



Metropolitan Transportation Authority

Capital Program Oversight Committee Meeting

January 2017

Committee Members

T. Prendergast, Chair

F. Ferrer

S. Metzger

J. Molloy

M. Pally

J. Samuelsen

L. Schwartz

P. Trottenberg

J. Vitiello

P. Ward

C. Wortendyke

N. Zuckerman

Capital Program Oversight Committee Meeting

**2 Broadway, 20th Floor Board Room
New York, NY 10004**

**Monday, 1/23/2017
1:45 - 2:45 PM ET**

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES DECEMBER 12, 2016

- Minutes from Decemeber '16 - Page 3

3. COMMITTEE WORK PLAN

- 2017 - 2018 CPOC Committee Work Plan - Page 6

4. NYCT CAPITAL PROGRAM UPDATE

- Progress Report on Bus Procurement Update - Page 8*
- IEC Review on Bus Procurements - Page 24*
- Progress Report on Subway Car Program Progress Update - Page 28*
- IEC Project Review on Subway Car Program - Page 38*
- Progress Report on Sandy Recovery and Resiliency Division Update - Page 46*
- IEC Project Review on South Ferry Station Complex - Page 59*
- IEC Review on Canarsie Tunnel Rehab - Page 63*
- IEC Project Review on Myrtle Avenue Line - Page 66*
- IEC Review on Clifton Repair Shop - Page 70*

5. CAPITAL PROGRAM STATUS

- Commitments, and Completions, and Funding Report - Page 73

Date of next meeting: Monday, February 21, 2017 at 1:15 PM

MINUTES OF MEETING
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE
December 12, 2016
New York, New York
1:15 P.M.

MTA CPOC members present:

Hon. Thomas Prendergast
Hon. Fernando Ferrer
Hon. Susan Metzger
Hon. John Molloy
Hon. Mitchell Pally
Hon. James Vitiello
Hon. Peter Ward
Hon. Carl Wortendyke
Hon. Neal Zuckerman

MTA CPOC members not present:

Hon. John Samuels
Hon. Lawrence Schwartz
Hon. Polly Trottenberg

MTA Board members present:

Hon. Andrew Albert
Hon. Ira Greenberg
Hon. Veronica Vanterpool

MTA staff present:

Craig Stewart
Michael Wetherell

MNR staff present:

Michael Shiffer

MTACC staff present:

Daniel Creighton
Michael Horodniceanu
Eve Michel
Anil Parikh

Independent Engineering Consultant staff present:

Joe DeVito
Kent Haggas
Dianne Rinaldi

* * *

Chairman Prendergast called the December 12, 2016 meeting of the Capital Program Oversight Committee to order at 1:00 P.M.

Public Comments Period

There were three public speakers in the public comments portion of the meeting: Murray Bodin; Jason Pineiro; and Omar Vera.

Meeting Minutes

Upon motion duly made and seconded, the CPOC members approved the minutes to the previous meeting held on November 14, 2016.

Committee Work Plan

Mr. Stewart announced that East Side Access, which is undergoing a budget review, would not be presented today, but will be briefed to the Board in early 2017. Instead, there will be a briefing by MTACC at today's meeting on the Penn Station Access Project.

MTACC Monthly Update on Second Avenue Subway

Mr. Parikh reviewed the status of Critical Milestones and Issues required for Revenue Service at 72nd Street Station, 86th Street Station, 96th Street Station, as well as Systems-related Critical Milestones and Issues required for Revenue Service at these locations and at 63rd Street Station. In its Project Review, the IEC reported the following with respect to Systems: track, signal and traction power systems have been completed and successfully demonstrated; critical remaining work includes the completion of the required communications, fire alarm systems and the Station Service Centers (token booths); and the rate of systems test completions more than doubled over the last few weeks and is on track to finish all required tests before the end of December. With respect to Stations, the IEC noted that equipment testing at each station is essentially completed and that the public areas of the stations are in final fitting-out and clean-up. Regarding Building Code Verifications, the IEC stated that the items necessary for building code verification are being addressed, that the Project Team has mobilized a major effort and has reduced outstanding code deficiencies since the last report in November, and that continuation of this level of effort should clear all deficiencies by the end of December. Finally, regarding Safety & Security Verifications, the IEC remarked that the Project Team's focus on the safety & security certification of the project delivered an increased rate of completed test reports consistent with requirements for revenue service. Further details of the presentations, and Committee Members' comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA's records.

MTACC Report on Cortland Street #1 Line

Mr. Creighton reported that project Substantial Completion is August 2018 and that the project budget remains \$158 million, excluding risk reserve. In its Project Review, the IEC concurred with the agency that updates to communication and electrical systems will impact the schedule contingency. The IEC cited the following issues with respect to budget: remaining construction contingencies may be inadequate to support the project to completion; additional funding may be required for design costs; and, additional funding may be required for agency costs if project completion is delayed. The IEC then cited the following observations: contractor productivity to date has not met the level required to achieve the August 2018 project completion date; the IEC concurs with MTACC that work progress has been limited due to the contractor's failure to respond to agency-issued RFPs for critical communication and electrical work; and, improved coordination between PANYNJ, other WTC stakeholders and MTACC has resulted in a reduction of risks related to interface issues. Finally, while the IEC states that sufficient time remains to complete the work required to open the Cortlandt Street #1 Station by the completion date, this can only be achieved if the following occurs: MTACC and the contractor agree upon a recovery schedule; all outstanding changes to the project scope are approved and integrated into the recovery schedule; and, the contractor commits to an increased level of productivity required by the recovery schedule. Further details of the presentations, and Committee Members' comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA's records.

MTACC/MNR Penn Station Access Project (PSA) Overview

Ms. Michel provided an overview of the project, the scope of work for which comprises the following: track and structures; communications and signals; power improvements including 3rd rail, power substations, and catenary; construction of 4 stations in the Bronx serving Co-op City, Morris Park, Parkchester/Van Nest, and Hunts Point; and Penn Station modifications to accommodate PSA. She then cited the following benefits of the project: improves network resilience and redundancy; improves East Bronx accessibility, including supporting development and employment growth and

addressing mass transit deficit in East Bronx; provides one-seat ride without transfers from New Haven Line communities to jobs, shopping and other destinations on Manhattan's West Side; provides MNR service into Penn Station as LIRR begins service into GCT; improves regional connectivity and mobility; provides additional access to East Bronx and Connecticut employment centers; and substantially reduces travel times from the Bronx to Manhattan and from the Bronx to Connecticut. Key project stakeholders include MNR and LIRR, Amtrak, CSX Freight Rail, Connecticut DOT, and New York City. Ms. Michel then cited the following timeline of Project Activities: in January 2014, Governor Cuomo announced 4 new Bronx Stations; in 2015 an MTA/Amtrak Letter Agreement was executed regarding partnering during Technical/Planning Phase, preliminary environmental analyses were performed, as well as an MTA-led Penn Station Operations Study to determine sufficiency of operational space; in 2016 \$695 million in the MTA Capital Program was approved for PSA Conceptual Engineering, including site survey, track alignments, station platform locations, bridge realignments, a Project Implementation Plan and a Value Capture Study. She then concluded her presentation by referencing the following current project activities: perform Operations and Power Simulations; commence scoping for General Engineering Consultant RFP; initiate MOU with Amtrak to support engineering effort; and develop stakeholder agreement on the alignments, scope and Concept of Operations. Further details of the presentation, and Committee Members' comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA's records.

MTA Capital Program Commitments & Completions and Funding

Mr. Stewart reported that in 2016 agencies plan to commit a total of \$6.6 billion dollars, including 41 major commitments. He then stated that to date 33 major commitments were planned. Of these 19 have been achieved (13 on time or early, 6 were delayed but have since been committed), and 14 remain delayed. By year end, the MTA forecasts meeting 85% of its annual goal, but doing so is reliant upon them achieving their December forecasts. With respect to completions, the agencies plan a total of \$4.6 billion in 2016, including 43 major completions. To date, 36 major completions are being tracked. Of these, 27 have been completed (22 on time or early, 5 were delayed but have since been completed), and 9 remain delayed. Year to date, agencies have completed \$2.3 billion versus a \$3.6 billion goal. By year end, the MTA forecasts meeting 94% of its annual completions goal of \$4.6 billion, but doing so will require the agencies to adhere to their year-end forecasts.

Capital Program Traffic Light Report, Quarterly Change Order Report, Risk Assessment Summary Appendices

Mr. Stewart brought the Committee's attention to the Capital Program Traffic Light Report, Quarterly Change Order Report, and the Risk Assessment Summary Appendices and invited Committee Members' questions, of which there was none.

Adjournment

Upon motion duly made and seconded, Chairman Prendergast adjourned the December 12, 2016 meeting of the MTA Capital Program Oversight Committee at 1:45 PM.

Respectfully submitted,
Michael Jew-Geralds
Office of Construction Oversight



2017-2018 CPOC Committee Work Plan

I. Recurring Agenda Items

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

II. Specific Agenda Items

February

B&T Capital Program Update

- Verrazano –Narrows Bridge Program Update
- Tunnel Program Update
- Robert F. Kennedy Bridge Program Update
- Open Road Tolling Update

LIRR and MNR Update on Positive Train Control (PTC)

Update on Minority, Women and Disadvantaged Business Participation

March

Quarterly MTACC Capital Program Update

Quarterly Change Order Report

Quarterly Traffic Light Reports

April

NYCT Capital Program Update

- Capital Program Overview
- Signals and Train Control Division
- Systems and Security Division

Update on Capital Program Security Projects (in Executive Session)

May

LIRR and MNR Capital Programs Overview

NYCT, LIRR, MNR Update on New Fare Payment System

June

Quarterly MTACC Capital Program Update

LIRR and MNR Update on Positive Train Control (PTC)

Quarterly Change Order Report

Quarterly Traffic Light Reports

July

NYCT Capital Program Update

September

Quarterly MTACC Capital Program Update

Update on Minority, Women and Disadvantaged Business Participation

Update on Small Business Development Program

Quarterly Change Order Report

Quarterly Traffic Light Reports

October

LIRR and MNR Capital Programs Update

LIRR and MNR Update on Positive Train Control (PTC)

Update on Capital Program Security Projects (in Executive Session)

November

NYCT Capital Program Update

NYCT, LIRR, MNR Update on New Fare Payment System

CPOC Committee Charter Review

December

Quarterly MTACC Capital Program Update

Quarterly Change Order Report

Quarterly Traffic Light Reports

January

NYCT Capital Program Update

Bus Procurement Update

Capital Program Oversight Committee
January 2017

John Higgins
Chief Maintenance Officer
Bus Operations



Agenda

- Goals
- Current Fleet
- Fleet Dynamics
- Procurement Summary
 - 2016 Completed Deliveries
 - Current Bus Deliveries
 - Upcoming Deliveries
- Propulsion Technology Strategy
- All Electric Buses (AEBs)
- Driver Visibility Improvement
- Improved Safety Technology
- New Look
- Improved Customer-Facing Amenities



Goals

- 12-year useful life for buses
- Reliable, environmentally friendly, and cost effective
- Match bus type with service needs and customer expectations
- Level the fleet procurement plan to minimize operating and capital impact
- Increase competition among bus manufacturers
- Continual improvements to reduce emissions



Current Fleet

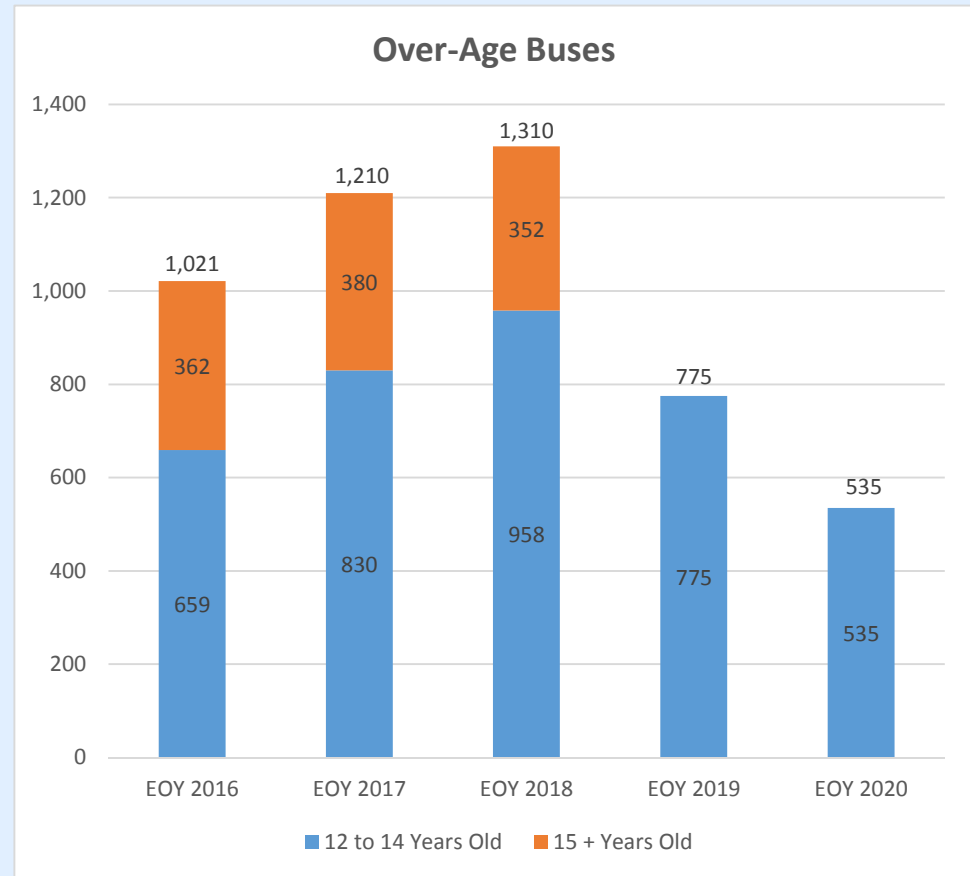
	NYCT DOB	MTA Bus	Total
Standard 40'	3,165	690	3,855
Diesel	1,348	90	1,438
CNG	532	213	745
Hybrid	1,285	387	1,672
Articulated 60'	760	75	835
Express 45'	500	520	1,020
TOTAL	4,425	1,285	5,710

Based on Winter 2017 Bus Assignment.



