



Metropolitan Transportation Authority

# Capital Program Oversight Committee Meeting

## November 2018

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### Committee Members

J. Lhota, Chair

F. Ferrer

A. Albert

N. Brown

S. Metzger

M. Pally

L. Schwartz

P. Trottenberg

P. Ward

C. Weisbrod

C. Wortendyke

N. Zuckerman

# **Capital Program Oversight Committee Meeting**

2 Broadway, 20th Floor Board Room

New York, NY 10004

Tuesday, 11/13/2018

2:00 - 3:00 PM ET

## **1. PUBLIC COMMENTS PERIOD**

## **2. APPROVAL OF MINUTES OCTOBER 22, 2018**

- *Minutes from October '18 - Page 3*

## **3. COMMITTEE WORK PLAN**

- *2018-2019 CPOC Committee Work Plan - Page 6*

## **4. NYCT CAPITAL PROGRAM UPDATE**

- *Update on Signals and Train Control Division - Page 8*
- *IEC Project Review on Signals and Train Control - Page 29*
- *Update on Systems and Security Division - Page 42*
- *IEC Project Review on Flushing Line Public Address System - Page 55*
- *IEC Project Review on Bus Radio System - Page 58*
- *IEC Project Review on Bus Command Center - Page 61*
- *Update on Stations Division - Page 65*
- *IEC Project Review on Sea Beach Line - Page 95*

## **5. UPDATE ON NEW FARE PAYMENT SYSTEM**

- *Update on New Fare Payment System - Page 100*
- *IEC Project Review on New Fare Payment System - Page 106*

## **6. UPDATE ON MINORITY, WOMEN AND DISADVANTAGED BUSINESS PARTICIPATION**

- *MTA-Wide MWDBE and SDVOB Awards on MTA Capital Projects with Goals - Page 109*

## **7. UPDATE ON SMALL BUSINESS DEVELOPMENT PROGRAM**

- *M/WBE, DBE, and SDVOB Participation on Capital Projects - Page 144*

## **8. CAPITAL PROGRAM STATUS**

- *Commitments, Completions, and Funding Report - Page 146*

Date of next meeting: Monday, December 10, 2018 at 1:30 PM

**MINUTES OF MEETING**  
**MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE**  
**October 22, 2018**  
**New York, New York**  
**1:30 P.M.**

MTA CPOC members present:

Hon. Joseph Lhota  
Hon. Fernando Ferrer  
Hon. Andrew Albert  
Hon. Norman Brown  
Hon. Susan Metzger  
Hon. Mitchell Pally  
Hon. Peter Ward  
Hon. Carl Wortendyke  
Hon. Neal Zuckerman

MTA CPOC members not present:

Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Carl Weisbrod

MTA staff present:

Tom Savio  
Donald Spero

LIRR staff present:

Jim Allen  
Debbie Chin  
Paul Dietlin

MNR staff present:

Anthony Forcina  
John Kennard  
Cathy Rinaldi

Independent Engineering Consultant staff present:

Chris Adams  
Mark Cosmedy  
Joe DeVito  
Nabil Ghaly  
Mohammad Mohammadinia

\* \* \*

Chairman Lhota called the October 22, 2018 meeting of the Capital Program Oversight Committee to order at 1:48 P.M.

**Public Comments Period**

There was one public speaker in the public comments portion of the meeting: Jason Pineiro.

**Meeting Minutes**

Upon motion duly made and seconded, the CPOC members approved the minutes to the previous meeting held on September 24, 2018.

### **Committee Work Plan**

Mr. Spero announced that there was one change to the Work Plan: because the Diversity Committee will be meeting in November, rather than October as scheduled, the updates on the Small Business Development Program and MWDBE Participation have also been moved to November.

### **LIRR Capital Program Update**

Mr. Dietlin provided an overview of LIRR's 2018 Capital Program Goals, including infrastructure commitment, start, completion and closeout goals, as well as 2018 Planned Major Starts and Completions. He then cited several active construction projects, including the Morris Park Locomotive Shop and Employee Facility, Mid-Suffolk Yard, and Jamaica Capacity Improvements, Phases I and II. In its oral remarks on the Morris Park Locomotive Shop, Mid-Suffolk Yard, Jamaica Capacity Improvements and Main Line Double Track, the IEC stated that it agrees with the status and issues regarding the LIRR projects as presented by the agency. In addition, the IEC's ongoing reviews indicate that LIRR is taking appropriate steps to mitigate project risks. 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.

### **MNR Capital Program Update**

Mr. Kennard cited MNR's 2018 Capital Program Goals and progress against these goals as of September 2018. He then provided details on the Harmon Shop Replacement Design-Build Phase V Project, Customer Service Initiatives, Station Improvement Initiative, the Hudson Line Power/Communication & Signal Design-Build Project as well as the Sandy Hudson Line Substation Restoration Project. In its oral remarks on the Harmon Consist Shop Replacement, Phase V, Stage 1, the IEC stated that, as reported by MNR, the project is now scheduled for substantial completion next month, and that in the IEC's opinion, there is still a potential for a minor delay due to the uncertain nature of testing and commissioning. With respect to budget, the IEC stated that the delay has thus far not resulted in the need to increase the budget, and that based on the IEC's review, there is a small amount of project contingency remaining until the end of the year. With respect to Harmon Consist Shop Replacement, Phase V, Stage 2, the IEC stated that the Stage 1 schedule issues will not affect the Stage 2 duration, and thereby, completion of the overall Croton Harmon yard program. Regarding the Hudson Line Project, the IEC stated that there has been no delay in the last year, the contractor is achieving productivity levels that are equal to or greater than those planned and based on the IEC's review, the contractor can maintain the current schedule. With respect to budget, the IEC is forecasting that the budget will need to be increased further to cover additional soft costs due to the extended schedule and to expected quantity adjustments in Phase II. In its oral remarks on Customer Service Initiatives, the IEC stated that based on its review, the program is on schedule and on budget, and while GCT access and MNR flagging resources continue to be a challenge, in the IEC's opinion, the Project Team is actively managing these issues. 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.

### **LIRR and MNR Update on Rolling Stock**

Mr. Allen updated the Committee on LIRR's M-9 car procurement, including a Major Milestone Summary, Enhanced Customer Amenities, Safety and Security Enhancements, as well as exterior and interior features. He then narrated photos from Kawasaki facilities in Lincoln, Nebraska and Yonkers, New York. With respect to the LIRR/MNR M-9A Joint Railcar Procurement, Mr. Allen outlined the scale of the procurement, including options, as well as the program schedule. In its oral remarks, the IEC stated that, based on its project review, the IEC concurs with the agency's report on the M-9 procurement. The IEC then highlighted two issues: since the October 2017 report, the project has incurred a 9-month delay primarily due to issues Kawasaki had in delivering the pilot cars to the LIRR, and as a result, delivery and testing of the pilot cars are now critical to the project schedule; and while the terms of the Global Settlement Agreement (GSA) have been agreed

to between Kawasaki and LIRR, until executed, the GSA represents a potential risk to the project budget. 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.

### **LIRR and MNR Update on Positive Train Control (PTC)**

Citing her detailed PTC report in the CPOC Agenda, Ms. Chin then presented a summary of the report as follows: LIRR and MNR have focused on federal compliance by the end of the year, and both railroads are on target to achieving compliance; LIRR and MNR submitted their Revenue Service Demonstration (RSD) Application to the FRA in September, in response to which MNR received conditional approval several days prior to CPOC, and LIRR expects to receive its by the end of October; LIRR and MNR are completing all installations and training by the November timeframe; MNR will initiate RSD on the Hudson Line in November and LIRR will initiate RSD on the Port Washington branch in December; as part of the federal requirements, both railroads will also have to update their PTC Implementation Plan and as part of that plan they will be including their respective alternative schedules, which will include details on the sequence and the plan to roll out the rest of the network. In its oral remarks, the IEC agreed with the agency report, as it provides a realistic assessment of remaining risks and the proposed mitigation approach. In the opinion of the IEC, since its last report to the Board, the project team has made good progress towards achieving RSD by advancing PTC equipment installations and training of railroad personnel. As reported by the project team regarding testing, the IEC stated that a new software release is required to address a higher-than-expected number of variances, and in the IEC's opinion, the project team took proactive steps to mitigate this issue. Finally, the IEC noted that the performance and duration of RSD remain dependent on the System Integrator's successful development and testing of the updated software and that LIRR and MNR have mitigations in place to ensure that federal compliance is achieved by year's end. 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.

### **MTA Capital Program Commitments & Completions and Funding**

Mr. Spero invited questions regarding the Capital Program Commitments & Completions and Funding Report, of which there was none.

### **Adjournment**

Upon motion duly made and seconded, Chairman Lhota adjourned the October 22, 2018 meeting of the MTA Capital Program Oversight Committee at 2:39 PM.

Respectfully submitted,  
Michael Jew-Gerals  
Office of Construction Oversight

## **2018-2019 CPOC Committee Work Plan**

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I. Recurring Agenda Items

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

II. Specific Agenda Items

**December**

Quarterly MTACC Capital Program Update

- East Side Access
- Second Avenue Subway
- Penn Station Access
- LIRR Expansion Project

Quarterly Change Order Report

Quarterly Traffic Light Reports

Update on Capital Program Security Projects (in Executive Session)

**January**

NYCT Capital Program Update

- L Line Restoration
- Reconstruction of Clifton Shop
- Rolling Stock Procurement Program

**February**

B&T Capital Program Update

**March**

Quarterly MTACC Capital Program Update

Quarterly Change Order Report

Quarterly Traffic Light Reports

**April**

NYCT Capital Program Update

Update on Minority, Women and Disadvantaged Business Participation

**May**

LIRR Capital Program Update  
MNR Capital Program Update  
Update on New Fare Payment System  
Update on Capital Program Security Projects (in Executive Session)

**June**

Quarterly MTACC Capital Program Update  
Quarterly Change Order Report  
Quarterly Traffic Light Reports

**July**

NYCT Capital Program Update

**September**

Quarterly MTACC Capital Program Update  
Quarterly Change Order Report  
Quarterly Traffic Light Reports

**October**

LIRR Capital Program Update  
MNR Capital Program Update  
LIRR and MNR Joint Update on Rolling Stock  
Update on Minority, Women and Disadvantaged Business Participation  
Update on Small Business Development Program

**November**

NYCT Capital Program Update

# Signals and Train Control Program

Capital Program Oversight Committee

Signals and Train Control

Robert Gomez, P.E.

