



Metropolitan Transportation Authority

Capital Program Oversight Committee Meeting

October 2020

Committee Members

P. Foye, Chair
N. Zuckerman, Vice Chair
A. Albert
J. Barbas
N. Brown
M. Fleischer
R. Glucksman
R. Herman
D. Jones
K. Law
R. Linn
D. Mack
J. Samuelsen
V. Tessitore

Capital Program Oversight Committee Meeting

2 Broadway, 20th Floor Board Room

New York, NY 10004

Wednesday, 10/28/2020

10:00 AM - 5:00 PM ET

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES SEPTEMBER 23, 2020

- Minutes from September '20 - Page 3

3. COMMITTEE WORK PLAN

- 2020 - 2021 CPOC Committee Work Plan - Page 4

4. C&D INFRASTRUCTURE PROJECTS UPDATE

- C&D Report on Infrastructure Division - Page 6

- IEC Review on Infrastructure Shops and Yards - Page 13

5. LIRR AND MNR UPDATE ON POSITIVE TRAIN CONTROL (PTC)

- Update on PTC - Page 26

- IEC Project Review on PTC - Page 42

6. CAPITAL PROGRAM STATUS

- Commitments, Completions, and Funding Report - Page 48

MINUTES OF MEETING
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE
September 23, 2020
New York, New York
10:00 A.M.

Because of the ongoing COVID-19 public health crisis, the MTA Chairman convened a one-day, virtual Board and Committee meeting session on September 23, 2020, which included the following committees:

- Long Island Rail Road and Metro-North Railroad;
- New York City Transit;
- MTA Bridges and Tunnels;
- Finance;
- Diversity;
- Capital Program Oversight Committee.

To see a summary of the CPOC Committee meeting, please refer to the September 23, 2020 Board minutes in the October Board Book available here on the Board materials website:
<https://new.mta.info/transparency/board-and-committee-meetings/october-2020>



2020 - 2021 CPOC Committee Work Plan

I. Recurring Agenda Items

Approval of the Minutes
Committee Work Plan
Commitments/Completions and Funding Report

II. Specific Agenda Items

November

C&D Capital Program Update

- Signals and Train Control

Update on OMNY Program
Update on Minority, Women and Disadvantaged Business Participation
Update on Small Business Development Program

December

C&D Capital Program Update

- Integrated Projects

LIRR and MNR Update on Positive Train Control (PTC)
Quarterly Traffic Light Reports

January

Rolling Stock Procurement Update

February

C&D Capital Program Update

- B&T

March

C&D Capital Program Update
Quarterly Traffic Light Reports

April

C&D Capital Program Update
Update on Capital Program Security Projects (in Executive Session)

May

C&D Capital Program Update

June

Update on OMNY Program

Update on Minority, Women and Disadvantaged Business Participation

Quarterly Traffic Light Reports

July

C&D Capital Program Update

September

C&D Capital Program Update

Quarterly Traffic Light Reports

October

C&D Capital Program Update

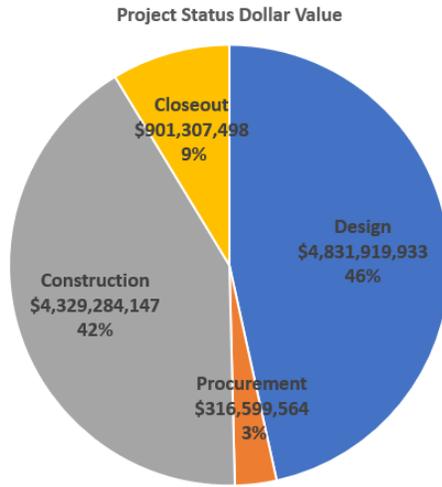
Update on Capital Program Security Projects (in Executive Session)

MTA Construction & Development
 Board Update: Infrastructure Division
 October 28, 2020

A. Project Summary

Across all project stages, Infrastructure has a total of 275 projects which are being advanced with a total value of \$10,379,111,142.

Agency	Design		Procurement		Construction		Closeout	
	Projects	\$ Value	Projects	\$ Value	Projects	\$ Value	Projects	\$ Value
Infrastructure	102	\$4,831,919,933	17	\$316,599,564	113	\$4,329,284,147	43	\$901,307,498



B. Key Project Updates and Notable Accomplishments

Clifton Shop C-82004

This Design/Build long-term flood mitigation project will develop an effective program to protect Staten Island's Clifton Shop and Yard infrastructure and equipment from flooding that may result from a potential Nor'easter storm. The plan is to fortify these assets against heavy rainfall and/or storm surges from up to a Category 2 hurricane coupled with high tides.

Completed:

- Installed track drainage and constructed underground utilities section inside the shop area.
- Steel superstructure, metal deck, track drainage, architectural concrete floodwall, storm retention tanks and hydrant system at West Yard.
- Installation of all roof top HVAC - Heating, Ventilation and Air Conditioning System equipment, emergency generator, hazardous material storage building, turntables, rollup doors, 30 ton crane, rail post installation for tracks 3 and 4, catwalks, stairways, exterior and interior masonry for all rooms, degreaser room equipment, north yard Direct Current duct work, Direct Current reactor, fireproofing, HVAC duct work.

Major activities in progress:

- Installation of elevators and elevator machine rooms, exterior metal panels, louvers, utility connections, cables in Electric Distribution Room, fire protection systems, fire alarm, interior room finishes, electrical, plumbing and communication systems.

Project Status

Construction 67% complete. Substantial Completion 9/2021 to be revised. Schedule issues include delays due to contaminated soil remediation, Con Ed issues, COVID 19 delays for material and fabrication, and contractor production delays.

Original Contract Completion: 7/2020 – revised to 12/20*

Forecast Completion 9/2021 is expected to slip to December 2021.

Budget has not changed since last report.

*Three excusable and non-impactable Extension of Time were granted for a total of 100 work days

All issues including Con Ed have been resolved and schedule analysis underway.



**Coney Island
Yard Flood
Mitigation
C-34836**

This project fortifies New York City Transit’s Coney Island Yard Complex against future superstorm water surge events. The Complex is made up of three yards (Culver, Coney Island and Stillwell) as well as 26 buildings including the Overhaul and Maintenance Shop, two Substations and more. The project consists of traction power, perimeter protection, drainage and communication work.

Project highlights follow:

- The below ground traction power cable system, which is vulnerable to flooding, is being replaced with a cable bridge structure that runs above the trains across approximately 110 tracks, with cable feeds down to each track. The resiliency aspect is if the area ever floods again, only the drop-down cables would need replacement. Completed 47 out of 87 spans.
- The complex will be shielded with two and a half miles of flood wall with nine flood gates. The flood wall height is designed to protect against a SLOSH 2 plus 3 feet flood event. It extends 30 feet into the ground to mitigate underground water seepage as we experienced with Superstorm Sandy. Completed 4,000 out of 12,000 Linear Feet of the wall.
- A new yard drainage system made up of 20,000 Linear Feet of pipe and hundreds of drainage structures is being installed within the three yards.
- Two pumping pits with deployable pumps and an additional east outfall to the creek are being constructed.
- Ancillary work: Emergency Alarm boxes, communications, signals and track work.

Project Status

Construction 40% complete. Substantial Completion 9/2022.

Original Project Completion: 9/2022 - Forecast Completion: 12/2022

Original Budget: \$514.3 M - Current Budget: \$514.3 M

Minor schedule impacts due to unforeseen conditions (underground Utilities) schedule review underway for potential mitigation.



**NYCT 207 St.
Yard
Rehabilitation**

**Perimeter
Wall, Portal,
Signals, Tracks,
and Power
Work 8th Ave
Line, IND
Division
C-34838**

This project repairs damage caused by Hurricane Sandy and to prevent a future “Sandy” type flooding event to withstand a Category 2 hurricane plus 3 feet (except Ninth Avenue wall which is 500 year + 2 feet). It includes perimeter wall and marine wall construction, installation of portal protection, replacement of power cables, signals, track, switches, and construction of two new Relay Buildings.

Milestones achieved:

- Harlem River Marine Wall: 100% completed with total of 279 pipe piles installed for a total length of 1,535 ft.
- 215th Street yard perimeter protection wall completed.
- Flood gates foundation work: 42% complete.
- Relay Building B: Structural steel erection and underground utility piping completed.
- Relay Building A: Structural steel erection 90% complete.
- Track/Power: Removal and replacement of tracks and 3rd Rail power on Tracks 1-13 completed. Replacement of Tracks 18-22 in progress.
- Concrete Masonry Unit wall installation started.

Project Status

Construction 43% complete. Substantial Completion 11/2023.

Original Project Completion: 11/2023 - Forecast Completion: 11/2023

Original Budget: \$635.4M - Forecast Budget: \$635.4M



Building B: CMU Wall installation

Sandy Mitigation

NYCT 207 St. Yard – Sewer Project

C-34869

This project will provide flood mitigation by relocating Department of Environmental Protection owned interceptor sewers and associated regulators from inside the 207th Street Yard to 215th Street and 10th Avenue. The overflow water from upstream thru manholes during Hurricane Sandy caused damages to the yard. The management of this project was combined with 207 Street Yard to achieve contract efficiencies.