Fleet Dynamics

- Delivery spikes cause operational and fiscal challenges
- By 2020, no buses over 15 years of age; total over-age buses is less than 10% of the fleet



Procurement Summary – 2016 Completed Deliveries

Fleet	Type	Agency	Total Order	Delivered	Status	Capital Program
Nova 40-ft Clean Diesel*	Standard	NYCT	414	414	Complete	2010-2014
Prevost 45-ft Coach	Express	NYCT	300	300	Complete	2010-2014
New Flyer 60-ft Artic (FTA)	Artic	MTA	75	75	Complete	2010-2014
Total			789	789		

*90 of 414 Nova Standards funded from 2005-2009 Capital Program



Current Bus Deliveries

138 40-ft CNG Standards (NYCT-DOB)

Item	Comments
Scope	138 buses from New Flyer
Schedule	Board approved in December 2015 Awarded in January 2016 Configuration audit occurred in August 2016 Pilot bus in-service evaluation began in October 2016 Deliveries expected between March and September 2017
Budget	\$94.3 million

Highlights

- First 40-ft bus delivered with “New Look” and customer amenities (USB and WiFi)
- First CNG bus with the New Flyer Excelsior body style



Current Bus Deliveries

231 60-ft Diesel Artics (NYCT-DOB)

Item	Comments
Scope	139 buses from New Flyer; 92 buses from Nova
Schedule	Board approved in November 2015; Awarded in March 2016 Configuration audit occurred in Sept 2016 (NF) & Nov 2016 (Nova) Pilot bus in-service evaluation began in Oct 2016 (NF) & Jan 2017 (Nova) Deliveries expected between February and November 2017 (NF) and between October 2017 and March 2018 (Nova)
Budget	\$202.2 million

Highlights

- Dual award to two vendors for an accelerated delivery timeline
- First “New Look” buses in Manhattan and the Bronx
- Replaces last order of high-floor artics



Procurement Summary –

Upcoming Deliveries

2015-2019 Capital Program

Fleet	Type	Agency	Total Order	Status
60-ft CNG Artics	Artic	NYCT	110	In Procurement
40-ft Clean Diesel (618) 40-ft Hybrid (10)	Standard	NYCT	628	In Procurement
60-ft Clean Diesel (180) 60-ft Hybrids (10)	Artic	NYCT	190	Authorization to advertise pending
60-ft Clean Diesel	Artic	MTA	53	Authorization to advertise pending
45-ft Coach	Express	MTA	257	In Development
45-ft Coach	Express	NYCT	50	In Development
40-ft Hybrid	Standard	NYCT	275	In Development
All-Electric Bus – Purchase	Standard/Artic	NYCT	50	In Development
40-ft Clean Diesel	Standard	MTA	25	In Development
Subtotal			1,638	



Propulsion Technology Strategy

Our goal is to reduce green house gas emissions while maintaining fleet resiliency and cost effectiveness

- New buses have improved emissions profile due in part to:
 - Move from hydraulic to electric subsystems
 - Redesigned transmission features and shift schedules
 - Redefined air conditioning parameters
- Test the latest generation hybrids
- Test All Electric Buses (AEBs)



All Electric Buses (AEBs)

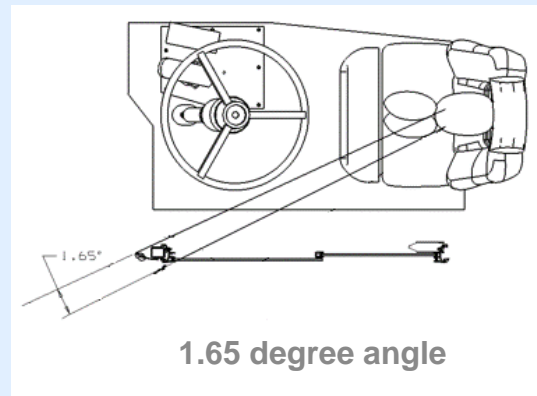
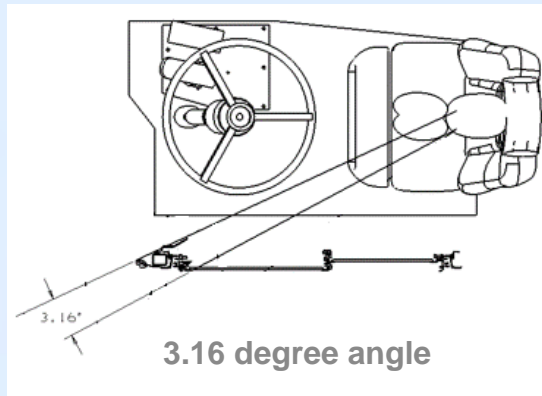


- Evaluate a pilot fleet of 10 AEBs and necessary charging stations
- Operating funded- Lease
- In service goal is December 2017
- After pilot evaluation, procure 50 AEBs and 8 Rapid In-Route Chargers



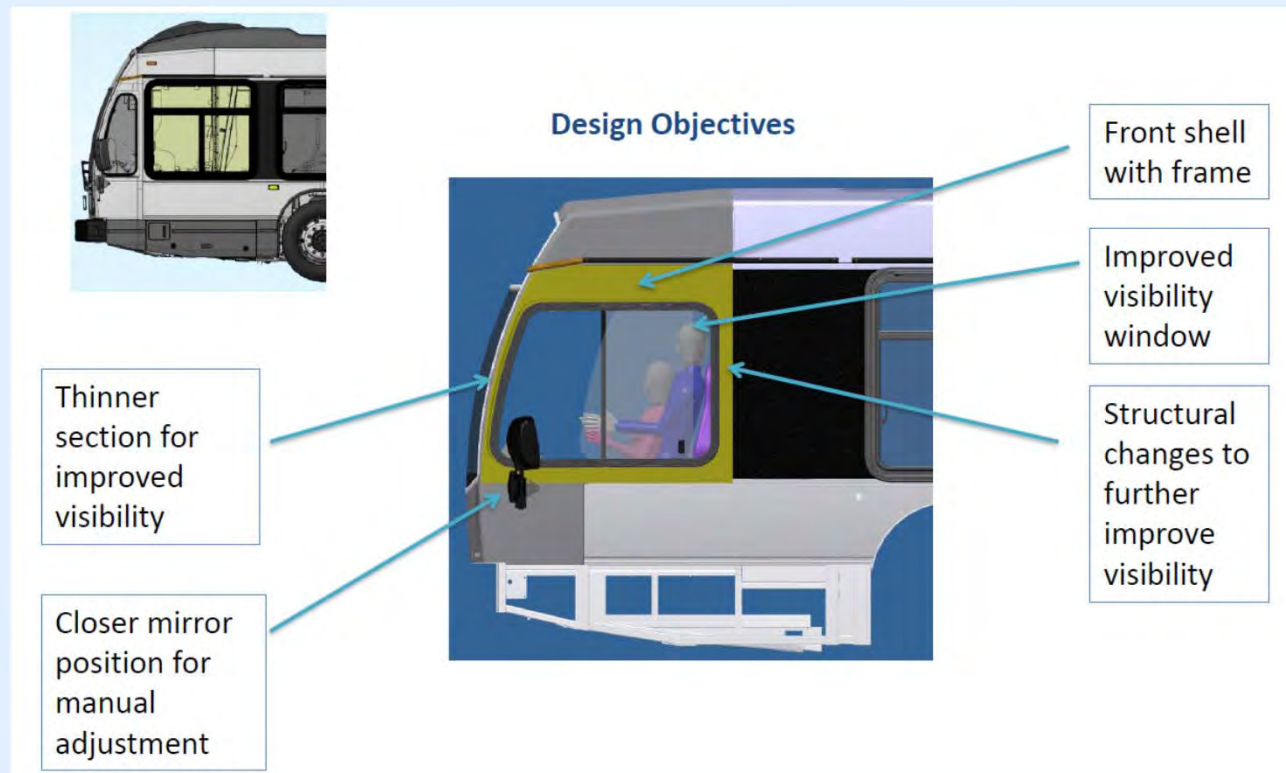
Driver Visibility Improvement

- High Visibility Windows (Hi-Vis)
 - NF has Hi-Vis window that reduces the angle of obscuration by half currently installed on pilot buses
 - Nova has Hi-Vis window installed on one pilot bus
 - Hi-Vis window configuration was presented to Union for review



Driver Visibility Improvement

- Nova working on solution to move B-Pillar
- Transit bus mirror study



Improved Safety Technology

- Collision Warning System
- Pedestrian Turn Warning System

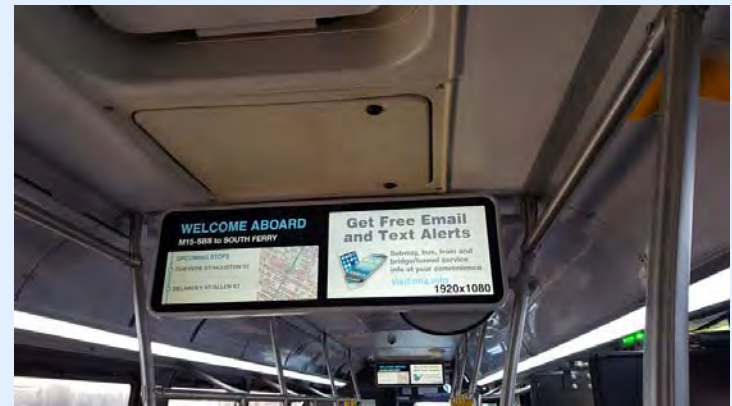


New Look



Improved Customer-Facing Amenities

- On-board Wi-Fi
- USB Charging Ports
- Digital Information Screens with Next Stop Announcements



January 2017 CPOC IEC Project Review



Bus Procurements



Schedule Review

Current Awarded Contracts (2016):

- 92 Nova 60-ft Articulated Clean Diesel Buses – on schedule
- 139 New Flyer 60-ft Articulated Clean Diesel Buses – on schedule
- 138 New Flyer 40-ft CNG Buses – on schedule

The 60-ft Articulated buses and 40-ft CNG buses are undergoing in-service evaluation.



Budget Review

- **Deliveries Completed in 2016:**
projects on budget with no significant issues.
- **Current Procurements:**
projects on budget with no significant issues.



Observations

The IEC notes that the bus procurement program appears to be well managed.

The IEC commends NYCT efforts to implement important new initiatives that improve passenger safety, reduce emissions, introduce new generation hybrid and electric buses, and new technologies.



