2017 ANNUAL REPORT CERTIFICATION

I, Lamond W. Kearse, Chief Compliance Officer of the Metropolitan Transportation Authority and Robert E. Foran, Chief Financial Officer of the Metropolitan Transportation Authority do certify based upon my knowledge and belief as follows:

1. the information contained in the 2017 Annual Report submitted with this Certification is accurate, correct and does not contain any untrue statement of material fact;

2. the information contained in the 2017 Annual Report submitted with this Certification does not omit any material fact, which if omitted would cause the financial statements to be misleading in light of the circumstances under which such statements are made; and

3. the information contained in the 2017 Annual Report fairly presents in all material respects the financial condition and results of operations of the Metropolitan Transportation Authority as of and for the periods represented in the financial statements.

Lamond W. Kearse
Chief Compliance Officer

Date: 3/27/18

Robert E. Foran
Chief Financial Officer

Date: 3.27.18
Section 1—Operations and Performance

Performance

NYC Transit (Subways and Buses) ■ Long Island Rail Road ■ Metro-North Railroad ■ MTA Bus Company ■ Bridges and Tunnels

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**MTA Bus Operations (NYCT Dept. of Buses, MTA Bus Company)**
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**Long Island Rail Road**
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Description of the MTA and the MTA Board Structure

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Material Pending Litigation Report

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- Compensation Schedule and Biographical Information Reports
- Bond Rating Reports
- Consolidated Financial Statements
- Governance Principles and By-Laws
- Grant Report 2017
- MTA Legislation
- Mission Statement and Measurement Report
- Management Assessment of the Effectiveness of Internal Controls
- Real and Personal Property Reports with Guidelines
- Board Self-Assessment Report
2017 ANNUAL REPORT—SECTION 1
Operations and Performance

Performance

This section of the MTA Annual Report summarizes ridership and other performance data for the twelve-month period ending December 31, 2017. (See also, the “2017 Mission Statement, Measurement, and Performance Indicator Report,” Public Authorities Law Sections 1269-f and 2824-a.)

Total ridership on the subways, buses, and railroads of the Metropolitan Transportation Authority (MTA) reached 2.63 billion rides in 2017, some 3.3 percent shy of the record 2.72 billion rides in 2014 and 2015. The decline came mainly in transit operations. While subway ridership decreased by 1.7 percent to 1.73 billion rides in 2017, this must be viewed in the context of a 9.7 percent increase in average weekday ridership over the last eight years and a passenger volume unequalled since the 1940s. Bus rides at New York City Transit (NYCT) and MTA Bus fell by 5.6 percent and 2.7 percent respectively. Though Long Island Rail Road (LIRR) ridership fell slightly from the peak levels of the prior year, the 89.2 million customers carried in 2017 remained the railroad’s second highest ridership since 1949. Metro-North Railroad (Metro-North), meanwhile, set an all-time record with 86.5 million rides, up 300,000 rides over the previous year. MTA Bridges and Tunnels (B&T) also hit a new high in 2017, with 310 million crossings, enabling B&T to provide $1.12 billion in support to transit.

Agency Projects Advanced During 2017

The year saw a number of major achievements for the MTA, alongside well-publicized challenges. The Second Avenue Subway, Phase 1, which opened on New Year’s Day of 2017, served an average 176,000 weekday riders by May, drawing down peak congestion at the four closest Lexington Avenue Line stations by around 40 percent. The line’s new stations and world-class public art drew praise from critics and the public alike. Preliminary work for Phase 2, from 96th Street to 125th Street, is underway. The South Ferry Station reopened in June 2017,

1 Because of the timing of the “Mission Statement,” the performance data in that report are subject to subsequent reconciliation and adjustment as data is finalized by each agency over the course of the year. For that reason, some of the data reported in the “Mission Statement” have been adjusted in this report to reflect the most recent 2017 performance data, as of March 15, 2018.
five years after the station was effectively destroyed by Superstorm Sandy. Its return to service was a major milestone in the ongoing superstorm recovery and resiliency efforts, as the MTA continues to rebuild damaged tunnels and infrastructure, while fortifying the entire system against rising sea levels and extreme weather events.

Another major achievement came in September 2017 when B&T completed its systemwide transition to cashless open road tolling (ORT), three months ahead of schedule. According to the first full year of data analysis, ORT has cut motorists’ travel time by 32 percent, while reducing fuel consumption by 1.6 billion gallons, carbon emissions by 15,393 tons, and toll-area collisions by 41 percent. Another notable advancement, with implications for Long Island and the entire Metropolitan Region, came in December 2017 when the MTA Board approved the contract for the LIRR Main Line Expansion project, which will increase capacity and dramatically improve commuting on Long Island.

Other MTA projects that advanced in 2017, as overviewed in Sections 2 and 3 of this report, ranged from some of the world’s largest infrastructure projects, like East Side Access and the Second Avenue Subway, Phase 2, to in-house IT innovations, such as the award-winning beacon signal system that brought countdown clocks to all remaining subway stations in 2017.

**Major 2017 Challenges and Responses**

The year’s greatest single challenge arose from the declining performance of NYCT’s aging subway system, to which many historical causes have contributed. In June 2017, shortly after assuming the leadership position, MTA Chairman Joseph J. Lhota, launched the Subway Action Plan (SAP), which is described in the following pages and on the MTA website. By year’s end the plan was already showing early results, with notable third-quarter improvements in some of the key performance indicators cited in this report. An expanded set of indicators is now updated regularly with the new subway dashboard on the MTA website. The two-phase SAP aims to stabilize and improve current service issues, while laying a foundation for system modernization. Long-term improvements were jumpstarted in 2017 with the MTA’s Genius Transit Challenge, which drew hundreds of proposals worldwide for innovative upgrades to signals, communications, and subway car design. Eight winning proposals were selected in March 2018 to begin development and testing over the coming year.
In another significant step, the MTA undertook several changes to its management structure in 2017, as described in Section 4 of this report. Notably, the MTA chairman, Mr. Lhota, created the Office of the Chairman consisting of the MTA president, currently Patrick Foye; the MTA managing director, currently Veronique Hakim; and the MTA chief development officer, currently Janno Lieber, who also serves as president of MTA Capital Construction (MTACC). Additionally, Phillip Eng was named MTA chief operating officer in 2017. New presidents were named at four MTA agencies, either in 2017 or the first quarter of 2018. All current MTA management positions and agency heads are referenced under “Leadership” on the MTA website.

Together, the MTA agencies committed a total of $8.786 billion for capital projects in 2017 and completed projects worth $4.588 billion during the year, as overviewed in Section 3 of this report. Amendments to the 2015-2019 MTA Capital Program were approved by the MTA Board and by the Capital Program Review Board (CPRB) in February and May of 2017, increasing the total program value from $29.45 billion to $29.57 billion. Also in May, the MTA Board amended the 2010-2014 Capital Program, reducing it from $34.801 billion to $32.021 billion, which was approved by the CPRB in July 2017. Capital project details and status can be accessed at the Capital Program dashboard on the MTA website.

The balance of Section 1, below, reports the 2017 performance measurements for each of the MTA agencies providing subway, bus, paratransit, commuter rail, and bridge-and-tunnel crossing services. As part of its public transparency mission, the MTA regularly updates these data on the performance dashboards on the MTA website at www.mta.info. Because MTA performance indicators are regularly updated, some of the data reported here may be subject to later adjustment and reconciliation.
New York City Transit—2017 Performance

First opened in 1904, the New York City Transit (NYCT) subway system is among the largest and busiest public transit systems in the world, accounting for 70 percent of all subway rides in the United States. Today, the system spans 472 stations and 665 miles of track. It offers 24/7 service across four boroughs and has enabled New York City to grow and thrive for over a century.

In July 2017, the MTA chairman launched the Subway Action Plan (SAP), which aims to address increased ridership and declining performance on the aging subway system. The two-phase plan seeks to stabilize and improve the system while laying a foundation for modernization. It addresses the major causes of subway delays, such as signal malfunctions, track issues, failing power infrastructure, water damage, track fires, car breakdowns, police activity, and station issues. The first phase targets those system components that have the biggest impact on service. It focuses on increased reliability and capacity, stations and safety, and better service communications. The second phase introduces long-term, systemwide improvements, including better subway cars, a new signaling system, modern communications technology to facilitate new signaling, and the deployment of the most promising innovations from the MTA’s Genius Transit Challenge.

To address signal and track issues, NYCT is expediting the repair of 1,300 of the most problematic signals. In addition, the agency is sealing water leaks, unclogging drains, and aggressively cleaning the entire underground system to remove debris and reduce fire hazards. The agency is also tripling its planned installation of continuous welded rail (CWR), which decreases rail joints failures and provides smoother rides. To tackle in-service incidents more quickly, NYCT has established new rapid response teams based at strategic locations throughout the system.

To improve car reliability, NYCT has expanded the number of overhauls from 950 to 1,100 cars per year, prioritizing the maintenance of car doors, which cause 40 percent of breakdowns. To increase train capacity, the agency is adding more cars on lines with longer platforms that can accommodate the extra cars. On selected lines, NYCT is testing a program to reduce some seats, which allows 25 more standing customers per car.
As part of the SAP, NYCT has developed four new performance indicators: (1) “Major Incidents” (MI) are incidents that delay 50 or more trains; (2) “Service Delivered” (SD) measures the agency’s ability to deliver scheduled subway service; (3) “Additional Platform Time” (APT) is the average added time customers must wait for a train, compared the scheduled wait time; and (4) “Additional Train Time” (ATT) is the average added time customers spend aboard a train due to service issues. These new indictors are now tracked on the Subway Performance Dashboard at the MTA website.

As NYCT continues the SAP implementation, progress has been captured in both new and old performance indicators. Weekday MIs declined 23.6 percent from an average of 77 per month in the first half of 2017 to an average of 59 per month after July 2017, when the plan launched. Over that same period, weekday track incidents declined by 12 percent, signal incidents fell by 22 percent, and subway car incidents dropped by 11 percent. While “on-time-performance” (OTP) declined overall in 2017 compared to the previous year, OTP after July had improved slightly from 62.7 percent to 64.2 percent. Subway “mean distance between failures” (MDBF) continued to improve in 2017, increasing by 8.0 percent over the previous year.

In June of 2017, the MTA announced its “Genius Transit Challenge,” an international contest seeking innovative ideas to improve subway performance in specific operational categories, from signaling to car design. The challenge drew over 400 responses from individuals and firms, and on March 9, 2018, the review panel announced eight winning entries. The eight initiatives, which are described on the MTA website, will be developed and tested by NYCT over the coming year.

At NYCT Bus, ridership decreased by 5.6 percent in 2017 to 602.6 million riders, with most of the decline on Manhattan and Brooklyn routes. NYCT Bus continued to expand its Select Bus Service (SBS) and its fleet modernization, with clean-energy vehicles and added customer amenities.
New York City Transit

Performance Key
- At or above target
- Below target by less than 5%
- Below target by 5% or more

<table>
<thead>
<tr>
<th>Service Indicators</th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Major Incidents – Subways *</td>
<td>N/A</td>
<td>67.9</td>
<td>N/A</td>
</tr>
<tr>
<td>Weekday Service Delivered – Subways *</td>
<td>N/A</td>
<td>94.5%</td>
<td>N/A</td>
</tr>
<tr>
<td>Weekday Terminal On-Time Performance – Subways</td>
<td>75.0%</td>
<td>63.4%</td>
<td>-11.55%</td>
</tr>
<tr>
<td>Mean Distance Between Failures – Subways (miles)</td>
<td>150,000</td>
<td>121,220</td>
<td>-19.19%</td>
</tr>
<tr>
<td>Weekday Wait Assessment - Subways</td>
<td>80.7%</td>
<td>71.3%</td>
<td>-9.41%</td>
</tr>
<tr>
<td>Elevator Availability - Subways</td>
<td>96.5%</td>
<td>95.9%</td>
<td>-0.59%</td>
</tr>
<tr>
<td>Escalator Availability - Subways</td>
<td>95.2%</td>
<td>94.5%</td>
<td>-0.73%</td>
</tr>
<tr>
<td>Total Ridership – Subways</td>
<td>1,773,592,000</td>
<td>1,727,315,649</td>
<td>-2.61%</td>
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<tr>
<td>Weekday On-Time Performance - Staten Island Railway</td>
<td>95.0%</td>
<td>96.7%</td>
<td>1.70%</td>
</tr>
<tr>
<td>Mean Distance Between Failures - Staten Island Railway (miles)</td>
<td>80,000</td>
<td>59,871</td>
<td>-25.16%</td>
</tr>
<tr>
<td>% of Completed Trips - NYCT Bus</td>
<td>99.4%</td>
<td>99.2%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Total Paratransit Ridership - NYCT Bus</td>
<td>8.8</td>
<td>8.6</td>
<td>-2.27%</td>
</tr>
<tr>
<td>Bus Passenger Wheelchair Lift Usage - NYCT Bus</td>
<td>1,473,948</td>
<td>1,432,622</td>
<td>-2.8%</td>
</tr>
<tr>
<td>Total Ridership - NYCT Bus</td>
<td>639,434,669</td>
<td>602,620,356</td>
<td>-5.8%</td>
</tr>
<tr>
<td>Mean Distance Between Failures - NYCT Bus (miles)</td>
<td>5,819</td>
<td>6,225</td>
<td>+6.5%</td>
</tr>
</tbody>
</table>

Safety Indicators

<table>
<thead>
<tr>
<th></th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Injury Rate – Subways (per million)</td>
<td>2.51</td>
<td>2.82</td>
<td>12.4%</td>
</tr>
<tr>
<td>Customer Accident Injury Rate - NYCT Bus (per million)</td>
<td>1.21</td>
<td>1.37</td>
<td>+ 0.16</td>
</tr>
<tr>
<td>Collisions with Injury Rate - NYCT Bus (per million miles)</td>
<td>6.49</td>
<td>6.91</td>
<td>+ 0.45</td>
</tr>
<tr>
<td>Employee Lost-Time and Restricted-Duty Rate (per 100 employees)</td>
<td>3.36</td>
<td>3.35</td>
<td>-0.01</td>
</tr>
</tbody>
</table>

Note: MTA performance data are subject to periodic adjustment. Some data may have been updated subsequent to the 2017 “Mission Statements” PAL §1269-f report and earlier documents. Major Incidents and Service Delivered are new indicators now tracked on the Subway Dashboard at the MTA website as part of the Subway Action Plan. Subways customer injury rate is as of Nov. 2017.
Long Island Rail Road—2017 Performance

In 2017, the Long Island Rail Road (LIRR) experienced its second-highest ridership since the postwar record of 91.8 million passengers in 1949. The railroad carried 89.2 million customers during the year, a slight, 0.2 percent decrease from its post-1940s record of 89.4 million in 2017. LIRR remains the busiest commuter railroad in North America. Strong local economic conditions and continuous growth in non-commutation travel, including trips to entertainment and sports venues, have contributed to these ridership numbers.

LIRR also improved its overall fleet reliability for the eighteenth year in a row, as measured in “mean distance between failures” (MDBF). The fleet average of 205,270 MBDF in 2017 represents a 6,700-mile improvement over the previous year, achieving the railroad’s highest rate of mechanical reliability since recordkeeping began in 1981.

Service to the East End of Long Island was expanded in 2017. After discussing ways to improve transit access with officials from North Fork and South Fork communities, LIRR provided two new services: the “Fisherman’s Train,” which enables early morning weekday riders to travel from Ronkonkoma to Greenport and a new westbound train to depart from Greenport. In addition, a new “one-seat ride,” requiring no transfer, from Southampton to Penn Station during the morning peak is being introduced in 2018.

The agency’s market research, posted on the MTA website, has revealed an increased reliance on LIRR service—especially on the part of younger riders—for travel to work and other destinations. LIRR will continue to analyze ridership trends in order to respond to changing service needs.
## Long Island Rail Road

### Performance Key
- **At or above target**
- **Below target by less than 5%**
- **Below target by 5% or more**

<table>
<thead>
<tr>
<th></th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
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</thead>
<tbody>
<tr>
<td><strong>Service Indicators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Time Performance</td>
<td>94.0%</td>
<td>91.4%</td>
<td>-2.4%</td>
</tr>
<tr>
<td>Elevator Availability</td>
<td>98.0%</td>
<td>99.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Escalator Availability</td>
<td>97.0%</td>
<td>97.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Total Ridership</td>
<td>86,959,917</td>
<td>89,158,841</td>
<td>2.5%</td>
</tr>
<tr>
<td>Mean Distance Between Failures (miles)</td>
<td>200,000</td>
<td>205,270</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>Safety Indicators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRA-Reportable Customer Injury Rate (per million)</td>
<td>3.74</td>
<td>4.05</td>
<td>8%</td>
</tr>
<tr>
<td>FRA-Reportable Employee Lost-Time Case Rate (per 200,000 worker hours)</td>
<td>3.27</td>
<td>3.71</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Note: MTA performance data are subject to periodic adjustment. Some data may have been updated subsequent to the 2017 "Mission Statements" PAL §1269-f report and earlier documents.*
Metro-North—2017 Performance

Metro-North’s systemwide “on-time performance” (OTP) for 2017 operated above goal at 93.4 percent, while train delay minutes were reduced by 4.8 percent from the previous year. The Hudson Line performed at 93.6 percent; the Harlem Line at 94.9 percent; and the New Haven Line at 92.1 percent of goal. West-of-Hudson OTP totaled 94.1 percent, slightly below the goal of 95.5 percent.

The railroad maintained a high “mean distance between failures” (MDBF) of 193,883 miles in 2017. While this falls 3.1 percent below the year’s goal of 200,000 MDBF, it is in line with Metro-North’s high MDBF average of 203,497 miles over the last three years. Factors contributing to this high MDBF include the performance of the new M8 fleet on the New Haven Line and aggressive car and locomotive maintenance programs. This also resulted in a 99 percent “consist compliance rate,” which is the percentage of cars in service and providing seats for customers each day.

Challenges to service delivery in 2017 included aggressive track inspections and maintenance, which required temporary speed restrictions, and ongoing catenary replacement on the east end of the New Haven Line.

Total Metro-North ridership in 2017 was approximately 86.5 million rides, the highest in the railroad’s history and nearly 300,000 rides higher than the previous year. East of Hudson ridership for the year was approximately 84.9 million, also the highest in Metro-North history, surpassing the record ridership in 2016 by approximately 400,000 rides.

Ridership on both the Harlem and Hudson lines hit new highs in 2017, surpassing the record levels of the previous year. The Harlem Line had 27.8 million rides, up by 200,000, while the Hudson Line saw 16.9 million rides, up by 400,000 rides. West of Hudson ridership was approximately 1.6 million, 3.6 percent below the previous year and 500,000 fewer rides than the record of 2.1 million rides in 2008.