This project will relocate the sewer interceptor to outside the yard facility, as well as prevent a future “Sandy” type flooding event by sealing the existing manhole covers and installing check valves to the sanitary facilities. Plan is to prevent a future “Sandy” type flooding event by modifying the existing manholes and sanitary facilities.

Milestones achieved:

- Gas service relocation: 50% complete.
- Water main relocation: 80% complete.
- Relocation of telephone company and electrical service: 7% complete.
- Completed installation of steel sleeves and connections for the new pumping station.
- Modification of three manholes inside the Yard.

Project Status

Construction 11% complete. Substantial Completion 2/2024.

Original Project Completion: 4/2024 - Forecast Completion 4/2024

Original Budget: \$152.4M – Current Budget \$152.4M

Minor schedule impacts due to COVID regulatory requirements outdoor dining locations conflicting with and construction activity locations were mitigated during construction by having contracting efficiencies combining activities with the 207 Street Yard project.



215th Street: Pile driving operation

**Bus Radio
Upgrade for
NYCT
W-32366**

Contract is to replace New York City Transit and MTA Bus with a new digital bus radio system for all buses in the NYCT and MTA Bus fleet. Project includes:

- Constructing 35 new radio base station sites throughout the five boroughs on properties owned or leased by the MTA.
- Retrofitting all buses and non-revenue vehicles with new radio equipment.
- Furnishing a new radio control and dispatch system in the new Bus Command Center.

Contract status:

- Staten Island: Commissioned six base stations. Completed the first phase of the radio installation on 273 buses.
- Bronx: Five sites are expected to be completed by 12/31/2020.
- Manhattan, Brooklyn and Queens: Sites to be completed first quarter 2021.

Substantial Completion has slipped six months to June 2021, with the risk of further slippage due to:

- Contractor Parsons poor performance installing equipment on the buses.
 - In September 2020, Parsons changed course to bring the bus installation in-house and self-perform the work.
 - Parsons has not yet demonstrated the ability to hire and train installers to meet the schedule.
 - Parsons is also struggling to develop the installation manual and parts kit needed for the bus installations to proceed for all bus types in the fleet.
- COVID-19 delayed the replacement of the deteriorated radio tower at the East New York Yard.
 - The tower and associated radio base station shelter are now installed.
- Contractor Parsons has submitted an extension of time and compensation request to June 2021. Proposal currently under review.

Project Status

Construction 58% complete. Substantial Completion 6/2021.

Original Project Completion: 1/2021 - Forecast Completion 6/2021

Original Budget: \$249.7M – Current Budget \$272.7M*

* \$272.1M includes \$11.5M for new CCM and \$4.9M for new tower at ENY

Mitigation Efforts

Schedule monitored weekly with Parson Transportation Group Executives, expediting reviews and approvals where possible. the project team does not have a high level of confidence in meeting the June completion date.



New Radio Tower at East New York Yard

October 2020 CPOC Independent Engineering Consultant Project Review Summary

A summary of monitored Infrastructure projects reflecting the key points in the following reports:

- NYCT/SIR Clifton Shop
- Harmon Shop Replacement Phase V Stage 2
- 207th Street Yard
- Coney Island Yard Long Term Flood Mitigation
- Morris Park Locomotive Shop
- Mid-Suffolk Yard



McKISSACK

MTA Independent Engineering Consultant

NYCT/SIR Clifton Shop

Project Scope:

This project replaces the existing SIR shop that was flooded during superstorm Sandy with a new facility that meets SIR's current and future demand for maintaining rail cars and consolidates SIR office space on its upper levels.

Budget Review:

- ❑ The current budget of \$211.7M has not changed since award.
- ❑ IEC analysis of project costs, contingencies, work in place, pending changes and outstanding risks indicates the project is currently within budget. Projections indicate additional schedule delays will not be supported by the current budget.
- ❑ Expenditures for soft costs are in line with construction expenditures.
- ❑ Budget has benefitted from several large credit changes that were the result of Agency scope reductions.



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NYCT/SIR Clifton Shop

Schedule Review:

Since the April 2020 IEC review, the project has slipped an additional 5 months and now projects Beneficial Use of the shop in May 2021 and Substantial Completion in December 2021.

- The current delay is attributed to COVID-19 workplace restrictions and delays in obtaining permanent power.
- On going disagreement between the agency and the contractor on their schedule submissions continue.
- The IEC projects Beneficial Use of the shop in July 2021 and Substantial Completion in January 2022. This projection includes the ongoing impacts of COVID-19 restrictions, modification of the facility power substation and remaining risks.
- Delays early in the project resulted in the stacking of activities later in the project. This risk may result in delay due to a loss of efficiency, and increased manpower that may exceed COVID-19 limits for the work site.



MNR – Harmon Shop Replacement Phase V Stage 2

Project Scope:

This project is the final stage of a multi-phase program of capital improvements at MNR's Harmon Shops and Yards. The current phase entails the design and construction of a new running repair and support shop (RRSS) and blowshed.

Budget Review:

- The current program budget of \$439.6M has not changed since award.
- IEC analysis of project costs, work in place, contingency draw-down, pending changes and outstanding risks indicates the project EAC is within budget.
- Expenditures for soft costs are ahead of design-build contractor expenditures. This represents early shop relocations completed by other third-party contracts.



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MNR – Harmon Shop Replacement Phase V Stage 2 (Cont'd)

Schedule Review:

- A six-month time extension settlement has been executed for Stage 1 schedule impacts to the Stage 2 contract. The original contract completion date of October 2022 has been extended to April 2023.
- In the IEC's opinion, work progress to date supports current schedule projections.

Top Risks:

- Timeliness of Design Builder Submittal Reviews for shop drawings and commissioning.
- Coordination of critical force account (F/A) work with third party work.
 - COVID priorities are impacting F/A availability for MNR capital construction needs. Critical F/A work on Stage 2 includes track and traction power.



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207th Street Yard

Project Scope:

The work to be performed under this Contract consists of flood protection for the 207th Street Yard by the construction of a Sea Wall, a Flood Wall along 215th Street, wall repairs on 9th and 10th Aves. and Portals. The flood protection also includes the upgrades to the track, electrical and signal systems as well as the construction of two new signal buildings and the relocation of yard crew quarters.

Budget:

- Based on the IEC's review of the project's budget, contingency, work in place, soft costs, pending changes and risks, the IEC concurs with the agency's Estimate at Completion of \$635.4M which equals the project budget.

Schedule:

- The project has advanced a new G.O. phasing plan and change order approvals. The contractor schedule has been re-baselined to reflect the revised approach and changes.
- The IEC performed an analysis of the contractor's re-baselined schedule, which, in addition to the G.O. phasing plan and change orders, reflects progress through September 2020. The IEC believes that this revised approach will allow the project to meet the substantial completion date of November 2023, provided that the signal equipment delivery, installation and testing remain on track to complete on time.



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207th Street Yard (Cont'd)

Risk:

- Due to extensive scope changes and IEC recommendation, the agency refreshed the original risk assessment. The latest assessment considers risks such as: Siemens request to prioritize work, coordination issues with other on-going projects; new site work plan; and a revised track and signal work and G.O. phasing plan.

Mitigation:

- In order to maintain substantial completion in November 2023, the project has agreed to Siemens' proposal to resequencing the work and G.O. phasing plan. The IEC views this mitigation favorably.

Observation:

- Recent management changes has proven an effective measure in resolving project issues.



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Coney Island Yard Long Term Flood Mitigation

Project Scope:

The main purpose of the project is to mitigate flooding experienced in past storms. The Contractor is building a flood wall with flood gates to enclose the yard to defend against storm surges and improve the yard drainage. In addition, a cable bridge is being constructed to create a raised platform for the Traction Power System and the Communication System.

Budget:

- Based on the IEC's review of the project budget, contingency, work in place, soft costs and risks, the IEC concurs with the agency's Estimate at Completion of \$514.3M, which equals the project budget.

Schedule:

- IEC analysis of the August 2020 contractor's schedule indicates the project completion date is December 2022, a three-month delay since April 2020 IEC review. The contractor encountered underground obstructions which is delaying the Cable Bridge installation. The agency believes recovery of this delay is possible and is negotiating with the contractor.
- The contractor's schedule delineates the required cable bridge activities so that the fabricator can continuously progress the work in the event of encountering unforeseen field conditions.
- The IEC agrees with the agency that these mitigation measures should result in the project meeting the Substantial Completion date of September 2022 providing testing activities remain on time.