Program Officer



November 2018

# Signals & Train Control Projects

## Project Name

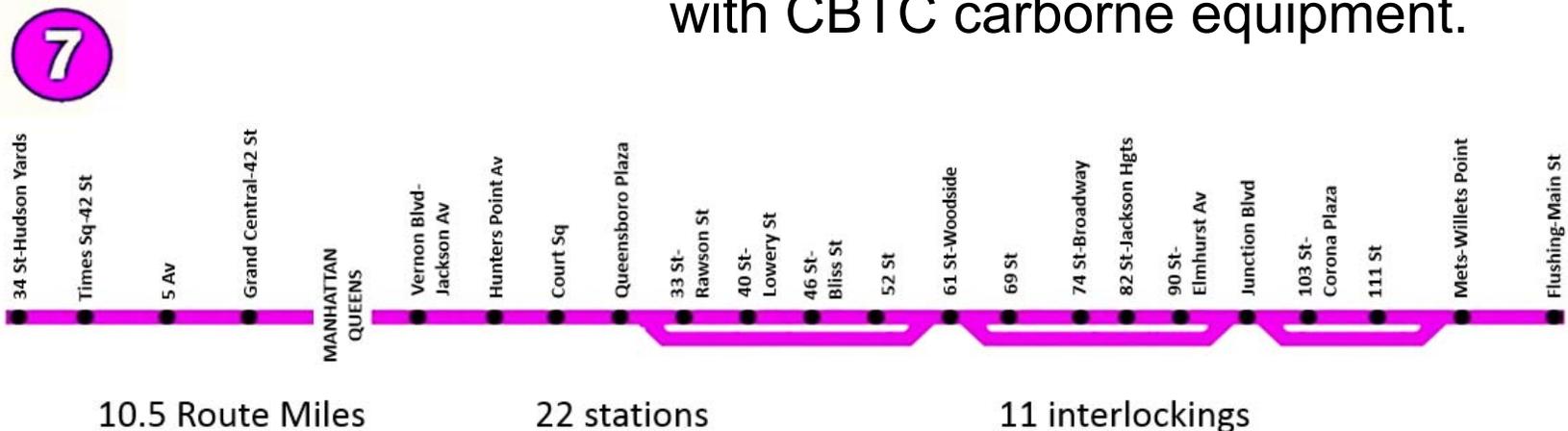
## Phase

- |  |              |
|--|--------------|
| ■ CBTC Flushing Line   | Construction |
| ■ CBTC Queens Blvd Line – Design and Furnish (Phase I)                     | Construction |
| ■ CBTC Queens Blvd Line – Installer (Phase II)                             | Construction |
| ■ CBTC Equipment Supplier Interoperability                                 | Construction |
| ■ ISIM-B: Module 1 – Train Position Monitoring System                      | Construction |
| ■ ISIM-B: Module 3 – Large Scale Display at RCC and Data Warehouse         | Construction |
| ■ ISIM-B: Module 3A – Renovation of South Side of Operating Theater at RCC | Procurement  |
| ■ 2 Interlockings: Union Turnpike & 71st Ave, QBL                          | Construction |
| ■ Dyre Avenue Line Signals   | Closeout     |
| ■ 34th Street Interlocking   | Construction |
| ■ W. 4th Street Interlocking   | Construction |
| ■ Kings Highway Interlocking, Culver Line                                  | Construction |
| ■ CBTC Culver Line   | Procurement  |
| ■ CBTC 8th Ave / 2 Interlockings 30th St & 42nd St                         | Design       |



# CBTC Flushing Line

- ❑ Awarded: June 16, 2010
- ❑ Contractor: Thales Inc.
- ❑ Project Description: Project will overlay new CBTC system on the Flushing Line between Main St. and the new 34th St./Hudson Yards Terminal. Modernize 1st Ave. and Times Square Interlockings and equip fleet with CBTC carborne equipment.



# CBTC Flushing Line

## Overall Status

Item	Comments
Schedule	93% complete. CBTC in-service for the entire Flushing line by end of November 2018
Cost	Within current budget of \$588M

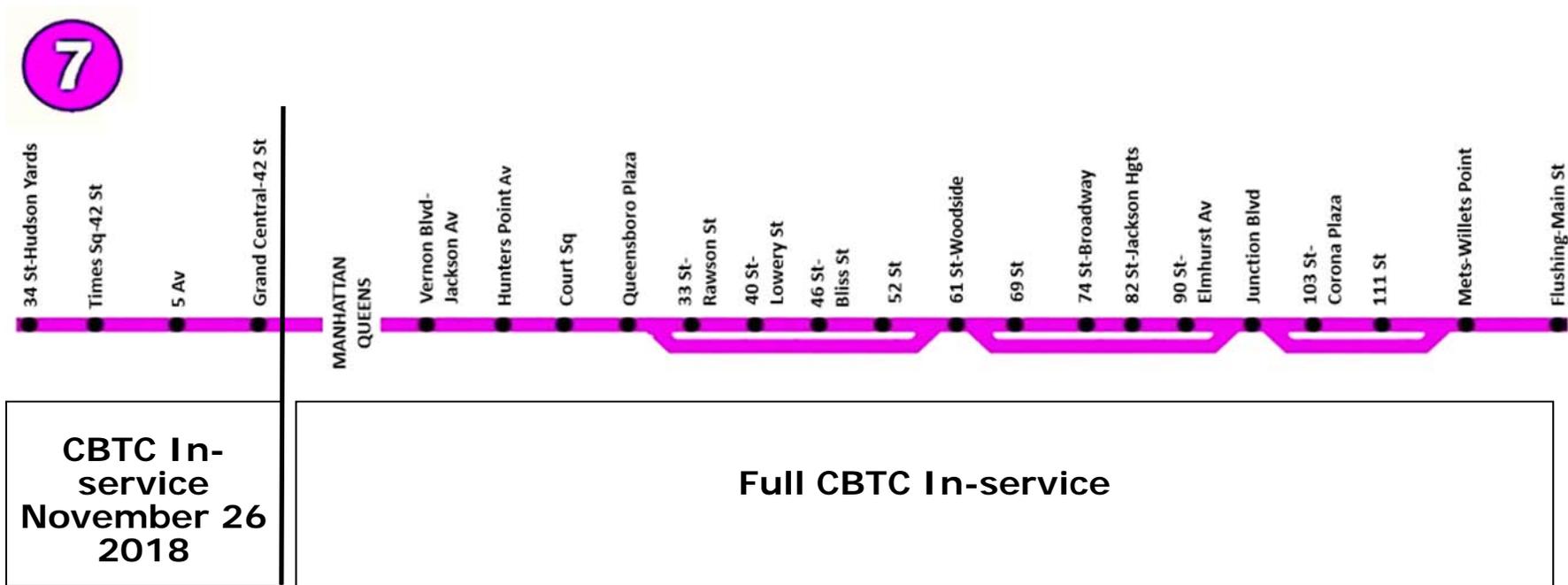
## Highlights

Progress	<ul style="list-style-type: none"> <li>❑ All major CBTC testing completed</li> <li>❑ Achieved stability of CBTC system</li> <li>❑ Over a period of 8 weekends CBTC was commissioned from Main Street to North of Grand Central</li> </ul>
180 Day Look Ahead	<ul style="list-style-type: none"> <li>❑ Complete CBTC in-service from North of Grand Central to 34<sup>th</sup> St.-Hudson Yards</li> <li>❑ Work with Thales to resolve open issues to achieve Substantial Completion</li> </ul>



# CBTC Flushing Line

## Projected Dates for CBTC Cutover



# CBTC Flushing Line

## Critical Milestones and Issues

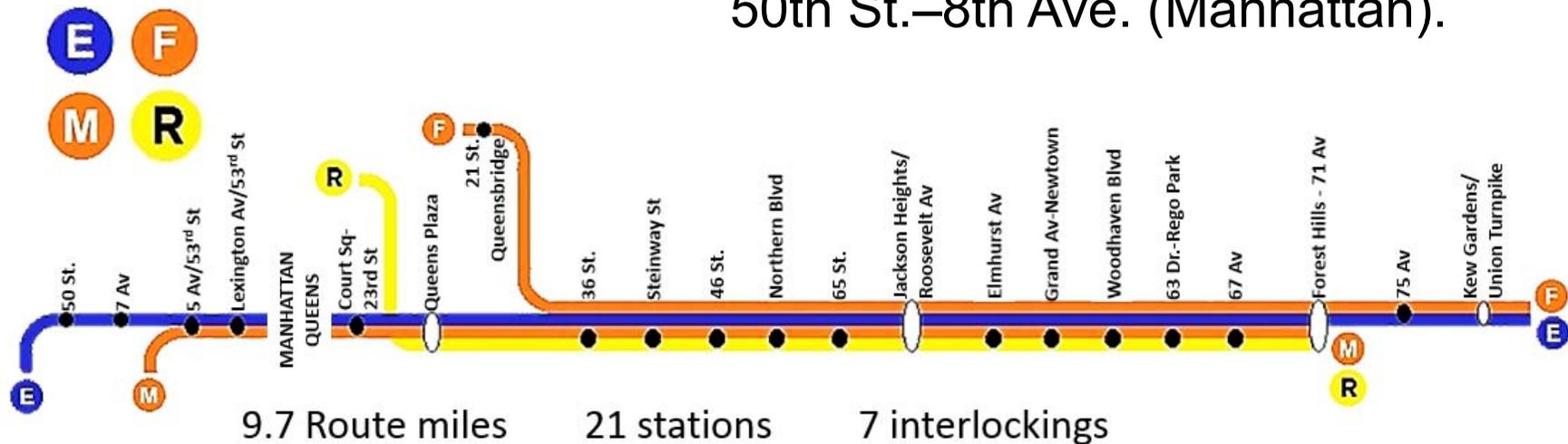
Status	Activity	Date Needed	Issues
● Green	CBTC Software Stability	May 2018 (Actual)	CBTC System software stability was achieved in May and has resulted in successful cutovers to date. Working with Thales to resolve outstanding items.
● Green	G.O., Work Train, and Flagging Availability	Now through November 2018	Weekend G.O.s have been secured to complete the remaining CBTC cutovers.
● Green	ATS	Now through November 2018	Final implementation of all external interfaces is underway in parallel to CBTC cutover. No impact on cutovers or CBTC in-service.

●	Red	Significant impacts with potential impacts on Revenue Service Date, Cost, or Customer Benefit Milestones
●	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.
●	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.



# CBTC Queens Blvd. Line (Phase 1) Design & Furnish

- ❑ Awarded: Siemens – August 24, 2015  
Thales – August 31, 2015
- ❑ Project Description: Design and furnish two CBTC interoperable systems with Automatic Train Supervision (ATS) from Union Turnpike (Queens) to 50th St.–8th Ave. (Manhattan).



# CBTC Queens Blvd. Line (Phase 1) Design & Furnish

## Overall Status

Item	Comments
Schedule	51% complete. Substantial Completion March 2021 (on schedule)
Cost	Within current budget of \$239M

## Highlights

Progress	<ul style="list-style-type: none"> <li><input type="checkbox"/> Delivery of wayside and carborne equipment is 46% complete</li> <li><input type="checkbox"/> Completed environmental qualification test on carborne equipment</li> <li><input type="checkbox"/> Placed Coney Island Yard test track in-service</li> <li><input type="checkbox"/> Completed upgrade of Integrated Test Facility (ITF) and started interoperability testing between CBTC suppliers</li> <li><input type="checkbox"/> Completed installation of carborne equipment on 171 out of 309 R-160 units (on schedule)</li> <li><input type="checkbox"/> Completed carborne post-installation check out (PICO) testing on 32 of 309 units (on schedule)</li> <li><input type="checkbox"/> Started ATS PICO testing at RCC</li> </ul>
180 Day Look Ahead	<ul style="list-style-type: none"> <li><input type="checkbox"/> Complete interoperability testing between CBTC suppliers at ITF</li> <li><input type="checkbox"/> Start PICO testing of CBTC wayside and relay rooms equipment from 71<sup>st</sup> Avenue to Roosevelt Ave. on Tracks D3/D4 for the "Intermediate Cutover"</li> <li><input type="checkbox"/> Continue installation and testing of carborne equipment</li> </ul>