Combined ridership on Metro-North’s three connecting services was about 587,000 in 2017, up by 4.1 percent. Ridership increased by 7.5 percent on the Hudson Rail Link, while decreasing on the Haverstraw-Ossining and the Newburgh-Beacon ferries by 2.6 percent and 1.9 percent respectively.
## Metro-North Railroad

### Performance Key

- Green: At or above target
- Black: Below target by less than 5%
- Red: Below target by 5% or more

### Service Indicators

<table>
<thead>
<tr>
<th></th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Time Performance (East of Hudson)</td>
<td>93%</td>
<td>93.4%</td>
<td>0.43%</td>
</tr>
<tr>
<td>On-Time Performance (West of Hudson)</td>
<td>95.5%</td>
<td>94.1%</td>
<td>-1.47%</td>
</tr>
<tr>
<td>Elevator Availability</td>
<td>98.0%</td>
<td>99.3%</td>
<td>1.33%</td>
</tr>
<tr>
<td>Escalator Availability</td>
<td>97.0%</td>
<td>96.5%</td>
<td>-0.52%</td>
</tr>
<tr>
<td>Total Ridership (includes connecting services)</td>
<td>87,555,109</td>
<td>87,082,968</td>
<td>-0.54%</td>
</tr>
<tr>
<td>Mean Distance Between Failures (miles)</td>
<td>200,000</td>
<td>193,883</td>
<td>-3.08%</td>
</tr>
</tbody>
</table>

### Safety Indicators

<table>
<thead>
<tr>
<th></th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRA Reportable Customer Injury Rate (per million)</td>
<td>1.46</td>
<td>0.77</td>
<td>-47.2</td>
</tr>
<tr>
<td>FRA Reportable Employee Lost-Time Case Rate (per 200,000 worker hours)</td>
<td>3.12</td>
<td>2.86</td>
<td>-8.3</td>
</tr>
</tbody>
</table>

*Note: MTA performance data are subject to periodic adjustment. Some data may have been updated subsequent to the 2017 PAL §1269-f report and earlier documents.*
MTA Bus Company—2017 Performance

MTA Bus ridership was 122.2 million in 2017, a 2.7-percent decrease from the previous year. The bus fleet’s “mean distance between failures” (MDBF) was 7,479 miles in 2017, a slight increase over 2016. An over-age fleet continues to pose challenges.

No new buses were delivered to MTA Bus in 2017, but 40 new articulated buses were loaned to the agency by NYCT Bus for service on the Q52/Q53 Select Bus Service (SBS) routes. They are expected to be returned to NYCT after MTA Bus takes delivery of 53 new articulated buses in 2019 and 2020. In addition, 257 over-the-road coach buses are expected in 2020 and 2021. The “percentage of trips completed,” which depends on both vehicle and operator availability, remained unchanged from the previous year.

The agency’s “collisions with injury” rate decreased from 5.66 to 3.44 per million vehicle miles. Safety remains a primary focus and, in partnership with NYCT Buses, MTA Bus continued to analyze accident findings and focus on basic driving procedure. In 2017, the agency implemented the new Vision Zero III “Eye on Safety,” the third version of this eight-hour training program. The refreshed program incorporates all-new content, including new testimonial videos from “Families for Safer Streets” and videos of bus and pedestrian accidents secured from on-board and external security cameras. The agency has also enhanced its monitoring of bus operators, tracking such indicators as speed-camera violations, cellphone infractions, and customer complaints.

In a joint agreement with all labor unions, MTA Bus maintains a “zero-tolerance” policy on the use of cellphones and other electronic device by employees while operating a bus. In another joint agreement, bus operators who receive speed-camera violations are disciplined and required to pay the fine. In addition, MTA Bus recently completed negotiations on the “Accident Review System” (ARS) with all MTA labor unions. The program is now instituted at all MTA Bus locations. (See also, Safety/Security Initiatives.)
<table>
<thead>
<tr>
<th>Service Indicators</th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Completed Trips</td>
<td>99.4%</td>
<td>99.2%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Bus Passenger Wheelchair Lift Usage</td>
<td>79,005</td>
<td>86,584</td>
<td>+9.6%</td>
</tr>
<tr>
<td>Total Ridership</td>
<td>125,606,108</td>
<td>122,213,569</td>
<td>-2.7%</td>
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<tr>
<td>Mean Distance Between Failures (miles)</td>
<td>6,842</td>
<td>7,479</td>
<td>9.3%</td>
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<table>
<thead>
<tr>
<th>Safety Indicators</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Customer Accident Injury Rate (per million)</td>
<td>1.06</td>
<td>1.11</td>
<td>-4.7%</td>
</tr>
<tr>
<td>Collisions with Injury Rate (per million miles)</td>
<td>5.51</td>
<td>3.44</td>
<td>-37.6%</td>
</tr>
<tr>
<td>Employee Lost-Time Rate (per 100 employees)</td>
<td>6.67</td>
<td>5.93</td>
<td>-12.5%</td>
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</table>

Note: MTA performance data are subject to periodic adjustment. Some data may have been updated subsequent to the 2017 PAL §1269-f report and earlier documents.
Bridges and Tunnels—2017 Performance

MTA Bridges and Tunnels (B&T) achieved several new records in 2017 for traffic and transactions at its crossings. At 310 million paid vehicles for the year, overall traffic was the highest on record; while E-ZPass use, at 93.6 percent of customers, also rose to its highest rate ever.

In another major advance, B&T completed the transition of all facilities to cashless open road tolling (ORT) by the end of September 2017. This followed an ambitious one-year schedule for the transition set down in the “New York Crossings Project,” announced in October 2017. The ORT system allows a free flow of traffic through overhead gantries with vehicle classification and E-ZPass sensors. For vehicles without an E-ZPass, a “Tolls by Mail” invoice is sent to the vehicle’s registered owner.

The transition from toll booths to cashless tolling has numerous benefits for customers, stakeholders, and the entire travel region. It significantly reduces customer travel time and traffic congestion, while improving safety at crossings. By reducing motorists’ idling time, it saves energy and lowers carbon emissions.

Data collected by B&T over 2017 has already captured evidence of these benefits. Analysis of the first full year of data showed a 32-percent cut in motorists’ travel time, saving some 3.4 million travel hours, even as the number of collisions in toll areas fell by 41 percent. Equally significant, fuel consumption dropped by 1.6 billion gallons, while carbon emissions fell by 15,393 tons.
## Bridges and Tunnels

### Performance Key
- **Green**: At or above target
- **Yellow**: Below target by less than 5%
- **Red**: Below target by 5% or more

<table>
<thead>
<tr>
<th>Service Indicators</th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
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<tbody>
<tr>
<td>Paid Traffic</td>
<td>305,032,980</td>
<td>310,038,376</td>
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### Safety Indicators

<table>
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<th>Safety Indicators</th>
<th>2017 Target</th>
<th>2017 Actual</th>
<th>Change from Target</th>
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<tr>
<td>Collisions with Injury Rate (per million vehicles) *</td>
<td>0.96</td>
<td>0.99</td>
<td>3.13%</td>
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<tr>
<td>Employee Lost-Time Injury Rate (per 200,000 work hours) **</td>
<td>5.7</td>
<td>7.2</td>
<td>26.32%</td>
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</table>

Note: MTA performance data are subject to final audit. Some data may have been updated subsequent to the 2017 “Mission Statement” PAL §1269-f report and earlier documents.

* The target collisions with injuries rate is from 2015 before full implementation of ORT construction work in 2016 and 2017.

** Lost Time Injuries target is the average of the last 5 years (2012-2016), which is also prior to full implementation of ORT.
Customer Service Initiatives

Interagency—Customer Service Initiatives

- Successfully leveraged the fiber infrastructure previously built out at stations to support cellular and Wi-Fi services for customers, as well as data/communications needs at various transit stations and bus depots throughout the system. The MTA’s lease agreement with Transit Wireless will provide the necessary bandwidth to support a variety of new applications and technologies at these locations.

- Developed a number of customer service initiatives through MTA’s IT department in 2017, including the award-winning Beacon Train Tracking System, which uses beacon technology and wireless communications to feed live countdown clocks at B Division subway stations, and a new Subway Performance Dashboard to provide the public with enhanced performance indicators, such as service capacity, customer wait times, and station environment. (See also, Operations/Technology Initiatives)

- Provided improved language services for Access-A-Ride paratransit customers with Limited English Proficiency (LEP). Critical documents, such as eligibility and denial letters for Access-A-Ride applicants, are now available in multiple languages, including Haitian Creole, Korean, Russian, Chinese, and Spanish.

- Developed and implemented several customer-focused marketing campaigns supporting MTA initiatives to improve the customer’s riding experience. These included: completion of countdown clock installations in all subway stations; design and placement of construction site “wallscapes” to beautify stations and inform customers of the benefits of construction projects; Help Point intercoms in stations; MTA’s homeless outreach program; Operation Track Sweep; anti-littering; and the Subway Library campaign, a partnership with the New York Public Library offering free e-book excerpts to MTA customers.
Collaborated with LIRR and NYC Transit to develop, implement, and communicate the Penn Station Mitigation Plan, which provided alternate travel options for LIRR customers impacted by Amtrak repair work in Penn Station through the summer of 2017.

Developed and implemented a multi-wave marketing campaign to inform and prepare MTA Bridges & Tunnels customers as each of the agency’s nine facilities were converted to cashless open road tolling (ORT), achieving an unprecedented 94-percent penetration for E-ZPass.

Continued administering projects for the acclaimed MTA Arts & Design program of commissioned artworks, with 109 art projects now in planning or fabrication for NYCT, LIRR, and Metro-North. In 2017, fifteen artist selection panels were convened, primarily to commission artworks for a program of station renewal initiatives, and several neighborhood transit station projects.

Installed eight new “Percent for Art” projects across the MTA system in 2017, including three mosaic projects for a station renewals program; six metal artworks on the New Lots Line in Brooklyn; on the Culver Line in Brooklyn; and a glass artwork at the Arthur Kill Station on the Staten Island Railway.

Received a number of prestigious national-international arts awards in 2017, including: the “Year in Review” award from Public Art Network/Americans for the Arts; inclusion in the Society of Illustrators and American Illustrator annual exhibitions and publications; and a Gold Medal from the Digital Signage Expo (DSE) APEX Awards for a digital art commission at Fulton Center.

Presented over 7,500 performances in 2017 through Arts & Design’s popular “Music Under New York” program; selected 28 new performers to join the program; presented a new series of poems through the “Poetry in Motion” program; and facilitated publication of a Poetry in Motion book, including a major event at Lincoln Center with the Poetry Society of America.

Presented “The Fluid,” a new digital artwork by Chris Doyle via the 52-channel integrated digital display network throughout the Fulton Center Complex.

Hosted and moderated panel discussions on MTA Arts & Design projects in Washington, D.C., and at local colleges and museums, the World Metro-Rail Congress, and the NY Transit Museum. Led tours of Second Avenue Subway art for cultural institutions and foreign delegations.
Delivered 24/7 MTA news and information to customers, news organizations, and the general public through a variety of media, including the MTA website; press briefings; press releases; press conferences; and real-time feeds to social media, including Twitter, Tumblr, Flickr, Instagram, and Facebook. As of 2017, the MTA’s YouTube Channel archived well over 1,300 service videos on MTA agency initiatives, campaigns, and projects.

NYC Transit (Subways)—Customer Service Initiatives

- Completed the installation of countdown clocks at all stations across the subway system. The new clocks on the B Division and the 7 Line operate through an award-winning system developed by MTA engineers, which utilizes scheduling software, existing wireless networks in stations, cloud computing, and Bluetooth receivers to track arrival and departure times.
- Launched a number of service initiatives under phase one of the 2017 Subway Action Plan (SAP). Operational efforts include new maintenance, cleaning, and incident-response initiatives aimed at reducing delays, along with station enhancements to improve the customer experience. (See also, NYCT Performance, page 5.)
- Rolled out several new communications initiatives under the SAP. These include clearer, more specific service announcements and a new Subway Dashboard at the MTA website, with new performance indicators to track delays and service incidents with greater precision and transparency.
- Expanded direct customer assistance with more personnel to assist on crowded station platforms and a new pilot program that prepares and equips station agents to assist customers in the areas around station booths.
- Installed an additional 98 “On the Go” station kiosks at 30 subway stations in 2017, bringing the total number of customer service kiosks to 404 kiosks at 96 stations. The touch-screen kiosks provide system alerts, trip planning, and more.
- Improved escalator availability from 93.7 percent to 94.5 percent in 2017, maintained elevator availability at 95.9 percent, and arranged a dedicated maintenance/repair contract to improve escalator and elevator performance at NYCT’s stations in the Washington Heights neighborhood of Manhattan.
MTA Bus Operations (NYCT Department of Buses, MTA Bus Company)—Customer Service Initiatives

- Expanded the Select Bus Service (SBS) to provide faster, more reliable service on the Bx6 in the Bronx, the M79 in Manhattan, and the Q52/Q53 in Queens, bringing SBS to a total of 17 routes on 15 corridors.

- Deployed 40 “new look” MTA-SBS branded articulated buses on the Q52/Q53 SBS routes in central Queens. These buses feature USB charging ports and Wi-Fi connectivity. NYCT Bus also completed the purchase of 138 New Flyer buses in 2017, all of which are equipped with chargers, Wi-Fi, and other customer amenities.

- Implemented route and bus stop changes based on community requests and/or changes in traffic flow, including adjustments on the B103, BM2, BxM3, BxM4, BxM11, BxM18, Q23, Q37, QM12, and QM42 routes. Also added a new bus stop at Stillwell Avenue on the Bx12 SBS route, based on community requests.

- Implemented a number of customer-based service changes, including splitting the M5 route in Midtown into two routes, extending the M1 to Grand Street, rerouting the Q59 in Rego Park to avoid difficult turns, rerouting the B63 at Brooklyn Bridge Park to accommodate new traffic patterns, and extending service hours on the Bx29. Also implemented minor rerouting on the Staten Island-bound X4, X5, X7, and X8 buses to enable access to the new Verrazano-Narrows Bridge high-occupancy vehicle (HOV) lane.

- Implemented a number of customer-based service changes, including a 0.9-mile eastward extension of the Q52 route in Arverne, Queens, in response to community requests; and a streamlining of the Q114 travel path in Inwood, Nassau County.

- Continued to monitor and improve customer experience through the position of the MTA Bus “Customer Advocate,” whose functions include development of bus customer programs, onboard communications, public media programs, and interaction with advocacy groups.

- Continued to expand and improve services for Access-A-Ride (AAR) customers. A Passenger Bill of Rights was developed and finalized. The Bill of Rights sets forth clear standards and expectations for AAR customers. Paratransit also launched a one-year test and evaluation e-hail pilot program. The one year pilot program provides up to 600,000 trips and enabled the testing of on-demand booking capabilities. Participating customers with smart phones can book on-demand trips via a Verifone app. Participating customers without smart phones can call the Paratransit Command Center to book on-demand trips. Initial customer feedback is very positive.
Long Island Rail Road—Customer Service Initiatives

- Expanded service to the East End of Long Island with the “Fisherman’s Train,” which enables early morning weekday riders to travel from Ronkonkoma to Greenport, and by repurposing the “Jury Train,” to allow a westbound train to depart from Greenport.

- Advanced improvements to the Hicksville Station to support the Town of Oyster Bay’s Hicksville Downtown Revitalization Action Plan. This station project includes the installation of new platforms, platform waiting rooms, canopies, elevators, escalators, stairways, signage, security cameras, Wi-Fi, and charging ports.

- Advanced the rehabilitation of Wantagh Station. This project will replace the station platform, platform waiting room, canopy, escalator, platform lighting, communications and security systems, and drainage. A new elevator will also be installed to make the station wheelchair accessible. Construction began during 2016 and is scheduled for completion in September 2018.

- Advanced the rehabilitation of the elevated Nostrand Avenue Station. This work includes replacement of the station platforms, railings, canopy, overpasses, platform stairs, and the installation of new elevators, station lighting, electrical and communication systems, CCTV security cameras, and signage. Construction is currently underway and is forecasted for completion in March 2019.

- Advanced improvements to the Stewart Manor Station under the agency’s station renewals program. This project has deployed best architectural and design practices to upgrade the station, as well as install new LED lighting, USB charging ports, Wi-Fi service, and interactive digital kiosks.

- Advanced improvements to the Flushing-Main Street Station. This project includes the installation of new hydraulic elevators, platform railings, staircases, lighting, station plaza, tactile warning strips on platform edges, CCTV security cameras, and ticket office. Construction began in March 2016 with construction completion forecasted for June 2018.
Metro-North—Customer Service Initiatives

- Expanded the railroad’s customer base for MTA eTix®, the new mobile ticketing app that lets customers purchase, store, and redeem tickets directly on smartphones and mobile devices. Launched on all East of Hudson lines by August 2016, the app’s original business plan called for 5 percent of sales the first year and 10 percent the second year. Preliminary December 2017 figures show 22.5 percent of monthly customers, 31.5 percent of weekly customers, and 19 percent of one-way tickets using MTA eTix®, for a total of 19.1 percent of all ticket sold, or nearly four times the original first-year estimate.

- Completed enhancements to the Marble Hill Station on the Hudson Line and the Bronxville Station on the Harlem Line, part of the agency’s ongoing Station Rehabilitation Program. Upgrades included painting, lighting, signage, bench replacement, and other improvements. Upgrades to lighting and static signage at the Fleetwood and Tuckahoe stations began in 2017, with additional enhancements continuing into 2018. The agency also replaced approximately 150 station recycling centers as part of a system-wide replacement initiative.

- Implemented a pilot program that increases service at the Tremont and Melrose stations from a two-hour frequency to hourly service during off-peak and weekend travel times. The expanded service is part of an effort to build ridership and provide Bronx residents with more convenient travel options. (See also, Operations/Technology Initiatives.)

- Procured the services of the Bowery Resource Center (BRC), a Homeless Outreach Provider, entering into a five-year contract to provide assistance and resources needed by homeless individuals frequenting Metro-North stations.

- Continued to roll out new wireless station LCD monitors, which display the next nine train arrivals, their stops, departure times, real-time train status, and track information. In 2017 monitors were installed in the Scarborough, Irvington, Cortlandt, Woodlawn, Williams Bridge, Hawthorne, Croton Falls, Purdy’s, and Valhalla stations, bringing the total number of monitor-equipped stations to fifty-five. Installations will be completed at seven more stations in 2017 and 11 in 2019.

- Worked with the Rockland County Department of Public Transportation to expand Saturday TAPPAN ZEExpress bus service, adding eight new trips between Rockland and Westchester Counties and extending two trips to White Plains. The service is also being expanded to Sundays, providing 32 daily bus trips on both Saturdays and Sundays.
Held a series of “Connect with Us” public forums to increase transparency and engage customers. These included informal outreach meetings at Grand Central Terminal and outlying stations, where Metro-North senior management elicited suggestions from customers, residents, and other stakeholders across the service area.

Created a new Social Media Division within the Customer Communications Center to disseminate real-time service information, engage customers, and monitor customer feedback. The division, which is staffed 24/7, addresses customers issues and ensures that all service messages are distributed rapidly and accurately across media. To date, Metro-North has around 93,000 Twitter followers and 15,000 Facebook followers.

**Bridges & Tunnels—Customer Service Initiatives**

- Completed the conversion of B&T’s nine bridges and tunnels to cashless open road tolling (ORT) by September 30, 2017, three months ahead of schedule. ORT provides significant and sustained benefits for motorists. It enables the free flow of traffic through tolling areas, reducing customer travel times by 10 to 30 percent, while also cutting fuel consumption, carbon emissions, and traffic accidents.

- Undertook a number of marketing, advertising, and public outreach initiatives in 2017 to promote E-ZPass in advance of the ORT changeover. These outreach efforts kept B&T customers fully informed of related construction work, traffic impacts, and new toll collection methods as each facility transitioned to the ORT system.