MTA Independent Engineering Consultant

Coney Island Yard Long Term Flood Mitigation (Cont'd)

Top risk and mitigations:

- Risk - Contractor may encounter unknown underground utilities and obstructions.
 - Mitigation - Contractor has performed underground utility surveys, used ground penetrating radar, increased the number of test pits and excavated the first five feet by hand.
- Risk - Tight clearances create constructability challenges for the Cable Bridge which may increase cost & apply schedule pressure.
 - Mitigation - Contractor has spent several months verifying clearances and planning for the cable bridge installation by coordinating with the yardmaster and operations planning.
- Risk - Planned track outages may not occur when needed or take longer than anticipated.
 - Mitigation - CM/CCM and the contractor have worked with operations and produced a revised outage schedule. Weekly communications take place to coordinate the outages.



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Morris Park Locomotive Shop

Project Scope:

The scope of the Morris Park Locomotive Shop project is to construct a new, modern 21st Century locomotive maintenance facility for the railroad's fleet of diesel and dual-mode diesel-electric locomotives, as well as work train diesel locomotives. The new building will maximize yard functionality and worker productivity.

Budget:

- Based on the IEC's review of the project's budget, contingency, work in place, soft costs and risks, the IEC believes the project budget will be overrun by approximately \$1M due to cost overruns in force account and third-party contingency.

Schedule:

- Design delays, agency approvals, testing and commissioning of fire pump and alarm system as well as power are adversely affecting the substantial completion, which is currently October 2020, a five month slip since April 2020 IEC review.
- The IEC is concerned that this date may slip due to the following risks:
 - Completion of the testing and commissioning for the fire alarm and pump systems.
 - Con Edison permanent power supply for the new shop.
 - Operations will function out of the existing facility and take beneficial use after fourth quarter 2020.



MTA Independent Engineering Consultant

Morris Park Locomotive Shop (Cont'd)

Observation:

- The IEC finds the installation and final commissioning of the fire alarm and pump systems is critical and scheduled for completion in early October 2020 however, it is unlikely the testing and commissioning will be complete by the end of this month.

Recommendation:

- The IEC suggests using lessons learned from Mid-Suffolk Yard fire alarm system testing and commissioning on this project.



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Mid-Suffolk Yard

Project Scope:

Construction of a new electric train storage yard and new employee facility, south and adjacent to the existing train storage. The base scope for the new yard includes eleven new tracks as well as a lead track with interlocked signals, switches & crossover. This will increase commuter railcar storage and provide efficiencies in workforce operations.

Budget:

- Based on the IEC's review of the project's budget, contingency, field work, soft costs, pending changes and risks, the IEC notes that the contingency is likely to be consumed.
- A risk existed that the PSE&G work would exceed budget however based on current billings and work completed, the IEC agrees the project EAC of \$136M will remain intact.

Schedule:

- The project team is performing a time impact analysis of the contractor's CPM schedule that shows a 7-month delay to the original Substantial Completion of February 2020.
- The required 60-day burn in period for the DC substation has not commenced. In the IEC's opinion, this will result in a further delay from October to November 2020.

Risk:

- The top project risk is the commissioning of the DC traction power system.
- Finalization of a work-around agreement is in progress.



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Mid-Suffolk Yard (Cont'd)

Observation:

- The IEC agrees with the project in finding the completion and final commissioning of the DC substation system is critical to maintaining schedule and is essential to providing a functional yard.
- The project team has developed a successful risk mitigation plan including connecting a portion of the old yard to the new substation allowing the burn-in period to commence.

Recommendation:

- The agency should require the contractor to perform the full 60-day substation burn as stated in the contract.



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MTA Independent Engineering Consultant

Joint MNR/LIRR Committee & CPOC Monthly PTC Project Update



LIRR/MNR Overall PTC Project Status

Schedule

Both LIRR and MNR remain on target to implement PTC across their respective territories by December 31, 2020.

MNR has 100% of their 244.3 route miles in Extended Revenue Service Demonstration (ERSD).

LIRR has 96% of their 305 route miles in ERSD.

Budget

\$1.159B Current Budget



LIRR PTC ERSD Timeline and Look-ahead

September 2020

- ✓ HMAC (over-the-air security) deployment completed
- ✓ Removal of Office split completed

October 2020

- Jamaica – Mile Post 8-11 (Metropolitan interlocking to West of Hillside)
- Delivery of System Software Baseline 3.9 (Previously September as reported in May CPOC)

November 2020

- Harold – Mile Post 0 to 5 (previously September as reported in May CPOC)
- Conditional approval of Safety Plan
- Interoperability with Amtrak with FRA-approved mitigation for compliance.

After PTC Deadline

- Two-year RAMS (Reliability, Availability, Maintainability, Safety) period in 2021-2022
- Full interoperability with Amtrak (with Amtrak's updated on-board software)
- Updates to system software to make operational improvements and correct variances



LIRR Project Update

ERSD

- Achieved ERSD on 96% of LIRR's 305 route miles with the exception of Jamaica and Harold.

Field Installation & Testing

- Jamaica (MP 8-11) – functional field testing in progress; ERSD on schedule for October.
- Harold (MP 0-5) - transponder and WIU designs updated and being installed and tested in the field; functional field testing to start in mid-October; ERSD on schedule for November.
- Completed HMAC (over-the-air security) deployment on LIRR Territory in September.
 - Agreement with Amtrak and NJT to exchange HMAC keys in mid-October for interoperability.
- Completed the Office split (which was implemented to conduct ERSD and testing activities in parallel) in September.

Software Testing (3.9 Release)

- Integrated System Factory Acceptance Testing (FAT) extended to correct on-board and office variances.
- 4 • Safety review/approvals in late October for field deployment to support Jamaica ERSD.



LIRR Project Update (continued)

Safety Plan

- FRA provided all comments to LIRR Safety Plan at the end of September.
- Weekly meetings with FRA to address all comments and update Safety Plan in real-time.
- Conditional approval of Safety Plan anticipated in November.

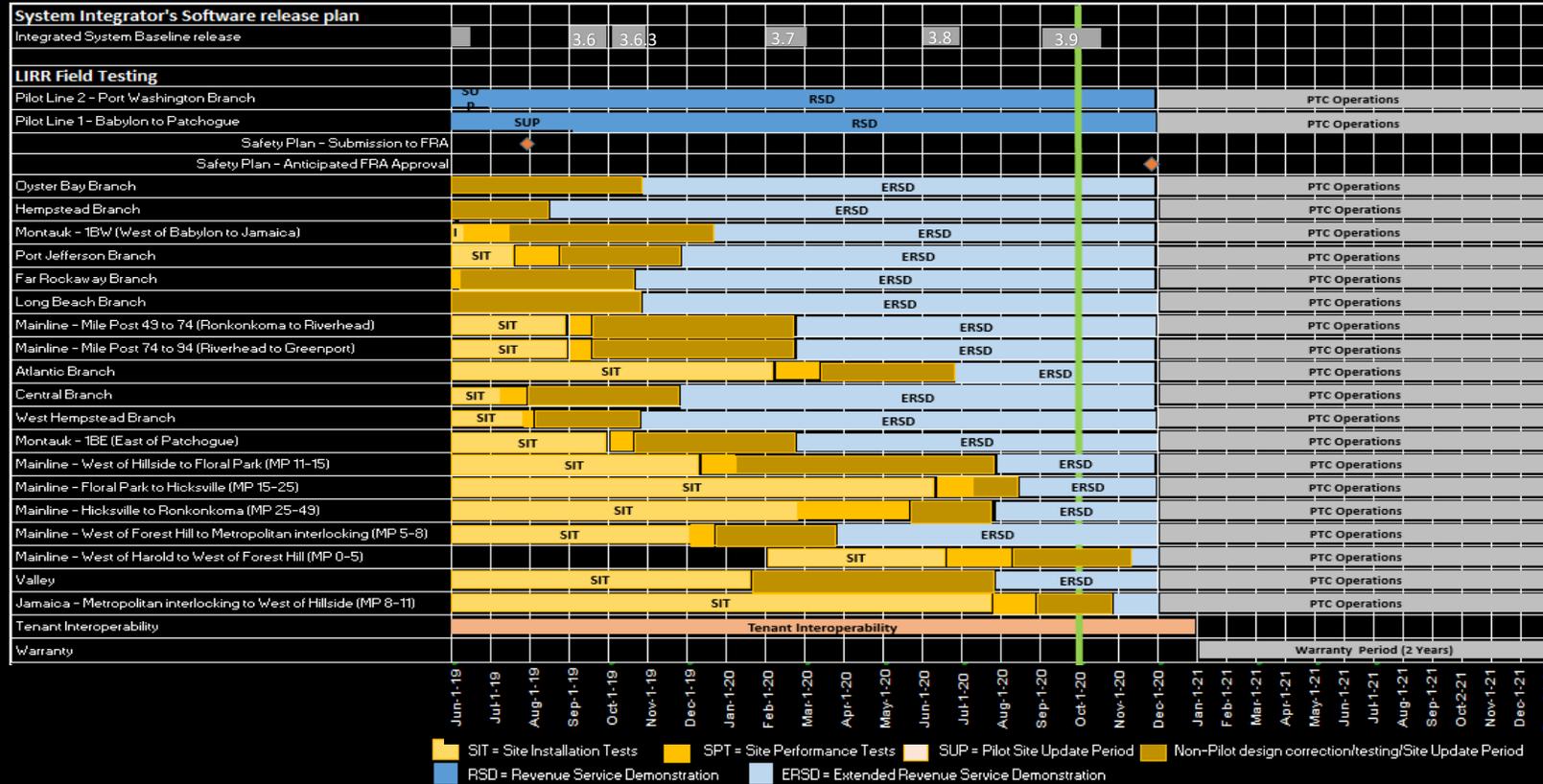
LIRR interoperability with Amtrak

- Wayside modifications implemented in the field to support Amtrak's back-to-back (b2b) mitigation for deadline compliance.
- LIRR trains are approved to operate on Amtrak territory; M9 fleet will be qualified on Amtrak as part of Harold ERSD.