# CBTC Queens Blvd. Line (Phase 1) Design & Furnish

## Critical Milestones and Issues

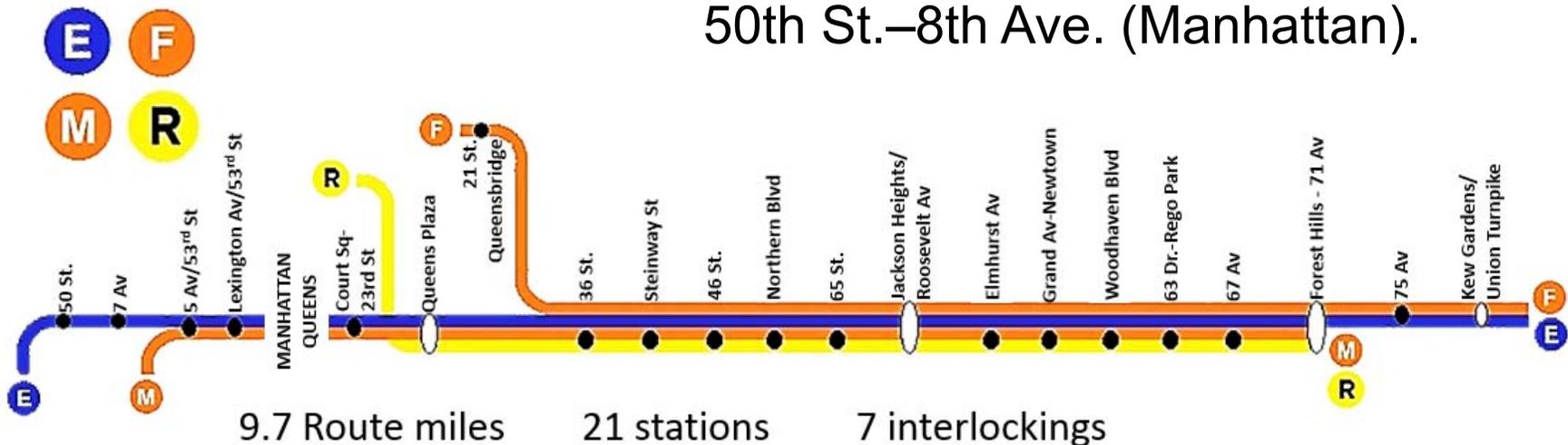
Status	Activity	Date Needed	Issues
● Green	Integration Testing	May 2019	Integration testing between Siemens and Thales began in August. It is anticipated to finish by May 2019.
● Green	CBTC Train Operator Simulator Training	June 2019	The delivery of the CBTC Train Operator Simulator is scheduled for June 2019. Plans are being developed to train the operators in the field to support the intermediate cutover.
● Green	CBTC Equipment Installation on R160 Cars	June 2020	CBTC equipment installation on the 309 R160 units is on schedule to be completed by June 2020.
● Green	Substantial Completion	March 2021	The latest project schedule shows a potential 1 month delay to Substantial Completion. We are working with the suppliers and installer to identify the issues and develop mitigation plans.

●	Red	Significant impacts with potential impacts on Revenue Service Date, Cost, or Customer Benefit Milestones
●	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.
●	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.



# CBTC Queens Blvd. Line (Phase 2) Installer

- ❑ Awarded: December 22, 2016
- ❑ Contractor: L.K. Comstock & Co.
- ❑ Project Description: Install all CBTC equipment, support testing and in-service of the CBTC interoperable system including ATS from Union Turnpike (Queens) to 50th St.–8th Ave. (Manhattan).



# CBTC Queens Blvd. Line (Phase 2) Installer

## Overall Status

Item	Comments
Schedule	31% complete. Substantial Completion July 2022 (on schedule)
Cost	Within Current budget of \$424M

## Highlights

Progress	<ul style="list-style-type: none"> <li>❑ Installation of all wayside CBTC equipment is ongoing</li> <li>❑ Completed installation of fiber optic cable at Rail Control Center (RCC)</li> <li>❑ Signal Power Room (SPR) construction is 60% complete</li> <li>❑ Began installation of CBTC and Auxiliary Wayside Signals (AWS) equipment in Relay Rooms</li> </ul>
180 Day Look Ahead	<ul style="list-style-type: none"> <li>❑ Complete installation of fiber optic and signals cables from Roosevelt Avenue to 71<sup>st</sup> Avenue</li> <li>❑ Complete installation of fiber optic cables in Backup Command Center (BCC)</li> <li>❑ Complete installation of CBTC and AWS equipment in Roosevelt Avenue and 71<sup>st</sup> Avenue Signal Rooms</li> <li>❑ Start AWS testing for Intermediate Area on Tracks D3/D4 from Roosevelt Ave. to 71<sup>st</sup> Avenue</li> </ul>



# CBTC Queens Blvd. Line (Phase 2) Installer

## Critical Milestones and Issues

Status	Activity	Date Needed	Issues
● Green	Construct 3 Signal Power Rooms (SPR)	December 2018	Construction is 60% complete and equipment is already on-site.
● Green	71 <sup>st</sup> Avenue and Roosevelt Avenue Signal Rooms	December 2018	Work in these rooms is progressing as planned. Equipment is on-site.
● Green	Union Turnpike Signal Room	June 2019	Room access has been coordinated with the Union Turnpike Interlocking construction project. Equipment is on-site.
● Green	G.O., Work Train, and Flagging Availability	Now through 2022	

●	Red	Significant impacts with potential impacts on Revenue Service Date, Cost, or Customer Benefit Milestones
●	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.
●	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.



# CBTC Equipment Supplier Interoperability

- ❑ Awarded: September 25, 2015
- ❑ Contractor: Mitsubishi Electrical Power Products
- ❑ Project Description: Develop an interoperable CBTC system to meet NYCT's I2S standards and safety certify the interoperable system.



# CBTC Equipment Supplier Interoperability

## Overall Status

Item	Comments
Schedule	47% complete. Substantial Completion projected for October 2019
Cost	Within current budget of \$20M

## Highlights

Progress	<ul style="list-style-type: none"> <li><input type="checkbox"/> Preliminary Design Review (PDR) was approved in December 2017</li> <li><input type="checkbox"/> Started Final Design Review (FDR). Received 22 out of 24 submittals</li> </ul>
180 Day Look Ahead	<ul style="list-style-type: none"> <li><input type="checkbox"/> Approve Final Design Review</li> <li><input type="checkbox"/> Conduct and witness Factory Acceptance Test (FAT)</li> </ul>



# CBTC Equipment Supplier Interoperability

## Critical Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	CBTC Sub-system Design for Wayside and Car Equipment (FDR)	November 2018	Final Design Review documents are under review.
 Green	Conduct Factory Acceptance Test (Japan)	November 2018	On schedule
 Green	Conduct post inspection check-off in integrated test facility	December 2018	On schedule

	Red	Significant impacts with potential impacts on Revenue Service Date, Cost, or Customer Benefit Milestones
	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.
	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.



# ISIM-B Module 1: Train Position Monitoring System (TPMS)

- Awarded: November 17, 2015
- Contractor: Yonkers Electric Contracting & U.S. Information Systems JV
- Project Description: Furnish and install equipment at 26 locations on the B Division to acquire field data from the signaling system. This data is required for ISIM-B (Module 3) and for Automatic Train Supervision (ATS) outside of CBTC territory.

## Overall Status

Status	Item	Comments
 <b>Green</b>	Schedule	72% complete. Substantial Completion December 2018 (on schedule)
	Cost	Within budget of \$56M



# ISIM-B Module 3: Large Scale Display at RCC and Data Warehouse

- Awarded: July 17, 2018
- Contractor: ARINC INC
- Project Description: Furnish and install large scale display at RCC and develop a data warehouse. In addition, this project will furnish and install workstations at RCC.

## Overall Status

Status	Item	Comments
 <b>Green</b>	Schedule	Module 3 Project Award July 2018
	Cost	Total project budget - \$103.30M



# ISIM-B Module 3A: Renovation of South Side of Operating Theater at RCC

- Projected Award: 4<sup>th</sup> Quarter 2018
- Project Description: This project will renovate south side of the operation theater. Renovation work includes architectural, structural, mechanical, electrical and communication work to prepare for installation of a large scale display under ISIM-B Module 3.

## Overall Status

Status	Item	Comments
 <b>Green</b>	Schedule	Award Scheduled for December 2018
	Cost	Total project budget - \$17.80M



# Interlockings

Status	Contract No.	Description	Schedule	Budget
 Green	S-32769	2 Interlockings, QBL	Closeout May 2019	Current Budget: \$298M. EAC: \$305.5M Budget Modification approved in May for \$7.7M for additional Contingency and TA Labor.
 Green	S-32773	Dyre Avenue	Closeout November 2018	Current Budget: \$237M.
 Green	S-32764	34 <sup>th</sup> Street	Substantial Completion November 2018	Current Budget: \$180.20M Additional TA Labor funds required for 4-track weekend shutdowns used to increase contractor's productivity and prevent schedule delays.
 Green	S-32765	West 4 <sup>th</sup> Street	Substantial Completion December 2018	Current Budget: \$174M Additional TA Labor funds required for 4-track weekend shutdowns used to increase contractor's productivity and prevent schedule delays.
 Green	S-32176	Kings Highway	Substantial Completion May 2021	Current Budget: \$179.14M



# CBTC Culver Line

- Projected Award: 4<sup>th</sup> Quarter 2018
- Project Description: Modernize Avenue X and Ditmas Ave Interlockings with Solid State Interlocking (SSI) technology and overlay the Culver Line in Brooklyn with CBTC from Church Ave to W. 8<sup>th</sup> St.

Item	Comments
Schedule	Award Scheduled for December 2018 (previously 3 <sup>rd</sup> Quarter)
Cost	Total Project Budget: \$432M



# CBTC 8<sup>th</sup> Ave / 2 Interlockings – 30<sup>th</sup> St. & 42<sup>nd</sup> St.

- Projected Award: 1<sup>st</sup> Quarter 2019
- Project Description: Modernize 30th St and 42nd St Interlockings with Solid State Interlocking (SSI) technology and overlay the 8th Ave Line with CBTC from 59th St - Columbus Circle to High Street.

Item	Comments
Schedule	Design Completion: October 31, 2018 (previously June 2018)
Cost	Total Project Budget: \$580M



# November 2018 CPOC IEC Project Review

CBTC NYCT Signals & Train Control Division



# IEC Project Review NYCT Signals & Train Control Division

- Communication Based Train Control (CBTC) Flushing Line.
- CBTC Queens Blvd. Line (QBL) Queens Blvd Line Design & Furnish (Phase 1).
- CBTC Queens Blvd. Line – Installer.
- CBTC Equipment Supplier Interoperability.
- Integrated Service Information & Management – B Division (ISIM-B), Module 1 Train Positioning Monitoring System.
- Integrated Service Information & Management – B Division (ISIM-B), Module 3 Large Scale Display at Rail Control Center (RCC) and Data Warehouse.



# CBTC Flushing Line

- **Schedule:** NYCT is currently on schedule to meet the planned in-service cutovers for completion in November 2018.
  - The Project Team & Contractor are assessing remaining work to determine if substantial completion can be achieved in December 2018.
- **Budget:** The project remains within the approved budget. The project has \$5M in reserve.



# CBTC Flushing Line

## ■ IEC Observations:

- Progress was made in expanding CBTC passenger service operation to North of Grand Central.
  - Revenue service for the remaining section (Grand Central to 34<sup>th</sup> Street) is scheduled in November
- System performance has improved. However, there remain system issues to be resolved.
  - The contractor continues to implement software modifications to address identified CBTC system issues.
- The project team identified additional system modifications to address technical issues. These modifications are planned after completion of in-services.



# CBTC Flushing Line

## ■ IEC Concerns:

- Resolution of technical issues affecting Corona Yard operation, Carborne Interface Units (CIU), train localization and speed sensors.
- Communication issues continue to impact system performance.
  - CBTC Supplier is making design and software modifications to address communication interruptions.
- Software updates are needed to resolve technical issues affecting Automatic Train Supervision (ATS) operation, including interfaces with external systems.



# CBTC-QBL Design and Furnish Schedule and Budget Review

- **Schedule:** The Agency is reporting project to be one month late. However, interim milestones continue to be missed which may have a negative impact on the March 2021 substantial completion date.
- **Budget:** On review, project remains within the current budget.