- Increased the rate of E-ZPass usage among B&T customers by 7.0 percent to a record 93.6 percent, the highest rate in the country.

- Maintained pre-ORT revenue collection rates through the expanded use of E-ZPass, along with “Tolls by Mail,” through which customers without E-ZPass are identified by vehicle registry and invoiced by mail.

- Increased the number of E-ZPass Reload Cards in circulation to nearly 175,000, with $18 million reloaded to accounts since ORT began. The agency also increased the number of E-ZPass “Pay Per Trip” accounts to more than 86,000 and exchanged over 91,000 expired E-ZPass tags to ensure a high rate of scanning performance.

- Completed construction of a reversible Bus/High Occupancy Vehicle (HOV) lane on the Verrazano-Narrows Bridge, which has reduced peak-hour commute times from Staten Island.
to the Hugh L. Carey Tunnel by up to 15 minutes. The initiative included opening a seventh lane to the bridge’s upper deck for Bus/HOV traffic and a new Bus/HOV ramp connecting the upper deck to the Gowanus Expressway and the Belt Parkway, thus providing a direct connection between Bus/HOV lanes on the Staten Island Expressway and the Gowanus Expressway.

- Developed a “Pay Toll Now” option on the “Tolls by Mail” website, which allows non-E-ZPass customers to pay tolls before they receive a mailed invoice. The website also informs customers about new cashless tolling procedures; allows them to pre-register vehicles and pay incurred tolls; and enables out-of-area visitors and rental-car drivers to set up accounts and avoid added fees. In addition, B&T collaborated with the New York State Thruway Authority and the Port Authority of New York and New Jersey to merge tolls from all three authorities into a single bill.

- Migrated B&T’s Staten Island customers who formerly paid the reduced carpool rate in cash lanes to carpool tags with an HOV indicator. This enables them to use any lane on the Verrazano-Narrows Bridge and receive the discounted carpool rate, provided they have three or more occupants in their car.

- Completed or continued several customer-facing reconstruction projects in 2017, including the replacement of the Morris Street Pedestrian Bridge, which reopened to pedestrians in December 2017, and the reconstruction of the East 125th Street ramps at the Robert F. Kennedy Bridge’s Harlem lift span, which was completed months ahead of schedule with minimal traffic impacts.
Interagency—Operations/Technology Initiatives

- Supported a number of Enterprise Asset Management (EAM) projects in 2017 to extend the MTA’s agency-wide EAM program. Collectively, the various agency projects employ new data-gathering tools and data-analysis techniques to track MTA assets through their entire lifecycles. The aim is to optimize inventory, maintenance, and other areas of agency operations. (See also, Cost-Savings/Revenue Initiatives.)

- Initiated several EAM-related training efforts, including the “Change Management Capacity Building Program,” which in 2017 hosted 130 select participants from all agencies. The aim is to prepare employees for an active role in major organizational shifts due to new IT-led operations, new regulatory mandates, and other large-scale changes. In a related Train-the-Trainers program, five EAM-trained facilitators trained 96 employees in EAM methods over a four-month period.

- Launched two new IT self-service systems for MTA employees. The new “ServiceNow” portal lets employees report IT problems, request hardware or software, check on the status of requests, and find answers to FAQs. The new “Identity and Access Management System” (IAMS) streamlines identity and access controls. The first phase allows password resets without IT assistance. The second phase, the IAMS Workflow System, will automate and streamline “onboarding” for new hires, and is scheduled for completion in the first quarter of 2018.

- Initiated a major upgrade of all MTA user workstations to Windows 10 and Microsoft Office 2016, featuring advanced security and powerful collaboration tools, such as Skype for Business. Pilot programs were completed on over 1,200 workstations in late 2017. Upgrades to some 24,800 workstations will advance on a rolling basis over the next two years.

- Achieved audited compliance with the Payment Card Industry Data Security Standards (PCI DSS) for all MTA agencies. The standards are designed to ensure the security of credit and debit card transactions, protecting cardholders against fraud and other misuse of personal information.
Carried out a number of major 2017 upgrades to the MTA PeopleSoft systems, including security upgrades and patches; a reengineered, streamlined portal for MTA vendors; and new employee/retirees benefits module to accommodate insurance contracts and filings under the Affordable Care Act.

Developed or enhanced several IT systems for MTA management, including: a Capital Program Management system (IMPACT) with new interfaces, checks, and controls to ensure that capital projects are properly classified and funded; an upgraded All-Agency Contractor Evaluation (ACE) System to strengthen documentation and control of contractor performance; a new portal to improve risk-based oversight and management of the MTA Capital Program; an upgraded Consolidated Operating Budget and Planning System (COBAPS), providing all agencies with a more robust application for managing and reporting budgets and financial plans.

Continued installation of the Next Generation Network (NGN), the major, multiyear effort to build a high-speed corporate network supporting data, voice, video, internet and intranet applications throughout the MTA. The current phase, which focuses on replacing the outdated core NYCT network, achieved over 60 percent completion in 2017. The upgrades provide increased network reliability and speed—approximately 10 times the current speed of 100 Mbps.

NYC Transit (Subways)—Operations/Technology Initiatives

- Improved real-time information at the Rail Control Center (RCC) to help dispatchers better manage crowded conditions and incidents, including more live camera feeds and additional “staged personnel,” strategically located supervisors and multidisciplinary work teams who can respond rapidly to right-of-way disruptions and other situations.

- Continued to improve the condition of subway tracks through the use of Track Geometry Cars (TGC) for ultrasonic testing of rails and through NYCT Subway’s aggressive effort to install continuously welded rail (CWR).

- Continued implementation of an Enterprise Asset Management (EAM) project, which is rolling out a more advanced, efficient EAM system for maintaining and repairing subway components.
Established a centralized system through the agency’s Electronic Maintenance Division (EMD) for tracking all personnel actions, allowing management to monitor the current status of everything from new hires and service incidents to safety compliance, work orders, and repairs.

Continued the installation of Passenger Station Local Area Network (PSLAN) infrastructure in subway stations, which is being carried out under various Capital Program projects. The PSLAN enables Internet Protocol (IP) applications and equipment at the stations, including fare-payment systems; “Help Point” emergency intercoms; workstations; and IP-linked station intercoms, phones, and cameras connecting to NYCT’s Wide Area Network (WAN). PSLAN is now available in 458 stations and will be installed in all remaining stations by the second quarter of 2018.

Continued the highly successful FASTRACK program, which enables line repairs and maintenance on rotating, concentrated schedules for minimal service disruption and maximum worker safety. NYCT completed 24 FASTRACK programs in 2017.

Launched a number of operational initiatives under the NYCT Subway Action Plan (SAP), including an expedited signal repair program; sealing of water leaks; expanded car maintenance schedules; and systemwide track cleaning to reduce debris and track fires. (See also, NYCT Performance, page 5)

Launched the MTA “Genius Transit Challenge,” an international contest seeking operational and technical initiatives to improve subway performance in specified categories, from signaling to care design. The challenge drew hundreds of entries, and in March 2018, eight winning entries were announced.

MTA Bus Operations (NYCT Department of Buses, MTA Bus Company)—Operations/Technology Initiatives

Developed a new reliability-based maintenance (RBM) team as part of the bus fleet’s enterprise asset management (EAM) improvements. The initiative included hiring two reliability engineers; designing supportive business processes to continually improve bus maintenance practices; and training managers in reliability fundamentals.

Further expanded the Intelligent Vehicle Network (IVN) project, which uses onboard computers with wireless links to depots to monitor bus components, identify potential
failures, and provide information used in accident investigations. The IVN system has now been installed on 3,820 buses in 28 depots.

- Activated Transit Signal Priority (TSP) in 2017 on the following routes: Q44 SBS, M60 SBS, Q25, S62, S92, and Q43. This brings the total routes with TSP active to 11. MTA bus operations continue to work with New York City Department of Transportation to develop an aggressive roll-out plan for this initiative.

- Completed the pilot installation of digital information signs on 200 buses serving three routes. The digital screens offer audio and visual route information and display next stop information, service advisories, and travel information, including transfers. They also have the capability to display geo-specific advertising, enabling the potential opening up of a new avenue of advertising revenue.

- Purchased 138 standard Compressed Natural Gas (CNG) buses, equipped with the latest safety and customer service technologies in the industry, including digital information screens, Wi-Fi, USB charging ports, pedestrian turn warning (PTW) technology, and traffic signal priority (TSP) technology. (See also, Capital Projects, Completions)

- Expanded Paratransit’s use of GPS technology. MTA Bus now receives actual GPS information from brokers, which enables the measurement of the vehicle’s on-time performance (OTP). Through GPS technology the agency has modified the current scheduling software to improve the overall accuracy of estimated times of arrival (ETAs). Also expanded the capabilities of the Manage My Trip (MMT) and Where’s My Vehicle (WMV) functions. Via smart phone or computer, customers using Paratransit’s dedicated service can now see where their vehicles are in real time.

Long Island Rail Road—Operations/Technology Initiatives

- Advanced LIRR’s investment in the Enterprise Asset Management (EAM) initiative. EAM provides the combined planning, training and technology to optimally manage the railroad’s equipment and infrastructure. EAM will provide agency decision-makers with timely, accurate information regarding the condition, cost, performance, and reliability of agency assets. It will ensure that LIRR’s asset investments and maintenance efforts focus on those areas that deliver the greatest benefits to customers.

- Continued LIRR’s implementation of a Positive Train Control (PTC) system. By the end of 2017, LIRR had carried out the following activities: (1) Progressed subsystem designs; (2)
Completed pilot installations on both pilot rail lines, with the exception of 46 transponders, while continuing installations onboard the M-7 railcar pilots. (3) Continued wayside installations of non-pilot segments, including signal transponder, the wayside interface unit (WIU), and communication radio frequency (RF) locations; and (4) Acquired spectrum for all LIRR operating counties.

- Achieved beneficial use on a new signal system between Speonk and Montauk, which implemented automatic speed control (ASC). The new system went into service in November 2017, eliminating all “dark territory” on the Montauk Branch.

- Completed the 2017 LIRR Annual Track Program, including the following efforts: replaced 42,145 mechanized ties on the Babylon Branch; installed 24,816 concrete ties on the Babylon Branch; installed 26,879 feet of Continuous Welded Rail (CWR) on the Babylon Branch; replaced three switches on the Main Line Branch; renewed 14 grade crossings on the Montauk Mainline and West Hempstead branches; completed 813 field welds; undertook 62 miles of track surfacing; and performed surfacing on 47 switches.

- Provided a new option for students through the LIRR’s popular Mail&Ride program, which launched a pilot in December of 2017 for the January 2018 commutation month. The Mail&Ride Department enlisted Chaminade High School in Mineola to participate in this pilot, where students now receive their tickets by mail instead of purchasing them at the ticket windows. The school’s first monthly tickets via Mail&Ride were mailed out in December 2017. The Mail&Ride Department is anticipating opening this pilot to other schools during the second quarter of 2018.

**Metro-North—Operations/Technology Initiatives**

**Operations**

- Progressed the installation of Metro-North’s Positive Train Control (PTC) system. In 2017, Civil Speed Enforcement (CSE) was implemented on the New Haven Line between Woodlawn and New Haven, including the New Canaan and Waterbury branches; on the Harlem Line between Mott Haven and Woodlawn; and on the Hudson Line between Grand Central Terminal and Ardsley. The full PTC pilot program is set to begin on the Hudson Line in late summer 2018.
Implemented a pilot program to increase service at the Tremont and Melrose stations from a two-hour frequency to hourly service during off-peak and weekend periods. The service day was also extended, with earlier inbound service on weekdays and later outbound service on weekdays and weekends. During the pilot period, ridership at the two stations increased by 67 percent on weekdays and by 101 percent on weekends. As a result, the increased service at Melrose and Tremont stations is now permanent. (See also, Customer Service Initiatives)

Advanced the railroad’s track work initiative, a systemwide effort over the last four years. In 2017, Metro-North replaced 42,231 ties; replaced 9.9 miles of continuous welded rail (CWR); rebuilt 36 switches; upgraded 12 railroad crossings; and welded 2,242 rail joints.

Continued a range of advanced technology to supplement visual track inspections, including: track geometry cars that measure parameters such as curvature, alignment, and profile; a specialized car operated by Sperry Rail Service to detect internal rail defects; equipment that measures joint bar alignments between rails to within one-eight of an inch; and a track-loading vehicle that measures the lateral strength of the track, track ties, fasteners, and ballast.

Purchased and installed Automated Geometry Inspection Equipment on three revenue train cars to perform continuous track geometry measurements as the trains move through their regular service routes. This new equipment went into operation in 2017. Metro-North is also in procurement for a state-of-the-art, self-propelled track geometry car, which is now in production and will be tested during 2018 for service in early 2019.

Continued to upgrade the railroad’s locomotive fleets. Two GP35 locomotives were overhauled in 2017, bringing the total number of overhauled GP35s to six, with two more scheduled for 2018. Crews also carried out the second Reliability Centered Maintenance (RCM) overhaul for the P32 Fleet and performed major component changes in the new Croton-Harmon locomotive facility.

Progressed the installation of a CCTV camera security system, including a forward-facing cab view, for all Metro-North rolling stock. By the end of the year, 25 percent of the agency’s fleet was CCTV equipped, with all “in-cab” and “cab-forward” installations to be completed by the end of 2018.
Technology

- Implemented a unified corporate Wi-Fi system under the Next Generation Network (NGN) initiative, which is building a high-speed corporate network to support data, voice and video applications; provide seamless wireless access to the internet and the corporate network; and support the railroad’s mobile work force.

- Rolled out a new messaging system for company-issued mobile devices. The system is capable of delivering a wide variety of service, emergency, and operational messages, including messages to conductors with Ticket Issuing Machines (TIMs), train crews, and various operational and service centers.

- Upgraded a number of functions on the agency’s PeopleSoft System, including: a redesign of the vendor portal, through which vendors submit bids, respond to RFPs, and conduct business with Metro-North; adapted PeopleSoft to enable IRS filings under the Affordable Care Act; and modified both the PeopleSoft and IMPACT systems to meet FTA audit requirements and improve controls over the agency’s Capital Program projects.

- Developed a web-based, scalable application to manage the assignment and occupancy of employee lockers at the North White Plains, Brewster, Harmon, Stamford, New Haven, Danbury, and Wassaic maintenance shop locations.

- Implemented a new customer assistance application. This web-based application provides Metro-North field managers with a dashboard of real-time operating information on their smartphones, enabling them to better assist customers, especially during service interruptions or critical events.

Bridges and Tunnels—Operations/Technology Initiatives

- Installed License Plate Recognition (LPR) technology at all B&T crossings, as well as in patrol vehicles. The LPR technology, which is distributed to state and local law enforcement agencies, is used for the detection of persistent toll violators and for toll violation enforcement.

- Installed cashless tolling equipment at all B&T crossings in 2017. Cameras and sensors combine data sources to charge E-ZPass accounts or to identify and classify vehicles for “Tolls by Mail” processing. (See also, 2017 Performance)
- Installed a Vehicle Occupant Detection System (VODS) at the Verrazano-Narrows Bridge to confirm vehicle occupancy for customers using carpool tags. The system automatically checks vehicles displaying HOV carpool tags and confirms that the vehicle has three or more occupants. VODS enabled B&T to eliminate the manual carpool tickets used prior to the ORT transition.

- Advanced the construction of a new Operation Command and Control Center (OCCC) in the B&T training academy building on Wards Island. The center, to be completed by March 2018, will accommodate the agency’s expanded operational role in the New York Crossings Project. The OCCC will house new security and control systems, along with the training academy, the Special Operations Highway Unit, and the Multi-Agency Coordination Center (MACC), which includes representatives from the NY State Police and National Guard. Once opened, it will operate 24/7, 365 days a year.
Interagency—Sustainability/TOD Initiatives

- Partnered with the New York Power Authority (NYPA) to carry out energy-efficiency projects throughout the system. Notable achievements in 2017 included: the installation of interior and exterior LED lighting, rapid roll-up doors, new energy-efficient compressors and Demand Control Ventilation in multiple MTA facilities.

- Compiled all 2017 data regarding MTA’s energy usage and increased efficiency in accordance with the Executive Order 88 (EO88)

- Compiled all 2017 data regarding MTA’s greenhouse gas emissions, and subsequently reported all energy usage in accordance with the Greenhouse Gas Protocol. Data regarding energy usage have been third-party verified and reported to The Climate Registry. The MTA’s energy usage profile for prior years are publicly available through The Climate Registry’s website.

- Published the 2017 GHG Emission brochure for internal and external use, on MTA’s Energy Efficiency Efforts.

- Published the MTA the Climate Adaptation/Resiliency Report, the first annual report of the MTA Climate Adaptation Task Force. The report collects regional climate adaptation information and selected “case studies” from the MTA agencies as an ongoing overview of the MTA’s resiliency initiatives and strategies.

- Coordinated the agency-wide MTA Climate Adaptation Task Force. The Task Force supports climate-related initiatives for all MTA operating agencies, including flood mitigation product demonstrations, and shares information with other major national transportation organizations, including Amtrak, NYNJ Port Authority, the Boston Metro (MBTA), and the Washington, D.C. Metro (WMATA).

- Completed a comprehensive study, using geographic information systems (GIS), that assesses the roof space of NYCT facilities for potential solar photovoltaic installations. The roof space is approximately 5.33 million square feet. The aim of the data collection is to build a business case for a possible MTA-wide Solar Initiative to utilize facilities as a green power asset of generating green power and fully employ a currently an under-utilized asset (roofs). Project is currently undergoing evaluation for its program viability.
- Continue to participate with various state, city and federal agencies on energy efficiency, climate resiliency & adaptation, and sustainability.

NYC Transit (Subways)—Sustainability/TOD Initiatives

- Advanced NYCT’s energy-reduction programs in conjunction with the New York Power Authority (NYPA). In 2017, the program of installing radio controlled third rail heaters for snow/ice removal continued, which will result in NYCT electrical energy cost reductions and enhanced train service reliability.

- Continued systemwide recycling and reclamation programs. In 2017 an average 34 tons of passenger refuse was removed from stations each day. Over the year, 12,501 tons of station refuse were processed, 50 percent of which were recycled, one of the highest recycling rates in the U.S. In addition, the MTA’s Asset Recovery program separates and recycles scrap, waste, and disposed materials from NYCT worksites, yards, and other facilities. In 2017, out of a total of 82,734 tons disposed from NYCT properties, 57,701 tons were recycled, for an overall recycling rate of 70 percent.

- Achieved major progress in the "Recovery and Resiliency" program of post-Sandy construction to repair storm damage and protect the system from future coastal flooding. Permanent or temporary storm surge protections are now ready at locations identified as vulnerable to storm surges. Over the last five years, and continuing through 2017, crews have repaired and fortified the NYCT system by waterproofing infrastructure, raising equipment to higher elevations, installing marine-grade equipment and water-tight doors, and implementing flood protections at maintenance yards and depots.