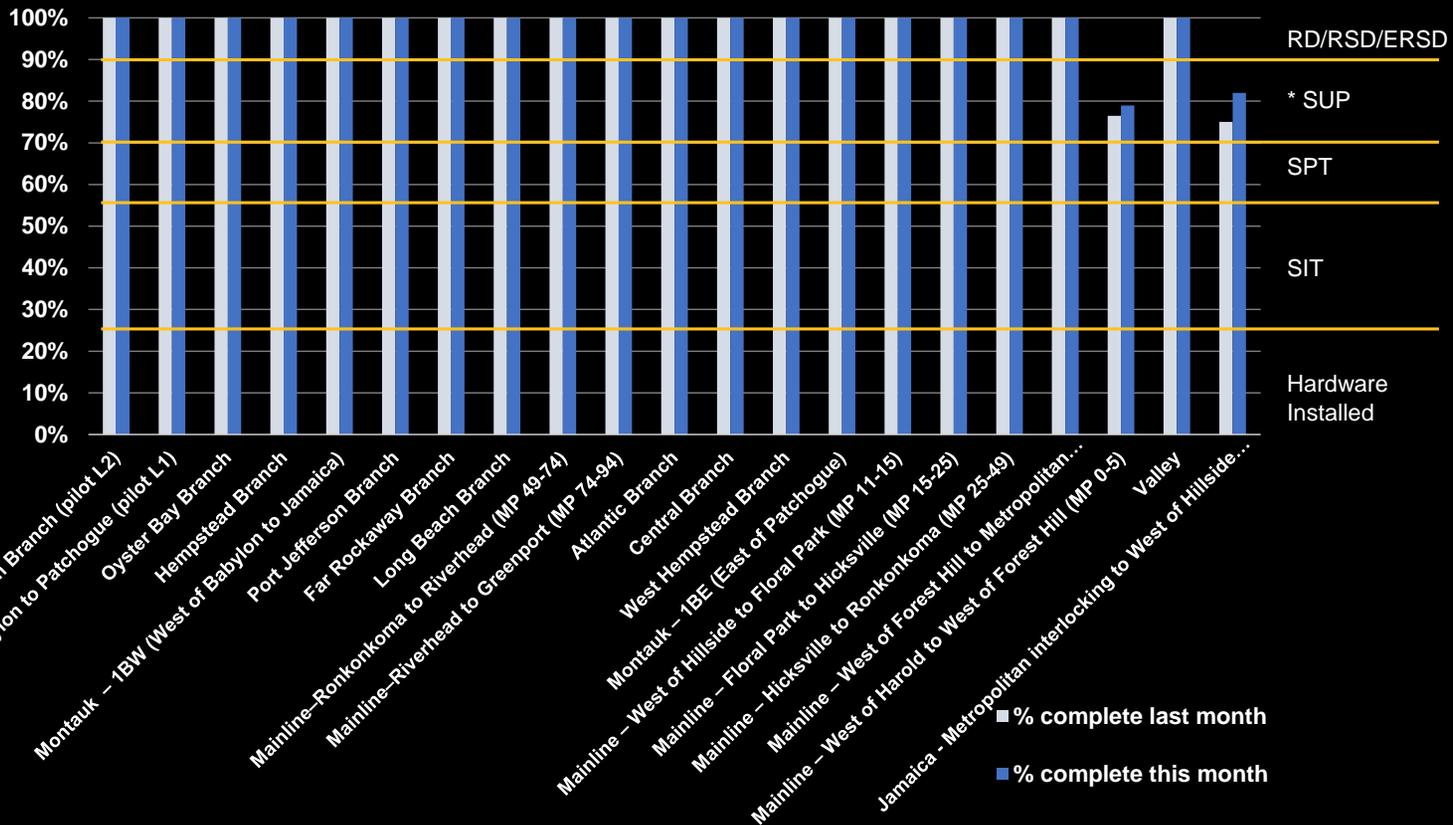
Amtrak interoperability with LIRR

- Siemens on target to provide an OBC software release to Amtrak/Burns for b2b testing in May 2021.
- Joint Amtrak/LIRR White Paper for b2b mitigation approved by FRA for deadline.
- Qualification of Amtrak trains to operate on LIRR territory in November as part of Harold ERSD

LIRR Working Schedule and Sequence



LIRR Segment RSD Readiness (Previous vs Current Month)



SIT = Site Installation Tests

SPT = Site Performance Testing

*SUP = Site Update Period includes design corrections and testing

RD/RSD/ERSD = Repeatability Demonstration/ Revenue Service Demonstration/ Extended RSD

■ % complete last month

■ % complete this month



Key Milestones and Issues (LIRR & MNR)

Status	Activity	Issues		
<p style="text-align: center;">● Green (Current)</p> <p style="text-align: center;">● Green (Previous)</p> <p style="text-align: center;">● Red <small>Significant impact to Project Schedule and ability to meet PTC deadline.</small></p> <p style="text-align: center;">● Yellow <small>Impact to Project Schedule or interim project milestone and may impact ability to meet PTC deadline.</small></p> <p style="text-align: center;">● Green <small>No Near Term Impact to Project Schedule and on target to meet PTC deadline.</small></p>	<p>Delivery and implementation of System Software for STS-STS safety server interface for Interoperability</p> <p>Baseline 3.9</p> <tr style="background-color: #FFD700;"> <td colspan="2" style="text-align: center;">Date Needed</td> </tr> <p>November 2020</p>	Date Needed		<p>Issues:</p> <ul style="list-style-type: none"> Timely delivery of System Software Release 3.9 for the STS-STS safety server interface for FRA compliance and interoperability with Amtrak. <p>Monthly Update:</p> <ul style="list-style-type: none"> All SI variances related to the STS-STS interface were corrected in new System Baseline 3.9 planned for late October delivery. Regression testing of the interface is in progress in Amtrak's lab. Physical connectivity of the interfaces are being tested in the field on both Railroads. STS-STS roll-out on LIRR/MNR in November pending Amtrak readiness. <p>Drivers:</p> <ul style="list-style-type: none"> Changes to MTA's design for the safety server interface was modified to align with an updated specification from Amtrak in early 2018. <p>Mitigations:</p> <ul style="list-style-type: none"> The Railroads have an operational workaround for FRA review/approval should interface fail to be operational at end of 2020. <p>Potential Impacts:</p> <ul style="list-style-type: none"> MTA will need to implement an operational mitigation if interface is not available at the end of the year.
Date Needed				



MNR Project Update

Segment in full PTC Functionality:

Total route miles in full PTC – 244.3 miles (100%)

- Hudson Line (GCT – CP75) – 74.8 miles
- Harlem Line (CP106 – CP182) – 76.9 miles
- New Haven Line (CP212 – CP274) – 61 miles
- Danbury Branch – 24.2 miles
- New Canaan Branch – 6.3 miles

PTC Implementation Summary:

- All trains for Hudson & Harlem Lines and Danbury Branch are operating with full PTC Functionality.
- Over 132,000 Revenue Trains ran in full PTC mode from August 2019 – Sept 2020
- Waterbury Branch is currently operating under PTC Main Line Track Exclusion Addendum
- Amtrak passenger trains (Rev10) are interoperable on the Hudson and New Haven Lines
- CSX and P&W freights (Rev10) are interoperable on the Hudson & New Haven Lines and Danbury Branch

MNR Project Update (continued)

Field Installation & Testing

- Commenced commissioning of Over the Air Security (HMAC) on Wayside and Fleets
 - Completed activation for all MNR Trains and Wayside except M8.
 - Amtrak and Freight train activations are expected by the end of October 2020
- Commenced Onboard OBC Software Update for release 5.2.17
- Completed CP 8 updates and testing for CSX Oak Point Link
- CSX Rev 11 OBC Testing was performed for deployment and operation on MNR
- Continue to mitigate technical and operational issues

Amtrak Boundary Installation & Commissioning

- Poughkeepsie – Completed and commissioned December 5th 2019
- Spuyten Duyvil - Completed and commissioned May 28th 2020
- New Rochelle – Completed and commissioned Sept 12th 2020
- New Haven – Pending Amtrak Installation readiness, commissioning scheduled for end of Oct 2020
- STS-STX Interface – Pending Amtrak Readiness, commissioning scheduled for Nov 2020

¹⁰ MNR Submitted its Safety Plan to the FRA on May 12th 2020.