NYCT Subway Car Program Progress Update to CPOC

Frank Jezycki

Vice President & Chief Mechanical Officer
Department of Subways

January 23, 2017

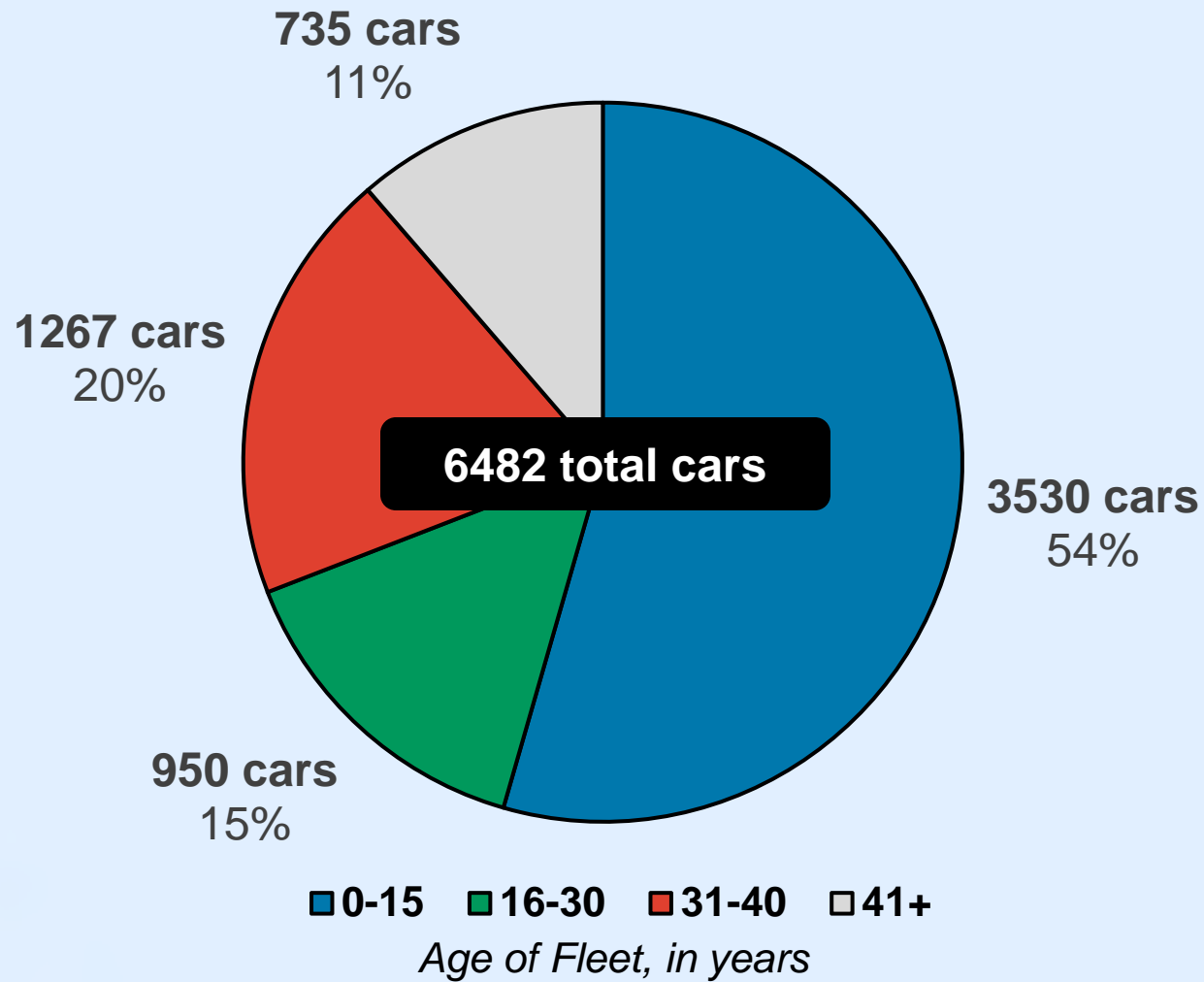


Agenda

- **R188** Project Update (506 Cars)
- **R179** Project Update (300 Cars)
- **R211** Project Update (Up to 1,545 Cars)



Subway Car Fleet Overview



As of January 2017



R188 | Project Overview

Car builder

Kawasaki Rail Car, Inc.

Scope

126 new 'A' Division cars + 380 converted R142A cars (506 total cars)

- Base Order: 3 trains (23 new cars + 10 converted R142A cars)
- Option Order: 43 trains (103 new cars + 370 converted R142A cars)
- Total: 46 trains for Flushing CBTC / 7 Line Extension service

Schedule

Base Contract awarded: 5/28/2010

Option Contract awarded: 12/30/2011

Final train accepted: 6/30/2016

Project Budget

\$613.6 million

Highlights

Progress

- Deliveries completed in June 2016; all 506 cars conditionally accepted and placed in-service
- Overall project budget currently 90% expended
- 12-Month Rolling MDBF of 222,457 miles exceeds contractual requirement of 150,000 miles.

2017 Look Ahead / Goals

- 319 cars remain under warranty

R188 | In-Service



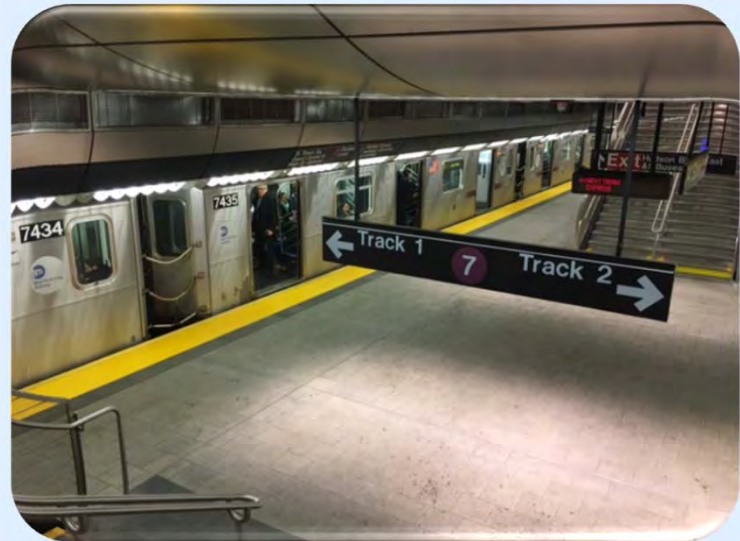
Exterior of new R188 Car



R188 in service



Interior of New R188 Car



R188 train at 34 St-Hudson Yards

R179 | Project Overview

Car builder

Bombardier Transportation Corp.

Scope

300 60-foot 'B' Division cars

– 36 ½ trains (configured into 65 4-car units and 8 5-car units)

Schedule

Contract awarded: 6/4/2012

Prototype test train delivered: November 2016

Production cars delivery begins (latest proposal): September 2017

Production cars completion (latest proposal): July 2018 – Under Review

Project Budget

\$740.6 million

Highlights

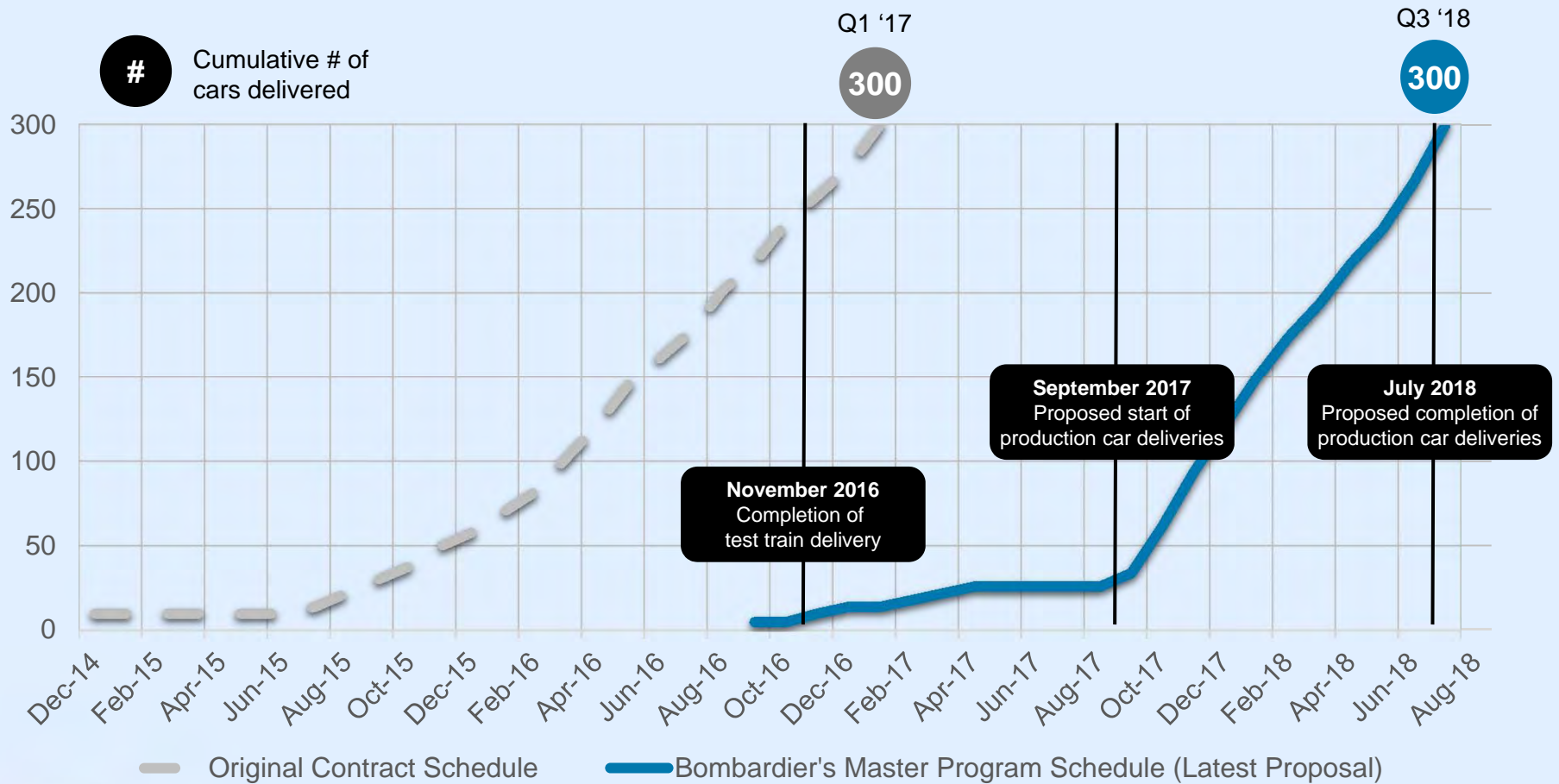
Progress

- Prototype test train received in November 2016
- Various on-site qualification tests ongoing

2017 Look Ahead / Goals

- Complete on-site qualification testing
- Begin receipt of production cars in September 2017

R179 | Delivery Schedule



R179 | Challenges + Mitigations

1 Schedule

- Revised Bombardier schedule proposal under evaluation by NYCT
- Bombardier to deliver additional production units to NYCT while prototype testing is underway
- Bombardier plans to ramp up production to prevent additional delay and potentially accelerate deliveries

2 Transfer of Production Sites

- Expanded oversight by NYCT and consultant
- Inspection plan developed for additional production sites
- Additional car sets of material on hand in the event of defects

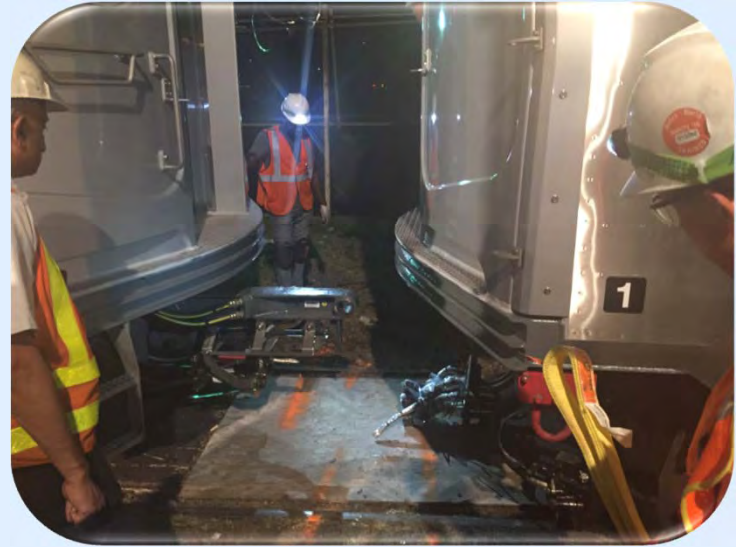
3 Overlapping of Deliveries & Testing

- Bombardier plans to address any required modifications
- Bombardier will group these cars by modifications, as required

R179 | Delivery + Commissioning



R179 car arriving at 207 St Yard



Coupling of R179 cars



Assembled R179 prototype unit



R179 undergoing testing in Pitkin Shop

R211 | Project Overview

Scope

RFP for up to 1,545 'B' Division Subway Cars

- Base order of 10 open gangway prototype cars, 75 SIR cars & 200 NYCT cars
- Option I for 740 NYCT cars (open gangway or standard configuration)
- Option II for 280-520 NYCT cars for "B" Division service growth

Schedule

Design start: 12/14/2012

RFP issued: 7/22/2016

RFP Proposals received: 12/15/2016

Contract Award (forecast): mid-2017

Project Budget

\$3.2 billion (not including Option II)

Highlights

Progress

- Proposals received from car builders in December 2016
- RFP evaluation process ongoing

2017 Look Ahead / Goals

- Completion of public mock-up forecast for May 2017

January 2017 CPOC IEC Project Review



Subway Car Procurements



R188 Budget Review

- The project is on budget. Outstanding change orders are not expected to exceed the remaining contingency.

