Inspection at the VNB (Group C and Group D) was performed in 2020. For Group C, a total of twelve (12) flags were issued during the 2020 Biennial Inspection. Of the twelve (12), all were yellow structural flags. Eight (8) were issued at the lower level and Four (4) were issued at the upper level. No flags were removed during the Inspection. During the 2021 special in-lieu of interim inspection, a total of six (6) yellow flags were issued, and four (4) yellow flags were removed.

For Group D, a total of four (4) flags were issued. Of these flags, 3 were yellow flags and 1 was a safety flag PIA. The safety flag PIA was removed during the 2020 Biennial Inspection. No red flags were issued. During the 2021 special in-lieu of interim inspection, no new yellow flags were issued.

The VNB is in overall fair condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the VNB include:

- Anchorage & Piers Rehabilitation and Sealing – Construction Contract was awarded in 2018 and was completed in May 2021.
- Painting of Suspended Span Upper & Lower Level Steel – Construction was awarded in 2019 and was completed in late 2021.
- Gowanus Widening at the 92nd Street On-Ramp (EB). Construction was awarded in 2019 and was completed in June 2021.
- Rehabilitation of the Staten Island and Brooklyn Upper Level Approach Ramps – The feasibility study and conceptual design for the reconstruction and reconfiguration of the ramps and approaches was awarded in 2013. Construction for Phase I was awarded in late 2019. It is an ongoing project and is projected to be completed in the fall of 2022. Preliminary design for Phase 2 of the project is ongoing with construction planned to begin in 2024.
- Steel Repair of the Suspended Spans – Construction contract was awarded in 2019. It is an ongoing project and is projected to be completed in April 2022.
- Safety Fence Installation at the Upper and Lower Level Main Suspended Spans. Project was awarded in March 2021 and is projected to be completed in late 2022.
- Miscellaneous Bridge Lighting and Electrical Improvements/Repairs. Design contract was awarded in March 2020. Design is ongoing with construction of electrical improvements planned for late 2022 and lighting improvements planned for 2023.
- Painting of the towers at the VNB – In house design is planned for 2022 with construction planned for 2023.
- Lower Level Main Suspended Span Deck Rehabilitation. Design contract was awarded in 2019 and was completed in early 2022. Construction is funded in the 2020-2024 Capital Program and is planned to begin in late 2022.
- Widening of Belt Parkway. Design was awarded in late 2019 and was completed in early 2022. Construction is funded in the 2020-2024 Capital Program and is projected to begin in late 2022

*Marine Parkway Bridge ("MPB")*

The Biennial Inspection of the MPB was performed in 2021. No flags were issued during the 2021 biennial inspection. The MPB is in overall fair condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the MPB include:

- Replacement of On Grade Light Poles Construction began in the spring of 2021 and is projected to be completed in the summer of 2022.
- MPB Facility-Wide Painting program began in the spring of 2021 and is projected to be completed in late 2022.
- Installation of Power Monitoring System – project is ongoing and is projected to be completed in the summer of 2022.
- Rehabilitation of Pier Fender System at the MPB and CBB – Construction was awarded in late 2018 and was completed in the fall of 2021.
- Miscellaneous Steel Repairs – Funding is included in the program for any necessary repairs identified under future inspections. This will be awarded as part of the CBB project for structural rehabilitation of the CBB referenced below.
- Electrical Rehabilitation of the Elevator – Construction was awarded in late 2021 and is projected to be completed in late 2023.
- Painting of the Above Roadway Steel – Construction was awarded in mid-2021, is ongoing and is projected to be completed in late 2022.

*Cross Bay Bridge ("CBB")*

The Biennial Inspection of the CBB and Ramp B were performed in 2021. No flags were issued during the 2021 biennial inspection. The CBB is in overall fair condition.

Recently completed and ongoing projects in the 2015-2019 Capital Program and ongoing and planned projects in the approved 2020-2024 Capital Program at the CBB include:

- Rehabilitation of Pier Fender System at the MPB and CBB – Construction was awarded in late 2018 and was completed in the fall of 2021.
- Structural Rehabilitation of CBB – In house design is ongoing with construction planned for late 2022.
- Installation of Power Monitoring System – project is ongoing and is projected to be completed in the summer of 2022.

**Other System Wide Improvements**

*Agency-Wide ("AW")* – Since the September 11th attack on the World Trade Center, TBTA has engaged consultants to assess security risks of their facilities. As a result of these risk assessments, increased security improvements including various monitoring, surveillance and hardening projects have been implemented or will begin construction shortly at TBTA facilities. Video surveillance software and hardware upgrades have been installed at many facilities. TBTA has also



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maintained a security department and incorporates mitigation measures into their operations, capital, and maintenance programs.