- Discussions with the FRA ongoing to update the documents per applicable LIRR comments



MNR M8 Project Update

Current Project Status

- Safety Certification of ATC Software D1/D2, complement to PTC OBC software – September 30, 2020
- Alstom field Testing for OBC Software Release Candidate 1 (RC1) completed September 25, 2020
- Bombardier Wayside integration Testing of OBC Software RC1 completed on Oct 9, 2020
- OBC Software RC2 was released and field tested for Non-Vital Interfaces the week of Oct 13, 2020
- Continued replacement of upgraded ATC/ACSES hardware on M8 fleet, 49 out of 125 required completed.
- Gap Analysis – Mitigation and Interoperability efforts continue based on field testing performed by SI

Upcoming Milestones

- Alstom field Testing of Release Candidate 2 (RC2) scheduled for the week of October 19, 2020
- Bombardier Wayside Integration field testing of RC2 scheduled for the week of October 26, 2020
- Continued replacement of upgraded ATC/ACSES hardware on M8 fleet
- M8 Safety Certification expected in November 2020 (Previously Sept 2020)



MNR Port Jervis and Pascack Valley Line Update

Port Jervis Line

Current Project Status

- MNR commissioned the Cab Signaling with last segment completed in March 2020
- MNR completed PTC Wayside (Transponder, WIU and Radio Case) installations
- NJT completed PTC Office and Onboard installations
- Transponder and WIU configuration and installation testing was completed
- Wayside Communications configuration and testing is ongoing
- Functional testing commenced between CP OV and Harriman

Upcoming Milestones

With support from NJT and its Systems Integrator the following activities are planned,

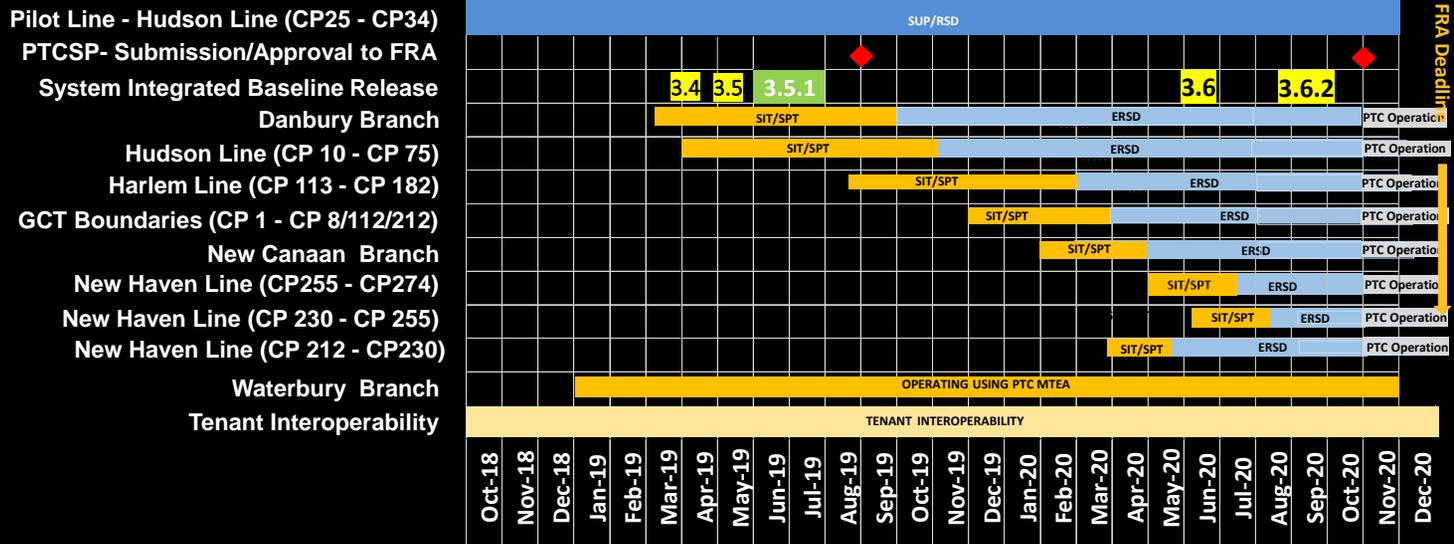
- Communications coverage testing to commence in Oct 2020
- The reconfiguration and testing of about 100 Transponders is expected late Oct 2020
- Onboard, Office and Functional Qualification testing completion expected by Nov 2020
- ERSD on Port Jervis Line is scheduled by Dec 2020

Pascack Valley Line

- Entered ERSD in Sept 2020



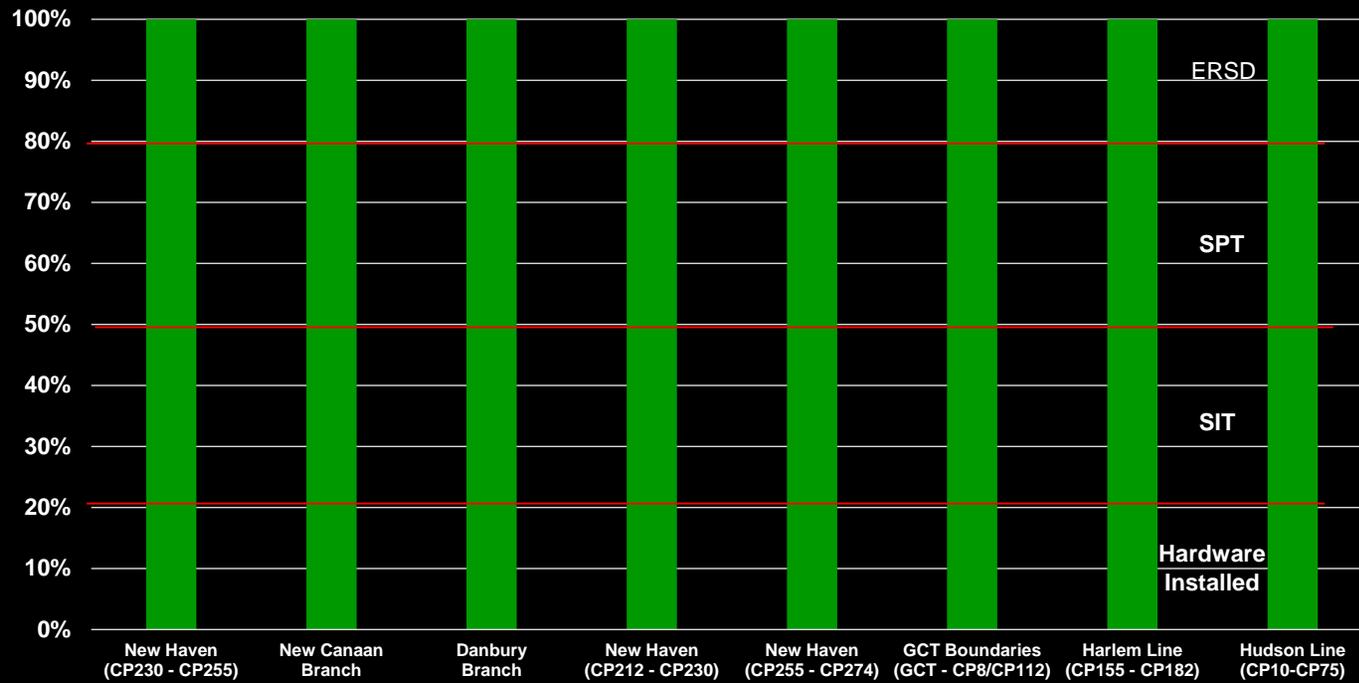
MNR Schedule and Sequence



SIT - Site Installation Testing/SUP -Site Update Period/RSD - Revenue Service Demonstration/SPT – Site Performance Test
 ERSD - Extended Revenue Service Demonstration
 Waterbury Branch – Operating under Main Line Track Exclusion Addendum (MTEA). Installation of Signal System ongoing



MNR Segment ERSD Readiness



SIT = Site Integration Testing, SPT = Site Performance Testing, ERSD = Extended Revenue Service Demonstration.