MTA Bus Operations (NYCT Department of Buses, MTA Bus Company)—Sustainability/TOD Initiatives

- Began a pilot program of ten leased all-electric buses (AEBs). Five of the pilot AEBs from New Flyer are operating in Manhattan on the M42 and M50 routes, and five AEBs from Proterra are operating in Queens and Brooklyn on the B32 route. On-street charging stations are located at terminal areas at each end of 42nd Street and at the Williamsburg Bridge Plaza. Overnight chargers are located at the M.J. Quill and Grand Avenue depots.
- Purchased 138 New Flyer standard Compressed Natural Gas (CNG) buses, which will replace older buses in the city-wide fleet, continuing the transition of MTA bus fleets to emissions-reducing technology. (See also, Capital Projects, Completions)

- Committed to purchase 846 new clean-energy and fuel-efficient buses for the MTA fleets, including 110 New Flyer XN-60 articulated CNG buses; 377 New Flyer standard clean diesel buses and 10 New Flyer hybrid buses; 251 Nova clean diesel standard buses; and 108 New Flyer clean diesel articulated buses. (See also, Capital Projects, Commitments)

- Advanced construction throughout 2017 on the new NYCT and MTA Bus Command Center in East New York, Brooklyn, which is incorporating energy-efficiency innovations, including natural lighting, a “greenroof,” and a rainwater-collection system to manage storm runoff.

- Continued to implement a comprehensive plan to comply with New York State Executive Order 88 (EO 88), which mandates a 20-percent reduction of building energy consumption from 2010 levels by 2020. The order affects a total of 32 MTA and NYCT bus facilities. The work in progress is based on an aggressive schedule of 14 energy audits and seven retro-commissioning audits.

- Worked with the NYPA to advance energy-efficiency projects at bus facilities, including comprehensive energy upgrades for the MJ Quill, Grand Avenue, East New York, and Flatbush depots, as well as the bus Central Maintenance Facility. A thermal solar power system for the hot water at the Jackie Gleason Depot was completed in 2017. A LEED application has been filed for the upgrades at the MJ Quill Depot.

- Developed a master plan for incorporating energy-efficient measures into the rehabilitation of building envelopes at three NYCT Bus depots and three MTA Bus depots, including window replacements with double-glazed, LEED-compliant windows; roof replacements with “white” or “green” roofs to reduce the “heat island” effect are underway at the Spring Creek and East New York depots.

- Completed a yearlong “Bike and Ride” pilot on the S53 and S93 bus routes on Staten Island, the first time that such equipment has been made available on NYCT vehicles. Bike racks were installed on a dedicated fleet of buses that serve the two routes. The pilot, which is testing three types of front-mounted racks, determined that the bike racks did not hamper bus operations. The program will continue on the S53 and S93 and be expanded to the Q50 and Bx23. Customers can use the racks at no additional charge on a first-come basis.
Long Island Rail Road—Sustainability/TOD Initiatives

- Continued to support the “Wyandanch Rising” project, a transit-friendly revitalization plan centered around the LIRR’s Wyandanch Station in the Town of Babylon. This initiative included construction of a new 920-space parking facility, providing a significant increase in commuter parking along the Main Line and additional parking capacity to support future ridership projections associated with East Side Access. Also included in this initiative is LIRR’s construction of a new state-of-the-art station building and pedestrian overpass, with elevators, to be completed in 2018.

- Supported the Town of Oyster Bay’s “Hicksville Downtown Revitalization Action Plan.” The plan is proposing to rezone the area around LIRR’s Hicksville Station, which will allow for a mix of multi-family housing, offices, and a variety of retail uses. The town hopes to use its $10 million NYS Downtown Revitalization Initiative (DRI) grant, along with the LIRR’s $120 million Hicksville Station renovation, to leverage its revitalization efforts.

- Continued to work with the Town of Brookhaven and the Town of Islip to transform the area around the Ronkonkoma Station into a mixed-use transit-oriented development (TOD) that leverages the LIRR station and the nearby Long Island MacArthur Airport. In connection with this effort, the LIRR is serving as a key stakeholder of Suffolk County’s Train-to-Plane Study, which is exploring connectivity between the LIRR’s Ronkonkoma Station and LI MacArthur Airport.

- Continued participation with a number of Long Island communities to pursue mixed-use development centered around LIRR stations. These included station enhancements and/or TOD planning efforts in the villages of Hempstead and Port Jefferson, the Town of Huntington, the City of Glen Cove, as well as the hamlets of East Farmingdale, Copiague, and Hicksville.

- Supported the Nassau County’s Baldwin “Downtown and Commercial Corridor Resiliency Study,” whose goal is to develop and implement a plan that ensures economic and physical resiliency within the community, including the area around LIRR’s Baldwin Station. The study evaluated the potential for downtown revitalization designed to promote new residential options and increase demand for local businesses.

- Supported the Town of Babylon’s East Farmingdale “Form Based Code and Regulating Plan” whose goal is to create diverse housing choices, a vibrant business community and an overall welcoming place that will attract and retain young people. The plan is centered
around a reopened LIRR Republic Station near the intersection of Route 110 and Conklin Street.

- Continued to support the Town of Babylon’s Route 110 Bus Rapid Transit (BRT) initiative. The plan will provide north-south transit access along Route 110, Long Island’s largest job center, while also connecting the LIRR Babylon and Ronkonkoma branches. Besides alleviating traffic congestion, the BRT would enhance TOD initiatives along the corridor, encourage economic development, and spur job creation. A key component of the initiative would be the reopening of LIRR’s Republic Station, for which LIRR has included environmental review and preliminary design work in the 2015-2019 Capital Program.

- Continued to support Suffolk County’s BRT initiative, which would provide north-south transportation along Nicolls Road. This would connect job centers between Stony Brook and Patchogue; link three LIRR branches; help support LIRR’s double track initiative; alleviate traffic congestion; and support TOD initiatives along the corridor.

- Participated in the fifth annual “Long Island Car Free Day” on September 22, encouraging all Long Islanders to give up their cars and try mass transit, carpooling, walking, and bicycling.

- Reported in October 2017 on LIRR’s recycling program for the 2016 calendar year, during which the agency recycled: 72 tons of office paper; 0.44 tons of car/truck batteries; 29 tons of other batteries; 72 tons of motor oil; 7 tons of scrap metal; 83 tons of electronics; and 4 tons of fluorescent bulbs. LIRR also sends all small office refrigerators and air conditioners for Freon recovery to avoid releasing the refrigerants into the atmosphere.

**Metro-North—Sustainability/TOD Initiatives**

**Sustainability**

- Developed an environmental training program for the agency’s Capital Program Department. The program aims to ensure that environmental compliance, sustainability, and resiliency requirements are considered at the beginning of all capital projects and carried forward across the life of the project through operation and close out.

- Implemented an energy-management framework that will enable Metro-North to achieve ISO 50001 certification, the first for any railroad in North America. This effort involves a number of energy conservation and fuel-metering initiatives aimed at cutting greenhouse
gases and other environmental impacts, while also reducing costs. The ISO certification audit is tentatively scheduled for 2nd quarter 2018.

- Undertook a number of specific projects to reduce energy consumption and advance the ISO 50001 effort, including installation of fuel-monitoring and leak-detection systems at the Brewster and North White Plains yards, with similar systems planned for four additional yards and Grand Central Terminal.

Transit Oriented Development

- Advanced the proposed Harrison Station Transit Oriented Development, which has completed the environmental and public review and is ready for groundbreaking in 2018. Located on a 3.3 acre MTA property, the project will construct a mixed-use, residential-commercial development, with affordable housing units, two pedestrian plazas, and 745 parking spaces, including a 475-space garage for Metro-North customers, nearly doubling commuter parking.

- Issued a Request for Expressions of Interest (RFEI) in December 2017 to explore the potential for redeveloping MTA-owned and city-owned properties in and around Metro-North’s Poughkeepsie Station. Proposals are due in April, 2018.

- Granted permission to use the Congestion Mitigation Air Quality (CMAQ) federal funds remaining from the construction of the North White Plains parking garage towards the construction of a new parking facility near the Croton Falls Station. The new facility is located about an 8 to 10 minute walk from the station and will eliminate parking in unauthorized spaces along local roads. The project includes the new parking facility, as well as lighting for sidewalks and crosswalks. The project will add about 200 new parking spaces beyond those spaces currently available on the street.

Bridges and Tunnels—Sustainability/TOD Initiatives

- Provided $1.222 billion in support for the MTA’s regional transit operations in 2017, which in turn helps 13 million New Yorkers in the MTA service area lead carbon-efficient lives, making New York the most carbon-efficient state in the nation.

- Completed the cashless tolling transition at all facilities, which eliminates vehicle idling, thereby reducing carbon emission and fuel consumption. Data collected over the first year of ORT operations shows fuel consumption by B&T customers dropping by 1.6 billion gallons,
while carbon emissions fell by 15,393 tons. Removed toll plazas and converted roadway and tower lighting to energy-efficient LED bulbs, resulting in a significant net reduction of B&T’s overall power usage.

- Completed an LED lighting retrofit of the Battery Parking Garage in cooperation with the New York Power Authority (NYPA). The high-efficiency LED fixtures replaced over 1,500 mercury vapor lighting fixtures throughout the parking complex, with an expected energy savings of approximately 1,333,532 kWh annually worth around $150,000 in energy costs per year.
Safety/Security Initiatives

Interagency—Safety/Security Initiatives

Safety

- Prepared the MTA’s annual updates for agency emergency planning. These include safety/security planning—with drills, exercises, and after-event analyses—for weather-related emergencies, biological incidents, terrorist attacks, crowd-control, customer evacuations, and other emergencies. Such planning is coordinated with local, state, and federal agencies. Special programs in 2017 included active-shooter simulations, rail safety training for first responders and communities, and dissemination of all-agency emergency weather guidelines.

- Contributed to statewide preparedness efforts as an active member of the Governor’s Disaster Preparedness Commission, which develops numerous New York State disaster plans and participates in disaster response exercises and interagency coordination meetings throughout the year.

- Implemented a multi-agency obstructive sleep apnea (OSA) screening, testing, and treatment program for train engineers and other critical personnel, the first OSA program of its kind and now the largest in the country.

- Developed several new employee health and safety initiatives, including: an inter-agency Wellness Council to coordinate wellness activities for the MTA’s 70,000+ employees; a New Hire Safety orientation program for HQ employees; an “injured on duty” (IOD) reporting and investigation program at HQ.

- Created new MTA-wide programs, including an internal dashboard for better monitoring of key safety initiatives across the MTA and an MTA-wide standardized non-DOT drug testing program to ensure consistency and societal relevance.

- Trained and certified a safety management employee as an FDNY Fire Safety Director. Also, established a fire-and-life safety investigation program for HQ to better meet the safety needs of employees and facilities.

- Acquired the services of a third-party engineering firm to undertake a third-rail risk assessment project in response to a recommendation from the National Transportation Safety Board (NTSB).
Developed seasonal video safety content in partnership with the National Safety Council (NSC) for use on the FYI Network, an internal messaging system for NYCT employees.

Created new medical standards at NYCT, in collaboration with medical experts, to ensure that employees are fit for their jobs and undergo appropriate medical monitoring. These criteria will also be used to help development new medical standards at the MTA railroads.

Began testing “active stopped-on-tracks warning” (ASTW) systems at four MTA railroad grade crossings. The testing is to determine the best technology to alert distracted motorists and keep them from queuing on grade crossings.

Hosted a number of safety-related events, including: a delegation of rail safety experts from Australia; five meetings of the MTA Board's Safety Committee; and weekly safety teleconferences to help safety departments across the MTA to coordinate activities and share best practices.

Security

Provided systemwide policing through the MTA Police Department (MTAPD), which has a workforce of over 700 officers and civilian employees. Its jurisdiction, which focuses on LIRR, Metro-North, and SIR, extends across the MTA travel region to 14 counties in two states. Following 9/11, MTAPD significantly expanded its counter-terrorism capabilities, adding K-9 and emergency service officers.

<table>
<thead>
<tr>
<th>Category</th>
<th>2016</th>
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</tr>
<tr>
<td>Rape</td>
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Established a new headquarters for the MTAPD Northern Emergency Services Unit (ESU) at the West Farms Bus Depot. The new location significantly reduces response time to emergencies, as well as fleet mileage and maintenance.
- Completed acquisition of new MTAPD security assets, including six new state-of-the-art emergency response patrol vehicles and two Smiths Detection Hazardous Material Identifiers, which can give officers instant results for chemical, biological, explosive and narcotic detection.

- Completed active shooter training for all MTPD officers in 2017. The department has trained a total of 702 officers in the Active Shooter Course I and 135 officers in the Active Shooter Course II. All members of the ESU attended Active Shooter and Advanced Active Shooter courses at the State Preparedness Training Center. In addition, the Office of Security provided active shooter training with the Civilian Security Awareness Training for “first-line” MTA employees.

- Carried out a multi-agency active shoot simulation and drill in Grand Central Terminal.

- Conducted three classes in the operation of an MP5 submachine gun, adding 27 trained operators in 2017 for a total of 94 MTAPD officers trained in use of an MP5.

- Completed testing and began installations of ballistic window shields for MTAPD patrol and special service fleets in 2017, with purchases to be completed in 2018.

NYC Transit (Subways)—Safety/Security Initiatives

- Continued installation and upgrading of “Help Point” devices, with more than 2,860 units installed in 457 subway stations by the end of 2017. The highly visible, “blue-lighted” units put customers in contact with the RCC for emergencies and with the Travel Information Center (TIC) staff for directions and other service information. The units were used for more than 2,100 incident reports and nearly 450,000 information requests in 2017.

<table>
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<tr>
<th>Category</th>
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<th>% Change</th>
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<tbody>
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<tr>
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Subway crime statistics are reported by the New York Police Department (NYPD) Transit Bureau, which is responsible, along with other agencies, for patrolling the NYCT Subway system.
- Continued “Operation Track Sweep” to dramatically reduce trash on tracks, which in turn reduces debris fires. NYCT has purchased three powerful new track vacuum trains and 27 new refuse cars to move debris out of the system more quickly. NYCT is also using six portable vacuum systems that can be quickly deployed and easily used without special equipment such as work trains.

- Increased the frequency of infrastructure, track, and signal inspections to identify issues before they cause unplanned right-of-way (ROW) disruptions. Other safety-related ROW projects include: increasing the number of multi-disciplinary rapid response teams stationed throughout the system; continued expansion of a Communications-Based Train Control (CBTC) system; and installation of Continuous Welded Rail (CWR) to improve system capacity, safety, and performance.

- Continued the FASTRACK program, which provides a safer working environment for maintenance and repair crews by curbing train operations in work areas. NYCT completed 24 FASTRACK programs in 2017.

- Decreased the rate of employee “lost time and restricted duty” accidents from 3.16 per 100 employees in 2016 to 2.74 in 2017. NYCT continued its expanded employee safety program, which includes regular safety communications, safety audits, training, and accident investigations.

**MTA Bus Operations (NYCT Department of Buses, MTA Bus Company)—Safety/Security Initiatives**

- Expanded the bus camera security system to a total of 3,071 buses, with additional installations ongoing. The cameras are an increasingly critical tool in incident reporting, crime prevention, and improved safety for both drivers and customers.

- Successfully negotiated the implementation of operator-compartment-facing cameras with all the bus operator labor unions. Cameras have been installed in 162 buses, with more retrofits expected in 2018. All 366 new buses delivered in 2018 will have operator-compartment-facing cameras, which are an increasingly critical tool in incident reporting, crime prevention, and improved safety for both bus operators and customers.

- Continued the Vision Zero “Eye On Safety” safety training program. In 2017, the third version of this highly successful program, Vision Zero III, was refreshed with entirely new content and expanded to include all managers, supervisors, and bus operators.
Expanded pilot testing of two new safety technologies: a Pedestrian Turn Warning (PTW), which emits automatic voice alerts to pedestrians, and a Collision Warning System (CWS) that audibly alerts bus operators to unintentional lane departures, forward collision warnings, and pedestrian/cyclist collision warnings. MTA installed PTW on 225 buses and CWS on 63 buses in 2017.

Completed MTA’s first new bus contracts with high-visibility windows for 2017 delivery of 138 New Flyer standard CNG buses and 139 New Flyer diesel articulated buses.

Completed Phase IV and launched Phase V of MTA’s security awareness training for bus operators, front-line managers, and supervisors with direct customer contact. The program is a joint initiative with the MTA Office of Security.

Continued the MTA’s random undercover observation program, which focuses on directly evaluating and reinforcing the safety habits of bus operators, while also providing bus operators with positive feedback for every observed ride, as warranted. Completed security system upgrades at the Eastchester and LaGuardia depots, including “swipe” access to key entry points, new fencing and lighting, and CCTV cameras. Also, neared completion of security upgrades at the Baisley Park and Far Rockaway depots, and awarded security upgrade contracts for the Spring Creek and JFK depots.

Carried out several MTA Paratransit safety programs in 2017, with a focus on safety training for service providers. These included a workshop to review accident trends and safety programs for providers; training programs for accident and emergency responders; training on proper wheelchair securement and related issues for 1,225 drivers; and training on high-stress customers-drivers situations for 195 dispatchers.

**Long Island Rail Road—Safety/Security Initiatives**

Conducted quarterly “Safety FOCUS days” across LIRR in 2017, each attended by approximately 4,000 employees. Conducted weeklong Safety, Health, and Wellness Events covering seasonal safety trends, personal protective equipment, fire extinguisher safety, physical fitness, fatigue, and electrical safety.

Continued implementation of the Confidential Close Call Reporting System (C3RS), a collaborative effort between management, labor, and the Federal Railroad Administration (FRA), that provides a mechanism for employees to confidentially report “close calls” that
could have resulted in operating and safety incidents. As a result, the C3RS Peer Review Team implemented three corrective actions in 2017.

- Continued to work with MTAHQ, NYSDOT, Nassau and Suffolk counties, local government authorities, and a third-party consultant to develop improved safety measures at railroad grade crossings. Applied for and awarded a competitive FRA Infrastructure Safety Grant to implement enhancements at two crossings.

- Continued design and development efforts with Metro-North and a third party vendor for a new enterprise safety system. This system will replace LIRR’s existing mainframe-based Accident Control System that currently serves as the railroad’s FRA accident-reporting system and the official depository of accident and incident data.

- Continued implementing a “safety management systems” (SMS) approach to LIRR’s overall safety program. The SMS approach, which has been endorsed by the FTA, the FRA, the federal DOT, other transportation authorities, supplements an engineering-centered process with increased attention to the “human element,” data sharing, and measurements of safety performance.

- Implemented a railroad safety contest for elementary, middle, and high school students. The winning safety slogans at the elementary and middle schools were printed on t-shirts and string purses and incorporated into banners hung at their local LIRR stations. The high school winners worked with the LIRR to develop a Public Service Announcement that was sent to all schools and played in LIRR stations.

- Commenced screening all LIRR locomotive engineers for obstructive sleep apnea (OSA) through the MTA Occupational Health and Safety’s all-agency OSA testing program. The LIRR began testing in April 2017 and is on schedule to complete the screening during May 2018.

- Continued Customer Safety Awareness Days in partnerships with New Jersey Transit, Amtrak, and 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.

- Implemented a labor-management partnership committee focusing on “on-track safety” for employees working on the railroad’s tracks, but not necessarily in regular track crews. This would cover workers in a range of areas, such as power work, signals, and other elements located on or near tracks.
- Completed a number of security/safety projects at LIRR properties in 2017, including installation of high-security electronic gates and fencing at two LIRR locations; security hardening at two LIRR yards; installation of video management systems at 16 LIRR station platforms; installation of 112 access-control devices; and the upgrade of security systems at 19 LIRR passenger stations.