R188 Schedule Review

- The project remains on schedule with no slippage since the IEC's January 2016 report.
- The IEC notes that delivery completion supports the schedule for the CBTC Flushing project.



Observations

- The IEC observed prompt response and investigation by NYCT and the carbuilder to identify and resolve technical issues and to approve and implement field modifications.
- The IEC observed a coordinated effort between NYCT and the carbuilder resulting in an MDBF that exceeds the contractual requirement of 150,000 miles.



R179 Budget Review

- The project budget was increased to offset the cost of consultant construction administration for program delays associated with welding and truck casting issues that occurred earlier in the program.
- The IEC notes that the contract provides for liquidated damages to recover the cost of contractor delays.
- With four (4) outstanding change orders, the IEC believes the current budget and remaining contingency are adequate to complete the project.



R179 Schedule Review

- The carbuilder's schedule has slipped an additional 6 months since our last report of January 2016. The project is currently 24 months late with a proposed delivery completion date of July 2018.

The additional slippage is due to delay in the production and testing of the pilot cars and completion of on-site qualification testing.

- The carbuilder has submitted a Recovery & Mitigation Plan to NYCT. If successfully executed, the IEC believes a portion of the additional 6-month delay may be recovered.



R179 Project Risks

- The carbuilder plans to ramp up production to 1 car/day in 2017 from the current production rate of 1 car/4-days. Considering the carbuilder performance to date, it is the IEC's opinion that the carbuilder may be unable to achieve the full production rate.
- The IEC is concerned whether the supply chain will be able to support Bombardier's aggressive ramp up schedule.
- The ramp up plan also requires NYCT to accept cars at a rate of 1 car/day which may be difficult to maintain on an uninterrupted ongoing basis.



R211 Budget Review

- The current Budget is \$3.2B and includes the purchase of 75 SIR cars, one Open Gangway Test Train, and 940 “B” Division Railcars a portion of which may be open gangways.

R211 Schedule Review

- The R211 project is currently in the RFP stage. Proposals were received in December 2016. The award date has shifted from early 2017 to mid-2017.



R211 Project Risks

The IEC has identified the following as potential factors that could influence the success of this project:

- Complicated multi-phase procurement
- Changing landscape of suppliers
- Introduction of new technologies



New York City Transit Sandy Recovery & Resiliency Division Capital Program Oversight Committee – January 2017



NYCT Sandy Recovery & Resiliency Program

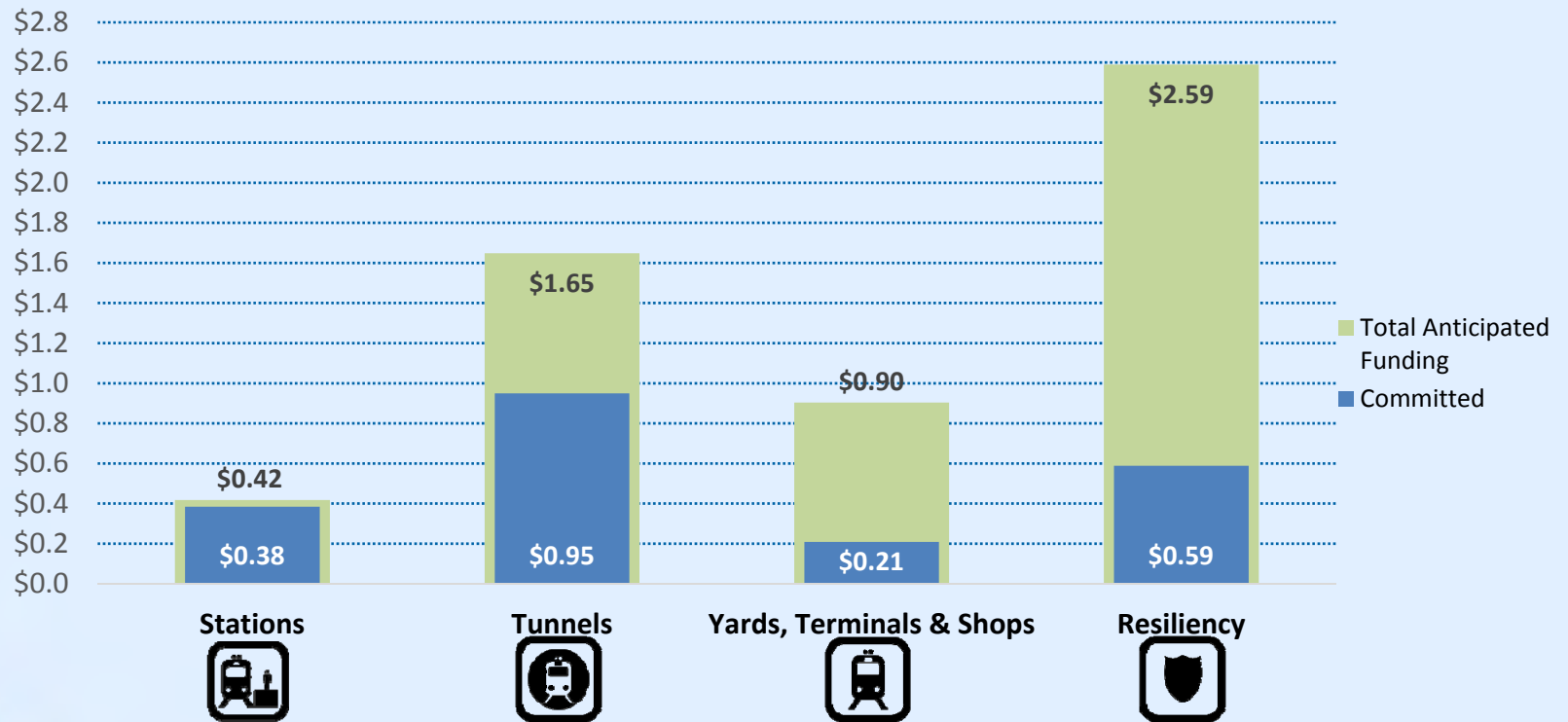
Agenda

- Program Overview
- Project Update
 - South Ferry Station
 - Canarsie Tunnel / Myrtle Viaduct and Bridge
 - St. George Terminal/Yard
 - Clifton Shop



NYCT Sandy Recovery & Resiliency Program Overview

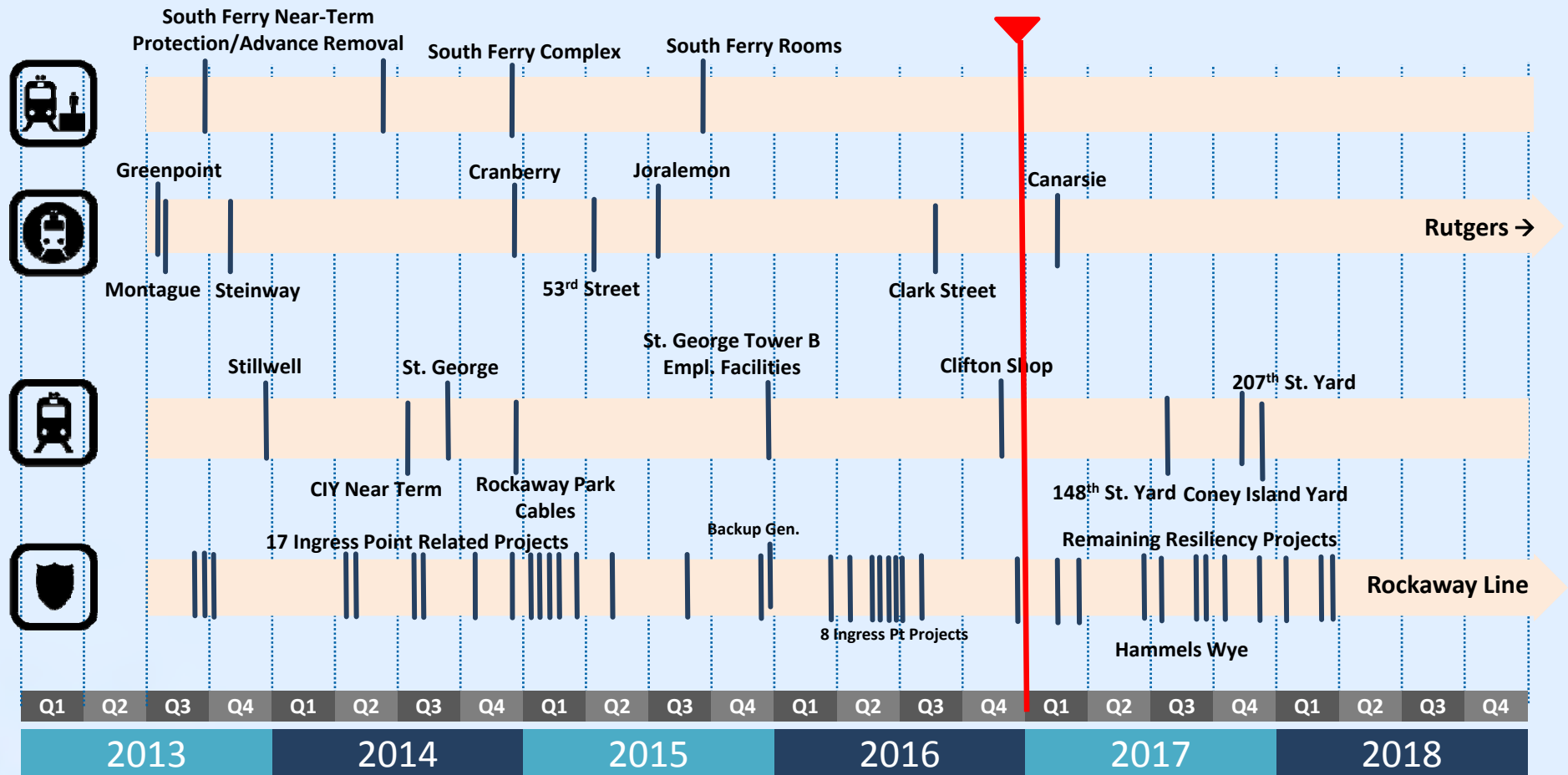
Performance (\$ billion)



- 2016 Award: 10 Projects \$0.52
- 2017 Projected: 15 Projects \$2.46



Timeline of Construction Awards





South Ferry Station Reconstruction

Award: November 2014

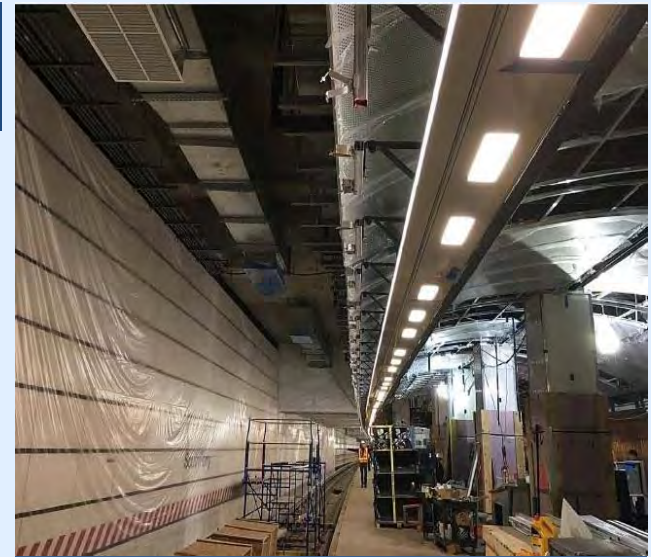
Duration: 31 months

Substantial Completion: June 2017

Project Cost: \$343.9 million

87 % Complete

- Resiliency measures at three station entrances successfully completed June 2016
- Entrance #1 opened on schedule in August 2016
- Systems installation underway
- Station finishes installation underway
- Systems Testing & Commissioning started
- Two SBFP contracts completed on schedule in September 2016 for \$6.3M



Platform Level Lighting



Main Entrance Door (East)





UNDER-RIVER TUNNELS

9 Tunnels Damaged

Completed

- Montague R
- Greenpoint G
- Steinway 7

Actual

3/2015

11/2014

11/2015

In Construction

- Cranberry A C
- 53rd Street E M
- Joralemon 4 5
- Clark Street 2 3

Completion Forecast

5/2017

4/2017

6/2017

1/2019

Future Awards

- Canarsie L
- Rutgers F

Award Forecast

3/2017

2/2021



Canarsie Tunnels – Program of Projects





Canarsie Tunnels – Activities

Progress

- Outreach to affected communities – Spring/Summer 2016
- Feedback from public prefers full closure
- Project in procurement – evaluating contractors' proposals
- Risk Assessment – A risk assessment was performed during the 4th quarter of 2016