■ % complete ■ Remaining



Key Milestones and Issues (MNR Only)

Status	Activity	Issues
<ul style="list-style-type: none"> ● Yellow (Current) ● Yellow (Previous) 	<p>Integration for the M8 OBC into the MNR Wayside</p>	<p>Issues:</p> <ul style="list-style-type: none"> • Complete M8 Fleet Hardware and Software Upgrade for full PTC Operability • Complete Gap analysis, design and implement mitigating measures • Complete M8 OBC Qualification and Integration Testing in MNR / BT Wayside Environment <p>Monthly Update:</p> <ul style="list-style-type: none"> • Safety Certification of ATC Software D1/D2, complement to PTC OBC software – September 30, 2020 • Delivery of Release Candidate 1, RC 1, OBC Software completed on September 21, 2020 • Field Testing Complete for OBC – SW RC1 – Completed September 25, 2020 • Bombardier Wayside integration of OBC SW RC1 in progress • Continued replacement of upgraded ATC/ACSES hardware on M8 fleet • Gap Analysis – Mitigation and Interoperability efforts continue based on field testing performed by SI <p>Drivers:</p> <ul style="list-style-type: none"> • Continued production schedule adherence for upgraded ATC/ACSES Mechanisms for replacement • Complete SLR Review/Update, SI M8 SPT test Procedure, Gap Analysis, Wayside Engineering Testing • Complete MNR M8 integration engineering testing using M8 OBC RC2 software <p>Mitigations:</p> <ul style="list-style-type: none"> • Complete design for mitigations defined in the Gap analysis and validate through field testing • Perform M8 OBC integration/engineering testing to qualify/verify all gaps and define mitigation measures <p>Potential Impacts:</p> <ul style="list-style-type: none"> • Potential risk of not completing entire M8 fleet with both hardware and software PTC upgrades
<ul style="list-style-type: none"> ● Significant impact to Project Schedule and ability to meet PTC deadline. Red ● Impact to Project Schedule or interim project milestone and may impact ability to meet PTC deadline. Yellow ● No Near Term Impact to Project Schedule and on target to meet PTC deadline. Green 	<p>Date Needed</p> <p>October 2020</p>	



MNR PTC ERSD Timeline

May 2020

- ✓ New Haven Line: (CP212) – (CP230) – 18 miles
- ✓ Resubmitted PTC Safety Plan

June - August 2020

- ✓ New Haven Line: (CP255 - CP274) - 19 miles
- ✓ New Haven Line: (CP230 – CP255) – 25 miles

Sept – Dec 2020

- ✓ New Rochelle Line Boundary with Amtrak
- ✓ Pascack Valley ERSD
- New Haven Line Boundary with Amtrak (Previously September)
- HMAC Over the Air Security Implementation
- STS – STS Amtrak Boundary Interface (Previously September)
- Port Jervis Line ERSD

After PTC Deadline

- Two-year RAMS (Reliability, Availability, Maintainability, Safety) period in 2021-2022
- Updates to system software to make operational improvements and correct variances
- PTC for Waterbury Branch and New Haven Signal Upgrades



October 2020 CPOC Independent Engineering Consultant Project Review

Positive Train Control



MTA Independent Engineering Consultant

IEC Conclusion

Both LIRR and MNR made good progress to achieve PTC Compliance by December 2020, including extending revenue service demonstrations to various branches and line segments and advancing interoperability with Amtrak. Further, the Railroads have been successful in mitigating identified risks and implementing operational workarounds to address technical issues. However, achieving integration of the M8 fleet in PTC operation remains a risk for MNR (Page 6).



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Budget Review

- The current budget and EAC is \$1,159M.
- Additional funds (\$41M for LIRR and \$32M for MNR) to support project needs until substantial completion (December 2022) are included in the current budget.
 - Based on our review of change orders, burn rate and the amount of remaining work, the IEC EAC forecast is \$1,172M.



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Schedule Review

- Both LIRR and MNR have been successful in progressing E-RSD on various branches and line segments with minimum impact from COVID-19:
 - MNR has 100% of its territory in E-RSD
 - LIRR has 96% of its territory in E-RSD.
 - Jamaica and Harold are on the critical path with E-RSD scheduled for October and November respectively.
- MNR is progressing plan to integrate M8 fleet into PTC operation.
 - Testing of the M8 Alstom software has uncovered a number of variances that necessitate a new software version scheduled for testing on October 26
 - MNR plans to address variances using operational workaround
 - Safety certification of the M8 software is now delayed to late November.
- R/Rs are working closely with Amtrak to achieve interoperability:
 - Encryption for secure radio communication is currently being deployed,
 - Interim solution for Harold will be implemented in November,
 - Software to achieve STS-STX interoperability will be deployed in November.



IEC Observations

- The project team and the SI have taken actions to mitigate the risks identified by the IEC in previous reports, including:
 - Improving software development and testing processes,
 - Working closely with Amtrak to comply with interoperability requirements,
 - Developing and implementing a plan to integrate the M8 Fleet into PTC operation,
 - Establishing, implementing and monitoring a plan to resolve Non-Conformance Report issues that are needed for compliance.

- Extensive work is required post compliance to achieve Substantial Completion by December 2022, including:
 - Achieve full interoperability with Amtrak at Harold,
 - Software development to address operational issues,
 - Addressing remaining software variances,
 - Maintenance, training and asset management activities.



Project Risks

- While good progress was made to achieve compliance by December 2020, the project float has been reduced to one month. As indicated on the schedule slide, a number of critical activities are now scheduled for November.
- The delivery and testing of a fully functioning Alstom software has been delayed by two months and is now scheduled for completion in late October. Safety certification is scheduled for late November. Any further delay in concluding the testing and safety certification of the Alstom software could impact the schedule to integrate the M8 fleet into PTC operation.



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MTA Capital Program Commitments & Completions

through September 30, 2020

Capital Projects – Major Commitments – September 2020

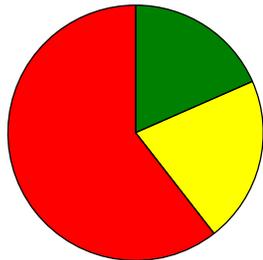
In 2020, agencies have a goal of \$13.5 billion in overall commitments. 51 major commitments are included; 29 for NYCT, eleven for LIRR, four for MNR, one for B&T, four for Network Expansion, and two for MTA Bus.

The MTA’s Chairman Pat Foye announced at the March 25th Board meeting that capital work commitments will be considered on an exception basis. This action has impacted commitments since then. As a result, the MTA’s \$13.5 billion 2020 commitment plan is under review.

Through September, agencies have committed \$3.9 billion versus a \$9.2 billion YTD goal. The shortfall is mainly due to slips of twenty-three major commitments pursuant to the moratorium on new commitments announced by the MTA Chairman. The twenty-three major slips are explained on the following pages.

Since the last report to the MTA Board in September 2020, the year end 2020 forecast has slipped from 75% to 51%, which reflects the anticipated movement of \$6.1 billion of major commitments into 2021.

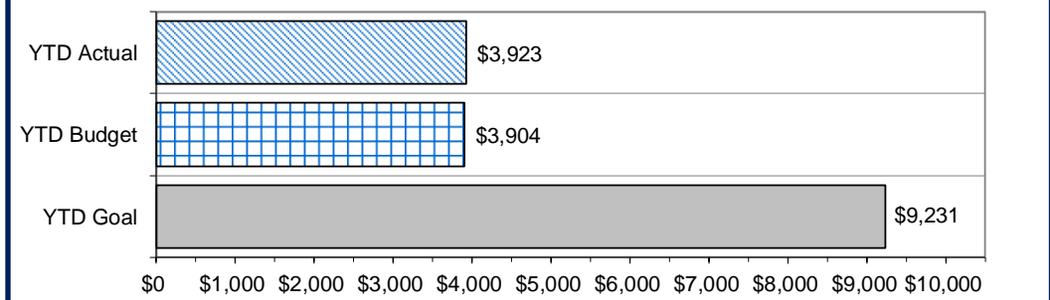
Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
GREEN = Commitments made/forecast within Goal	7	18%	-
YELLOW = Commitments delayed beyond Goal (already achieved)	8	21%	↑ 1
RED = Commitments delayed beyond Goal (not yet achieved)	23	61%	↑ 7
Total	38	100%	↑ 8

Budget Analysis

2020 Annual Goal	\$13,497	(\$ in millions)
2020 Forecast	51%	of Annual Goal
Forecast Left to commit	43%	(\$2,945)



Year-to-Date Agency Breakdown

2020 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
4 GREEN, 3 YELLOW, 15 RED	---	---	+6 RED
Long Island Rail Road			
2 GREEN, 2 YELLOW, 5 RED	---	---	+2 RED
Metro-North Railroad			
2 GREEN, 1 YELLOW	---	---	---
Bridges and Tunnels			
	---	---	---
Capital Construction Company			
1 GREEN, 1 YELLOW	---	+1 YELLOW	-1 RED
MTA Bus Company			
1 RED	---	---	---
MTA Police Department			
	---	---	---