**Metro-North—Safety/Security Initiatives**

**Safety**

- Fully implemented the confidential “close call” reporting system (C3RS) for Metro-North’s transportation, mechanical and engineering departments. Developed with the FRA and NASA, the system encourages workers to report potential safety hazards or breach of procedures by providing them with an anonymous, non-confrontational, non-punitive method to do so. Metro-North has received over 2,560 reports since the inception of C3RS in 2015.

- Fully implemented Metro-North’s award-winning Enhanced Employee Protection System (EEPS), an industry-leading tool that provides an additional layer of safety protection for employees working on or around the tracks. The system protects Maintenance-of-Way employees by placing a blocking device on the track that can only be removed after rail traffic controllers are provided a unique code.

- Continued to implement the National Transportation Safety Board (NTSB) recommendations, while working with both the NTSB and other MTA agencies to ensure the coordination of industry best and safe practices.

- Progressed plans for the installation of the Positive Train Control (PTC) system, which is now 68 percent complete (See also, Operations/Technology).

- Continued the agency’s Obstructive Sleep Apnea (OSA) program, which began in 2015 with the screening of all of Metro-North’s 434 locomotive engineers, who are subsequently screened for OSA during annual physicals. In June 2017, Metro-North began OSA screening for conductors. Currently 252 conductors have been screened and 29 are being monitored for compliance with treatment.
- Continued the TRACKS (Together Railroads and Communities Keeping Safe) outreach program to promote grade-crossing awareness and rail safety to communities, schools, and busing and trucking companies. Since its inception in June 2016, the program has reached over 134,000 individuals and is continuing its educational efforts across the Metro-North territory.

- Provided both classroom and field training for police, fire, and EMS workers in Metro-North’s travel region on rail safety and emergency incidents. In 2017, the agency trained 1,450 first responders. Each year, the program includes a full-scale emergency simulation, which in 2017 involved an active shooter exercise in Grand Central Terminal.

- Coordinated with the NYDOT to provide new road markings, signage, and cameras at three grade-crossing. The cameras will enable the agency to monitor driver behavior and assess the effectiveness of the program. Also, replaced 12 grade crossing surfaces within right-of-ways on the Harlem, Hudson, and New Haven lines.

- Conducted regular Metro-North employee safety programs, including bi-annual Safety Clean-Up Days to remove debris and clutter at seven yards and Grand Central Terminal; quarterly Safety Focus Days to discuss safe practices and employees’ safety concerns; the agency’s Safety Excellence Awards to recognize employees and departments; and a revised, comprehensive set of General Safety Rules.

- Carried out regular safety programs aimed at Metro-North customers, including the seasonal “Best Foot Forward” campaigns to promote safe customer footing and handling and the weekly safety tweets, which reach the agency’s 88,000-plus Twitter followers.

**Security**

- Implemented several new procedures at the Metro-North Security Command Center (SCC) to improve operations, including the issuance of quick-reference cards on video archiving and other systems used by watch officers; dissemination of a new SCC Daily Report recapping security-related events; a new Threat Level Escalation Plan and checklist; and new limited-access system for distributing security videos quickly and securely outside the SCC.

- Installed additional security fencing and lighting, along with increased security checks and reporting, at the Harlem River Lift Bridge, the busiest bridge on the Metro-North territory and a critical single-point-of-failure.
- Purchased a rapid-deployment video surveillance system that can moved quickly to potential trouble spots and has the ability to remotely view security video at facilities without fixed cabling. The new system was effective in preventing burglaries at the Highbridge Yard in the Bronx.

- Facilitated an “active shooter” simulation and exercise in Grand Central Terminal, which involved representatives from NYPD, FDNY, NY State Police, MTAPD, the FBI, and the U.S. Department of Homeland Security.

**Bridges and Tunnels—Safety/Security Initiatives**

**Employee Safety**

Responding to a 2017 increase in employee “lost time accidents,” B&T undertook the following safety initiatives:

- Performed safety training for all field employees, including traffic management training for all Bridge and Tunnel Officers (BTOs) and supervisors.
- Intensified case management of injuries on duty (IOD) to minimize lost work time and to discourage abuse.
- Provided safety support for the cashless tolling implementation, including an update of the agency’s Roadway Safety Guidelines and the abatement of hazardous materials prior to toll booth demolitions.
- Utilized joint labor/management safety task forces to address safety risks in the cashless tolling environment.
- Achieved a 22-percent reduction in the rate of contractor injuries in 2017, despite an unprecedented volume of accelerated construction, through accident program management and prevention.
- Conducted a refresher in safety protocols and accident prevention across the agency, including Traffic Incident Management, which covers responder safety, initial scene response, emergency traffic control, and scene management.

**Customer Safety**

By continuing to address the causes of collisions, B&T reduced its “collisions with injury” rate to 0.99 per million vehicles in 2017, down from 1.08 the previous year. Related initiatives included:
- Held weekly collision task force meetings with facility management to analyze collision information, as well as quarterly authority-wide reviews by an interdepartmental team.

- Intensified customer safety strategies, which focus on identifying collision-prone locations and improving their physical characteristics, as well as targeted enforcement to reduce unsafe driver behaviors.

- Issued over 110,000 summonses and effected over 700 arrests in 2017, in collaboration with NY State Police. This includes 53.4 percent more summonses by B&T officers than in the prior year. The largest increases involved unsafe lane changes, disobeying traffic control devices, and cellphone-related violations.

- Interdicted over 1,000 persistent toll violators as part of B&T’s Revenue Recovery Enforcement efforts, and, with NY State Police, issued over 9,300 summonses for covered or obstructed license plates.
Cost Cutting /Revenue Initiatives

Interagency—Cost Cutting/Revenue Initiatives

- Launched a new Enterprise Asset Management (EAM) training and certification program in 2017 based on the “Lean Six Sigma” model originally developed in the private sector. The program trains executive-sponsored employees across agencies in project planning, data analysis, and project implementation. The aim is to identify operational efficiencies and cost-savings. Projects developed in the first round of training identified savings of $1.9 million and are currently advancing towards approval and implementation. The 2018 round of training, now underway, includes newly sponsored employees and more advanced training for certified employees.

- Undertook a number of EAM-related courses, exercises, and project roll-outs in 2017 to extend the MTA’s agency-wide EAM program. Collectively, the varied EAM agency projects employ new data-gathering tools and data-analysis techniques to track MTA assets through their entire lifecycles. The aim is to optimize inventory, maintenance, replacements, and other areas of agency operations, with a focus on greater productivity and cost-efficiency. (See also, Operations/Technology Initiatives.)

- Generated approximately $221,000 in net royalty revenue through the MTA Brand Licensing Program, which licenses use of MTA intellectual property on branded products, in advertising, publications, and other uses.

NYC Transit (Subways)—Cost Cutting/Revenue Initiatives

Revenues

- Generated total farebox revenues of $3.4 billion in 2017, up 2.7 percent over the previous year, mainly due to a March 2017 fare increase. While total subway ridership and average weekday ridership both declined slightly in 2017, NYCT maintained an overall 9.7-percent growth in ridership from 2009 to 2017. This represents the highest levels of subway ridership since the 1940s, generating a steady, seven-year increase in annual farebox revenues.

- Worked in conjunction with MTAHQ and outside agencies to continue the expansion of innovative, revenue-generating advertising sales on NYCT subway cars, stations, platforms, station entrances, and other venues, including online advertising on the MTA website.
Cost Cutting

- Continued internal cost discipline across the agency, which enabled the MTA Board to vote in 2017 for a flat base fare and 2.0-percent annual fare increase over the next two years, the lowest biennial fare increase since 2009 and below the annual inflation rate.
- Shortened the scheduled time for the rehabilitation of the Canarsie Tunnel under the East River to 15 months, allowing a faster return to full revenue service. Contractual provisions were included to expedite demolition, accelerate the tunnel work, enable traffic mitigation work, and facilitate the commissioning and testing of power, signal, and communication systems.

MTA Bus Operations (NYCT Department of Buses, MTA Bus Company)—Cost Cutting/Revenue Initiatives

- Continued the rollout of a multi-modal trip platform for Access-A-Ride (AAR) that matches customers’ needs with the appropriate service and vehicles as determined through the eligibility process. On-going analysis aims to systemize the most cost-effective, customer-beneficial delivery of AAR services.
- Continued shifting AAR services from dedicated providers to qualified, non-dedicated brokers and “e-hail” providers. In 2017, lower cost “broker/voucher” car services provided 1.519 million trips that otherwise would have been provided by dedicated AAR providers. This reflects an increase of 124,000 trips over the same period in 2016 and a savings of $4.9 million.

Long Island Rail Road—Cost Cutting/Revenue Initiatives

- Achieved the second highest LIRR ridership since 1949, with a total of 89.2 million passengers and revenues of $70 million in 2017, an increase of 2.4 percent and $16.6 million in revenues over the previous year.
- Experienced a 2.2-percent increase in the recreational and non-commutation market in 2017, outpacing a 1.6 percent decline in the commutation market during the year, due mainly to the extensive Amtrak repairs at Penn Station.
Achieved the budget reduction target of $8.2 million by strategically rebalancing the Reliability Centered Maintenance (RCM) plan to better reflect the retirement of the old M3 fleet and its replacement with the new M9 fleet, which will be under warranty.

Placed tighter controls on and re-prioritized non-payroll funding. The LIRR continues to subject all areas of the budget to intensive review, specifically non-payroll-related operational costs, overtime, inventory, and administration.

**Metro-North—Cost Cutting/Revenue Initiatives**

**Cost Cutting**

- Reduced operating subsidies by $5.3 million annually through cost-cutting measures, while continuing the strategic long-term investments needed to ensure safe, secure, and reliable transportation services. Since 2010, the MTA and its agencies have pursued operational efficiencies and recurring cost reductions to the amount of $1.9 billion. Over that time period, Metro-North has contributed a cumulative annualized savings of $95.3 million towards these cost-cutting measures.

- Continued to generate steam and electrical energy savings through the Grand Central Energy Conservation Project. In 2017 annual cost reductions remained constant at more than $1 million annually, as compared to the 2014 benchmark level when the conservation project was originally completed.

- Accelerated the reduction of energy costs across Metro-North operations through the ISO 50001 Energy Management System framework. Projects in 2017 included new electronic fuel-monitoring and leak-detection systems at the Brewster and one at the North White Plains yards, with similar systems planned for four additional yards and Grand Central Terminal (See also, Sustainability/TOD Initiatives).

**Revenues**

- In 2017, Metro-North’s Group Travel Program generated $857,000 in ticket revenue which included 1,307 group trips; the Audio Tours of Grand Central Terminal generated about $35,000, and the guided tours sponsored by the Municipal Art Society generated $50,000. In addition, Metro-North generated $825,000 through regional tourism partnerships, with a 15-percent increase in 2017 ticket sales for Metro-North “Getaway” offers.
- Generated approximately $15 million in 2017 as part of the MTA contract with Outfront Media for ad displays in Grand Central and throughout the Metro-North system. The advertising concession will also bring a widespread conversion from traditional ad formats to new digital displays, with added customer communications potential.

- Metro-North took in roughly $320,000 in 2017 through its soda and snack vending machine program. Answer Vending has entered into a new sponsorship agreement for Metro-North with Pepsi, which began in 2018.

- Approved licensing agreement with a consortium of wireless communication providers, for a wireless network in Grand Central Terminal and the Park Avenue Tunnel, which was completed in 2017. In addition to licensing revenue, the project also provides a critical safety and emergency communications network at no cost to Metro-North, representing combined revenue and cost savings worth some $24.0 million over 20 years.

- In January 2017, MNR launched a five-year license agreement with Zipcar, in which Zipcar will pay $600 per parking space annually, in nine Metro-North parking lots.

- Metro-North selected two vendors to pay license fees for ATM machines on agency properties. Access One Solutions, who bid on all (41) Metro-North Stations listed in the Request for Proposal (RFP) and Wells Fargo who only bid on White Plains Station. Wells Fargo offered to pay $30,000 annually with a 3-percent minimum escalation fee and Access One Solutions offered to pay 56 percent of all surcharges and a $2,000 signing bonus for each location. The draft agreement is pending with Legal for review.

- Processed 1,307 group trips through the Group Travel Program which accommodated about 32,000 customers and generated over $856,000.

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**Bridges and Tunnels—Cost Cutting/Revenue Initiatives**

- Proceeded with an ambitious design-build program as part of the 2015-2019 Capital Plan. This allows for faster, more efficient delivery of projects, while achieving best value in implementation costs for the agency. Design-build projects comprise approximately 24 percent of B&T’s current capital program.

- Continued to advance the agency-wide Enterprise Asset Management (EAM) program, which aims to maximize the efficient use of capital assets. B&T is in the process of
implementing a “top to bottom” EAM framework for more transparent, data-driven investment and operational decisions, enabling the agency to make better use of resources; justify funding requirements; improve safety and reliability; and, ultimately, lower the cost of maintaining assets in a “state of good repair.”

- Maintained the savings achieved through prior budget reduction programs, which have enabled B&T to achieve millions of dollars in savings through in-depth organizational assessments and structural modifications.
- Achieved a total net operating income of $1.443 billion in 2017, or 3.3 percent above the original estimate included in the “MTA 2017 Adopted Budget, February Financial Plan.”
- Provided $1.122 billion in total support for MTA transit operations in 2017, following a record high of 310 million paid crossings for the year.
- Achieved a 93.6 percent market share for E-ZPass toll collections in 2017. Since E-ZPass is the least expensive method for B&T to collect tolls from motorists, increasing this percentage is an important cost-containment strategy.
The MTA’s current 2015-2019 Capital Program was approved by the MTA Board on April 20, 2016, and by Capital Program Review Board (CPRB) on May 23, 2016. The approved program totaled $29.5 billion, nearly 10 percent less than the Board’s original plan. It includes $21.6 billion in core investments for MTA subways, buses, and railroads; $5.0 billion for network expansion projects, including the Second Avenue Subway, East Side Access (ESA), and Penn Station Access; and $2.9 billion for MTA Bridges and Tunnels (B&T). The B&T portion of MTA capital funding is not subject to CPRB approval.

During 2017, the MTA Board approved several amendments and actions affecting both the 2015-2019 Capital Program and the 2010-2014 Capital Program, through which a number of ongoing capital projects are funded—in particular, the MTA’s agency-wide Superstorm Sandy recovery and resiliency projects.

In February 2017, the Board amended the current program to increase station investments, which shifted some funds within the NYCT portion of the program and added $119.4 million to the LIRR portion of the program. With CPRB approval in March 2017 this increased the total program value from $29.456 billion to $29.575 billion.

A second amendment to the 2015-2019 Capital Program was approved by the Board in May 2017, increasing the program total to $32.457 billion. The CPRB portion of the amendment was approved in July 2017. Key portions of this increase include: updates to stations renewals and other core programs; work related to expansion of the LIRR Main Line; funding required for the Second Avenue Subway, Phase 2; and the accelerated Open Road Tolling (ORT) program at B&T.

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2 Because of the timing of the “Mission Statement,” the data in that report are subject to subsequent reconciliation and adjustment as data is finalized by each agency over the course of the year. For that reason, some of the data reported in the 2017 Mission Statement have been adjusted in this report to reflect the most recent 2017 performance data, as of March 15, 2018.
In December 2017, the Board approved two separate actions impacting the 2015-2019 Capital Program. First, the contract award for LIRR’s Main Line Expansion project required a $100 million transfer from LIRR’s portion of the capital program. Second, the Board added $340 million to NYCT’s capital program to advance the Subway Action Plan (SAP) announced in July 2017. Neither action required CPRB approval at the time, but both are reflected in this current proposed amendment.

Additionally, in May 2017, the Board approved an amendment to the 2010-2014 Capital Program, reducing the program from $34.801 billion to $32.021 billion. This was approved by the CPRB in July 2017. Key portions of the reduction include: adjustments to Sandy recovery work; a transfer of surplus B&T funds from the 2010-2014 program to the 2015-2019 program to support ORT; administrative scope transfers of $464 million to the 2010-2014 program from the 2015-2019 program to consolidate work and budgets for ESA and Regional Investments; and schedule/budget modifications relating to updated assumptions and CPRB approvals.

Since the MTA Capital Program began in 1982, the MTA has made capital commitments of $117.830 billion, capital expenditures of $101.868 billion, and capital project completions of $85.993 billion—investments enabling the New York regional economy to grow and thrive over those decades. In 2017, the MTA agencies achieved capital commitments of $8.786 billion and capital completions worth $4.588 billion. Unless otherwise indicated, the agency commitments and completions listed in this Section 3 of the 2017 Annual Report reflect only those set as 2017 goals by the MTA Board.

### Funding Received Through December 31, 2017 ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>1982-2017</th>
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</thead>
<tbody>
<tr>
<td>Federal grants</td>
<td>$3,485</td>
<td>$40,269</td>
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<tr>
<td>State service contracts/Bond Act</td>
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<td>$2,931</td>
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<tr>
<td>State appropriations/Other</td>
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<td>$1,089</td>
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<td>City appropriations</td>
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<td>MTA/TBTA bonds</td>
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<td>MAC Surplus</td>
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<td>Debt restructuring</td>
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<tr>
<td>Other/Lessor Equity/Asset Sales/Investment</td>
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<td>$9,252</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6,845</strong></td>
<td><strong>110,290</strong></td>
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*Note: Includes Receipts for MTA Bridges and Tunnel.*

### Capital Program Progress, 1982-2017 ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Commitments</th>
<th>Expenditures</th>
<th>Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City Transit</td>
<td>62,581</td>
<td>56,000</td>
<td>51,915</td>
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<tr>
<td>Long Island Rail Road</td>
<td>11,653</td>
<td>9,952</td>
<td>8,279</td>
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<tr>
<td>Metro-North Railroad</td>
<td>8,007</td>
<td>6,992</td>
<td>5,677</td>
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<tr>
<td>Bridges and Tunnels</td>
<td>6,094</td>
<td>5,311</td>
<td>4,299</td>
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<tr>
<td>Capital Construction</td>
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<td>17,852</td>
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<td>MTA Bus Company</td>
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<td>817</td>
<td>758</td>
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<tr>
<td>Commuter Rolling Stock</td>
<td>1,913</td>
<td>1,912</td>
<td>1,896</td>
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<tr>
<td>Other*</td>
<td>4,959</td>
<td>3,033</td>
<td>1,816</td>
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<td><strong>MTA Total</strong></td>
<td><strong>117,830</strong></td>
<td><strong>101,868</strong></td>
<td><strong>85,993</strong></td>
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*Includes funds for World Trade Center recovery, Superstorm Sandy, planning and customer service projects, and security. Numbers may not total due to rounding.*
## Capital Program Progress, 2017
($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Commitments</th>
<th>Expenditures</th>
<th>Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City Transit</td>
<td>3,305</td>
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<td>Long Island Rail Road</td>
<td>1,185</td>
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<td>Metro-North Railroad</td>
<td>610</td>
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<td>103</td>
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<tr>
<td>Bridges and Tunnels</td>
<td>654</td>
<td>678</td>
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<tr>
<td>Capital Construction *</td>
<td>2,213</td>
<td>1,097</td>
<td>1,700</td>
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<tr>
<td>MTA Bus Company</td>
<td>22</td>
<td>18</td>
<td>3</td>
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<tr>
<td>Other **</td>
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<td>--</td>
<td>--</td>
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<tr>
<td><strong>MTA Total</strong></td>
<td><strong>8,786</strong></td>
<td><strong>5,757</strong></td>
<td><strong>4,588</strong></td>
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</tbody>
</table>

* Includes funds for security and MTAPD. Numbers may not total due to rounding.