Next Steps

- Continued work with NYCDOT to finalize alternate service plans
- Continued outreach to the affected communities

Key dates

- March 2017 contract award - 3 month slip from Dec. 2016
- 1st Quarter 2019: 18 month tunnel shutdown begins





Myrtle Line Viaduct and Bridge




Construction Award: December 2016

Contract Duration: 24 Months

Substantial Completion: December 2018

Project Cost: \$166.7 Million

- Replace 100-year-old viaduct (Bushwick Cut) and bridge
- Construct new Car Equipment Facility at Fresh Pond Yard
- 10 month closure – July 2017 through April 2018
-  Line must reopen before Canarsie shutdown begins
- There is sufficient float between the two projects for preparatory work on the Canarsie line before the tunnel is closed in 1st Quarter of 2019
- Risk Assessment indicates 80% confidence reopening will not be delayed by more than 1 month





St. George Interlocking – Terminal / Yard

Construction Award: September 2014

Contract Duration: 30 months

Substantial Completion: March 2017

Project Cost: \$120.1 Million

84 % Complete

- Replace tracks, interlocking and signal system
- Install new signal relay room, battery room and auxiliary relay room on platform above flood level elevation
- Repair flood damage at Signal Tower B





St. George Interlocking – Terminal / Yard



Central Instrument Location (CIL)

- Signal relay room, battery room and auxiliary relay room installation are completed
- Signal Tower B, three HVAC units have been installed.
- Walkways and Driveway in the yard area have been completed.
- Task Completion: Track Work 99%, Signal 75%, Communication 60%, Power 90%, and Structure 80%
- Continuing coordination with adjacent private development projects: NY Wheel, Empire Outlets and Lighthouse



Clifton Shop (Design/Build)





Clifton Shop (Design/Build)

Design/Build Contract

Awarded December 2016

Project Cost: \$201.82 million

Substantial Completion: July 2020

Duration: 43 Months

- Alternate locations were considered
- Resilient to Category 2 Storm
- Risk Assessment indicated:
 - 80% confidence schedule delay will be no more than 6 months
 - Project cost will remain within allocated budget



January 2017 CPOC IEC Project Review



**Sandy Recovery:
South Ferry Station Complex**



Budget Review

- The project is on budget.
- Expenditures to date reflect the actual percentage of project completion.
- In the opinion of the IEC, the remaining project contingency is sufficient to reach substantial completion.



Schedule Review

- The contractor has cited an area of potential delay in the installation and integration testing of the Fire Alarm System.
- The NYCT intends to mitigate any potential minor delays by expediting the review and acceptance testing process.
- In the opinion of the IEC potential contractor delays are recoverable with the proper allocation of resources.



Observations

- **Testing and Commissioning:** As demonstrated in recent station openings, efficient systems testing and commissioning is critical to a project's success.
 - On the South Ferry Station complex project, the IEC has observed that the agency has taken pre-emptive steps to ensure timely completion of testing and commissioning by holding weekly workshops with the contractor, commissioning agent and user groups.



January 2017 CPOC IEC Project Review



Canarsie Tunnel Rehabilitation



Budget Review

- Project currently in procurement, IEC will comment after award.

Schedule Review

- IEC concurs with NYCT on the following two near-term milestones:
 - Contract award in March 2017
 - 18-month tunnel shutdown to begin 1st Quarter 2019



Observations

- A key predecessor activity to begin the Canarsie tunnel shutdown is the completion of the Myrtle Viaduct project.



January 2017 CPOC IEC Project Review



**NYCT Viaduct and Bridge
Replacement on the Myrtle
Avenue Line (BMT)**



Budget Review

- The award amount was approximately \$10M more than the engineer's estimate partly due to the negotiated schedule needed to maintain the milestone dates. The budget was increased by approximately the same amount.

Schedule Review

- The contract was awarded approximately two months later than planned. To meet critical project milestones, NYCT negotiated a more compact schedule with the contractor.
- A critical schedule component is the completion of the car inspection facility needed to maintain the shuttle trains.



Risk Assessment

Risk Assessment (RA) Workshops were held in June 2016. A risk mitigation workshop was held on August 16, 2016.

- The results of the RA were provided at the December 2016 CPOC meeting.
- The largest schedule contributors were associated with potential delays in real estate acquisitions and with the contract award. MTA Real Estate (RE) started negotiations with adjacent property owners early enough to avoid a construction delay. The IEC has observed that appropriate steps are being taken to mitigate the RE risk.



Risk Assessment

- The post-award project budget fell within the risk-generated, 80% confidence level amount.
- Now that the negotiations are complete and the project awarded, many of the risks are transferred to the contractor or can be retired.



January 2017 CPOC IEC Project Review



**Sandy Recovery:
Clifton Repair Shop
Staten Island**



Budget Review

- Following award, the project is on budget.
- In the opinion of the IEC budget contingency is sufficient to reach substantial completion.

Schedule Review

- The Design-Build contract for the Clifton Repair Shop in Staten Island was awarded in December 2016, with an expected substantial completion date of July 2020.



Observations

- In a cooperative effort, the IEC and the NYCT developed a risk log, which will facilitate monitoring of the project.
- In the opinion of the IEC, at the early design stage of the project, controlling scope and ensuring design and review process is done on a timely basis, are key factors to maintaining the project schedule.



MTA Capital Program Commitments & Completions

through December 31, 2016



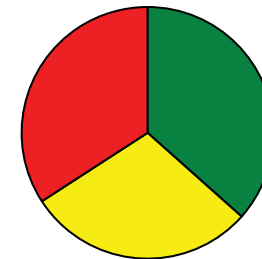
Capital Projects – Major Commitments – December 2016

In 2016, 41 major commitments were planned of which 27 were made. 15 were on time or early, 12 were late, but have since been committed, and 14 remain to be committed. Delayed projects are explained on the following pages.

Through year end, agencies committed \$5.0 billion of a \$6.6 billion goal. The shortfall versus goal was due to the delayed major commitments referenced above. These delays include high value projects such as NYCT's Canarsie Tube and 207th Street restoration projects, as well as East Side Access' Mid-Day Storage Yard.

Major commitments delayed beyond 2016 will continue to be tracked in 2017 against the original goals.

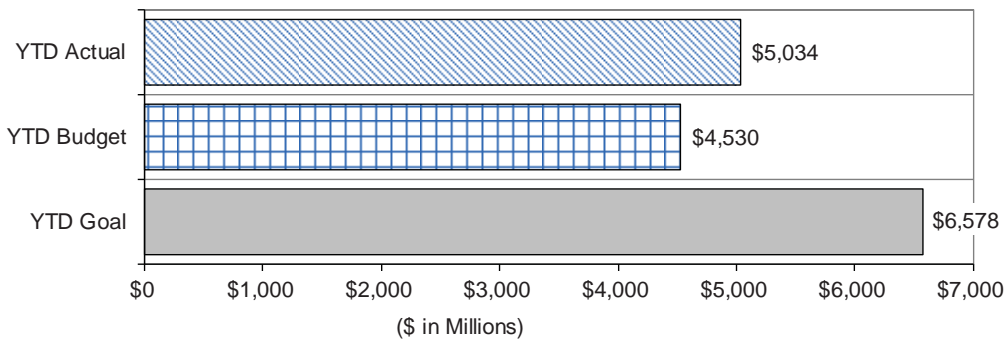
Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
GREEN = Commitments made/forecast within Goal	15	37%	↑ 2
YELLOW = Commitments delayed beyond Goal (already achieved)	12	29%	↑ 6
RED = Commitments delayed beyond Goal (not yet achieved)	14	34%	↓ 1
	41	100%	↑ 7

Budget Analysis

2016 Annual Goal	\$6,578	(\$ in millions)
2016 Actual	77%	of Annual Goal
Forecast left to Commit	0%	\$0



Year-to-Date Agency Breakdown

2016 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
5 6 7	—	+3 YELLOW	-2 RED
Long Island Rail Road			
8 11	+1 GREEN	—	—
Metro-North Railroad			
11 3	+1 GREEN	+1 YELLOW	+2 RED
Bridges and Tunnels			
11	—	—	+1 RED
Capital Construction Company			
4 1	—	+2 YELLOW	-2 RED
MTA Bus Company			
	—	—	—
MTA Police Department			
1	—	—	+1 RED

Capital Projects – Major Commitments – December 2016 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
14 All-Agency Red Commitments (6 new this month)				<i>Facilities/Maintenance</i>			
NYCT				Power Upgrade: RCC, PCC			
<i>Sandy Recovery & Mitigation</i>				Construction Award			
Sandy Mitigation: 7 Stations (Manhattan/Queens/Bronx Initiative)	Construction Award	May-16	Feb-17			Jul-16	Jan-17
		\$96.3M	\$51.7M			\$50.2M	\$55.5M
Delay in advertisement postponed the award. Prior delays include pending design drawings approvals, finalization of specs and contract documents, and issuance of notice to proceed for CCM to start constructability review, and revised mitigation solution for a staircase at 155 St on the Concourse Line.				Project delayed due to late advertisement and pending approval of Procurement Staff Summary. Two subcontractors approval required before awarding the contract.			
<i>Sandy Mitigation: 9 Stations (Brooklyn/Queens Initiative)</i>				LIRR			
	Construction Award	Jun-16	Feb-17	<i>Stations</i>			
		\$100.7M	\$56.2M	Nostrand Avenue Station	Construction Award	Nov-16	Mar-17
Delay in advertisement postponed the award. Bid opening scheduled in November. Earlier delay pending design drawings approvals, finalization of specs and contract documents. Project cost decreased reflecting RTA estimate.						\$21.0M	\$21.0M
<i>Sandy: 207th Yard Perimeter Protection & Power Cable</i>				Approval to advertise was received in November, which was delayed as the LIRR sought approvals from all stakeholders. Approval was also needed for renderings for a public notice.			
	Construction Award	Oct-16	Dec-17	MNR			
		\$222.7M	\$211.5M	<i>Signals</i>			
Project award slipped to December 2017 due to ongoing NYC DEP issues regarding existing sewer relocation and the need for further coordination.				Positive Train Control 2010-14 Support (New Item)			
<i>Sandy Canarsie Tube Restoration & Core Capacity Improvements</i>					Construction Award	Dec-16	Mar-17
	Construction Award	Nov-16	Feb-17			\$57.0M	\$57.0M
		\$883.3M	\$899.6M	The design of the radio communications was delayed due to radio coverage issues that delayed the installation award (\$15 million). Other tasks with the overall \$57 million goal were made.			
The award schedule delayed due to a protracted procurement process. Project cost increased reflecting updated Engineer's estimates.				Positive Train Control Installations (New Item)			
<i>Stations</i>					Construction Award	Dec-16	Mar-17
ADA: 68 St- Hunter College /	Construction Award	Sep-16	May-17			\$45.3M	\$45.3M
		\$66.8M	\$103.7M	The design of the radio communications was delayed due to radio coverage issues (related to a subcontractor change) that delayed the installation award. None of the tasks supporting the \$45 million goal were committed in 2016, but a project management task (\$48 million) was committed ahead of schedule.			
Most recent delay due to revisited constructability for possible reduction in duration. Previous project schedule delayed pending FTA Finding of No Significant Impact (FONSI) and resolution of property acquisition of the Imperial House property.				<i>Right of Way</i>			
Renew Five Astoria Line Stations (New Item)				Rock Slope Remediation (West of Hudson) (New Item)			
	Construction Award	Dec-16	Apr-17		Construction Award	Dec-16	Feb-17
		\$71.5M	\$71.5M			\$15.0M	\$15.0M
Four of the stations are now combined into a separate Enhanced Stations Initiative package (package #2) to become a new 2017 goal. The request to advertise for the remaining station (Ditmars Ave; \$12 million) was delayed due to this change.				Due to a protracted procurement the construction award has been delayed and is now scheduled to be awarded in February 2017.			