Capital Projects – Major Commitments – September 2020 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
23 All-Agency Red Commitments (8 New Items)							
NYCT				NYCT			
<i>Passenger Stations</i>				<i>Passenger Stations</i>			
Replace 8 Escalators / Various	Construction Award	Mar-20	Jul-21	ADA: Wave A1 Bundle (New Item)	Construction Award	Sep-20	Jul-21
		\$62.0	\$61.2			\$391.7	\$235.4
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects favorable bids.				The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects reduced number of stations now to be awarded under ADA: 8 Stations (Pkg A) (see below) and latest estimates.			
Replace 12 Escalators	Construction Award	May-20	Jul-21	ADA: Wave A2 Bundle (New Item)	Construction Award	Sep-20	Jul-21
		\$111.9	\$110.9			\$788.8	\$402.1
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects latest estimates.				The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects reduced number of stations now to be awarded under ADA: 8 Stations (Pkg A) (see below) and latest estimates.			
ADA and Station Improvements: Westchester Square / PEL	Construction Award	May-20	Dec-20	ADA: Wave A3 Bundle (New Item)	Construction Award	Sep-20	Jul-21
		\$90.0	\$94.4			\$592.3	\$444.7
The award is delayed due to necessary coordination with other projects. Cost increase reflects additional scope.				The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects reduced number of stations now to be awarded under ADA: 8 Stations (Pkg A) (see below) and latest estimates.			
Overcoating: 17 Bridges & East 180 Street Flyover / Dyre Av	Construction Award	Aug-20	Nov-21	ADA: 8 Stations (Pkg A) (New Item)	Construction Award	Sep-20	Dec-20
		\$132.5	\$143.7			\$0.0	\$582.0
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects latest estimates and additional scope.				Eight (8) ADA stations from Wave A bundles are now packaged to be awarded separately in a new (Pkg A) bundle.			
Replace 8 Traction Elevators / Various	Construction Award	Jun-20	Jul-21	ADA: Woodhaven and Jamaica Renewals (New Item)	Construction Award	Sep-20	Feb-21
		\$65.4	\$66.8			\$239.2	\$313.2
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects latest estimates and additional scope.				The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects project complexity and market conditions, and the addition of Court Square ADA project to the bundle.			
ADA: 14 St Complex Bundle	Construction Award	Jul-20	Mar-21	<i>Shops and Yards</i>			
		\$231.5	\$374.0	Rail Car Acceptance and Testing Facility, Brooklyn	Construction Award	Jul-20	Apr-21
The award is delayed due to necessary coordination with other projects. Cost increase reflects additional scope.						\$78.9	\$78.9
Flushing (ADA/ Renewals/ Components) Bundle (New Item)	Construction Award	Sep-20	Jul-21	The award is delayed due to unresolved ground lease agreement issues.			
		\$520.7	\$605.0	<i>Rolling Stock</i>			
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects additional scope.				Purchase 84 Hybrid-Electric & 139 Standard Buses (New Flyer)	Construction Award	Mar-20	Jul-21
Replace 11 Hydraulic Elevators / Various	Construction Award	Mar-20	Jul-21			\$161.8	\$170.0
		\$65.9	\$69.6	The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects final negotiated price.			
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost increase reflects project complexity and unfavorable bids.							

Capital Projects – Major Commitments – September 2020 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
23 All-Agency Red Commitments (continued)							
LIRR				MTA Bus			
<i>PSNY</i>				<i>Bus Company Projects</i>			
PNSY 33rd St Corridor- Phase 1A	Construction Award	Jun-20	Nov-20	Depot Rehab - College Point	Construction Award	Mar-20	Oct-20
		\$24.0	\$24.0			\$9.5	\$9.5
This award is the balance of Phase I and II support costs. The award is delayed to reflect timing of Phase II award.				The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.			
PNSY 33rd St Corridor- Phase II	Construction Award	Jun-20	Nov-20	Network Expansion			
		\$380.0	\$380.0	<i>East Side Access</i>			
The award is delayed due to extended procurement period to finalize cost negotiations.				Rolling Stock Procurement M-9A Cars	Construction Award	Jun-20	Mar-21
						\$367.0	\$367.0
<i>Rolling Stock</i>				The request for proposals was modified to maximize competition and as a result the associated negotiations have extended the procurement phase.			
M-9 Rolling Stock Procurement - 54-Car (Option)	Construction Award	Jun-20	Dec-20				
		\$243.0	\$243.0				
The LIRR continues to negotiate with the vendor. Board approval is required to exercise this option.							
Work Locomotives (New Item)	Construction Award	Sep-20	Dec-20				
		\$35.2	\$32.2				
The award was delayed due to a review of the procurement by the MTA Office of the Inspector General. LIRR Legal notified the project team that MTA OIG closed their investigation without issuing a report. The procurement is now proceeding with an anticipated task opening date of December 2020.							
<i>Power</i>							
Substation Repl Package II-3P Construction (New Item)	Construction Award	Sep-20	Dec-20				
		\$18.0	\$18.0				
The award is delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.							
MNR							
<i>Stations</i>							
Harlem Line Station Improvements	Construction Award	Apr-20	Nov-20				
		\$16.3	\$16.3				
The award is delayed due to temporary and permanent easement issues as well as the overall amount of technical requests for information.							

Capital Projects – Major Commitments – September 2020 – Schedule Variances
Actual Results Shaded

Project	Commitment	Goal	Actual
8 All-Agency Yellow Commitments (1 New Item)			
NYCT			
<i>Line Structures</i>			
Eastern Parkway (Line Structures)	Construction Award	Apr-20 \$135.6	Jun-20(A) \$77.1
The original award was delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Completion date was advanced as part of the MTA's acceleration program. Cost decrease reflects favorable bids.			
<i>Rolling Stock</i>			
Purchase 25 Hybrid Locomotives	Construction Award	Apr-20 \$225.3	Aug-20(A) \$258.0
The award was delayed due to additional technical review of alternate battery proposals. Cost increase reflects final negotiated bid price.			
<i>Passenger Stations</i>			
ADA: Tremont & 149 Street - Grand Concourse Complex	Construction Award	Jun-20 \$161.8	Aug-20(A) \$160.4
The award was delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic. Cost decrease reflects favorable bids.			

Project	Commitment	Goal	Actual
LIRR			
<i>PSNY</i>			
PNSY 33rd St Corridor-Phase 1A	Construction Award	Mar-20 \$24.0	May-20(A) \$24.0
This award is the first half of Phase I support costs. The balance of Phase I and II support costs is delayed to September to reflect timing of Phase II award.			
PNSY 33rd St Corridor-Phase 1B	Construction Award	Mar-20 \$44.4	Jul-20(A) \$42.5
A Memorandum of Understanding (MOU) was executed with NYS for its contribution to the project budget.			
MNR			
<i>Track and Structures</i>			
Harlem River Lift Bridge SuperStructure/Pier Repair	Construction Award	Mar-20 \$15.0	Aug-20(A) \$15.0
The award was delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.			
Harlem River Fender	Construction Award	Mar-20 \$6.0	Aug-20(A) \$6.0
The award was delayed due to the financial impact on the MTA as a result of the COVID-19 pandemic.			
Network Expansion			
<i>East Side Access</i>			
Harold Interlocking Catenary (New Item)	Construction Award	Jun-20 \$63.9	Sep-20(A) \$90.4
The award was delayed due to an extended RFQ period to permit more time for proposers to assemble qualified teams and obtain more competitive bidders, the addition of contract modification to include the CH064 scope for the Mid-Day Storage Yard connections and additional track work, and COVID-19 related procurements pause.			

Capital Projects – Major Completions – September 2020

In 2020, agencies have a goal of \$5.4 billion in overall completions. 40 major completions are included, including 19 for NYCT, eight for the LIRR, seven for MNR, four for B&T, one for Network Expansion, and one for MTA PD.

Through September, agencies have completed \$1.5 billion versus a \$2.2 billion YTD goal. The shortfall is primarily due to slips of twelve major completions explained on the following page.

Although the pace of work slowed for some projects already under construction, the MTA still anticipates meeting 94% of its overall completions goal in 2020. This relies on achieving \$2.9 billion of completions in the 4th quarter 2020.

Year-to-Date Major Completions

	Count	Percent	Change from Prior Month
GREEN = Completions made/forecast within Goal	9	36%	↑ 1
YELLOW = Completions delayed beyond Goal (already achieved)	4	16%	↑ 2
RED = Completions delayed beyond Goal (not yet achieved)	12	48%	-
Total	25	100%	↑ 3

Budget Analysis

2020 Annual Goal	\$5,390	(\$ in millions)
2020 Forecast	94%	of Annual Goal
Forecast left to complete	71%	(\$3,605)

Category	Rolling Stock	Total
YTD Actual	\$33	\$1,481
YTD Goal	\$334	\$2,241

Year-to-Date Agency Breakdown

2020 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
5 GREEN, 3 YELLOW, 4 RED	----	+1 YELLOW	-1 RED
Long Island Rail Road			
3 GREEN, 3 RED	+1 GREEN	----	----
Metro-North Railroad			
4 RED	----	----	+2 RED
Bridges and Tunnels			
1 GREEN, 1 RED	----	+1 YELLOW	-1 RED
Capital Construction Company			
	----	----	----
MTA Bus Company			
	----	----	----
MTA Police Department			
1 RED	----	----	----