# CBTC-QBL Design and Furnish

## ■ IEC Observations:

- Final Design Review is now scheduled for December 2018.
- Installation of carborne equipment is progressing as planned.
- Project team continues to finalize Interoperability and Interface Specifications.
- Good cooperation between contractors at various coordination meetings.



# CBTC-QBL Design and Furnish

## ■ IEC Concerns:

- CBTC Suppliers continue to miss interim milestones, which could impact Substantial Completion.
- Lack of adherence to software management process.
- Resolution of technical issues affecting the Integrated Test Facility (ITF).
- Lack of an Integrated Project Schedule (IPS) is adding risk to the QBL CBTC Program.
  - Impacts the project team's ability to identify all of the interfaces between the various contracts.
  - Ineffective monitoring of critical path activities and the ability of contractors to meet contractual milestones.



# CBTC-QBL Install Schedule and Budget Review

- **Schedule:** Project is reported to be one month late.
- **Budget:** Project remains within the current budget.



# CBTC-QBL Install

## ■ IEC Observations:

- Contractor assumed responsibility to upgrade Relay Rooms at 71<sup>st</sup> Continental and Union Turnpike.
- Completed installation of CBTC equipment at yard test tracks.
- Completed fiber optic cable installation at RCC.
- Continue to progress the installation of cables and CBTC equipment in Intermediate Section.



# CBTC Equipment Supplier Interoperability Schedule and Budget Review

- **Schedule:** Third CBTC Equipment Supplier has progressed to the Final Design Review phase.
- **Budget:** On review, the project remains within budget.



# ISIM-B Module 1

## Schedule and Budget Review

- **Schedule:** On review the IEC concurs that the project is on schedule to meet Substantial Completion by end of 2018.
- **Budget:** On review the IEC confirms that the project is within budget.



# ISIM-B Module 3 Schedule and Budget Review

- ▣ **Schedule:** Module 3 has commenced the mobilization phase and remains on schedule.
- ▣ **Budget:** On review, project remains within budget.



# Systems & Security Program

Capital Program Oversight Committee

Systems & Security  
Mark Bienstock, P.E.  
Program Executive

November 2018



# Projects

- Flushing Public Address System
- Bus Radio System
- Bus Command Center



# Flushing Line Public Address System

- ❑ Awarded: December 30, 2016
- ❑ Contractor: TC Electric
- ❑ Project Description: Furnish and install new Public Address and Customer Information Screens with real time train arrival information on the Flushing Line. Relies on Flushing CBTC/ATS for train tracking and arrival information. This project is Module 2 of the ISIM-B Program.



# Flushing Line Public Address System

## Overall Status

Item	Comments
Schedule	Substantial Completion is scheduled for March 2019
Cost	Total Project Budget is \$65.2M

## Highlights

Progress	<ul style="list-style-type: none"> <li>• Placed in Service 3 Benning Power Plants.</li> <li>• Completed Factory Acceptance Test of PA cabinets at 20 (out of 21) stations.</li> <li>• Placed in service train arrival sub-system at 22 stations.</li> </ul>
180 Day Look Ahead	<ul style="list-style-type: none"> <li>• Complete Factory Acceptance Test of PA cabinets at 1 remaining station.</li> <li>• Complete commissioning of Passenger Station Local Area Network (PSLAN).</li> <li>• Continue site acceptance testing at PACIS.</li> <li>• Complete installation of all PACIS infrastructure.</li> </ul>



# Flushing Line Public Address System



PA Cabinet



Willets Point Speakers



69th Street Speakers



Customer Information Screens

# Bus Radio System

- ❑ Awarded: March 2, 2016
- ❑ Contractor: Parsons Transportation Group
- ❑ Project Description: This project will design, furnish, and install a new digital radio system for NYCT and MTA Bus. Also part of this contract to furnish and install computer aided dispatch equipment, network and telephone video and audio systems.



# Bus Radio System

## Overall Status

Item	Comments
Schedule	Substantial Completion forecast is January 2, 2021 – on schedule
Cost	Budget of \$280M (includes \$7.9 M for East New York Tower)

## Highlights

Progress	<ul style="list-style-type: none"><li>• Construction work started at Transition Center and 2 Broadway.</li><li>• Monopole Foundation construction was completed at Eltingville Station and 38<sup>th</sup> St. Train Yard.</li><li>• Todt Hill antenna location approved by FAA.</li><li>• Site surveys being held weekly at new Bus Command Center.</li><li>• Critical Design Review milestone approved on 7/18/18.</li></ul>
180 Day Look Ahead	<ul style="list-style-type: none"><li>• Begin construction work at Charleston Depot, Castleton Depot, and Todt Hill.</li><li>• Begin construction work at Bus Command Center.</li><li>• Conduct Fujitsu Factory Acceptance Test.</li><li>• Conduct Network System Integration Test.</li><li>• Conduct First Article Inspection of new pre-cast shelters.</li><li>• Continue construction work at Pilot locations.</li></ul>



# Bus Radio System

## Critical Milestones and Issues

Status	Activity	Date Needed	Issues
● Green	Critical Design Review	April 2018	Completed 7/18/18
● Green	Factory Acceptance of Base Stations	June 2018	Completed 6/30/17
● Yellow	Retrofit and Testing of 200 Buses for Staten Island Pilot	August 2019	Achieving this milestone requires FAA approval of the new tower at Todt Hill as well as resolution of the issues with the existing East New York Tower. FAA and DOD approval has been received for the new Todt Hill tower. A Small Business Mentoring Program contractor will repair the existing ENY tower, and construction of the new ENY tower is being expedited under this contract.
● Green	Retrofit All Remaining Buses	August 2020	None
● Green	Substantial Completion	January 2021	None
● Yellow	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.	
● Green	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.	



# Bus Radio System



**Monopole Foundation Completed at 38<sup>th</sup> St. Yard**



**Monopole Sections at Rohn Products**



**Geotechnical Boring for new Tower at Todt Hill**



# Bus Command Center

- ❑ Awarded: June 26, 2015
- ❑ Contractor: MPCC Corp.
- ❑ Project Description: Design and construct a new, modern, secure command center for NYCT and MTA Bus operations.



# Bus Command Center

## Overall Status

Item	Comments
Schedule	Substantial Completion (SC) forecast is November 30, 2018 (previously reported August 31, 2018)
Cost	Within budget of \$82.4M (includes approved budget modification of \$6M)

## Highlights

Progress	<ul style="list-style-type: none"><li>• Completed building Enclosure</li><li>• Completed installation of all major systems</li><li>• Started testing and commissioning of systems</li><li>• Made building available to BRS Contractor</li></ul>
180 Day Look Ahead	<ul style="list-style-type: none"><li>• Complete all testing and commissioning</li><li>• Achieve Substantial Completion</li><li>• Complete punch list items</li><li>• Achieve Temporary Certificate of Compliance</li></ul>



# Bus Command Center

## Critical Milestones and Issues

Status	Activity	Date Needed	Issues
 Green	Permanent Power	May 2018	Achieved permanent power in May
 Green	Building Enclosed and Weather-tight	August 2018	Roofing was completed in August which delayed some of the architectural work such as dry wall, painting and flooring.
 Red	Substantial Completion (SC)	November 2018	The current contractual SC is August 31, 2018. The forecast SC date is November 30, 2018 due to delays associated with difficulty in obtaining water service, which delayed charging and testing of the sprinkler system. SC delay has not impeded the BRS Contractor's work.

	Red	Significant impacts with potential impacts on Revenue Service Date, Cost, or Customer Benefit Milestones
	Yellow	Impacts which can lead to cost increases or schedule delays on individual milestones or contracts.
	Green	No Near Term Impact for Design, Procurement & Construction. Successful management of major activity to stay on schedule or budget.



# Progress Photo



# November 2018 CPOC IEC Project Review

## Flushing Line Public Address System



# Flushing Line Public Address System Schedule and Budget Review

- **Schedule:** The IEC review of the current project schedule finds that there is sufficient time to meet substantial completion in March 2019.
- **Budget:** Our review of project budget documents finds that the outstanding work is in line with the remaining budget.



# Flushing Line Public Address System Observation

Following the successful testing of the Flushing CBTC Automatic Train Supervision (ATS) System in December 2018, In-house resources will need to coordinate the integration of the Flushing Line Public Address System with the ATS.



# November 2018 CPOC IEC Project Review

## Bus Radio System



# Budget and Schedule Review

## □ Budget:

- The project budget is \$280M, an increase of \$7.9M since last reported. The increase is to fund the new East New York Tower.

## □ Schedule:

- The contractor's latest CPM schedule shows a two month delay to substantial completion. A recovery schedule is required which includes mitigations to key interim milestones.
- Pending change orders for the new East New York Tower and Todt Hill tower's new location may impact the schedule.



# IEC Observations and Concerns

- FAA approval process for the new East New York tower should be expedited to avoid potential risks to the schedule.
- Timely repairs to the existing East New York tower will ensure continuing operation of the present radio system until the new Bus Radio System is deployed.
- The contractor is implementing a test plan to effectively address systems integration and commissioning testing, which is key to a successful pilot location testing.



# November 2018 CPOC IEC Project Review

## Bus Command Center



# Bus Command Center

## IEC Summary Assessment

- CBTC Work remaining to achieve Substation Completion consists primarily of:
  - Completion of remaining code compliance work.
  - Resolution of subsurface issues that are delaying completion of the sewer connection.
  - Obtaining a Temporary Certificate of Code Compliance.
  
- The final Certificate of Occupancy for the Bus Command Center building will be obtained by the Bus Radio project.
  - Occupancy of the building is not required until much of the Bus Radio work is completed.



# Bus Command Center

## Schedule Summary

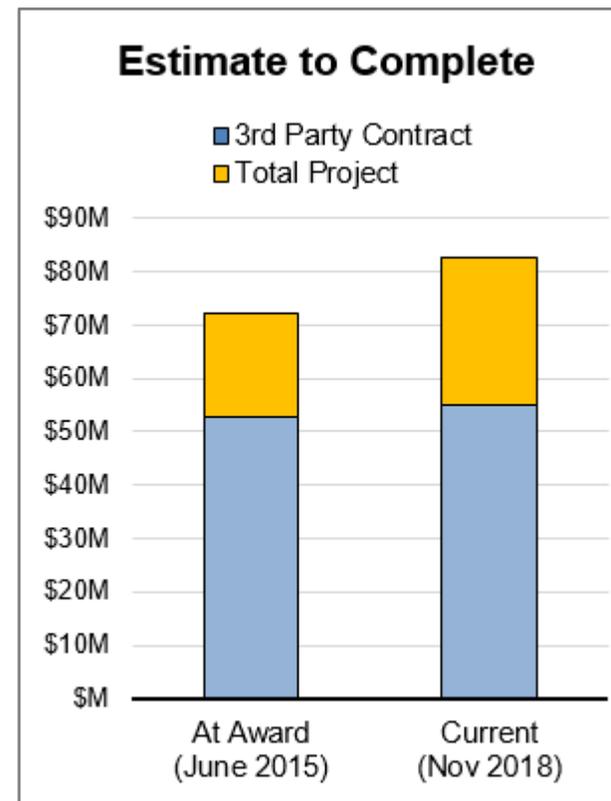
- The contract to construct the Bus Command Center was awarded in June 2015 with an original duration of 24 months.
- At our last report to committee, the Agency projected Substantial Completion in August 2018. The current projection is late November 2018.
- Achieving Substantial Completion this month will be a challenge, due to the amount of remaining contract work required for Code Compliance, and issues encountered with completing the sewer connection.



# Bus Command Center

## Cost Summary

- Since last report, the Estimated Cost to Complete was increased \$1.2M to \$82.4M.
- Since last report, a budget modification added \$6.0M to the project, to cover the current estimated cost to complete.
- Since award, the total project budget has increased \$10.4M, or 14%.