Capital Projects – Major Commitments – December 2016 – Schedule Variances

Actual Results Shaded

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Actual
B&T				12 All-Agency Yellow Commitments (7 new this month)			
<i>Facilities</i>				NYCT			
Installation of Fire Standpipe & Upgrade of Fire Protection System (New Item)	Construction Award	Dec-16	Feb-17	<i>Signals & Communications</i>			
The delay was attributable to previously outstanding compliance with reporting obligations, which have since been resolved.		\$17.0M	\$17.0M	Passenger Station LAN: 188 Stations	Construction Award	Feb-16	Mar-16 (A)
						\$50.0M	\$50.0M
				Award was delayed because of additional time required to secure necessary approvals for budget changes and authorizations to approve the commitment.			
				Kings Hwy Interlocking / Culver	Construction Award	Jun-16	Oct-16 (A)
						\$150.0M	\$177.2M
				Award was delayed due to bid postponements from bidders' questions, budget modifications to address increased costs from an unfavorable bid and additional scope related to Church Ave Interlocking. The current estimate reflects the full cost, while the goal budget reflected limited funding availability prior to capital plan approval.			
				CBTC Queens Boulevard West - 50 St to Union Tpke: Phase 2 (New Item)	Construction Award	Jun-16	Dec-16 (A)
						\$143.7M	\$408.8M
				Previous delays were due to approval of budget modification from an unfavorable bid and several earlier bid opening postponements. Bids received and exceed allocated budget. The actual value reflects the full cost of the project including support costs for the duration of the contract and higher costs from bids received. The goal budget assumed only partial support costs due to limited funding prior to program approval.			
				<i>Line Structures & Track</i>			
				Bushwick Cut / MYR Bridge Over Atlantic (New Item)	Construction Award	Sep-16	Dec-16 (A)
						\$70.9M	\$150.2M
				Project award delayed to allow for adequate time for Request for proposals (RFP) procurement method which typically takes longer. Project cost increased due to additional scope including new bridge seat, longer bridge, replacement of substructure, inclusion of track work, increase estimate of property acquisition and the need for temporary Car Inspection Facility to inspect trains during shuttle operations.			
				<i>Sandy Restoration and Resiliency</i>			
				Sandy: Clifton Shop (New Item)	Construction Award	Nov-16	Dec-16 (A)
						\$210.3M	\$202.8M
				The award was delayed due to protracted procurement process. A Bidder was selected by the Selection Committee and Procurement package is on the December Board agenda. Project cost reflects good bids.			

Project	Commitment	Goal	Forecast
B&T			
<i>Facilities</i>			
Installation of Fire Standpipe & Upgrade of Fire Protection System (New Item)	Construction Award	Dec-16	Feb-17
The delay was attributable to previously outstanding compliance with reporting obligations, which have since been resolved.		\$17.0M	\$17.0M
MTACC			
<i>East Side Access</i>			
Mid- Day Storage Yard	Construction Award	Nov-16	Mar-17
The delay is due to additional time required to complete a project risk assessment and to receive approvals to advertise from all sources.		\$266.0M	\$266.0M
MTA PD			
<i>MTA PD Projects</i>			
Penn Station/Atlantic Tunnel Radio Upgrade (New Item)	Construction Award	Dec-16	Dec-17
The schedule delay is due to ongoing MOU negotiations between users of the radio system as well as for considerations of other possible upcoming construction work at Penn Station, external to the radio project.		\$25.0M	\$25.0M

Capital Projects – Major Commitments – December 2016 – Schedule Variances

Actual Results Shaded

Project	Commitment	Goal	Actual
Sandy: 13 Fan Plants, Long-Term - 5 Locations (New Item)	Construction Award	Jun-16 \$46.2M	Dec-16 (A) \$32.6M
Project award delayed due to extended advertisement period and postponements of the bid. It was further delayed to December for vendor background checks and insurance approvals. Project cost decreased reflecting favorable bids.			

LIRR

Track

Amtrak Territory Projects	Construction Award	Jun-16 \$17.0M	Jul-16 (A) \$32.5M
Award delayed due to additional time required by the Procurement Department to perform audit of the bidders. EAC was adjusted to reflect spending trends since 2014, which includes add'l track equipment, increased material costs and increased Amtrak manpower costs.			

MNR

Track

Cyclical Track Program (New Item)	Construction Award	Aug-16 \$22.0M	Dec-16 (A) \$22.0M
Due to the reprioritization of track maintenance projects, some planned 2016 cyclical track work had been delayed and was committed in December 2016.			

MTACC

East Side Access

Grand Central Terminal Station Caverns & Track	Construction Award	Feb-16 \$777.4M	Apr-16 (A) \$712.0M
The delay was due to MTACC finalizing open issues prior to issuing a notice to proceed, which was issued in April. The award value reflects a favorable bid.			
Harold Tunnel A Construction (CH061A)	Construction Award	Jul-16 \$56.6M	Nov-16 (A) \$54.2M
Additional time required for extended review processes prior to advertisement and in procurement. Due to resource issues in the Harold Interlocking the award of this contract has been delayed. Budget adjusted to reflect good bid and force account costs.			

Project	Commitment	Goal	Actual
<i>Second Avenue Subway Ph. 2</i>			
Environmental Assessment (New Item)	Construction Award	Jul-16 \$10.0M	Dec-16 (A) \$2.3M
Additional review, outreach consultant, design and environmental issues resulted in a delay in the award. Design and Environmental contracts were approved at Nov MTA Board.			
PE Design Contract (New Item)	Construction Award	Jul-16 \$100.0M	Dec-16 (A) \$120.5M
Additional review, outreach consultant, design and environmental issues resulted in a delay in the award. Design and Environmental contracts were approved at Nov MTA Board and combined result in the higher cost.			

Capital Projects – Major Commitments – December 2016 – Budget Only* Variances

Actual Results Shaded

**for variances of more than \$5 million or 10%*

Project	Commitment	Goal	Actual
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4 All-Agency Budget Only Commitments

NYCT

Sandy Resiliency & Restoration

Sandy Mitigation: 17 Fan Plants & Adjacent Tunnels	Construction Award	Jul-16	May-16 (A)
		\$45.7M	\$39.2M
Awarded in May 2016. Value reflects good bids.			

Track

Mainline Track Replacement 2016 / 63rd St	Construction Award	Mar-16	Feb-16 (A)
		\$40.0M	\$29.2M
Awarded in February with savings reflecting a favorable bid.			

LIRR

Track

2016 Track Program	Construction Award	Mar-16	Feb-16 (A)
		\$17.8M	\$59.7M
Originally committed in February 2016. The actual value was increased in June following the approval of the 2015- 19 Capital Plan.			
Jamaica Capacity Improvements Phase I (Platform F)	Construction Award	Sep-16	Sep-16 (A)
		\$82.1M	\$68.3M
Lowest bidder was found to be competitive and equal to LIRR engineer's estimate with all contingency removed.			

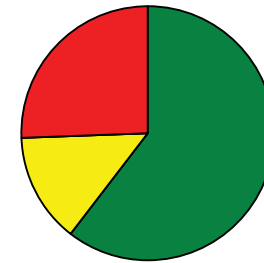
Capital Projects – Major Completions – December 2016

In 2016, 43 major completions were planned of which 32 were fully achieved. 26 were on time or early, six were late, but have since been completed, four have achieved beneficial use, but not substantial completion and seven remain to be completed. All major completion delays are explained on the following pages.

Through year end, the MTA substantially completed \$2.8 billion of its \$4.6 billion goal. In addition, Second Avenue Subway Phase 1 has opened new stations, bringing these assets into revenue service. Projects brought into substantial completion and/or revenue service total \$4.1 billion or 89% of the year-end target.

Major completions delayed beyond 2016 will continue to be tracked in 2017 against the original goals.

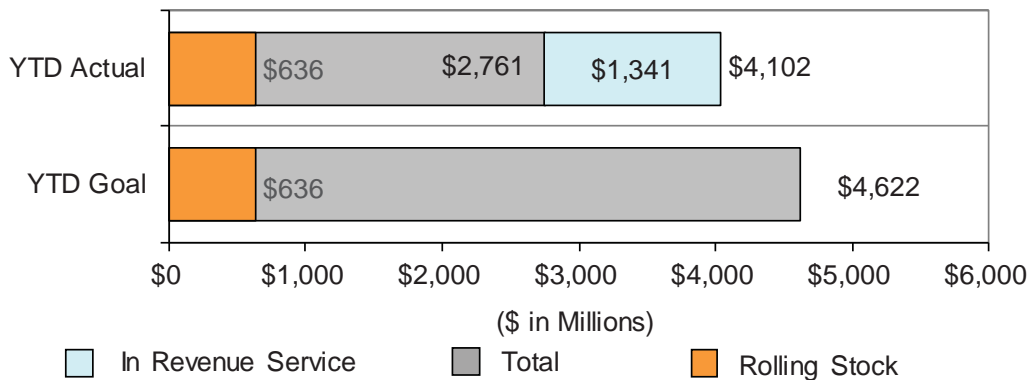
Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
GREEN = Completions made/forecast within Goal	26	60%	↑ 4
YELLOW = Completions delayed beyond Goal (already achieved)	6	14%	↑ 1
RED = Completions delayed beyond Goal (not yet achieved)	11	26%	↑ 2
Total	43	100%	↑ 7

Budget Analysis

2016 Annual Goal	\$4,629	(\$ in millions)
2016 Actual	60%	of Annual Goal
2016 Actual/Revenue Service	89%	of Annual Goal



Year-to-Date Agency Breakdown

2016 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
11	+3 GREEN	+1 YELLOW	-1 RED
Long Island Rail Road			
4	---	---	+1 RED
Metro-North Railroad			
3	---	---	+1 RED
Bridges and Tunnels			
5	+1 GREEN	---	---
Capital Construction Company			
1	---	+1 YELLOW	+1 RED
MTA Bus Company			
3	---	---	---
MTA Police Department			
	---	---	---

Capital Projects – Major Completions – December 2016 – Schedule Variances

Project	Completion	Goal	Forecast
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11 All-Agency Red Completions (3 new this month)

NYCT

Stations

Replace 11 Hydraulic Elevators	Construction Completion	Aug-16 \$24.0M	Feb-17 \$24.1M
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The project was delayed due to extensive work on existing signal switches which delayed GOs until mid-November. Testing, termination, and inspection, commissioning and place in service of the elevators will follow. Project completion was previously delayed due to unforeseen field conditions.

ADA & Station Renewal at Ozone Park- Lefferts Blvd / Liberty	Construction Completion	Aug-16 \$23.9M	Apr-17 \$24.1M
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Project completion re-scheduled to December due to substantial changes in communication work associated with the ADA elevators and the Help Point Infrastructure.

SIR: Station Construction: Arthur Kill	Construction Completion	Aug-16 \$23.2M	Mar-17 \$24.0M
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Project completion delayed due to scope changes including the redesign of the electrical distribution room (EDR), exterior wall panel, ramp work, and various communications issues.

LIRR

Track

2016 Annual Track Program (New Item)	Construction Completion	Dec-16 \$17.6M	Jan-17 \$17.6M
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The project's completion delayed due to a December 2016 snowstorm that prevented completion of the final crossing.

MNR

Grand Central Terminal

GCT Leaks Remediation (New Item)	Construction Completion	Dec-16 \$18.6M	Jun-17 \$18.6M
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The delay was due to unforeseen deteriorated structural steel and existing conditions that differ from the contract drawings. Project completion has been rescheduled for June 2017.

Blue = In Revenue Service

Project	Completion	Goal	Forecast
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MTA Bus

Bus Company Projects

Security Upgrades - Far Rockaway & Baisley Park	Construction Completion	Sep-16 \$9.9M	Apr-17 \$9.9M
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Delay due to ongoing negotiations for remaining AWOs.

MTACC

East Side Access

Plaza Substation & Structures	Construction Completion	Aug-16 \$250.2M	Mar-17 \$257.7M
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Substantial completion date has been delayed as a result of slow progress and additional work approved by the MTA Board in April 2016.

Second Avenue Subway

72nd St Station Finishes	Construction Completion	Nov-16 \$301.2M	Dec-17 \$333.9M
--------------------------	-------------------------	--------------------	--------------------

Budget increased to reflect acceleration agreement and additional contingency based on the analysis of current and future additional work order needs. Revenue Service began January 1, 2017. Punchlist items, as-built drawing and other administrative activities will be completed by the end of 2017.

86th St Station Finishes	Construction Completion	Nov-16 \$237.2M	Dec-17 \$256.7M
--------------------------	-------------------------	--------------------	--------------------

Budget increased to reflect acceleration agreement and additional contingency based on the analysis of current and future additional work order needs. Revenue Service began January 1, 2017. Punchlist items, as-built drawing and other administrative activities will be completed by the end of 2017.

96th St Station Finishes	Construction Completion	Nov-16 \$385.0M	Dec-17 \$415.4M
--------------------------	-------------------------	--------------------	--------------------

Budget increased to reflect acceleration agreement and additional contingency based on the analysis of current and future additional work order needs. Revenue Service began January 1, 2017. Punchlist items, as-built drawing and other administrative activities will be completed by the end of 2017.

Systems Contract (C6) (New Item)	Construction Completion	Dec-16 \$320.0M	Dec-17 \$334.6M
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Budget increased to reflect acceleration agreement. Revenue Service began January 1, 2017. Punchlist items, as-built drawing and other administrative activities will be completed by the end of 2017.