Recently completed and ongoing AW projects in the 2015-2019 Capital Program and ongoing and planned AW projects in the approved 2020-2024 Capital Program include:

- *Overhaul and Replace Facility Monitoring and Safety Systems* – This project includes upgrades for traffic detection, incident management, operational command, safety systems, and other agency-wide systems. Design is planned to begin in mid-2022, with construction planned for 2023.
- Intelligent *Transportation System Enhancements* – This project completed the installation of CCTV cameras at the TNB, BWB and RFK, improving the monitoring and observation of traffic flow on these bridges. Hardware upgrades will also be made for the Advanced Traffic Management Systems ("ATMS").
- *Hazardous Materials Abatement* – This project will remove hazardous materials at various facility work sites.

Additional projects:

- Structural Health Monitoring
- Fiber Optic Infrastructure and Integration
- Toll Collection System Rehabilitation/Upgrades
- SCADA Systems
- Rehab/Replace Facility Monitoring and Safety Systems
- Service Building Upgrades

As part of the Capital Program planning process for each five-year plan, TBTA personnel conduct a capital needs assessment. The assessment is compiled from data from biennial inspections and system improvements suggested by the Engineering and Construction department and includes factors such as service life of various structural components and normal replacement cycles. Scheduling of Major Maintenance projects is closely coordinated to ensure that the optimal level of service to the traveling public both locally and systemwide is maintained while balancing operating and capital expenditures.

Stantec's consultant team review of pertinent sections of the recent facility inspection reports found them to be extensive and detailed. The reports, based on that limited review, appear, in the opinion of Stantec, to be reasonable. The reviews proved informative. Facility projects and agency-wide projects specific to each structure were discussed. KC Engineering conducted the condition assessment of these facilities for Stantec.

It is important to note, however, that Stantec's consultant team review of portions of the work of other parties shall not relieve such other parties from their responsibility for performing their work in accordance with applicable requirements and the customary standard of care. Stantec and its subconsultants shall not be responsible for the acts or omissions of other parties engaged by TBTA.

### Long-Term Outlook for TBTA Facilities

The useful lives of bridges and tunnels, in general, could possibly be cut short for two main reasons: (a) they are geometrically and functionally unsatisfactory because they are too narrow, too steep, lacking in clearance or sufficient spatial capacity to handle the traffic; or (b) they are structurally unsafe because of deterioration or because their load-carrying capacity is inadequate to handle the loads imposed under current conditions. Deterioration may occur for a variety of reasons, including aging, but it will occur sooner if there has been inadequate or improper maintenance.

On the basis of the foregoing review and information available to us from reports of others, it is our opinion that the TBTA bridges, tunnels and approaches are all geometrically and functionally adequate, structurally sound, and generally maintained to good standards. Ongoing maintenance requirements of the structures are assessed, prioritized and addressed in an appropriate manner by TBTA to maintain a high level of safety to the traveling public, and to maintain the structures for many years to come.

TBTA is looking forward, exploring ways to add capacity at its facilities (where possible) while maintaining and rehabilitating its structures in order to ensure their future serviceability. We are of the opinion that all the TBTA facilities are and will be physically capable of accommodating traffic volumes at the levels projected for 2032 through the duration of the outstanding bonds that have been issued and future bonds to be issued based on a pledge of TBTA revenues through 2056, assuming maintenance and rehabilitation consistent with past practice.

## CONCLUDING REMARKS

It is Stantec's opinion that the revenue projections presented in this report have been prepared in accordance with accepted industry-wide practice for investment -grade studies. However, given the uncertainties within the current international and economic climate, Stantec considers it is necessary to state that the traffic and revenue projections take into consideration the following caveats:

- This report presents the results of Stantec's consideration of the information available to us as of the date hereof and the application of Stantec's experience and professional judgment to that information. It is not a guarantee of any future events or trends.
- The traffic and revenue forecasts will be subject to future economic and social conditions or demographic developments, which cannot be predicted with certainty.
- The projections contained in this report, while presented with numerical specificity, are based on a number of estimates and assumptions which, though considered reasonable to us, are inherently subject to significant economic and competitive uncertainties and contingencies, many of which will be beyond Stantec's control and that of TBTA. In many instances, a broad range of alternative assumptions could be considered reasonable. Changes in the assumptions used could result in material differences in projected outcomes.





- If, for any reason, any of these stated conditions should change due to changes in the economy or competitive environment, the pandemic conditions and associated actions, or other factors, Stantec's opinions or estimates may require amendment or further adjustments.
- Stantec's toll revenue projections only represent its best judgment and Stantec does not warrant or represent that actual toll revenues will not vary from its projections, estimates, and forecasts.

Many statements contained in this report that are not historical facts are forward-looking statements, which are based on Stantec's opinions, as well as assumptions made by, and information currently available to, the management and staff of Stantec. Because the statements are based on expectations about future events and economic performance and are not statements of fact, actual results may differ materially from those projected. The words "anticipate", "assume", "estimate", "expect", "objective", "projection", "plan", "forecast", "goal", "budget", or similar words are intended to identify forward-looking statements. The words or phrases "to date", "now", "currently", and the like are intended to mean as of the date of this report.

Respectfully,

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# MTA 2023 Combined Continuing Disclosure Filings