# Stations Division

## Capital Program Oversight Committee

Anthony Febrizio, Program Officer

William Montanile, Program Officer

New York City Transit

November 2018



# Stations Program Update

- 2015-19 Capital Plan
- Stations Program Progress, since November 2017 CPOC Report
  - Sea Beach Line Projects Updates: Station Renewal/ADA
  - NYCT Project Risk Log – Sea Beach
- Photographs
- ADA Accessibility
  - Accessibility Projects Underway
    - Key Stations
    - Additional Stations
    - System-Wide Evaluation



# 2015-2019 Stations Program

Category	# of Stations	Budget (in \$M)
Renewal	16	\$532.4
Replacement of Elevators / Escalators	29	\$472.6
ADA Accessibility	23	\$1,327.5
Component Investments (including SBMP)	107	\$424.7
Misc Projects / Station Reconstruction	13	\$434.9
<b>Grand Total</b>	<b>158</b>	<b>\$3,192.1</b>



# Stations Program Progress

## Projects Completed (since November 2017)

Project	Station	Line	SC Date
Platform Reconstruction Project	Eastchester Dyre Av		Nov 2017
Key ADA Project	Ozone Park Lefferts Blvd		Jan 2018
Platform Edge Project	25 St 45 St		Apr 2018
Increased Stair Capacity Project	Court Sq		June 2018
Renewal Project on Culver Line (8 N/B Stations)	18 Av Avenue I Bay Pkwy Avenue N Avenue P Kings Hwy Avenue U Avenue X		July 2018



# Stations Program Progress

## Projects Completed (since November 2017) cont.

Project	Station	Line	SC Date
Installed Help Points (SBMP)	5 Locations	Various	Jan 2018
Replaced 7 HVAC units (SBMP)	130 Livingston Plaza Data Center		Feb 2018
Rehabbed Substation Roof and building enclosure (SBMP)	Stanton St Substation		July 2018
Reconstruction of 9 Stairs (SBMP)	Various Locations	Various	Oct 2018



# Stations Program Progress

## Projects Placed in Service (since November 2017)

Project	Station	Line	Placed in Service
*New Street Entrance and Passageway at Mobil Bldg	Grand Central Terminal	4 5 6	Dec 2017
*8 New Stairs from Mezzanine to Platform	Grand Central Terminal	4 5 6	Various
*New Stair at 42 St and Lexington	Grand Central Terminal	4 5 6	Jun 2018

\* Developer funded projects



# Stations Program Progress

## Sea Beach **N** Line Projects

### STATIONS PLACED IN SERVICE:

Northbound	Stations	Closed	Placed in Service
All Stations	8 Av Fort Hamilton Pkwy New Utrecht Av 18 Av 20 Av Bay Pkwy Kings Hwy Avenue U 86 St	Jan 2016	May 2017
Southbound			
3 Stations	Kings Hwy Avenue U 86 St	July 2017	Oct 2018
6 Stations	8 Av Fort Hamilton Pkwy New Utrecht Av 18 Av 20 Av Bay Pkwy	July 2017	Apr 2019
ADA- Elevators	New Utrecht Av /62 St	July 2017	Apr 2019
	8 Av Station	July 2017	Oct 2019



# Stations Program Progress

## Sea Beach **N** Line Projects cont.

### SUBSTANTIAL COMPLETION DATES:

	Stations	SC Dates
3 Stations - Renewals	Kings Hwy Avenue U 86 St	Feb 2019
6 Stations - Renewals/ ADA	8 Av (except N/B elevator) Fort Hamilton Pkwy New Utrecht Av 18 Av 20 Av Bay Pkwy	Apr 2019

### Budget:

Original Budget:	\$392M
With Added Scope and Budget:	\$415M
<b>Current Budget:</b>	<b>\$455M</b>



# Stations Program Progress

## Sea Beach **N** Line Projects cont.



Compromised structural  
mezzanine slab



Deteriorated mezzanine girder



Fort Hamilton / SEA **N**

# Stations Program Progress

## Sea Beach **N** Line Projects cont.



Platform structural support deterioration



Platform Steel deterioration



# NYCT Sea Beach Project Risks Log

Sea Beach Risks	Sea Beach Mitigations
<p>1. <b>Phase II - GFRC Platform Wall Panels</b> – Ongoing Ph II panel fabrication, delivery and installation delays may impact SC.</p>	<ul style="list-style-type: none"> <li>Phase II wall panels in fabrication and will be installed prior to placing SB platforms in service. NYCT continues to monitor vendors performance.</li> </ul>
<p>2. <b>2 New 8<sup>th</sup> Ave elevators</b> – Construction start delays may impact the forecast late 2019 completion milestone.</p>	<ul style="list-style-type: none"> <li>Expedite 8<sup>th</sup> Ave elevators. The SB elevator agreement executed Nov 2018. The NB elevator AWO was negotiated for a lump sum credit.</li> </ul>
<p>3. <b>4 New Utrecht elevators</b> – Latest schedule forecasts slippage from Dec. 2018 to April 2019</p>	<ul style="list-style-type: none"> <li>NYCT issued letters to the contractor in regards to the commissioning of elevators in Dec 2018. The contractor plans to add additional resources to mitigate the schedule delays.</li> </ul>
<p>4. <b>Platform Roof Canopy Leaks</b> – Final results of emergency grouting remediation at platform roof canopies to be determined.</p>	<ul style="list-style-type: none"> <li>Leak remediation for 3 stations contract SB Platforms is complete. Negotiations for remaining Water Remediation work is under process.</li> </ul>
<p>5. <b>Rider Impacts</b> – Ongoing construction may further delay return of S/B track and completion</p>	<ul style="list-style-type: none"> <li>Temporary platforms at 8<sup>th</sup> Ave and Bay Pkwy remain open.</li> </ul>



# Stations Program Progress

## Projects Awarded (since November 2017)

Project	Station	Line	Award	SC Date
<b>Key ADA Projects (\$411M)</b>	86 St		Dec 2017	May 2020
	57 St – 7 Av		Dec 2017	Feb 2021
	Gun Hill Rd		Apr 2018	July 2020
	Bedford Pk Blvd		Apr 2018	June 2020
	Greenpoint Av		June 2018	Oct 2020
	Astoria Blvd		June 2018	Nov 2020
	Eastern Pkwy Brooklyn Museum		Aug 2018	Oct 2020
	Chambers St		Aug 2018	Aug 2020
	59 St		Nov 2018	Sept 2021
<b>Renewal Projects (\$81M)</b>	Astoria Ditmars Blvd		Dec 2017	June 2019
	Astoria Blvd		June 2018	Nov 2020



# Stations Program Progress

## Projects Awarded (since November 2017) cont.

Project	Station	Line	Award	SC Date
<b>Components (\$73M)</b>				
Station Entrance - 7 Av	8 Av		Dec 2017	Dec 2018
Circulation Improvement - Stairs	Broadway Junction		Apr 2018	Apr 2019
Component Repairs	President St, Sterling St, Winthrop St	 	Aug 2018	June 2019
Component Repairs	Morgan Av, Dekalb Av, Halsey St, Bushwick Av - Aberdeen St		Oct 2018	Apr 2020
<b>Elevator Replacements (\$98M)</b>				
12 Traction Elevators	168 St, 181 St, 191 St		Apr 2018	Dec 2021
<b>Circulation Improvements (\$16M)</b>				
Hyatt Girder Modification	Grand Central Terminal	  	Apr 2018	June 2019



# Stations Program Progress

## Projects Awarded (since November 2017) cont.

	Station	Line	Award	SC Date
<b>Small Business Mentoring Program (SBMP) (\$20M)</b>				
Refurbish 33 Stairs	25 Stations	Various	Various	Various
Rehab Substation Roof and Enclosure	Gates Av / Ridgewood Substation		Apr 2018	Apr 2019
Structural Rehab of Retaining Walls	Livonia Yard		Apr 2018	Apr 2019
Station Lighting	4 Locations	Various	July 2018	Apr 2019
Repair Mezzanine Components	Bowery	J Z	July 2018	May 2019



# Photographs

## Renewal Projects



Before



After



Kings Hwy / SEA **N**

# Photographs

## Renewal Projects



Before



After

86 Street / SEA **N**



# Photographs

## Renewal Projects



Avenue U / SEA 



# Photographs

## Renewal Projects



Avenue U / CULVER **F**



Avenue P / CULVER **F**



Avenue I / CULVER **F**

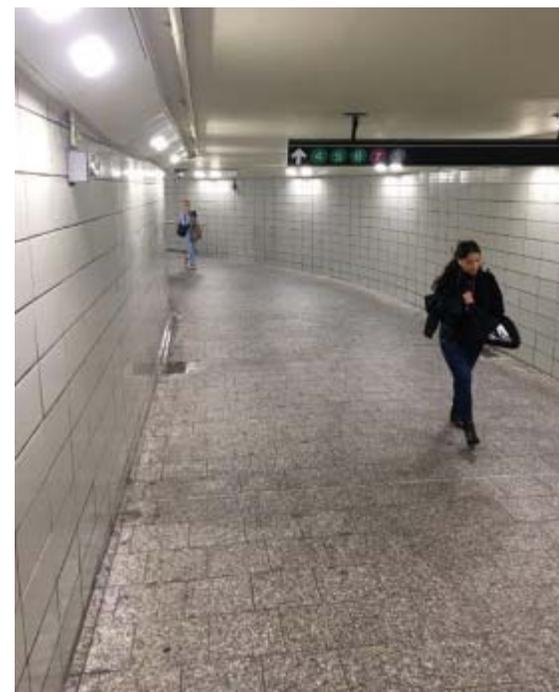


# Photographs

## Circulation improvements



Mezz Platform Stair - Court Sq G



Mobil building passageway -  
Grand Central Terminal 4 5 6 7 S



# Photographs

## Small Business Mentoring Program (SBMP)



Help Point - Myrtle-Wyckoff **L** **M**



Refurbished Stair -  
34 St- Herald Sq  
**B** **D** **F** **M** **N** **Q** **R** **W**



# Photographs

## ESI 72 Street Station Entrance



Before



After



# Photographs

## ESI 72 Street Station **B** **C** Platform & Stair



Before



After



# Photographs

## ESI 86 Street Station **B** **C** Fare Array



Before



After



# Photographs

## ESI 86 Street Station **B** **C** Platform



Before



After



# ADA Accessibility

## System-wide Accessibility Status

<b>Total Stations</b>	<b>493</b>
Accessible Stations	
Key Stations	87
Additional Stations	32
<b>TOTAL</b>	<b>119</b>

- Over 42% of total subway ridership



# ADA Accessibility

## Key ADA Stations: 13 Remaining

Project	Station	Line	Award	SC Date
<b>Final Design (1 Station)</b>	68 St Hunter College		Mar 2019	
<b>In Procurement (3 Stations)</b>	59 St		Nov 2018	
	Rockaway Pkwy		Nov 2018	
	Times Sq		Dec 2018	
<b>Construction (9 Stations)</b>	Bedford Av		Apr 2017	Nov 2020
	57 St – 7 Av	 	Dec 2017	Feb 2021
	86 St		Dec 2017	May 2020
	Bedford Pk Blvd	 	Apr 2018	June 2020
	Gun Hill Rd		Apr 2018	July 2020
	Greenpoint Av		June 2018	Oct 2020
	Astoria Blvd	 	June 2018	Nov 2020
	Eastern Pkwy Brooklyn Museum	 	Aug 2018	Oct 2020
	Chambers St		Aug 2018	Aug 2020