Capital Projects – Major Completions – December 2016 – Schedule Variances

Actual Results Shaded

Project	Completion	Goal	Actual
6 All-Agency Yellow Completions (1 new this month)			
NYCT			
<i>Stations</i>			
Renew Five Liberty Line Stations	Construction Completion	Apr-16 \$74.7M	May-16 (A) \$77.6M
The project was completed in May with the contract delay due to inclement weather, loss of two GOs, and the repair of corroded steel that stopped work at 111th Street Station. Project cost increased due to additional TA Labor services required for additional steel work.			
Brick Arch Repair: 168 Street & 181 Street / Broadway- 7th Ave	Construction Completion	Jul-16 \$64.8M	Sep-16 (A) \$72.1M
A budget modification being processed to cover additional costs for additional weekend GOs and support costs required during construction. Additional work and an extended contract duration by 10 months resulted in the previous increase. Additional AWOs and scope related to station medallions have resulted the original schedule delay and the recent delay is due to modifications related to Help Points at the 168th Street station.			
<i>Line Structures</i>			
Overcoating: Broadway Junction - New Lots Avenue / CNR (New Item)	Construction Completion	Oct-16 \$27.1M	Dec-16 (A) \$27.1M
The project was delayed due to the late removal of shielding under a separate project at Atlantic Ave Station that prevented some work from being performed. Inclement weather, high temperature and humidity resulted in work stoppages on multiple occasions last quarter.			
LIRR			
<i>Track</i>			
Main Line Track Farmingdale-Ronkonkoma Phase I	Construction Completion	Jul-16 \$36.3M	Oct-16 (A) \$36.3M
Delay related to contract change work that included wetland mitigation and an additional retaining wall on south side, which were completed in October (delayed from September due to weather conditions).			

Project	Completion	Goal	Actual
B&T			
<i>Marine Parkway Bridge</i>			
Rehabilitate Rockaway Point Blvd Overpass	Construction Completion	May-16 \$11.1M	Jun-16 (A) \$11.1M
The project was completed in June. Although the overpass was opened for traffic at the end of May, substantial completion was previously delayed by one month due to outstanding work items including installing a concrete median barrier, curbs, drainage, and striping.			
MTACC			
<i>East Side Access</i>			
Manhattan South Structures	Construction Completion	Feb-16 \$249.8M	Jun-16 (A) \$249.8M
The project was completed in June. Substantial completion was impacted by delays to underground tunnel work.			

Capital Projects – Major Completions – December 2016 – Budget* Variances

Actual Results Shaded

**for variances of more than \$5 million or 10%*

Project	Completion	Goal	Actual
3 All-Agency Budget Only Completions			
NYCT			
<i>Track</i>			
Mainline Track Replacement 2016 / 63rd St	Construction Completion	Jul-16 \$40.0M	Jul-16 (A) \$25.4M
Project cost decreased to reflect favorable bid and project savings.			
<i>Line Equipment</i>			
Vent Plant: Mulry Square / 8AV & BW7	Construction Completion	Apr-16 \$60.9M	Apr-16 (A) \$55.4M
Project completed in April. Cost estimate decreased reflecting project savings.			
B&T			
<i>Signals & Communications</i>			
Miscellaneous Structural Rehabilitation	Construction Completion	May-16 \$22.0M	May-16 (A) \$19.1M
The project was completed in May 2016. Project cost decreased to reflect unused project contingency.			

MTA Capital Program Commitments & Completions Quarterly Report of Prior Years' Delays



Metropolitan Transportation Authority

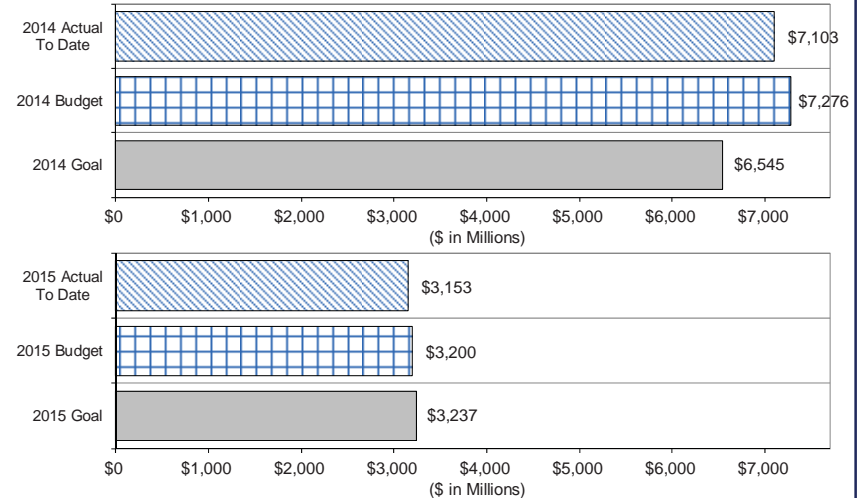
Prior Years' Major Commitments – Quarterly Update: Dec. 2016

The status of 2014 and 2015 major commitments delayed beyond 2015 continue to be tracked until committed and are reported to CPOC on a quarterly basis.

In 2014, agencies set an overall MTA commitment goal of \$6.5 billion which included 55 major commitments. In 2014, 39 commitments totaling \$5.8 billion were made. Of the 16 major commitments that slipped beyond 2014, nine were made in 2015 and seven slipped beyond 2015. Five of these commitments were made in 2016.

In 2015, agencies set an overall MTA commitment goal of \$3.1 billion which included 34 major commitments. In 2015, 25 major commitments totaling \$2.9 billion were made. Nine remaining major commitments slipped beyond 2015 and seven of these were made in 2016.

Budget Analysis



Actual		MTA-Wide Prior Years' Major Commitments																Post 2016
		2014 G	2014 Y	2015 G	2015 Y	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Goal		12	27	13	21	0	0	3	0	1	1	3	1	1	0	0	2	4
Total	89	12	27		9			1			1	3	1	1			1	2
2014	55																	
Jan-15	1			1														
Feb-15	3			2	1													
Mar-15	4			3	1													
Apr-15	7			4	3													
May-15	2			2														
Jun-15	6				5				1									
Jul-15	2			1								1						
Aug-15	2							2										
Sep-15	1											1						
Oct-15	2				1							1						
Nov-15	2				1													1
Dec-15	2																1	

This chart tracks when all major commitments are forecast/achieved versus original goal, starting with those that were committed within 2014 and 2015, followed by those that slipped beyond 2015. Green represents projects that were achieved on-time, yellow represents projects that were delayed but have since been committed, and red represents projects that are still delayed. Projects that are red will become yellow when they are committed.

GREEN = Commitments made/forecast within Goal **YELLOW** = Commitments delayed beyond Goal (already achieved) **RED** = Commitments delayed beyond Goal (not yet achieved)

Prior Year Major Commitments – December 2016 – Schedule Variances

Actual Results Shaded

Project	Commitment	Goal	Forecast
4 All-Agency Red Commitments			
NYCT			
<i>Sandy Recovery & Mitigation</i>			
Sandy Repairs: Rutgers and Cranberry Tubes	Construction Award	Jun-14 \$154.0M	Feb-22 \$165.0M
This originally was a two-tube Sandy project. Due to operational planning issues, the two tubes were separated. The Cranberry tube contract awarded in December 2014 while the Rutgers tube was rescheduled to 2022 due to construction sequencing of the tubes. The project cost increase reflects unfavorable bids received for Cranberry Tube contract.			
Sandy: 148th Yard Long-Term Perimeter Protection & Power Cable	Construction Award	Nov-15 \$135.1M	Aug-17 \$124.9M
Project delayed further due to property acquisition issues. Prior delays due to expected Sandy funding issues, delay of easement agreement, a Risk assessment and advertisement approval. Project cost decreased reflecting draft RTA estimate.			
<i>Stations</i>			
ADA: Phase 2: 57 Street - 7 Avenue / Broadway	Construction Award	Nov-14 \$35.9M	Jul-17 \$73.2M
Delay due in part to the an elevator relocation in the excavation area impacting existing ducts. In addition, alternatives providing ADA access to the 57th Street Station, impacting the design completion schedule and increasing project costs.			
<i>Service Vehicles</i>			
Work Train & Special Equipment: 54 Flat Cars	Purchase Award	Dec-15 \$33.5M	Jun-17 \$34.7M
To maximize efficiencies, this procurement is being combined with the procurement of 27 refuse flats which is included the 2015-2019 Capital Program. The combined advertisement was previously delayed due to issues in securing capital program funding and later advertised in August 2016. To allow sufficient time for the RFP evaluation and negotiation period, the award is now forecast for Q2 2017. The cost reflects RTA estimate.			

Project	Commitment	Goal	Actual
12 All-Agency Yellow Commitments (2 new this quarter)			
NYCT			
<i>Sandy Recovery & Mitigation</i>			
Sandy: Clark St Tube	Construction Award	Aug-14 \$77.4M	Sep-16 (A) \$115.3M
The bid opening postponed to July to answer bidder questions thus delaying the award. The award was previously delayed due to schedule adjustments based on service and community impact as well as constructability and programmatic concerns. Project cost adjusted to reflect a negotiated CCM contract and the final bid.			
Sandy Mitigation: Sidewalk Vent Grating/Covers/Manholes - 8 Stations	Construction Award	Jul-15 \$70.4M	Jul-16 (A) \$47.1M
Project was awarded in July but delayed pending executive approval and coordination with NYS. Project cost reflects favorable bid price.			
<i>Signals & Communication</i>			
ISIM B- Div: Module 2 (New Item)	Construction Award	Dec-15 \$43.7M	Dec-16 (A) \$58.5M
Delay was due to PSLAN installation at ten stations and a reschedule due to capital program funding constraints experienced at that time. Actual award value reflects bid results.			
<i>Buses</i>			
Purchase 231 Articulated Buses	Purchase Award	Jun-14 \$245.5M	Mar-16 (A) \$202.2M
The procurement staff summary approved by the MTA Board in November, but the contract award was subject to State Comptroller review. Contract awarded in March.			
<i>Depots</i>			
Bus Radio System - NYCT	Construction Award	Aug-15 \$215.0M	Mar-16 (A) \$187.3M
Procurement Staff Summary approved by MTA Board in February. Project Awarded in March. Project cost decrease reflects a favorable bid.			
<i>Stations</i>			
Station Components: 4 Stations / Jamaica	Construction Award	Dec-14 \$37.8M	Jun-16 (A) \$81.4M
Awarded in June. The past delay was due to additional scope including new station component work at three stations, extending the design, and additional painting in 3 of the 4 stations. Project cost increased due to added scope and an unfavorable bid.			

Prior Year Major Commitments – December 2016 – Schedule Variances

Actual Results Shaded

Project	Commitment	Goal	Actual	Project	Commitment	Goal	Forecast
LIRR				MTA Bus			
<i>Track</i>							
MLC- Hicksville North Siding	Construction Award	Sep-15 \$25.7M	Jul-16 (A) \$8.4M	Bus Radio System - MTA Bus	Construction Award	Aug-15 \$58.5M	Mar-16 (A) \$62.4M
Construction award delayed due to additional scope review during the design process and extended RFP process, including BAFO review.				The procurement staff summary was approved by MTA Board in February. Project awarded in March.			
MLC- Hicksville Station	Construction Award	Oct-15 \$42.2M	Jul-16 (A) \$44.6M	Hurricane Sandy Depot Rehabilitation at Far Rockaway	Construction Award	Dec-14 \$25.0M	Aug-16 (A) \$15.0M
Construction award delayed due to additional scope review during the design process and extended RFP process, including BAFO review.				Delay was due to finalizing a construction strategy and cost estimates.			
MNR							
<i>Power</i>							
Power Infrastructure Restoration - 4 Substations (New Item)	Construction Award	Oct-14 \$48.5M	Dec-16 (A) \$49.7M				
Construction services for the four substations was executed in December 2014. The only remaining commitment (\$3.3M) in the agreement with New York State Electric and Gas Company will commence with installation of the Brewster Feeders. The Brewster design was repackaged with Sandy substations work.							
B&T							
<i>Roadway & Decks: RFK Bridge</i>							
Construction of New Harlem River Drive Ramp	Construction Award	Jun-15 \$26.3M	May-16 (A) \$22.9M				
Awarded in May. Delay was due to additional time required to negotiate and to improve coordination with NYC DOT and their contractors.							