** Commitments and completions include funds for planning and customer service projects, and security.
New York City Transit (Subways)

Major 2017 Commitments

Fare Control Modernization

- Awarded a New Fare Payments System (NFPS) initiative, which will modernize the entire fare payment structure and replace the legacy MetroCard system. The NFPS will be an account-based system with contactless payments, allowing riders to pay fares by waving a cellphone, a bank card, or other payment device over contactless readers. The new system will facilitate faster, more efficient payment and boarding, while allowing customers to manage accounts online without physical cards that can be lost or damaged. The NFPS will also provide the basis for interoperability of fare payment systems between NYCT and other MTA agencies. ($581 million)

Stations

- Awarded Packages No. 2 and 3 of the agency’s stations initiative. Package No. 2 will provide improvements at the Broadway, 30th Avenue, 36th Avenue, and 39th Avenue stations on the Astoria Line (N, W trains) in Queens. Package No 3 will provide improvements at 72th Street, 86th Street, 110th Street, and 163rd Street-Amsterdam Avenue stations on the 8th Avenue Line in Manhattan. The ESI will transform numerous stations systemwide by addressing “state of good repair,” introducing design innovations, and generally improving the customer experience. ($366.1 million)

- Awarded Americans with Disabilities Act (ADA) accessibility projects at the following stations: the 57th Street Station on the Broadway Line (N, Q, R, W trains), the 86th Street Station on the 4th Avenue Line (D, N, R trains), and the First Avenue and Bedford Avenue stations on the Canarsie Line (L Train). These investments will provide elevators, safety railings, ramps, warning strips, and other improvements, bringing the stations into full ADA compliance. ($178.2 million)

Signals, Line Structures, Line Equipment, and Track

- Started work on the following new power substation construction projects: at 14th Street-Avenue B, Maspeth Avenue-Humboldt Street, and Harrison Place on the Canarsie Line (L
Train) and at New Dorp, Tottenville, and Clifton on the Staten Island Railway (SIR). The substations will be constructed with the necessary rectifiers, transformers, circuit breakers, switchgear, and supervisory control equipment to augment power capacity and support increased train service. The Canarsie Line projects will be coordinated with the Superstorm Sandy recovery work. ($188.8 million)

- Awarded an AC-to-DC line relay upgrade project for 95 automatic signal locations on the Crosstown Line (G Train) in Brooklyn, which will extend the useful life of the interlockings at Court Square, Nassau Avenue, Nostrand Avenue, and Bergen Street. ($25.2 million)

- Awarded projects to replace mainline tracks, yard tracks, and switches at various locations throughout the system. ($342.5 million)

- Began priority subway tunnel repairs along the 4th Avenue Line (D, N, R trains) in Brooklyn. This project will rehabilitate a 1.1 mile segment of subway tunnel between 36th Street and 59th Street, including replacement of columns, concrete center wall, ventilator gratings, repair of other steel and concrete defects, and related tunnel lighting and cable work. ($87.2 million)

Superstorm Sandy Repair and Resiliency

- Awarded the contract for rehabilitation of the Canarsie Tube (L Train) between Manhattan and Brooklyn to address damage from Superstorm Sandy, along with other critical capital program improvements. Assets to be replaced include power distribution components, ducts, tracks, signal equipment, lighting, and fire systems. The replacement will incorporate improved resiliency standards to mitigate future damage, including flood-resilient cables and ducts. The work will also include core capacity improvements to enable increased train throughput, along with improved accessibility and circulation. ($546.3 million)

Major 2017 Completions

Stations & Yards

- Completed the construction of a new station at Arthur Kill on the SIR. The project scope included the construction of platforms, station entrance stairs, ADA ramps and overpass, communications, lighting systems, a new parking facility, and the demolition of the adjacent Atlantic and Nassau stations. ($24 million)
Completed Package No. 1 of the Enhanced Stations Initiative (ESI) at the 53rd Street, Bay Ridge Avenue, and Prospect Avenue stations on the 4th Avenue Line (D, N, R trains) in Brooklyn. This is the first ESI package to be completed, and all three stations reopened by November 2017. The ESI will transform numerous subway stations systemwide by addressing “state of good repair” and introducing design innovations. ($120.1 million)

Completed renewal and component repair at seven stations on the New Lots Line (2, 3, 4, 5, trains) in Brooklyn. Renewals were completed at the Junius Street, Pennsylvania Avenue, Rockaway Avenue, Saratoga Avenue, Sutter Avenue-Rutland Road, and Van Siclen Avenue stations. Component work was completed at the New Lots Avenue Station. In addition to work on platforms, mezzanines, walls, roofs, windows, and other station elements, the work included ADA enhancements. ($97.5 million)

Completed repairs to car washers at NYCT rail yards in the Bronx. This contract involved component repairs of three car washers and ancillary work at the 239th Street, Concourse, and Westchester yards. Car washers help to prolong the life of railcars, contributing to efficiency of operations and service reliability. ($15.2 million)

**Signals and Track**

Completed replacement projects for mainline tracks, yard tracks, and switches at various locations throughout the system. ($433.3 million)

Completed the modernization of the signal system on the Dyre Avenue Line (2, 5 trains) in the Bronx. This project provided a new fixed-block wayside signal system from East 180th Street Station to Eastchester-Dyre Avenue Station. Two interlockings were modernized at Morris Park and Dyre Avenue, enabling the relay-based system to interface with Automatic Train Supervision and be compatible with future Communication Based Train Control (CBTC). These investments bring the line’s signal system back into a “state of good repair,” reducing the likelihood of signal failures and improving system reliability. ($228.9 million)

**Superstorm Sandy Repair and Resiliency**

Completed projects to repair equipment and facilities damaged by flooding from Superstorm Sandy, while hardening the system against future storm damage. Projects included:

- Completed the restoration of the Joralemon Tube (4, 5 trains) between Brooklyn and Manhattan. Replacements included all tunnel lighting fixtures, communications equipment,
fiber optic cables, and more. The contract also covered work on two of the tube’s pump rooms, including the installation of new pumps with the elevated controls to minimize future flood damage. ($121.2 million)

- Completed repairs at St. George Interlocking and Yard, including the replacement and modernization of the track and signal systems, along with drainage improvements. In addition, new walls, doors, lighting systems, roofing, alarms and electrical and mechanical systems were installed at the yard’s Tower B employee facility. ($120.6 million)

- Completed the rehabilitation of the South Ferry Station, which was essentially destroyed by Superstorm Sandy. The project scope included electrical/electronic systems, architectural and structural elements, mechanical systems, elevators and escalators, HVAC, plumbing, fire protection, communications, instrumentation and controls, circuit breaker houses, signals, tracks, tunnel lighting, and traction power. The work also included watertight doors, deployable barriers, and other flood-mitigation features to protect against future storms. The station reopened for service on June 27, 2017. ($317.6 million)

- Completed the rehabilitation of the Cranberry Tube (A, C trains), which suffered extensive saltwater damage from Superstorm Sandy. The project scope included the repair of a circuit breaker house, pump rooms, fan plants, substation equipment, signal equipment, and power and communication cables. ($102.9 million)
MTA Bus Operations  (NYCT Dept. of Buses, MTA Bus Company)

Major 2017 Commitments

Depots/Facilities

- Awarded contract to replace the roof at East New York Depot ($7.8 million, NYCT Bus)
- Awarded the expansion of the mezzanine at Ulmer Park Depot ($8.1 million, NYCT Bus)

Information Systems

- Awarded a contract for rollout of the onboard Automated Passenger Counting (APC) system. ($5.6 million, NYCT Bus)

Rolling Stock

- Committed to purchase 110 New Flyer XN-60 articulated CNG buses ($104.2 million, NYCT Bus); 377 New Flyer standard buses, 367 clean diesel and 10 hybrid, ($235.7 million, NYCT Bus); 251 Nova clean diesel standard buses ($161.0 million, NYCT Bus); and 108 New Flyer clean diesel articulated buses ($98.8 million, NYCT Bus). These buses will replace older buses in the fleet and provide the latest safety and customer service technologies in the industry, including digital information screens, Wi-Fi, USB charging ports, pedestrian turn warning (PTW) technology, and traffic signal priority (TSP) technology. ($599.7 million total commitment, NYCT Bus)
- Awarded the replacement of 202 non-revenue work trucks to meet requirements of the Diesel Emissions Reduction Act (DERA). ($33.8 million; NYCT Bus)

Major 2017 Completions

Rolling Stock

- Purchased 138 New Flyer standard Compressed Natural Gas (CNG) buses, which will replace older buses in the city-wide fleet and provide the latest safety and customer service technologies in the industry, such as digital information screens, Wi-Fi, USB charging ports,
pedestrian turn warning (PTW) technology, and traffic signal priority (TSP) technology. ($94.1 million, NYCT Bus)

Information Systems

- Completed the pilot installation of Digital Information Signs on 200 buses serving three routes ($3.0 million, NYCT Bus)
Major 2017 Commitments

Stations

- **Penn Station Complex Improvements**: Awarded the design contract for improvements to areas within the Penn Station Level A Concourse. The design addresses the layout of the existing concourses, corridor widths, lighting, architectural finishes, digital displays, and wayfinding signage, to optimize passenger movement, safety, and circulation. ($11 million, total project budget)

- **Nostrand Avenue Station Rehabilitation**: Awarded a construction contract for the rehabilitation of the circa-1977 elevated Nostrand Avenue Station in Brooklyn. Work includes replacement of two elevated, six-car side platforms and substructure, four overpasses, stairs and railings, a canopy system, lighting, electrical and communication systems, CCTV security system, and signage, along with the installation of two new elevators for ADA accessibility. This is the final project in a multi-phased investment in the Atlantic Avenue Viaduct in Brooklyn. ($28 million, total project budget)

- **Penn Station Customer Facilities**: Awarded a contract for design of platform-level improvements at Penn Station. The project includes a preliminary design for the painting, cladding, floor resurfacing, tactile strips, ceiling and lighting, and platform height corrections at station platforms 7, 8, 10, and 11. It also includes full design for the staircases at platforms 7, 8, 9, 10, and 11, as well as the complete design for platform 9. ($36 million, total project budget)

- **Penn Station Elevator/Escalator Renewal**: Awarded a design-build contract for renovation and refurbishment of six elevators and fourteen escalators on the LIRR Level A in Penn Station. The new equipment will include a monitoring system to relay operating information to the LIRR Station Master’s Office. The project is a critical part of LIRR’s plan to improve the long-term durability of escalators and elevators, while facilitating customer flow within Penn Station. ($14 million, total project budget)
Station Masters Office: Awarded a contract for renovation of the LIRR’s Station Master’s Office in Penn Station. The renovations include a video display wall system, integrated voice and data system, and CCTV security system, along with new workstation consoles, interior walls, ceiling, floor, lighting, and finishes. This project will enable LIRR to better monitor station conditions and provide current, reliable information on LIRR station operations and train status. ($6 million, total project budget)

Station Initiatives – Wyandanch: Awarded the construction contract for a new station building and enhancements at Wyandanch on the Main Line in Suffolk County. Work includes construction of a new one-story station building with new LED lighting, HVAC, plumbing, life safety systems, stairs, handrails and ADA ramps, and new decorative station identification. Station amenities will include digital panels/signs, Wi-Fi hot spots, interactive display kiosks, and USB charging stations. Sidewalks around the new building will be modified for ADA access. ($6 million, total project budget)

Murray Hill Station Elevators: Awarded the construction contract for new elevators at the Murray Hill Station in Queens on the Port Washington Branch. The project covers the installation of two new elevators for the station’s below-grade eastbound and westbound platforms, as well as street-level improvements for ADA compliance. The work includes elevator shafts, machine rooms, reconfiguration of retaining walls, new ADA compliant tactile warning strips on platform edges, lighting in elevator areas, CCTV cameras, signage, and bird control. ($15 million, total project budget)

Station Initiatives – Port Jefferson: Commenced work at Port Jefferson Station in Suffolk County. Project work includes replacement and upgrade of various station platform components, such as platform shelter sheds, railings, new LED lighting, and CCTV security cameras, along with improvements to the station building and station plaza area. ($4 million, total project budget)

Track

Main Line Double Track – Phase II: Awarded a contract for track and systems installation for the Main Line Double Track—Phase II. This phase includes construction of approximately 7.9 miles of new double track and infrastructure systems between Farmingdale and Central Islip, and construction of new platforms at the Wyandanch and Pinelawn stations. ($250 million, total project budget for Phase II)
Jamaica Capacity Improvements (JCI) – Phase II (Design): Awarded the design contract for JCI--Phase II. The design will address reconfiguration of Jamaica’s interlockings and upgrades to the track and related mechanical, electrical, and signal systems. The work will cover additional parallel routes through Jamaica; the extension of Platforms A through E to accommodate 12-car train consists; full reconfiguration of the Jay and Hall interlockings to accommodate higher speeds and additional parallel routes; and the design and construction of a new wayside signal system. ($73 million, total 2015-2019 Program budget)

Line Structures

Bridge Program Structural Renewals – Buckram Road Bridge: Awarded a design-build contract for replacement of the circa-1889 Buckram Road Bridge on the Oyster Bay Branch in Nassau County. The one-track, three-span bridge will be replaced with a new single-span ballasted deck bridge having an increased 14-foot vertical clearance that will significantly reduce the probability of bridge strikes. ($22 million, total project budget)

Design for Three Bridges – Wreck Lead, Webster Avenue, and Cherry Valley Road: Awarded a design contract covering full design for the Wreck Lead Bridge on the Long Beach Branch and preliminary designs for the Webster Avenue Bridge on the Port Washington Branch and the Cherry Valley Bridge on the Hempstead Branch. The work addresses mechanical rehabilitation at Wreck Lead; structural deficiencies at Webster Avenue and Cherry Valley; as well as vertical clearance at Cherry Valley. (Total project budgets: $2 million, Wreck Lead Bridge; $11 million, Webster Bridge; and $3 million, Cherry Valley Bridge)

Flushing Main Street Bridge Renewal: Commenced rehabilitation of the Flushing Main Street Bridge on the Port Washington Branch. The work includes new bearings, bridge deck waterproofing, and repairs to the concrete underdeck, girders, parapets, piers, and abutments. ($4 million, total project budget)

Signals

Centralized Train Control – Tower Migration: Awarded a contract for design and engineering services for the Jamaica Control Signal Migration Strategy, part of LIRR’s Centralized Train Control (CTC) initiative. The consultants will evaluate the various signal systems and associated infrastructure now in use throughout the railroad and provide a migration plan that will enable direct control from the Jamaica Central Control (JCC) facility. At present, LIRR has nine independent supervisory or traffic control Systems with
nine separate control towers. The long-term goal is to integrate these dispersed systems into a single CTC system within the JCC to facilitate information sharing and incident response. ($2 million, total project budget)

- **Positive Train Control (PTC):** Awarded a contract to furnish, install, and test the Atlantic Avenue Tunnel cables. The work includes installation and testing of approximately 35,000 linear feet of cable and associated hardware in the Atlantic Avenue tunnels that will provide PTC communication capabilities. The project is divided into two phases to accommodate available track outages: from East New York to Dunton and from east of Atlantic Terminal to East New York. ($126 million, total 2015-2019 Capital Program budget)

- **Lightning Protection:** Commenced efforts to upgrade lightning protection at towers and signal huts at various locations systemwide, in order to mitigate or reduce damage to the signal system that can occur during weather incidents involving lightning. ($5 million, total project budget)

**Shops & Yards**

- **Diesel Locomotive Shop Improvements:** Awarded a design-build contract for the new Morris Park Locomotive Shop and Employee Facility. The existing 125-year-old Morris Park Round House will be replaced by a new facility better equipped to maintain the current and future diesel locomotive fleet. The new heavy repair and overhaul shop and supporting facilities will improve locomotive reliability and facilitate on-time performance (OTP). ($102 million, total project budget)

- **Mid-Suffolk Electric Yard:** Awarded the design-build contract for a new Mid-Suffolk Electric Train Yard, to be located south of and adjacent to the existing Ronkonkoma Storage Yard. The new yard will provide 11 new layup tracks, each able to accommodate a 12-car electric train set for storage, light cleaning, servicing, and inspection. Work will include a new lead track with a new signal system and associated infrastructure and systems, along with new substations, high-security fencing, and a new employee facility. The new yard a key part of the infrastructure supporting East Side Access (ESA) and other LIRR service expansions. ($128 million, total project budget)

**Power**

- **New Substations – Power Load Study:** Awarded the contract for a Traction Power Load Study. This study will facilitate LIRR’s efforts to develop a substation and power strategy
that will meet the needs of the current operating fleet, as well as future operations and system expansions. ($5 million, total project budget)

- **Richmond Hill Substation Replacement**: Awarded the contract for a new substation at Richmond Hill to replace the existing substation. The new prefabricated, modular substation will house new pre-installed AC and DC switchgear, rectifiers, control cabinets, and associated equipment. New transformers will be installed outside the building. Other substation components include high tension feeders, fiber optic cables for the Programmable Logic Controller (PLC), and a fire alarm system. ($17 million, total project budget)

- **Atlantic Avenue Tunnel Lighting**: Commenced replacement of the existing tunnel lighting system between the East New York Station and Atlantic Avenue Terminal in Brooklyn. The work includes replacement of light fixtures, wire, cable, conduit, distribution equipment, primary power, transformer, and switches. ($12 million, total project budget)

### Major 2017 Completions

#### Stations

- **Escalator Replacement Program**: Completed installation of new all-weather, heavy-duty escalators at the Rockville Centre, Baldwin, Freeport, Amityville, Copiague, and Lindenhurst stations on the Babylon Branch. The new escalators are equipped with advanced safety enhancements and sensors, as well as remote monitoring capabilities. ($14 million, total project budget)

- **Stewart Manor Station Improvements**: Completed improvements at the Stewart Manor Station Building, located on the Hempstead Branch in Nassau County. The work included improvements to the station building; reconfiguration of the space for ADA-accessible restrooms and waiting area; and new lighting and signage. The station’s pedestrian underpass was also rehabilitated, with new wall and ceiling finishes and lighting. ($2 million, total project budget)

#### Track

- **Main Line Double Track – Phase II (Civil and Site Work)**: Completed the civil and site work associated with Main Line Double Track - Phase II. The work for this phase is between the Central Islip and Farmingdale stations. The design-build civil and site work included clearing of vegetation and material obstructions; construction of retaining
structures; and installation of a new track bed, with sub-ballast for the second track. Work continues on the track, systems, and station platform, including the installation of concrete pads at grade-crossings and demolition of the Pinelawn Station shelter. ($250 million, total project budget for Phase II)

- **2017 Annual Track Program**: Completed the annual lifecycle replacement and upgrade of track structures for 2017. The year’s track structure renewals included 62 miles of track surfacing, 42,145 mechanized wood ties, 24,816 concrete ties, 813 field welds, 14 grade crossings, three switches, and 26,879 liner feet of continuous welded rail (CWR). The Annual Track Program facilitates LIRR’s efforts to provide reliable service and maintain a “state of good repair” throughout the railroad’s track infrastructure. ($75 million, total project budget)