# ADA Accessibility

## Additional ADA Stations: 16 Stations

Project	Station	Line	Award
Master Plan (3 stations)	95 St		Dec 2020
	Broadway Jct (City Station candidate)	 	TBD
	77 St (Design Only)		TBD
Design (9 stations)	6 Av		Feb 2019
	149 St-Grand Concourse – WPR	 	Aug 2019
	149 St-Grand Concourse – JER		Aug 2019
	Woodhaven Blvd	 	Dec 2019
	Court Sq (elevator phase)		Apr 2020
	170 St (City Station candidate)		2019
	Livonia Av (City Station candidate)		2019
	Queensboro Plaza (City Station candidate)	  	2019
	Westchester Sq-East Tremont Av		3 <sup>rd</sup> Qtr 2019



# ADA Accessibility

## Additional ADA Stations: 16 Stations

Project	Station	Line	SC Date
<b>Construction (4 Stations)</b>	1 Av	L	Nov 2020
	New Utrecht Av	N	Oct 2019
	62 St	D	Oct 2019
	8 Av	N	Oct 2019



# ADA Accessibility

## System-Wide Accessibility Evaluation

- Evaluation underway of the remaining 345 stations
- In 2018, 119 stations out of 150 have been surveyed; 31 additional stations will be evaluated by end of 2018 and balance in 2019
- Inform the selection of new stations for 2020-24 and subsequent capital programs
- Develop a conceptual accessibility plan and cost for each station



# ADA Accessibility

## Next Steps

- Partner with Board Work Group on Accessibility
- Identify stations and selection criteria in consultation with the community
- Evaluate and advance new ADA projects for scoping and design
- Initiate design of stations included in the 2020-2024 Capital Program and Fast Forward Initiative
- Advance Fast Forward Plan's ADA investment strategy – “No more than 2 stations away”



# November 2018 CPOC IEC Project Review

NYCT - Sea Beach Line, Brooklyn NY  
Renewal of Nine Stations



# Schedule Review

## □ Schedule

### □ Phase II

- SB platforms return-to-service milestone dates.
- 3 Station – Reopened Oct 29, 2018
- 6 Station – From Sept 2018 to Apr 2019

### □ Substantial Completion

- Completion has been impacted by AWOs, added scope and unforeseen conditions.
- 3 Stations – From Nov 2018 to Feb 2019
- 6 Stations – From Dec 2018 to Apr 2019
  - Elevators - New Utrecht place-in-service – Apr 2019
  - Elevators - 8<sup>th</sup> Ave – NB – place-in-service – Oct 2019  
SB – in procurement



# Budget Review

## ■ Budget

- The current budget (approx. \$457M) and EAC (approx. \$458M) are now closely aligned, but significantly above the original budget at award (\$390M).
- Since last CPOC, increased costs during construction have negatively impacted the total project budget. To date, multiple budget modifications have been directed at replenishing contingency, AWOs, added scope items, unforeseen conditions, design modifications, environmental work, additional FA, CCM, construction and design services and leak remediation.



# IEC Observations

## ▣ Overall Project:

- ▣ The IEC recognizes that after 4 years of working on a challenging construction project, Sea Beach is ultimately a good news story. The 9 severely deteriorated open-cut stations have been dramatically transformed and the results are a success for NYCT, the riders and the local Brooklyn communities the stations serve. In addition, 3 stations, New Utrecht, 62<sup>nd</sup> Street and 8<sup>th</sup> Ave, will provide full ADA accessibility. New Utrecht will also provide an accessible transfer to the 62<sup>nd</sup> Street station platforms on the D line.



# Risk Review

- **Risks to Project Milestones and Substantial Completion:**
  - **Re-open South Bound Platforms:** Ongoing construction may delay return of the SB track and Phase II completion.
  - **Platform Wall Panel Installation:** Ongoing panel fabrication and delivery delays may impact installation completion.
  - **Place in Service – 4 New Utrecht Elevators:** Latest schedule forecasts completion slippage from Dec 2018 to Apr 2019.
  - **Leak Remediation:** Final results of emergency grouting remediation at platform roof canopies to be determined.
  - **Place in Service – 8<sup>th</sup> Ave Station Elevators:** Construction start delays may impact the forecast 2019 completion milestone.



# New Fare Payment System

Capital Program Oversight Committee

November 2018



# Today's Presentation: Update on NFPS Plans and Progress

- Update to the Capital Program Oversight Committee Briefing of June 2018
- Discuss planned replacement for NYCT's MetroCard system and LIRR/MNR fare payment systems



# New Fare Payment System Timeline Phased Approach

Customers begin using contactless open payment media

Contactless open payment available on all buses and subways

Upon completion, retire MetroCard & current LIRR/MNR systems

## 1 - Staged Initial Deployment

Initial launch at select subway stations/buses

Start acceptance of contactless open payments & new self-service options

18 months from NTP



May 2019

## 2 - Complete Contactless Open Payments Roll Out

Complete roll out of contactless open payments on Subway/Bus



35 months from NTP

Oct. 2020

## 3 - Expanded Payment Options Available

Introduce contactless MTA Transit card & eTix 2.0

Roll out new Retail Network

39 months from NTP



Feb. 2021

## 4 - In-System Sales

Deploy new vending machines across NYCT, MNR and LIRR

52 months from NTP



Mar. 2022

## 5 - Project Complete

Removal of legacy sales equipment

69 months from NTP

Jul. 2023



# MTA New Fare Payment System Program Status

- **Schedule:** Phase One public launch - May 2019
  - Subways: Lexington Av line from 42 St/Grand Central to Atlantic Av/Barclays Center
  - Buses: all Staten Island bus routes
- **Budget:** \$620M – on budget
- **% Complete:** 9%
- Field construction in subways is ongoing and progressing well



# MTA New Fare Payment System 6-Month Look Ahead

- ❑ Public Outreach: November 2018 launch
- ❑ Phase 1 Testing - complete by January 2019
- ❑ Phase 2 Preliminary Design Review – February 2019
- ❑ Pilot Test – March & April 2019
- ❑ Public launch of new system – May 2019



Phone tap at turnstile



# MTA New Fare Payment System Risks

- NFPS for Paratransit: Initially reported to Board - October 2017
- All-Door Boarding – NYCT’s Fast Forward Plan
- Validator Performance
- Financial Industry Commitments



# November 2018 CPOC IEC Project Review

## New Fare Payment System



# Budget and Schedule Review

- **Budget**

- Project remains on budget.

- **Schedule**

- Contractor schedule remains on target for each phase of the project through substantial completion.



# Risk Review

- Test results show that the validator requires optimization for better performance & operational reliability. Cubic is working on correcting the issues, and the unit must be fully retested before deployment.
- Paratransit and All-Door-Boarding are owner driven scope changes, hence risks to project cost and/or schedule. Proper scheduling of these changes are key in avoiding impacts to project schedule. Offset to cost increases are under review.



# Annual Update of MTA Small Business Development Program

Small Business Mentoring Program-Tier 1 (SBMP-Tier 1)

Small Business Mentoring Program-Tier 2 (SBMP-Tier 2)

Small Business Federal Program (SBFP)

October 22, 2018 CPOC Meeting

**Brian Murphy**

Deputy Director

Office of Construction Oversight

Department of Capital Programs

**George Cleary**

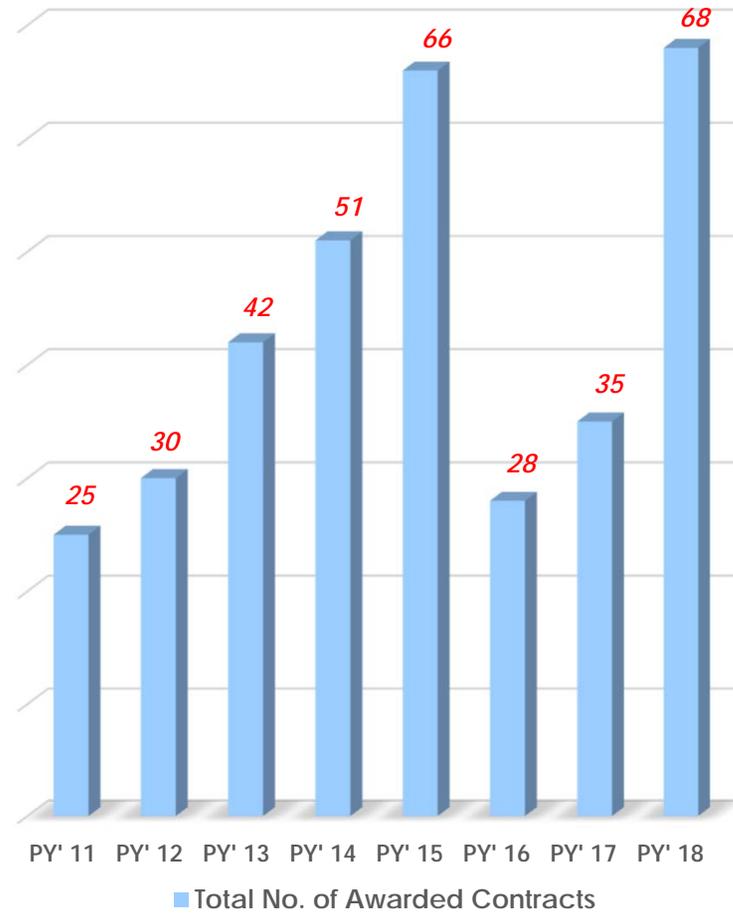
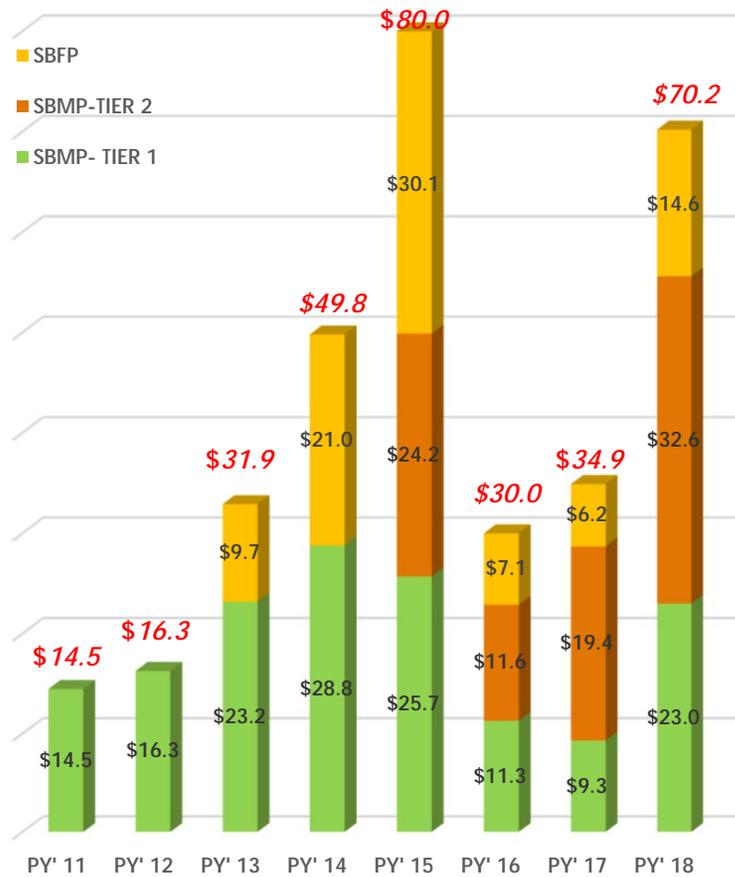
Deputy Chief Diversity Officer

Small Business Development Program

Department of Diversity and Civil Rights



# SBDP Contract Awards totaling \$328 Million Over Eight Years



# Typical SBDP Projects

## Program Year (PY) 2017-2018

- ▣ Stair replacements and station improvements
- ▣ Mechanical and electrical upgrades
- ▣ Flood mitigation
- ▣ Installation of bus chassis wash lift equipment
- ▣ Bridge preservation project
- ▣ Asphalt & concrete paving, site work and landscaping
- ▣ Roofing
- ▣ Demolition



# Small Business Mentoring Program – Tier 1 Status

- Program in existence for eight years.
- NY State funded prime contracts of up to \$1M.
- 172 prequalified firms participate for up to 4 years.
- Bond requirements waived.
- Owner Controlled Insurance Program (OCIP).