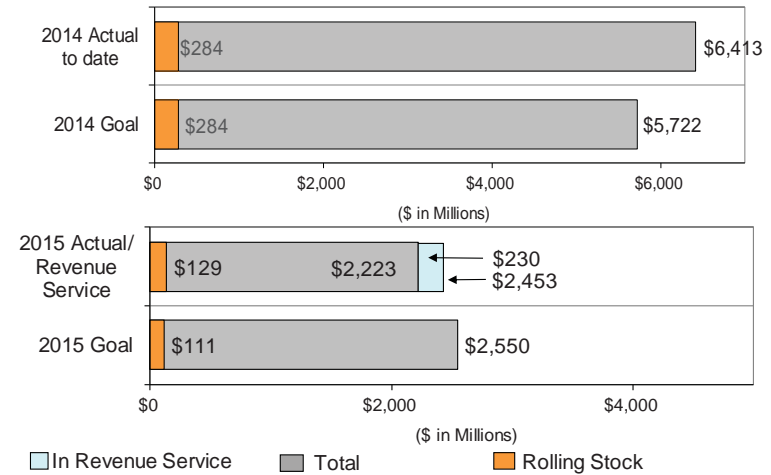
Prior Years' Major Completions – Quarterly Update: Dec. 2016

The status of 2014 and 2015 major completions delayed beyond 2015 continue to be tracked until completed and are reported to CPOC on a quarterly basis.

In 2014, agencies set an overall MTAT completions goal of \$5.7 billion which included 46 major completions. In 2014, \$4.5 billion was completed, including 28 major completions. Of the 18 major completions that slipped from 2014, nine were made in 2015 and nine slipped beyond 2015. Since 2015, five of these completions were achieved in 2016.

In 2015, agencies set an overall MTA completions goal of \$2.6 billion which included 25 major completions. In 2015, 19 major completions totaling \$2.1 billion were made. The remaining six major completions slipped beyond 2015 and three of the six were achieved in 2016. One of the delays, the Second Ave Subway 63rd Street Station Upgrade (\$230 million) was brought into revenue service in 2016.

Budget Analysis



Actual		MTA-Wide Prior Years' Major Completions																Post 2016
		2014 G	2014 Y	2015 G	2015 Y	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	
Goal		23	5	8	20	1	1	0	1	1	0	0	3	1	0	0	0	7
Total	71	23	5		9		1		1	1			2					4
2014	46																	
Jan-15	1			1														
Feb-15	0																	
Mar-15	2			2														
Apr-15	3				3													
May-15	2				1									1				
Jun-15	4				3													1
Jul-15	4				4													
Aug-15	4			3									1					
Sep-15	0																	
Oct-15	0																	
Nov-15	0																	
Dec-15	5			2		1												2

This chart tracks when all major completions are forecast/achieved versus original goal, starting with those that were completed within 2014 and 2015, followed by those that slipped beyond 2015. Green represents projects that were achieved on-time, yellow represents projects that were delayed but have since been completed, and red represents projects that are still delayed. Projects that are red will become yellow when substantially completed.

GREEN = Completions made/forecast within Goal

YELLOW = Completions delayed beyond Goal (already completed)

RED = Completions delayed beyond Goal (not yet achieved)

Prior Year Major Completions – December 2016 – Schedule Variances

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
7 All-Agency Red Completions				MTACC			
NYCT				East Side Access			
<i>Track</i>							
2014 Track & Switch Program (4 Projects) - 3rd Qtr	Construction Completion	Sep-14 \$33.7M	Sep-17 \$36.5M	GCT Concourse Finishes Early Work (CM014A)	Construction Completion	Apr-14 \$56.7M	Mar-17 \$58.0M
Delay due to remaining work at SSIBergen Track Wrap-up. Project completion pending track access needed to complete the work. No GOs are currently scheduled.				Current delay due to slow progress and productivity being lower than expected.			
<i>Depots / Rolling Stock</i>				Second Avenue Subway			
AVLM: Paratransit - 2,273 Vehicle	Purchase	Dec-14 \$35.8M	Jun-17 \$37.7M	63rd St Station Upgrade (C3)	Construction Completion	Dec-15 \$208.9M	Dec-17 \$229.5M
Delays due to deployment of new servers to meet agency- wide operating system compliance and to prewire an additional 433 paratransit vehicles. The project was further delayed due to server consolidation and the procurement of a modification for additional consultant work.				Budget increased to reflect acceleration agreement and additional contingency based on the analysis of current and future additional work order needs. Revenue Service began January 1, 2017. Punchlist items, as- built drawing and other administrative activities will be completed by the end of 2017.			
<i>Signals and Communications</i>							
PA/CIS at 45 Stations - Install Cable	Construction Completion	Dec-15 \$56.1M	Dec-17 \$56.0M				
Project delayed due to slow progress of work. In- house forces were diverted to address other safety sensitive projects.							
LIRR							
<i>Power</i>							
F Circuit Breaker House	Construction Completion	Oct-14 \$7.2M	Feb-17 \$7.2M				
Delay due to a reevaluation of the project's need to be informed by a power load study.							
<i>Signals and Communications</i>							
Centralized Traffic Control	Construction Completion	Jun-15 \$12.9M	May-17 \$12.9M				
Delay due a redesign of the theater as a result of a reevaluation of theater operations.							

Blue = In Revenue Service

Prior Year Major Completions – December 2016 – Schedule Variances

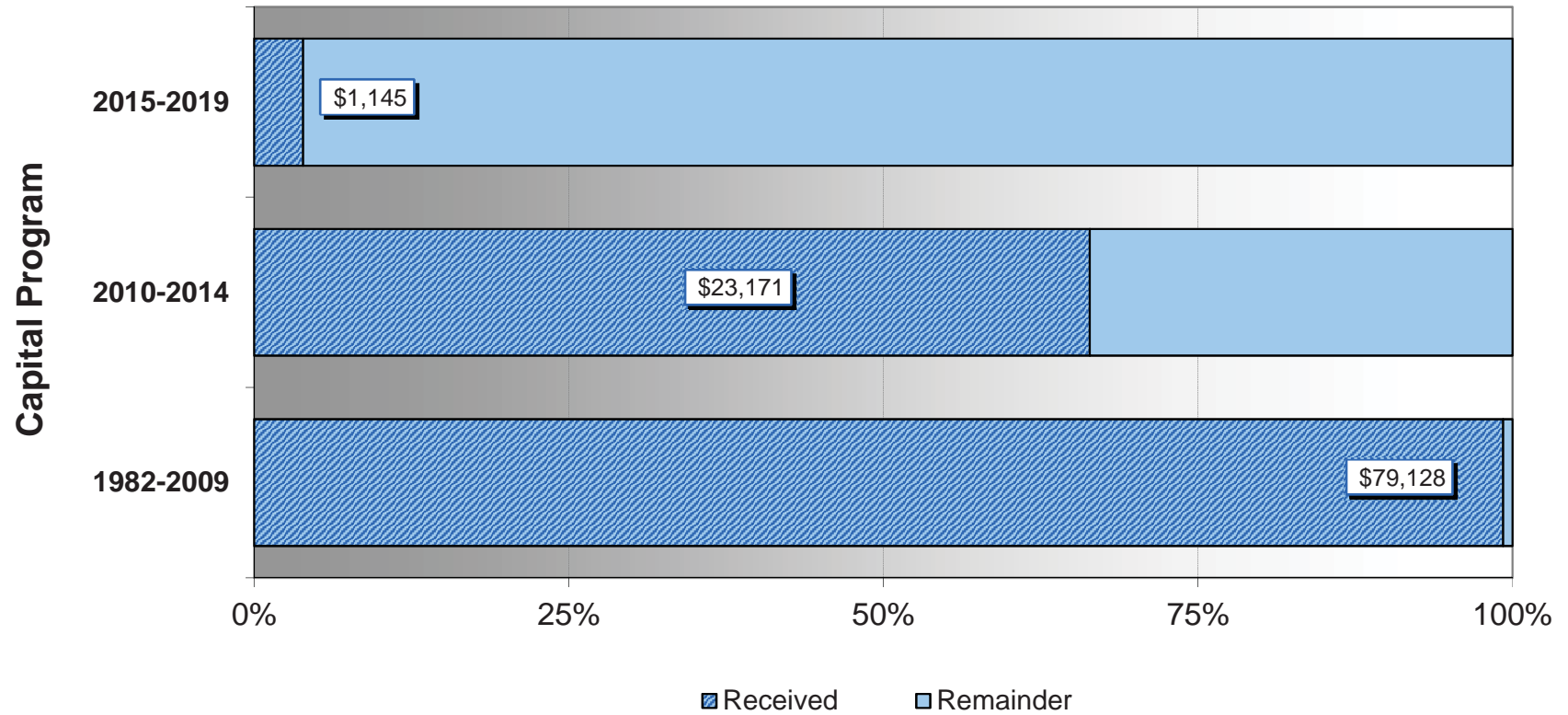
Actual Results Shaded

Project	Completion	Goal	Actual	Project	Completion	Goal	Actual
8 All-Agency Yellow Completions				LIRR			
NYCT				Sandy Mitigation: Line Structures			
Stations				Atlantic Ave Tunnel Lighting			
Station Rehab: Smith-9th Street & 4th Ave	Construction Completion	Jul-14 \$40.7M	Aug-16 (A) \$43.6M	Construction Completion	Nov-14 \$7.0M	Apr-16 (A) \$7.0M	
Project delay was due to a broken water valve, completing as-built drawings, punch list work as well as required drain line and water service repairs. The project was further delayed to redo water line work at Smith-9th Street.				The project has been completed. The previous delay was due to asbestos concerns resulting in investigations, clearances, and requirements for high tension cable installation.			
MTA-Wide Security				MNR			
Electronic Security - URT Phase 2	Construction Completion	May-15 \$31.0M	Sep-16 (A) \$33.1M	Track and Structures / Power			
The project was delayed due to lack of timely track access and shortage of flagging support services. The project was further delayed by network issues which delayed equipment testing.				Harlem River Lift Bridge Cable/Breaker House /Controls	Construction Completion	Aug-15 \$25.4M	Aug-16 (A) \$25.4M
Buses				Prior delay was due to performance issues with the elevator subcontractor. Subsequent delay was due to additional testing of the motor control system.			
Purchase 72 Standard Diesel Buses	Purchase	Dec-15 \$41.8M	Jan-16 (A) \$39.2M	MTAPD			
All buses have been delivered and accepted. The last bus was damaged during transport and is being repaired. Project cost decreased due to lower negotiated price.				Security			
MTACC				MTAPD K-9 Facility	Construction Completion	Jul-14 \$15.0M	Aug-16 (A) \$15.8M
East Side Access				Beneficial Use was established Sept 2015. While there are some lingering punchlist items, substantial completion was achieved in August.			
Harold Structures (Part 1) (CH053)	Construction Completion	Aug-14 \$326.1M	Feb-16 (A) \$309.5M	7 Line Extension			
The project has been completed. The previous delays were due to a cutover of the new duct bank, resource issues, and Amtrak's request for additional time. The Budget adjustment reflects project savings.				Systems, Finishes, and Core & Shell	Construction Completion	Oct-14 \$580.1M	May-16 (A) \$596.3M
7 Line Extension				The project has been completed. While revenue Service began September 13, 2015, the previous delay was due to remaining punchlist items required for substantial completion.			

Status of MTA Capital Program Funding

Capital Funding (December 31, 2016)

\$ in millions



Capital Funding Detail (December 31, 2016)

\$ in millions

2005-2009 Program

Funding Plan	Receipts		
<u>Current</u>	<u>Thru November</u>	<u>This month</u>	<u>Received to date</u>
24,504	23,908	\$5	23,913

2010-2014 Program

Federal Formula, Flexible, Misc
 Federal High Speed Rail
 Federal Security
 Federal RIFF Loan
 City Capital Funds
 State Assistance
 MTA Bus Federal and City Match
 MTA Bonds (Payroll Mobility Tax)
 Other (Including Operating to Capital)
 B&T Bonds
 Hurricane Sandy Recovery
 Insurance Proceeds/Federal Reimbursement
 PAYGO
 Sandy Recovery MTA Bonds
 Sandy Recovery B&T Bonds

Funding Plan	Receipts		
<u>Current</u>	<u>Thru November</u>	<u>This month</u>	<u>Received to date</u>
\$5,839	\$5,614	\$ -	\$5,614
295	295	-	295
206	100	-	100
-	-	-	-
774	607	-	607
770	150	-	150
132	102	-	102
12,703	10,048	-	10,048
1,538	1,077	246	1,322
2,111	1,292	-	1,292
9,376	3,423	-	3,423
160	160	-	160
758	-	-	-
230	59	-	59
Total	22,925	246	23,171

2015-2019 Program

Federal Formula, Flexible, Misc
 Federal Core Capacity
 Federal New Start
 State Assistance
 City Capital Funds
 MTA Bonds
 Asset Sales/Leases
 Pay-as-you-go (PAYGO)
 Other
 B&T Bonds & PAYGO

Funding Plan	Receipts		
<u>Current</u>	<u>Thru November</u>	<u>This month</u>	<u>Received to date</u>
\$6,275	\$27	\$28	\$55
100	-	-	-
500	-	-	-
8,336	-	-	-
2,492	40	-	40
5,889	-	-	-
600	-	-	-
1,846	500	514	1,014
562	36	-	36
2,856	-	-	-
Total	603	542	1,145