**Line Structures**

- **150th Street Jamaica Bridge Rehabilitation**: Completed rehabilitation and replacement of various components on the three spans of the 150th Street Bridge. The work included new bearings and bridge seats, repairs to abutments, concrete underdeck, piers, and miscellaneous structural steel. Above-deck work included waterproofing, end girder repairs, and drainage. ($17 million, total project budget)

- **Post Avenue Bridge Replacement**: Replaced the span on the Post Avenue Bridge in Westbury. The new span increases clearance by over two feet and will significantly reduce the number of train delays caused by oversized trucks hitting the span. ($20 million, total project budget)

**Signals**

- **Centralized Train Control Fit-Out (Design)**: The design effort for the architectural fit-out of the Centralized Train Control [CTC] facility in Jamaica has been completed. This design included flooring, ceiling, electrical, security, communication, fire suppression systems, and a new HVAC system; interior finishes, walls, doors, and windows; a new staircase; acoustic treatments; and console furniture. This project is critical to the implementation of the CTC facility in Jamaica that will provide the LIRR with a central location for monitoring and controlling train operations, and thus a quicker response time to operational situations. ($18 million, total project budget)
Shops & Yards

- **Employee Facilities Renewal**: Undertook roof replacement, installation of new HVAC units, and building façade repairs at the Jamaica Corporate Building and at selected buildings at Morris Park, Richmond Hill, the UCC Shop, the East End Pumphouse, the Babylon Welfare Facility, and the West Side Yard. The project also included new paving, curbs, signage, and striping in the parking lot at the Upper Holban Yard. ($11 million, total project budget)

Superstorm Sandy Projects

- **Infrastructure and System Upgrades**: Completed infrastructure repairs and system upgrades at various LIRR locations damaged by Superstorm Sandy. The work included replacement of third-rail cable, switches, and system components at the Far Rockaway and Shea yards; portable emergency generators, roof replacement, and carpeting at the Hillside Support Facility; a platform shelter shed at Westbury; platform lighting at the Oceanside and Island Park stations; and a new roll-up security gate at the Penn Station 34th Street entrance. ($7 million, total project budget)

- **First Avenue Substation Restoration**: Completed installation of two new switch gears in the First Avenue Substation in Manhattan. The restoration work was sequenced to ensure continuous third-rail power to the four East River Tunnels. The project also included integrated resiliency work, such as the hardening of splice connections and termination points against water infiltration and elevating the AC switchgear foundation above flood levels. ($8 million, total project budget)

- **Wreck Lead Bridge Systems Restoration**: Completed the replacement of submarine cables, electrical systems, and the emergency generator at the Wreck Lead Bridge on the Long Beach Branch. The bridge is a single-track, moveable drawbridge over the Reynolds Chanel whose underwater cables were damaged by Superstorm Sandy. Their replacement and additional storm-hardening measures will protect the bridge against future weather events and related service disruptions. ($15 million, total project budget)
Major 2017 Commitments

Rolling Stock

- Awarded an engineering services contract in July to begin drafting technical specifications and contract documents for both dual-mode locomotives and bi-level coach cars. ($371.6 million, total project budget.)

- Carried out system modifications and key upgrades to the M8 married pairs and single cars still in revenue service, including such essential upgrades as PTC and CCTV. These are to be completed by the end of 2018. ($1.4 billion total project budget; comprised of $448.1 million from MTA and $936.2 million from the Connecticut Department of Transportation (CTDOT))

- Awarded a change order in January 2017, with MTA Board approval, to purchase up to an additional 60 M8 cars in married-pair configurations. An option for an additional 34 cars was also approved for selection in the first quarter of 2018. (The option for 60 cars totals $281.5 million, of which MTA’s share is $92 million)

Stations

- Awarded a contract in July, through the Small Business Mentoring Program, to perform exterior lighting improvements around the Harlem-125th Street Station building and on the viaduct artwork. The contract also includes installation of gate board signage for two exterior staircases. ($3.7 million, total project budget.)

- Awarded a design-build contract in December 2017 for enhancements at five stations on the Hudson, Harlem, and New Haven lines. Work at the Crestwood, Port Chester and Riverdale stations will include new canopies and waiting plazas. The Harlem-125th Street Station will receive station house and platform improvements. Improvements at White Plains Station will include a renovated, expanded waiting room, new bathrooms, a new elevator, new canopies and more. ($135.6 million, total project budget)

- Awarded eight contracts in December relating to customer service initiatives (CSI) projects in Grand Central Terminal (GCT), outlying stations, and other Metro-North facilities. These are primarily communications projects extending to new public and visual
information system (PA/VIS), including real-time train data, centrally controlled security systems, high-bandwidth networks, information displays, and related communications infrastructure. ($236.8 million, total project budget)

Infrastructure

- Awarded a design contract in April for the replacement of an existing retaining wall located on the New Haven Line in Port Chester, NY. The contract also includes in-depth/hands-on inspections of five select retaining walls as well as the inventory and visual inspection of all retaining walls located along the Hudson and Harlem lines and on the New York portion of the New Haven Line. ($7.5 million, total project budget)

- Awarded a construction contract in May for replacement of the Prospect Hill Road Bridge in the Town of Southeast, NY. This project will replace the existing four-span truss bridge, which had been closed due to deterioration, with a new, two-span, multi-girder steel bridge. ($53.7 million, total project budget.)

- Awarded a construction contract in August for security upgrades at the Harlem River Lift Bridge. ($16.3 million, total project budget.)

- Awarded a design-build contract in September for the superstructure replacement of the 14th Avenue Bridge in Mt. Vernon, NY. ($20.2 million, total project budget.)

- Awarded a contract in September, through the Small Business Mentoring Program, for construction services for the provision of three new temporary modular buildings for Quality Assurance and Maintenance Planning Departments at Harmon Yard as part of the preconstruction activities required for Harmon, Phase V, Stage II. ($441.6 million, total project budget.)

- Awarded a design contract in October for engineering and design services for the inspection, assessment, and design of priority repairs to be performed in the Grand Central Terminal train shed. ($67.0 million, total project budget.)

- Awarded a contract in December for the build-out of the Metro-North Grand Central Terminal 5C area for the installation of the PTC primary control center and engineering lab. ($479.1 million total project budget, comprised of $316.0 million from MTA and $163.1 million from CTDOT)
Superstorm Sandy Restoration and Resiliency

Metro-North continues to repair equipment and facilities damaged due to flooding and related effects from Superstorm Sandy, while also advancing mitigation and resiliency projects to better prepare the system for future weather-related events. Major repair and resiliency efforts in 2017 include the following:

- Continued the multi-phase restoration and resiliency work on Hudson Line power and communications & signals. In 2017, design-build work on Phase I advanced from Greystone (CP 19) to Croton-Harmon (CP 35). Phase II design, from Mott Haven (CP 5) to Greystone (CP 19), progressed concurrently. Work includes: design, construction, and installation of critical power, communications, and single components, as well as elevated steel platforms to house critical equipment. ($165.2 million, total Phase I project budget; $136.8 million, total Phase II project budget)

- Awarded a contract in April 2017 for the purchase of one continuous welded rail (CRW) work platform with steel excavator. The platform will help expedite repairs and the restoration of passenger service after a storm. ($6.0 million, total project budget.)

- Completed the design in May 2017 for construction bids in the first quarter of 2018 for the Hudson Line perimeter protection, waterproofing, and hardening of the substation and the train yard buildings. ($50.0 million, total project budget.)

Major 2017 Completions

Rolling Stock

- Completed design in December 2017 to upgrade M8 married pairs with Advanced Civil Speed Enforcement System (ACSES) and commenced upgrading fleet with approved ACSES software. M8s with ACSES began entering revenue service in January 2018. ($1.4 billion total project budget; comprised of $448.1 million from MTA and $936.2 million from CTDOT )

Stations

- Completed the Elevator Rehabilitation Phase 4 project for Grand Central Terminal in June 2017. This project replaced the terminal’s SE-1, SE-2 and A-car freight elevators, providing greater freight moving capacity. ($10.4 million, total project budget.)
- Completed the design project for the Poughkeepsie Station building in December 2017. This design work relates to certain station utilities, as well as “state-of-good repair.” ($1.1 million, total project budget.)

- Completed the Port Chester Station elevator rehabilitation contract in December 2017. This contract, a part of the overall station rehabilitation, installed an elevator adjacent to west end of the outbound platform, along with a staircase and an ADA ramp from on the inbound side to the parking lot. ($8.6 million, total project budget.)

**Infrastructure**

- Completed the 2010-2014 Maintenance of Way (MOW) equipment/rolling stock program in March 2017. All 13 items of equipment completed acceptance testing to replace current MOW equipment as needed. ($5.3 million, total project budget.)

- Completed a project to replace third-rail brackets in the Park Avenue Tunnel in May 2017. The third-rail system in the tunnel is past its design life and in need of replacement. ($6.1 million, total project budget.)

- Completed a design in September 2017 for the replacement of two motor-alternator sets, along with related equipment, located in the Mott Haven Yard substation. ($1.5 million, total project budget)

- Completed a project in November 2017 to replace five miles of fiber cable for communications and signals along the Harlem and Hudson lines. ($4.2 million, total project budget.)

- Completed the agency’s systemwide drainage project in December 2017. This project installed 15,720 feet of under-drain pipe and connected it to five catch basins which drain into the NYC sewer system at 165th Street, 170th Street, and Claremont Parkway, in the Bronx. An additional three catch basins where installed at 175th, 176th, and 178th streets in preparation for the next phase of the project. ($13.0 million, total project budget.)
MTA Bridges and Tunnels

Major 2017 Commitments

- Bridges and Tunnels (B&T) is committed to maintaining its facilities in a state of good repair. Major projects in 2017 included: reconstruction of the southbound approach of the Henry Hudson Bridge; rehabilitation of the concrete skewbacks at the Henry Hudson Bridge; cashless tolling initiatives; and the installation of an Integrated Electronic Monitoring and Detection System at the Bronx-Whitestone and Robert F. Kennedy bridges. B&T committed a total of $676.1 million to Capital Program projects (including $249.7 million for cashless tolling initiatives) in 2017. The following are additional details about B&T’s major 2017 commitments:

Henry Hudson Bridge

- Awarded the design-build project for rehabilitation of the concrete skewbacks and pedestals. This project will address all necessary upgrades to the foundations of the Henry Hudson Bridge to extend the service life of the bridge and meet current seismic requirements. ($86 million, contract award; $100 million, total project budget).

- Awarded the contract for the reconstruction of the southbound approach at the Henry Hudson Bridge. This project will replace the last remaining 1930’s-era decks and reconstruct the structure supporting the decks. ($73 million, contract award; $97 million, total project budget)

Verrazano-Narrows Bridge

- Awarded the design-build contract for main cable and suspender rope testing. This project will assess the strength of the main cables and suspender ropes. ($18.1 million contract award, $40 million, total project budget)
Agency Wide

- Awarded $249.7 million in construction, design, and management services as part of the cashless tolling initiative. The transition to an ORT system was completed ahead of schedule at all nine B&T facilities in 2017. ($501.7 million, total proposed project budget).

- Installed an Integrated Electronic Monitoring and Detection System at the Bronx-Whitestone and Robert F. Kennedy bridges. This project will address fire detection and security needs at both bridges. ($75 million in design-build award; $88 million, total project budgets).

Major 2017 Completions

B&T completed a total of $832.9 million in Capital Program projects in 2017. The cashless or open road tolling (ORT) projects were completed ahead of schedule at all nine B&T facilities in 2017, marking a major advance for the agency. The agency’s transition to ORT at all crossings had a combined total budget of $501.7 million (of which $257.0 million is completed). The successful ORT changeover represented a major achievement for the agency, with cumulative benefits for years to come. Highlights of 2017 project completions include the following:

Verrazano-Narrows Bridge

- Completed the replacement of the upper-level suspended span deck and the construction of a new Bus/HOV ramp, along with miscellaneous steel repairs, concrete rehabilitations and structural painting of the Staten Island lower-level ramps. These two projects maintain a “state of good repair” and add a reversible Bus/HOV lane on the upper level of the bridge that ties directly to the Bus/HOV lane on the connecting highways. ($388.5 million, total project budget).

Robert F. Kennedy Bridge

- Completed the reconstruction of the 125th Street on and off bound ramps. ($102.9 million, total project budget).

Agency Wide

- Completed the replacement of toll equipment and new toll initiatives at various facilities. ($257 million)
MTA Capital Construction

MTA Mega Projects

Second Avenue Subway, Phase 1

- As of December 2017, $4.447 billion had been committed to the Second Avenue Subway, Phase 1, out of a current total project budget of $4.601 billion, of which federal funding accounts for $1.374 billion. To date, all contracts for the project have been awarded. The systems contract is expected to achieve substantial completion in 2018. The four final stations contracts were substantially completed in 2017. Second Avenue Subway Phase 1 began revenue service January 1, 2017.

Second Avenue Subway, Phase 2

- As of December 2017, $141 million has been committed to the Second Avenue Subway, Phase 2. Initial funding for this project is $1.735 billion to address environmental work, design, real estate, project support, and preliminary construction work. Additional funding will be added to the project in future capital programs. Work on the environmental and design phases of this project is ongoing.

7 Line Extension

- As of December 2017, $2.417 billion has been committed to the 7 Line Extension out of a total project budget of $2.420 billion, of which funding from New York City accounts for $2.367 billion. The 7 Line Extension project opened for revenue service in September 2015. All but one contract is substantially completed. The remaining contract, for a secondary entrance, is expected to be substantially completed in 2018.

East Side Access

- As of December 2017, $9.255 billion has been committed to the East Side Access (ESA) project, out of a current project budget of $10.178 billion, plus a rolling stock reserve of $463 million. Federal funding for the project is expected to total $2.699 billion. Total third-party construction executed to date is over $5.0 billion. In 2017, ESA executed approximately $620.6 million worth of construction. The ESA project is currently
undergoing an extensive budget review, which is analyzing trends, developing mitigations, and updating the estimate for completion. The revenue service date is forecast for December 2022.

- Two major ESA contracts were completed in 2017. June saw the completion of the Harold Structures contract at a cost of $60.7 million. This included replacement of the old 48th Street Railroad Bridge; construction of two new retaining walls, installation of catenary support structures; track switches; and certain Amtrak electrical utilities in the “Loop” and “T” interlockings. In November 2017, ESA closed out the Harold Structures, Part 3, Westbound Bypass contract at a cost of $88.3 million. This advanced work on the Westbound Bypass approach structures; a pump station; and initial excavation of the Westbound Bypass tunnel.

- In April 2017, ESA awarded the Midday Storage Yard contract for $291.5 million to provide a new 30-acre LIRR rail storage yard. The contractor will construct 24 layup tracks, 11 miles of new railroad tracks, more than 80 switches, and associated signal and traction power systems. Upon completion, the LIRR will be able to store upwards of 300 train cars in the yard during the day.

Cortlandt No. 1 Line Station Reconstruction

- As of December 2017, $161 million has been committed to the Cortlandt No. 1 Line Station Reconstruction project, out of a current project budget of $182 million. Work on the construction contract continues. The contract covers additional demolition and repairs, signal work, fire protection, communication systems, vertical transportation, and complete station fit-out, including mechanical, electrical and plumbing, architectural, structural, platform, and track reconstruction. This project is locally funded. The current forecast for completion is December 2018.

Penn Station Access

- As of December 2017, $13 million has been committed to the Penn Station Access project, out of $695 million in the 2015-2019 Capital Program. No major contracts were advertised or awarded for this project in 2017.
LIRR Expansion Project

- As of December 2017, the base value of the design-build contract ($1.5 billion) and the project-management contract ($67 million), totaling $1.6 billion, had been committed to the LIRR Expansion Project, out of $2.050 billion in the 2015-2019 Capital Program. Additional funding will be requested in future capital programs. Project completion is forecast for mid-2023.
- In December 2017, the MTA Board granted approval to award two contracts, with options to be exercised at a later time, for the LIRR Expansion project totaling $1.9 billion.
- The design-build contract is to construct approximately 10 miles of third track on the Main Line; remove seven street-level grade crossings, and provide grade-separated vehicular and pedestrian crossings at five locations. Options are available for additional work to provide up to five parking garages.
The Metropolitan Transportation Authority (“MTA”), a public benefit corporation of the State of New York (the “State”), 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”).

MTA carries out these responsibilities directly and through its subsidiaries and affiliates, which are also public benefit corporations. MTA and its subsidiaries, are listed by their legal names and number of employees (full-time and full-time equivalents) as indicated in the MTA 2018 Adopted Budget February Financial Plan 2018 – 2021 (February 2018):

<table>
<thead>
<tr>
<th>Legal Name</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTA Headquarters</td>
<td>3,073 employees</td>
</tr>
<tr>
<td>The Long Island Rail Road Company</td>
<td>7,450 employees</td>
</tr>
<tr>
<td>Metro-North Commuter Railroad Company</td>
<td>6,966 employees</td>
</tr>
<tr>
<td>Staten Island Rapid Transit Operating Authority</td>
<td>318 employees</td>
</tr>
<tr>
<td>MTA Bus Company</td>
<td>3,939 employees</td>
</tr>
<tr>
<td>MTA Capital Construction Company</td>
<td>139 employees</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Legal Name</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triborough Bridge and Tunnel Authority</td>
<td>1,589 employees</td>
</tr>
<tr>
<td>New York City Transit Authority, and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority</td>
<td>49,310 employees</td>
</tr>
</tbody>
</table>
MTA and the foregoing subsidiaries and affiliates are collectively referred to herein, from time to time, as the “Related Entities.” Throughout this document, the Related Entities are referred to by their popular names, as indicated below.

Certain insurance coverage for the Related Entities is provided by a New York State-licensed captive insurance public benefit corporation subsidiary of MTA, First Mutual Transportation Assurance Company (“FMTAC”).

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”).

The New York City Transit Authority and its subsidiary 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 continuing business interrelationship of the Related Entities and their common governance and funding, there are provisions of each of these three acts (the MTA Act, the MTA Bridges and Tunnels Act, and the MTA New York City Transit Act) that affect some or all of the other Related Entities in various ways.
Basic Organizational Structure for MTA Operations

MTA Headquarters (Including the Business Service Center)

MTA Headquarters includes the executive staff of MTA, as well as a number of departments that perform largely all-agency functions, including 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, and treasury. In addition, MTA maintains its own Police Department with non-exclusive jurisdiction over all facilities of the Related Entities.

Transit System

MTA New York City Transit and its subsidiary MaBSTOA operate all subway transportation and most of the public bus transportation provided within the City (the “Transit System”).

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 Long Island and within 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; through an arrangement with New Jersey Transit, the Port Jervis and Pascack Valley commuter rail services to Orange and Rockland Counties; and within such counties and the State of 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”).
MTA Long Island Bus

Pursuant to a lease and operating agreement with the County of Nassau (“the County”), MTA Long Island Bus formerly operated bus service in the County. MTA Long Island Bus operations ceased as of December 31, 2011, the date the lease and operating agreement terminated.

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.

MTA Bridges and Tunnels

MTA Bridges and Tunnels operates all nine of the intra-State toll bridges and tunnels in the City.