# SBMP-Tier 1 Status

- ❑ 371 firms prequalified since program inception
- ❑ 198 firms awarded projects since program inception
- ❑ 62 of the 198 firms were awarded 2 or more projects
- ❑ Several participants obtained MTA contracts outside of the SBDP

PY'11 – PY'18 Awards		
	Projects	Amount
Awarded to 198 Firms	250	\$152M
Substantially Completed	210	\$121M
<b>PY'19 Award Goal for SBMP-Tier 1 is \$19 Million</b>		



# SBMP-Tier 1 Project (PY' 2017-2018)

Narula Development Corp, a NYS certified MBE firm, completed the Steam Meter Room Insulation project at Grand Central Terminal for MNR at a cost of \$352,031. The project was completed safely, on time and within budget.

In Progress



Final



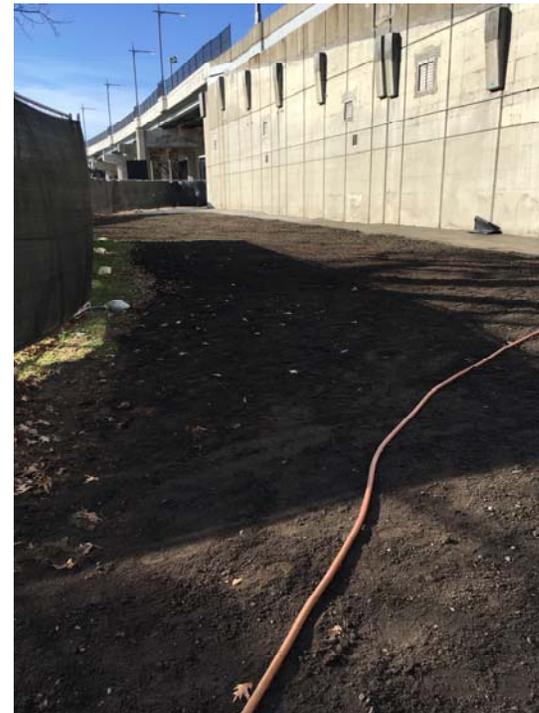
# SBMP-Tier 1 Project (PY' 2017-2018)

KSR Construction Corp., a NYS certified MBE firm, completed the Demolition of an Abandoned Pedestrian Bridge at Robert F. Kennedy Memorial Bridge facility for B&T at a cost of \$229,839. The project was completed safely, on time and within budget.

In Progress



Final



# Small Business Mentoring Program – Tier 2 Status

- Program in existence for four years
- NY State funded prime contracts from \$1M to \$3M
- Participation for up to 4 years
- Payment and performance bonds required
- 40 prequalified firms, which are all graduates of SBMP-Tier 1

## PY'15 – PY'19 Awards

	Projects	Amount
Awarded to 27 Firms	48	\$88M
Substantially Completed	25	\$53M

**PY'19 Award Goal is \$66 Million**



## SBMP-Tier 2 Project (PY' 2017-2018)

B & S Ironworks LLC, a NYS certified MWBE and a MTA certified DBE firm, installed Flash Flood Mechanical Closure Devices Between 123<sup>rd</sup> and 125<sup>th</sup> Street along Lexington Avenue for NYCT at a cost of \$2,374,776. The project was completed safely, on time and within budget.

In Progress



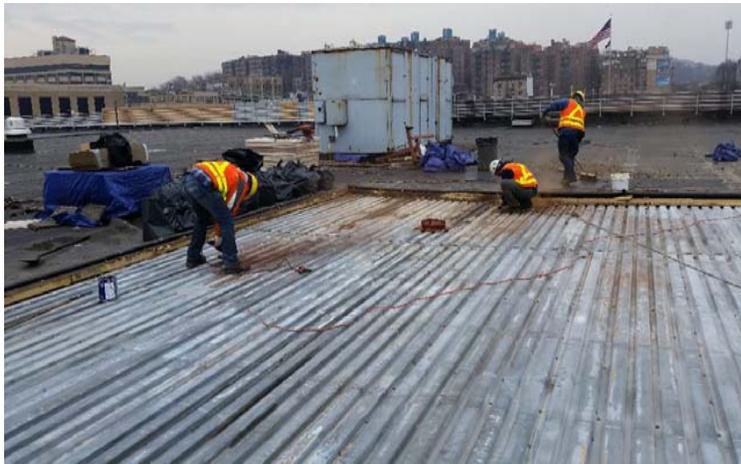
Final



## SBMP-Tier 2 Project (PY' 2017-2018)

Double M Construction, Inc. completed the roof replacement project at the Maintenance & Storage Building of the Kingsbridge Bus Depot in Manhattan for NYCT DOB at a cost of \$2,683,000. The project was completed safely, on time and within budget.

In Progress



Final



# Small Business Federal Program (SBFP) Status

- Program in existence for six years
- Federally funded prime contracts of up to \$3 million
- Participation for a maximum of 4 years
- Payment and performance bonds required
- 21 prequalified firms; 15 graduated from SBMP-Tier 1

## PY'15 – PY'18 Awards

	Projects	Amount
Awarded to 23 Firms	47	\$89M
Substantially Completed	35	\$74M

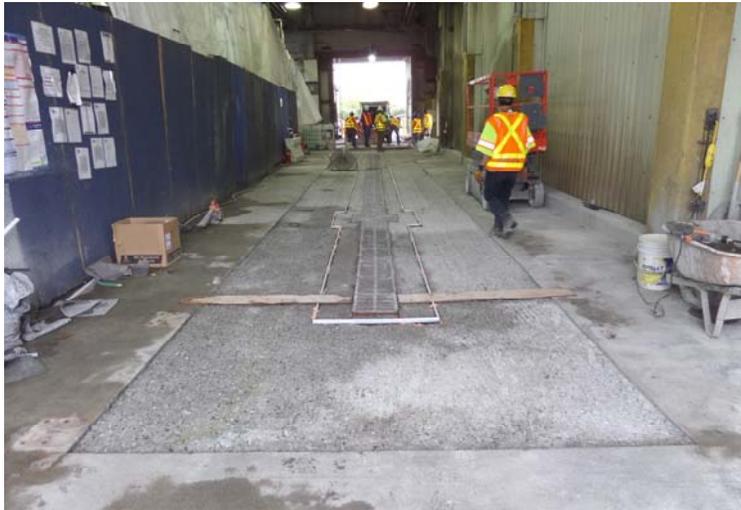
**PY'19 Award Goal is \$22 Million**



# SBFP Project (PY' 2017-2018)

Kapris Inc., a NYS certified MBE, completed the replacement of the Bus Washer & Associated Equipment at the Spring Creek Bus Depot for MTA Bus Company at a cost of \$2,456,000. The project was completed safely, on time and within budget.

In Progress



Final



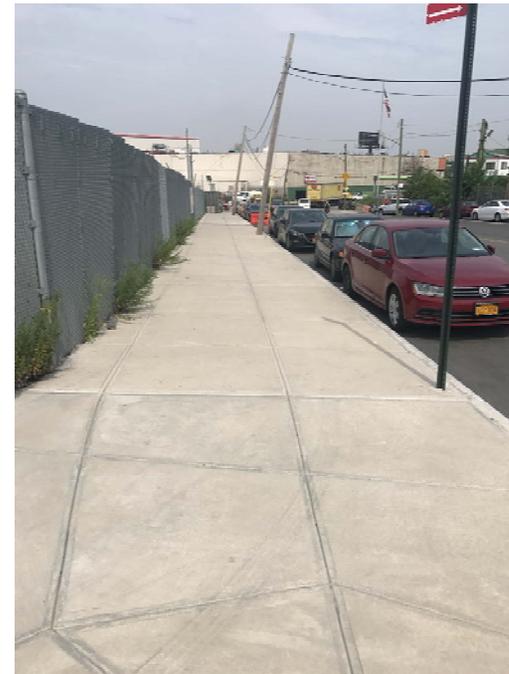
# SBFP Project (PY' 2017-2018)

Riggs Construction Company Inc., a NYS certified MBE firm and a MTA certified DBE firm, completed the Civil and Neighborhood Beautification Project at 43<sup>rd</sup> Street and 37<sup>th</sup> Avenue in Queens for MTACC at a cost of \$1,288,695. The project was completed safely, on time and within budget.

In Progress



Final



## Program Year 9 (8/18-7/19) Progress to Date (10/18)

Program Year Nine Awards		
Program	Awarded	PY 9 Goal
Tier 1	\$3.5M	\$19M
Tier 2	\$6.9M	\$66M
Federal Program	\$1M	\$22M

- ❑ Challenges:
  - ❑ Developing projects that fit the capacity and capabilities of the contractor pool
  - ❑ Maintaining a sufficient pool of qualified contractors