Capital Projects – Major Completions – September 2020 – Schedule Variances

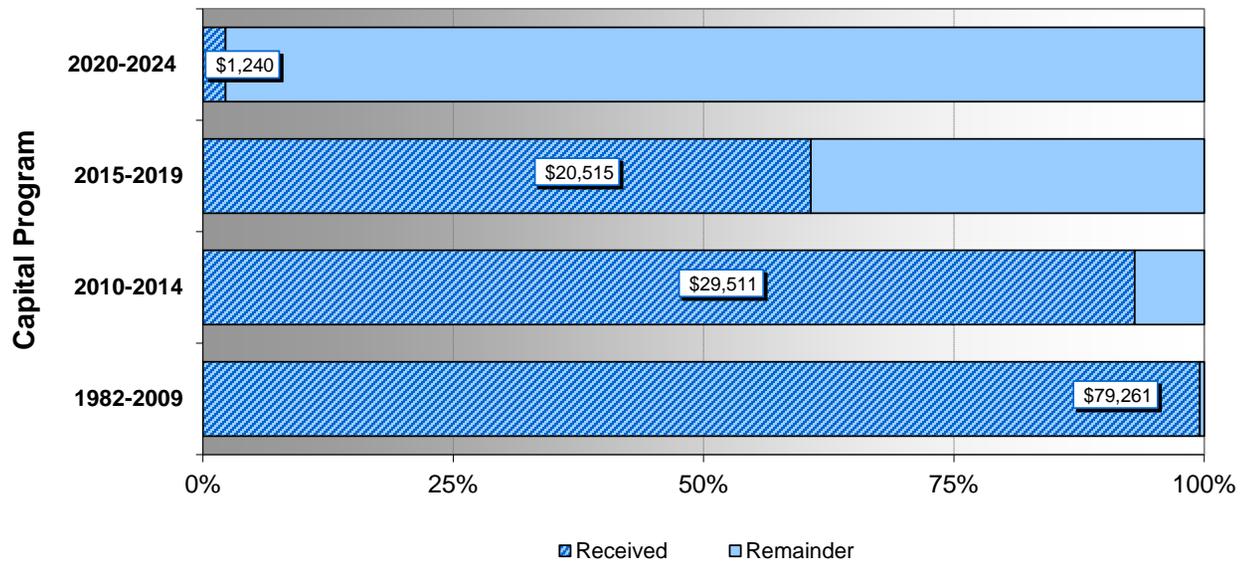
Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
12 All-Agency Red Completions							
NYCT				LIRR			
<i>Hurricane Sandy</i>				<i>Shops and Yards</i>			
Sandy Mitigation: 14 Fan Plants, LT - 4 Locations	Construction	May-20	Nov-20	Diesel Locomotive Shop Improvements	Construction	May-20	Oct-20
		\$34.1	\$34.1			\$89.8	\$94.4
A request for Extension of Time is under review by NYCT & C&D due to fabrication and delivery delays related to the COVID-19 pandemic.				Project completion delayed due to the design and fabrication of a diesel fire pump and emergency generator as well as delays related to the COVID-19 pandemic.			
<i>Passenger Stations</i>				MNR			
ADA: Chambers Street / Nassau Loop	Construction	Aug-20	Oct-20	<i>Hurricane Sandy</i>			
		\$43.6	\$43.2	Power Infrastructure Restoration - Substations	Construction	Jun-20	Jan-21
Project completion delayed due to the COVID-19 pandemic. Cost decrease reflects latest estimates.						\$43.8	\$43.8
ADA: Bedford Park Boulevard / Concourse	Construction	Jun-20	Nov-20	Project completion delayed due to the recent power failure during the cutover/energization at Riverdale and impacts to be realized under the COVID-19 pandemic.			
		\$32.6	\$32.7	<i>Power</i>			
Project completion slippage due to material delivery delays as a result of the COVID-19 pandemic. Cost increase reflects latest estimates.				Substation Bridge 23 - Construction	Construction	Jun-20	Oct-20
ADA: Gun Hill Rd / Dyre	Construction	Jul-20	Nov-20			\$41.7	\$41.7
		\$54.5	\$55.3	Project completion delayed due to the COVID-19 pandemic.			
Project completion slippage due to material delivery delays as a result of the COVID-19 pandemic. Cost increase reflects latest estimates.				H & H Power (86th St. / 110th St.) (New Item)			
					Construction	Sep-20	Nov-20
						\$12.3	\$12.3
				Project completion delayed due to reduced F/A availability as a result of the COVID-19 pandemic. Coordination of existing manpower levels is being done to adequately support on-going projects.			
LIRR				Harlem & Hudson Lines Power Improvements (New Item)			
<i>Track</i>					Construction	Sep-20	Nov-20
Massapequa Pocket Track	Construction	Feb-20	Dec-20			\$42.5	\$42.5
		\$19.6	\$19.6	Project completion delayed due to the COVID-19 pandemic.			
The cutover of the signal systems was completed on schedule. Additional work remains to resurface and realign track before putting this asset into service. A schedule for addressing this work is under development, but a delay to December has been forecast.							
<i>Rolling Stock</i>							
Rolling Stock: M-9 Procurement	Rolling Stock Purchase	May-20	Apr-22				
		\$300.8	\$300.8				
Project completion delayed due to issues in testing first cars and the production facility temporarily closing due to the COVID-19 pandemic.							

Capital Projects – Major Completions – September 2020 – Schedule Variances				Actual Results Shaded			
Project	Completion	Goal	Forecast	Project	Completion	Goal	Actual
12 All-Agency Red Completions (continued)				4 All-Agency Yellow Completion (2 New Items)			
MTA Police Department				NYCT			
<i>MTA PD</i>				<i>Buses</i>			
Staten Island District Office	Construction	Aug-20	Oct-20	Purchase 15 Articulated Electric Buses and Depot Chargers	Bus Purchase	Mar-20	Jun-20(A)
		\$13.5	\$13.5			\$32.9	\$32.9
Project completion delayed due to Con Edison's inability to provide permanent power. Con Edison plans to remobilize in October 2020.				There was a delay due to the COVID-19 pandemic and the related reduced workforce at New Flyer Industries. All buses have been delivered.			
				<i>Passenger Stations</i>			
				ADA: 86 Street / 4th Avenue	Construction	May-20	Aug-20(A)
						\$33.1	\$33.2
				Project completion was delayed due to the COVID-19 pandemic.			
				<i>Hurricane Sandy</i>			
				Sandy Mitigation: 9 Stations (9 Stns BK/Q Initiative) (New Item)	Construction	May-20	Sep-20(A)
						\$33.1	\$33.2
				Project completion was delayed due to additional column base repairs.			
				B&T			
				Skewback Retrofit at HH (New Item)	Construction	Aug-20	Sep-20(A)
						\$100.4	\$100.4
				Project completion was delayed due to unforeseen steel conditions requiring repair.			

Status of MTA Capital Program Funding

Capital Funding (September 2020)

\$ in millions



Capital Funding Detail (September 30, 2020)

\$ in millions

	Funding Plan		Receipts	
	Current	Thru August	This month	Received to date
2010-2014 Program				
Federal Formula, Flexible, Misc	\$5,844	\$5,839	\$ -	\$5,839
Federal High Speed Rail	173	173	-	173
Federal New Start	1,271	1,257	-	1,257
Federal Security	89	89	-	89
Federal RRIF Loan	-	-	-	-
City Capital Funds	719	608	-	608
State Assistance	770	770	-	770
MTA Bus Federal and City Match	132	112	-	112
MTA Bonds (Payroll Mobility Tax)	11,635	10,450	-	10,450
Other (Including Operating to Capital)**	1,299	1,268	6	1,273
B&T Bonds	2,175	2,019	-	2,019
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,697	6,491	206	6,697
<i>PAYGO</i>	18	18	-	18
<i>Sandy Recovery MTA Bonds</i>	659	182	-	182
<i>Sandy Recovery B&T Bonds</i>	230	23	-	23
Total	31,710	29,299	212	29,511
2015-2019 Program				
Federal Formula, Flexible, Misc	\$6,704	\$4,456	\$533	\$4,989
Federal Core Capacity	100	-	-	-
Federal New Start	500	-	-	-
Federal Security	19	15	-	15
State Assistance	9,064	2,248	1,094	3,342
City Capital Funds	2,667	790	-	790
MTA Bonds	8,474	7,818	-	7,818
Asset Sales/Leases	959	306	-	306
Pay-as-you-go (PAYGO)**	2,145	1,572	-	1,572
Other	217	36	2	38
B&T Bonds & PAYGO/Asset Sale	2,942	1,257	387	1,644
Total	33,791	18,498	2,017	20,515
2020-2024 Program				
Capital from Central Business District Tolling	\$15,000	\$ -	\$ -	\$ -
Capital from New Revenue Sources	10,000	-	-	-
MTA Bonds and PAYGO	9,792	80	-	80
Federal Formula	7,500	-	1,119	1,119
State of New York	3,000	-	-	-
City of New York	3,000	40	-	40
Federal New Start (SAS Ph2)	2,905	-	-	-
Federal Flexible	275	-	-	-
B&T Bonds (Self-Funded)	3,327	1	-	1
Total	54,799	121	1,119	1,240