MTA Capital Construction

MTA Capital Construction is responsible for the planning, design, and construction of current and future major MTA system expansion projects for the other Related Entities, including East Side Access (bringing MTA Long Island Rail Road into Grand Central Terminal), system-wide capital security projects, and the Second Avenue Subway.

The legal and popular names of the Related Entities are as follows:

<table>
<thead>
<tr>
<th>Legal Name</th>
<th>Popular Name</th>
</tr>
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<tbody>
<tr>
<td>Metropolitan Transportation Authority</td>
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<tr>
<td>New York City Transit Authority</td>
<td>MTA New York City Transit</td>
</tr>
<tr>
<td>Manhattan and Bronx Surface Transit Operating Authority</td>
<td>MaBSTOA</td>
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<tr>
<td>Staten Island Rapid Transit Operating Authority</td>
<td>MTA Staten Island Railway</td>
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<tr>
<td>MTA Bus Company</td>
<td>MTA Bus</td>
</tr>
<tr>
<td>Metropolitan Suburban Bus Authority</td>
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<td>The Long Island Rail Road Company</td>
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<td>Metro-North Commuter Railroad Company</td>
<td>MTA Metro-North Railroad</td>
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<td>MTA Capital Construction Company</td>
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<td>Triborough Bridge and Tunnel Authority</td>
<td>MTA Bridges and Tunnels</td>
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Governance of the MTA

Pursuant to statute, 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. The four voting Members required to be residents of the counties of Dutchess, Orange, Putnam, and Rockland, respectively, cast only 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.

In accordance with legislative amendments enacted in 2009, the Chairman is also the Chief Executive Officer of MTA and is responsible for the discharge of the executive and administrative functions and powers of the Related Entities. The Chief Executive Officer of MTA is, ex officio, the Chairman and Chief Executive Officer of the other Related Entities. Currently, the MTA has an Office of the Chairman composed of a Managing Director, MTA President, and MTA Chief Development Officer who are charged with the day to day administrative, as well as managerial and executive functions allocated to the CEO.

As of December 31, 2017, the following Committees of the Board assist the Chairman and the Board in discharging their responsibilities: (1) the Audit Committee; (2) the Finance Committee; (3) the Committee on Operations of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, and the MTA Bus Company; (4) the Committee on Operations of the Metro-North Commuter Railroad; (5) the Committee on Operations of the Long Island Rail Road and the Metropolitan Suburban Bus Authority; (6) the Committee on Operations of the Triborough Bridge and Tunnel Authority; (7) the Capital Program Oversight Committee; (8) the Diversity Committee; (9) the Corporate Governance Committee; and (10) the Safety Committee.

Board Members are assigned by the Chairman to serve as chairperson or as a member of several committees. The following chart sets forth the Committee Assignments for each MTA Board Member on December 31, 2017.
MTA Board Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Audit Committee</th>
<th>Corporate Governance Committee</th>
<th>Diversity Committee</th>
<th>Finance Committee</th>
<th>Capital Program Oversight Committee</th>
<th>B &amp; T Committee</th>
<th>LIRR Committee</th>
<th>MNR Committee</th>
<th>NYC Transit/MTA Bus Committee</th>
<th>Safety Committee</th>
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<td>Joseph J. Lhota (Chairman)</td>
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Notes: Joseph J. Lhota was named Chairman on June 21, 2017 and Chairman Thomas F. Prendergast retired on January 31, 2017. Fernando Ferrer served as Acting Chairman February 2017 through June 21, 2017. Randolph Glucksman and Scott Rechler were both appointed as Board Members on June 19, 2017. Carl Weisbrot was appointed as Board Member on July 1, 2017. The “C” indicates chair of that committee.
The MTA Board held twelve (12) meetings in 2017. The following chart sets forth the meetings of the MTA Board and the attendance of each Board Member at those meetings.

<table>
<thead>
<tr>
<th>BOARD MEMBERS’ ATTENDANCE</th>
<th>REGULAR MEETINGS OF THE MTA BOARD IN 2017</th>
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<tbody>
<tr>
<td>Joseph J. Lhota (Chairman)</td>
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<td>Thomas F. Prendergast</td>
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<td>(Chairman/CEO, Retired)</td>
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<td>Fernando Ferrer (Vice</td>
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<td>Chairman)</td>
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<td>Andrew Albert *</td>
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<td>Norman E. Brown*</td>
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<td>Ira R. Greenberg*</td>
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<td>Randolph Glucksman</td>
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<td>Peter Ward</td>
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<td>Carl Weisbrod</td>
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<td>Carl V. Wortendyke (1/4)</td>
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<tr>
<td>Neal Zuckerman^ (1/4)</td>
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</table>

**Legend**

- (1/4) = Casts one collective vote
- * = Non-voting Member
- X = Absent from meeting
- + = Special Board meeting, 4/03/17
-  = Period during which not a Board Member
- ^ = Appointed voting member 6/17/16
- # = Participated by teleconference. MTA by-laws preclude voting by teleconference.
2017 ANNUAL REPORT—SECTION 5
Material Pending Litigation Report

Litigation

General

The MTA and its affiliates and subsidiaries maintain extensive property, liability, station
liability, force account, construction, and other insurance, which is described in to the Annual
Disclosure Statement for the MTA’s Combined Continuing Disclosure Filings. Monetary claims
described below may be covered in whole or in part by insurance, subject to the individual
retentions associated with such insurance.

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.

MTA

Lockheed Martin Transportation Security Solutions v. MTA Capital Construction and MTA. The
MTA is a defendant, along with MTACC, 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 MTACC 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 MTACC 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 the MTA’s motion, the Court dismissed Lockheed’s claim under a quantum meruit theory, thereby reducing the 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 MTACC 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.
Infrassure Ltd. v. First Mutual Transportation Assurance Company: MTA and its affiliates and subsidiaries suffered billions of dollars of property damage as a result of Superstorm Sandy. MTA submitted a claim to its captive property insurer, First Mutual Transportation Assurance Company (FMTAC), which in turn submitted a claim to its reinsurers. MTA and FMTAC have settled with each other as of August 2017, following a prior settlement in which FMTAC settled with every reinsurer except one. The basis of these claims has been an allowed claim (i.e., recognized loss of MTA) in the amount of $720 million in excess of the self-insured retention. FMTAC, accordingly has paid MTA 100% of the limits of all of the reinsurance it had placed with respect to the first $720 million of coverage under MTA’s property policy (totaling approximately $694 million, because portions of the property policy were not reinsured), and FMTAC has collected all such amounts with the sole exception of the share of Infrassure Ltd., a Swiss reinsurer that reinsured $20 million of the $720 million allowed claim. While Infrassure has advised MTA and FMTAC that it continues to pay claims to some policyholders, it ceased issuing insurance in 2014 and has stated that it is in runoff and is subject to the supervision of the Swiss financial regulatory authority. Infrassure has refused to pay any of the $20 million it owes FMTAC. Both MTA and FMTAC dispute all of the purported reasons that Infrassure has given for its non-payment. In 2016, following the conclusion of federal litigation that commenced in 2015 over which of two possible venues for arbitration was applicable to this reinsurance dispute, FMTAC instituted New York-seated arbitration against Infrassure to recover the unpaid $20 million. This matter settled in principle on January 9, 2018, however the agreement has not yet been executed and payment will not be made until after the date of this letter. The arbitration has not yet been stayed or terminated.

Actions for Personal Injuries/Property Damage/Workers’ Compensation. As of December 31, 2017, there were approximately 37 actions and tort claims pending against the MTA. These include claims for damages for personal injuries sustained while on duty, including actions under the Federal Employers’ Liability Act (“FELA”), no-fault cases, and other torts. Also as of that date, there were approximately 200 pending Workers’ Compensation cases.

Transit System

Actions for Personal Injuries/Property Damage. As of December 31, 2017, MTA New York City Transit and MaBSTOA had an active inventory of 9,060 personal injury claims and lawsuits and 2,262 property damage matters arising out of the operation and administration of the Transit
In addition, with respect to the Access-A-Ride (Paratransit) program, as of December 31, 2017, there was an active inventory of approximately 1048 personal injury cases and approximately 229 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 2017 had policy limits of $3 million per occurrence, subject to a $1 million deductible.

As of December 31, 2017, MTA Staten Island Railway had a pending inventory of 21 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, 2017, MTA New York City Transit and MaBSTOA had an active inventory of approximately 11,816 Workers’ Compensation cases and approximately 1,551 no-fault cases. As of December 31, 2017, there were 15 Workers’ Compensation cases for MTA Staten Island Railway employees who had been classified as permanently disabled, entitling the claimants to continuing monthly benefits and payment of future related medical expenses, as well as two death cases.

**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, if recovered in full, could result in an 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 monies pledged for capital purposes. We note that, in late April, 2017, two purported class actions relating to subway system accessibility were filed against NYCTA and the MTA by a number of individuals and advocacy organizations on behalf of persons with disabilities that prevent them from using the stairs in the subway system. The plaintiffs in both cases seek declaratory and injunctive relief, not money damages. The City of New York was also named as a defendant in both cases but was voluntarily dismissed, with a tolling agreement, from the federal class action. In the federal lawsuit brought in the United States District Court, 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. Said 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 for remedy of which injunctive relief is sought. The case is in its early stages, with fact and expert discovery scheduled to be completed on October 2, 2018. In a case brought by the same plaintiffs in state court (Supreme Court, New York County), it is asserted that defendants, by not having installed elevators in all subway stations in the system, have discriminated against them on the basis of their disabilities in violation of the New York City Human Rights Law. Plaintiffs seek injunctive relief that would require implementation of a program to make all subway stations accessible to people who cannot use the stairs due to a disability. Defendants have moved to dismiss the state court case on the grounds that plaintiffs’ claims are preempted by New York Public Authorities Law §1266(8) and Transportation Law § 15-B, non-justiciable and time-barred. That motion awaits oral argument. Both cases are in their early stages and the likely outcomes cannot reasonably be predicted at this time. In addition, as previously reported, a lawsuit was commenced in 2016 relating to a specific capital project, captioned Bronx Independent Living Services, et al. v. MTA, et al., challenging the lack of elevator accessibility at Middletown Road Station. MTA and NYCT are sued by two disabled rights advocacy organizations and two named individual plaintiffs in federal court (United States District Court, Southern District of New York), in a matter alleging violation of the Americans with Disabilities Act (ADA) and other legislation, for proceeding with certain construction work at the station without including, in the scope of such work, the installation of an elevator or ramp. The complaint seeks declaratory and injunctive relief; no claim for monetary relief is asserted. MTA and NYCT answered the complaint in September, 2016, and deny any asserted violation of applicable law. Discovery is proceeding. The outcome of the litigation cannot be predicted at this time. It should be noted that 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 NYCT capital plan, which, as noted above, contemplates the utilization of project and program contingency funds, as well as other available monies pledged exclusively for capital purposes under bond resolutions, as the means of addressing such claims and related expenses.

Other Litigation. As of December 31, 2017 the General Law and Contracts Division had an inventory of approximately 552 cases, consisting of federal and state court plenary litigation actions and special proceedings as well as administrative matters pending before various state, federal and local administrative agencies.
Commuter System

Actions for Personal Injuries/Property Damage. As of December 31, 2017, MTA Metro-North Railroad had an active inventory of approximately 487 personal injury claims and lawsuits arising out of the operation and administration of the MTA Metro-North Railroad, of which 254 were the result of claims filed by employees pursuant to the FELA, and approximately 233 were claims filed by third parties. Also, as of that date, there were 4 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.

An incident occurring on February 3, 2015, when a Metro-North Harlem Line train struck an automobile in a highway-rail grade crossing between the Valhalla and Hawthorne stations, is also resulting 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 is conducting an investigation into the contributing causes of the accident and has issued a Preliminary Report. While there is no indication from the NTSB’s preliminary report that Metro-North was at fault in connection with this incident, 37 lawsuits have been filed to date against Metro-North Railroad, many of which name other defendants as well. Notwithstanding Metro-North Railroad’s position that it has no responsibility for this incident, if plaintiffs are successful in their claims against the Railroad, damages could exceed the self-insured retention and impact FMTAC and excess layers of insurance.

As of December 31, 2017, LIRR had an active inventory of approximately 1,913 personal injury claims and lawsuits arising out of the operation and administration of the LIRR, of which 1,296 were the result of claims filed by employees pursuant to FELA, and approximately 617 were claims filed by third parties. Also, there were approximately 61 pending property damage matters.
On October 8, 2016, the LIRR was conducting track work east of the New Hyde Park Station on the Main Line. A piece of track equipment (stabilizer) was heading east on track #2, which was out of service for the track work. When this equipment entered 12 switch, the switch was misaligned causing this piece of track equipment to head toward track #1, which was live track. The operator of the track equipment attempted to stop his track car prior to reaching track #1, with negative results. The track equipment derailed fouling track #1. Train #7734 had just left the New Hyde Park Station heading east toward its next stop, when the Engineer observed the track equipment fouling track #1, which was the track he was operating on. The train struck the track equipment causing 3 cars of the passenger train to derail. Numerous passengers and employees were injured due to this accident. The Federal Railroad Administration (FRA) along with the MTA/LIRR conducted investigations into this matter. There were a total of 72 claims to date related to this accident: 57 were passenger injuries, 8 were employees injuries and the remaining are property damage claims. At this time only 1 lawsuit has been filed against the MTA/LIRR.

The majority of the claims appear to be soft-tissue, with a few fractures and PTSD claims. The most seriously injured claimant allegedly sustained two fractured legs, requiring five surgeries to date. That claim is reserved at $8 million. The total outstanding reserves are approximately $20 million.

The LIRR received damages to three train cars, the track area and track equipment involved. To date, the damage costs are approximately $7 million. That figure includes the damage costs to the equipment and stabilizer, which will most likely be decommissioned.

The FRA has concluded an investigation and a report has been issued under FRA File #R1-2016-1164.

All of these cases will impact FMTAC since the work being performed at the time of this accident was project related.

Martens v. LIRR; Town of Brookhaven v. MTA, et al. LIRR previously reported that in October 1992, LIRR employees discovered a suspected contamination site in Yaphank while attempting to install a switch for freight operations. In 2002, LIRR and the New York State Department of Environmental Conservation (“NYSDEC”) entered into a Voluntary Compliance Agreement (VCA) with respect to the site, and in 2014 NYSDEC approved a Remedial Action Work Plan under which LIRR would progress a Capital Project to remediate the site by creation of a cap and
other measures, at a cost estimated at $8.8 million. In July 2014, MTA received from the Town of Brookhaven (within which the site is located) a Ninety-Day Notice of Intent to commence an action against LIRR under the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §6972(a)(1)(B), to compel a full remediation and removal of contaminated soils and hazardous materials at the Yaphank site. This has resulted in two actions being filed on or about March 11, 2015; one by NYSDEC against LIRR, filed in Supreme Court, Queens County, and a second hybrid action and proceeding under Article 78 of the CPLR brought by the Town of Brookhaven against MTA, LIRR, and NYSDEC, in Supreme Court, Suffolk County. In August 2015, the Supreme Court, Queens County decided motions to consolidate the two lawsuits and ordered their consolidation for purposes of trial in Suffolk County. Argument on the Article 78 portion of the Suffolk County action occurred on October 22, 2015 and February 10, 2016. On May 18, 2016, a partial judgment was entered by the Clerk of Suffolk County. The partial judgment included a statement on the plaintiff’s proffered proposed judgment allowing NYSDEC to enter into a Brownfield Cleanup Agreement with LIRR.

In compliance with the partial order, NYSDEC placed Yaphank Yard on its “Registry of Hazardous Waste Sites” pursuant to ECL Section 27-1305(1) and as a Class 3 site (a site that does not present a significant threat to public health or the environment) and LIRR submitted its application into the Brownfield Cleanup Program (“BCP”) on November 22, 2016. On November 29th, the Town of Brookhaven filed an Article 78 Petition against LIRR and NYSDEC, requesting the court to overturn NYSDEC’s classification on the State’s Registry of Inactive Waste Sites, assign a Classification of 1 or 2, and require a complete remediation and removal of all contaminated soils as demanded in the Town’s original Article 78 petition. It is anticipated that because LIRR submitted a BCP application, the court may find that DEC and LIRR are in compliance with the court’s prior order. On February 13, 2017, LIRR and the NYSDEC submitted their Answers and Memoranda of Law and on March 3, 2017, the Town Of Brookhaven submitted its reply. On October 23, 2017, the Town of Brookhaven filed an Order to Show Cause seeking to amend its Article 78 Petition, and seeking a preliminary injunction and Temporary Restraining Order to enjoin and restrain NYSDEC from granting the Brownfield application and from approving a remediation plan. On December 14, 2017, Supreme Court Judge Luft denied the TRO application and set a briefing schedule on the motion for a preliminary injunction and motion to amend the petition. NYSDEC’s and LIRR’s opposition papers are due January 16, 2018. The Town of Brookhaven’s reply papers are due January 23,
2018. If the action is not withdrawn, LIRR intends to vigorously defend the case and the outcome cannot be determined at this time.

*Actions Relating to the Commuter Capital Program.* From time to time, LIRR 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.

**MTA Bridges and Tunnels**

*Actions for Personal Injuries/Property Damage.* As of December 31, 2017, MTA Bridges and Tunnels had an active inventory of approximately 119 personal injury claims and lawsuits (including intentional torts such as false arrest) and approximately 15 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, 2017, MTA Bridges and Tunnels had an active inventory of approximately 503 Workers’ Compensation cases and no 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.

**MTA Bus**

As of December 31, 2017, MTA Bus had an active inventory of approximately 826 personal injury claims and lawsuits, approximately 863 property damage matters, approximately 431 no-fault cases arising out of the operation and administration of the MTA Bus System, and approximately 701 Workers’ Compensation cases.
Metropolitan Suburban Bus Company *

Matter of Adams v. MTA et al. This pending Article 75 petition by almost 200 former Metropolitan Suburban Bus Company (“MTA LI Bus”) employees who were members of TWU Local 252 seeks to compel arbitration pursuant to various "13(c) agreements" attached to grants that were used for MTA LI Bus. (See 49 U.S.C. 5333(b) ("Employee protective arrangements"), which provides that such agreements shall be entered into as a condition of certain federal financial assistance and shall provide, inter alia, "the protection of individual employees against a worsening of their positions related to employment.") The petition names MTA, MTA LI Bus, Nassau County and Veolia Transportation, which is now running bus service for Nassau County, as respondents and claims that the petitioners were either dismissed on the termination of the Lease and Operating Agreement between MTA LI Bus and Nassau County (the “LOA”) or hired by Veolia at lower pay and therefore are entitled to arbitrate their claims and to 13(c) displacement benefits, which extend for six years from the time of displacement. MTA and MTA LI Bus answered the petition, asserting various defenses. By decision filed October 27, 2014, the court granted petitioners’ motion to compel final and binding arbitration before the American Arbitration Association. Respondents MTA and MTA LI Bus have appealed. The appeal is pending. We cannot determine the final outcome of the matter at this time.

Actions for Personal Injuries/Property Damage. As of December 31, 2017, MTA LI Bus had an active inventory of 17 personal injury claims and lawsuits, and 1 property damage matter arising out of the operation and administration of MTA LI Bus.

Workers’ Compensation and No-Fault. As of December 31, 2017, MTA LI Bus had approximately 33 Workers’ Compensation cases and 4 open no-fault claims.

* 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.