# Business Development



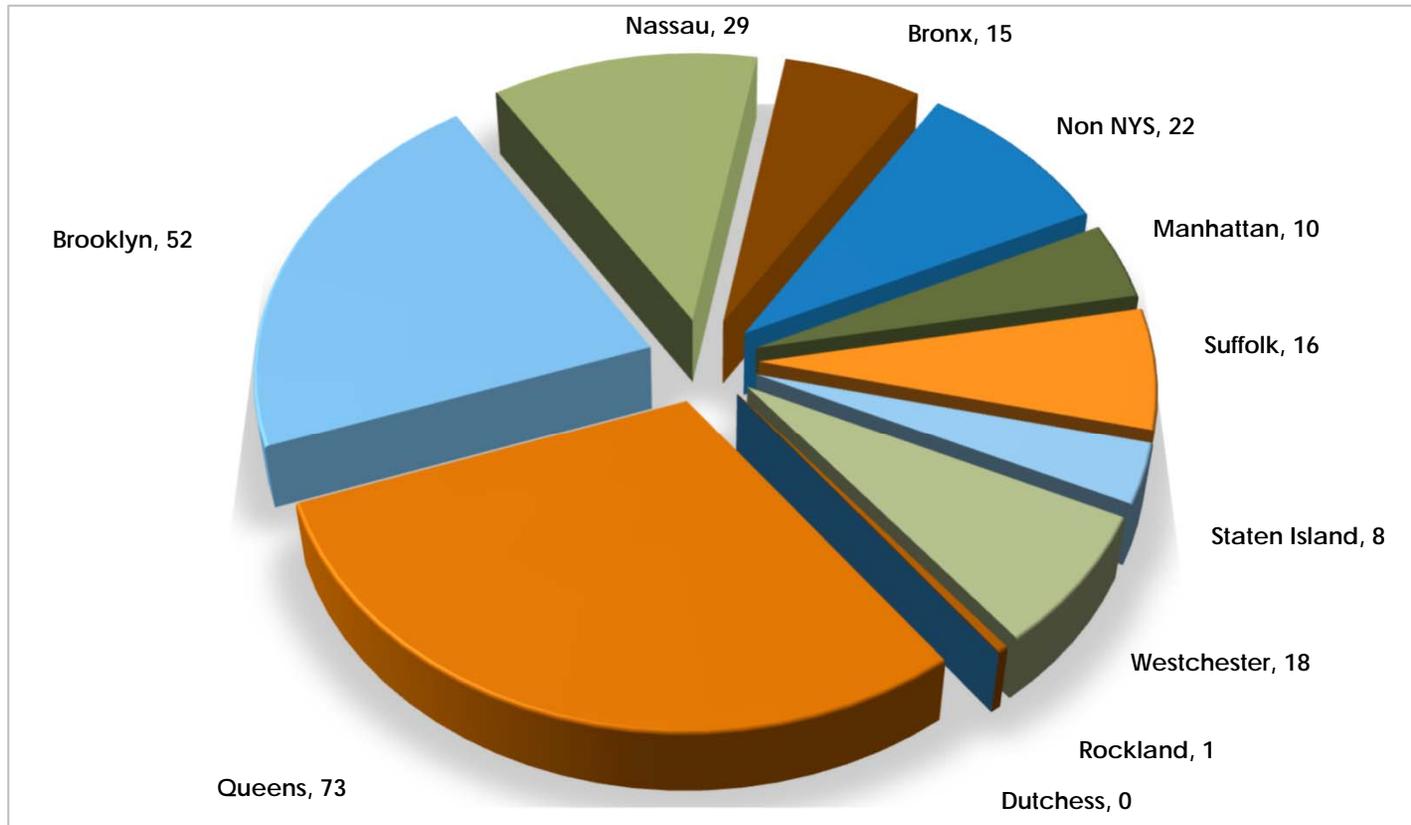
# SBDP Firms Distribution by Location

## Small Business Mentoring Program All Tiers

Certification *	
MBE	166
WBE	44
DBE	41
SDVOB	7
Non-Certified	71

\* firms may have multiple certifications

244 Prequalified Firms (as of September 30, 2018)

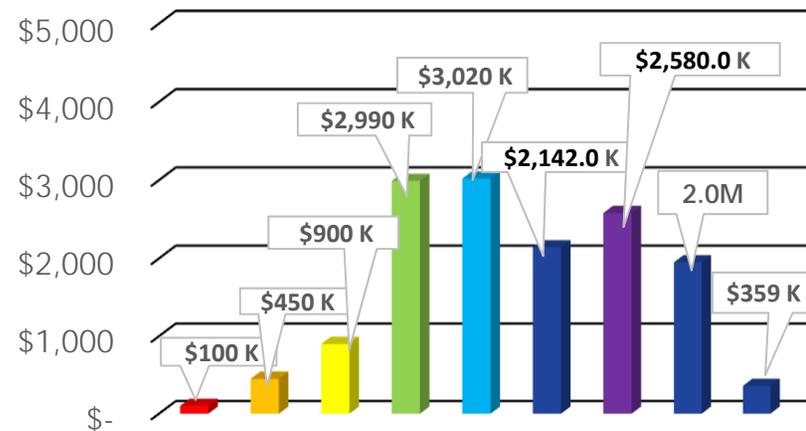
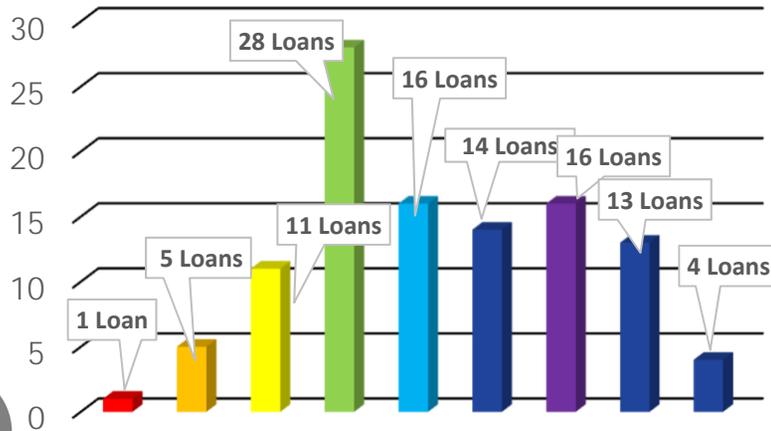


# SBDP Loan Program

	Year 1	-	1 Loan	totaling	\$ 100,000
	Year 2	-	5 Loans	totaling	\$ 450,000
	Year 3	-	11 Loans	totaling	\$ 900,000
	Year 4	-	28 Loans	totaling	\$ 2,990,000
	Year 5	-	16 Loans	totaling	\$ 3,020,000
	Year 6	-	14 Loans	totaling	\$ 2,142,500
	Year 7	-	16 Loans	totaling	\$ 2,580,000
	Year 8	-	13 Loans	totaling	\$ 1,950,000
	Year 9	-	4 Loans	totaling	\$ 359,000 <i>(Year 9 is for 3 months ended 9/30/2018)</i>
	<b>Total</b>		<b>108 Loans</b>	<b>Totals</b>	<b>\$14,491,500</b>

*Maximum Loan Available:  
SBMP up to \$150,000  
SBFP up to \$900,000*

*Loan values shown are through September 30, 2018*



# Exceeding MWDBE Goals at the SBMP

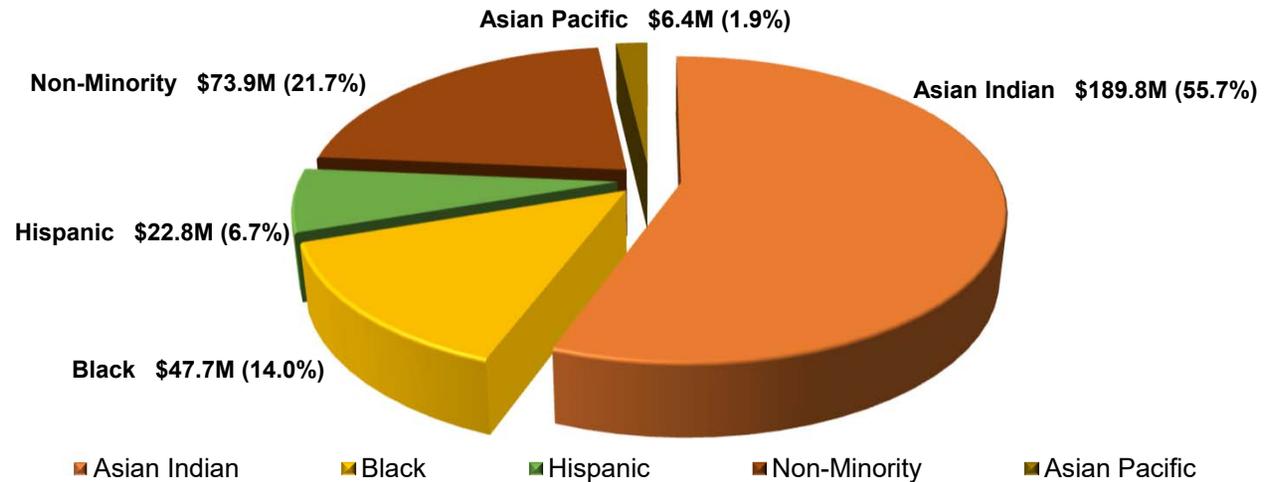
- MTA MWBE SBMP Tier 1/Tier 2 Goal – **30%**
- MTA DBE Goal – **18%**
- Tier 1 MWBE Achievements
  - **70%** - contracts awarded to NYS-certified MWBEs
  - **69%** - contract dollars awarded to NYS-certified MWBEs
- Tier 2 MWBE Achievements
  - **90%** - contracts awarded to NYS-certified MWBEs
  - **91%** - contracts dollars awarded to NYS-certified MWBEs
- Federal Program DBE Achievements
  - **59%** - contracts awarded to DBEs
  - **57%** - contracts dollars awarded to DBEs



# SBDP Contract Awards

## Total SBDP Contract Awards by Ethnic/Gender Categories

Category	Awards
Asian Indian	\$189.8M
Non-Minority	\$ 73.9M
Black	\$ 47.7M
Hispanic	\$ 22.8M
Asian Pacific	\$ 6.4M
<b>Total SBDP Awards</b>	<b>\$340.6M</b>



# SBDP Jobs Created

- PY'10 – PY'18 SBMP-Tier 1 Awards total \$156 Million
- PY'15 – PY'18 SBMP-Tier 2 Awards total \$95 Million
- PY'13 – PY'18 SBFP Awards total \$90 Million

## ■ Estimated job creation within the Small Business and MWDBE Community exceeding 8,100 \*

\* Source: New York State Department of Transportation (NYSDOT)

As an average statewide estimate, the Department uses 24 jobs per \$1 million dollars (\$1M) of construction value to calculate the estimated number of direct, indirect and induced jobs created or saved.

**Jobs Created and Employment Reporting** ( <https://www.dot.ny.gov/recovery/jobs?nd=nysdot>).



# SBDP Contract Goals vs. Awards

	<u>Goals</u>	<u>Awards</u>	
PY '14 - '15	\$98M	\$80M	'10 -'14 Capital Plan
PY '15 - '16	\$86M	\$30M	
PY '16 - '17	\$94M	\$35M	'15 -'19 Capital Plan
PY '17 - '18	\$146M	\$70M	

## Strategies to close the gap between Goals & Awards

- Have agencies identify projects in the planning phase.
- Identify additional smaller projects to fit the capacity of the current SBDP participants.
- Targeted efforts to match the firms with the agency projects based on trades.



# SBDP Projections

## Estimated SBDP Project Awards 2018 – 2019 & 2019 – 2020 Program Years

<b>Small Business Mentoring Program</b>		<b># of Projects</b>
<input type="checkbox"/>	Tier 1	\$ 90M
<input type="checkbox"/>	Tier 2	\$ 63M
<b>Small Business Federal Program</b>		
<input type="checkbox"/>	SBFP	\$ 72M
<b>Totals</b>		
<input type="checkbox"/>	All Programs	\$225M
<input type="checkbox"/>	Estimated Job Creation of over 5,400 jobs *	

\*Source: New York State Department of Transportation (NYSDOT)

As an average statewide estimate, the Department uses 24 jobs per \$1 million dollars (\$1M) of construction value to calculate the estimated number of direct, indirect and induced jobs created or saved.

**Jobs Created and Employment Reporting** ( <https://www.dot.ny.gov/recovery/jobs?nd=nysdot> )



# B & S Ironworks, LLC

- Mentor contractor since 2011
  - \$5.96M in MTA SBDP prime contract awards
  - 4 SBDP contract awards



# Minhas Construction

- Mentor contractor since 2011
  - \$28.9M in MTA SBDP prime contract awards
  - 6 SBDP contract awards
  - Beyond SBDP Mentoring – 2 contract awards
    - 1 prime contract award, 2 Joint Ventures
    - Total firm contract value - \$42M



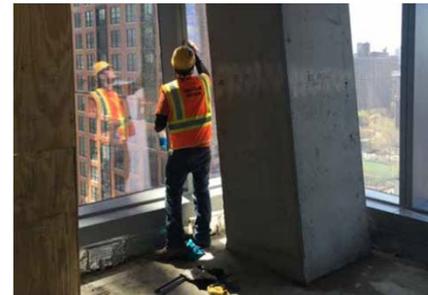
# Verdugos General Contractors

- Mentor contractor since 2013
  - \$1.42M in MTA SBDP prime contract awards
  - 2 SBDP contract awards



# Malcolm Patrick Corporation

- Mentor contractor since 2011
  - \$9.82M in MTA SBDP prime contract awards
  - 6 SBDP contract awards



# Reality Construction Inc.

- Mentor contractor since 2011
  - \$998K in MTA SBDP prime contract awards
  - 2 SBDP contract awards



# Zion Contracting

- Zion Contracting since 2009
  - \$26.4M in MTA SBDP prime contract awards
  - 5 SBDP contract awards
  - Beyond SBDP Mentoring – 3 contract awards
    - Total firm contract value - \$11.2M



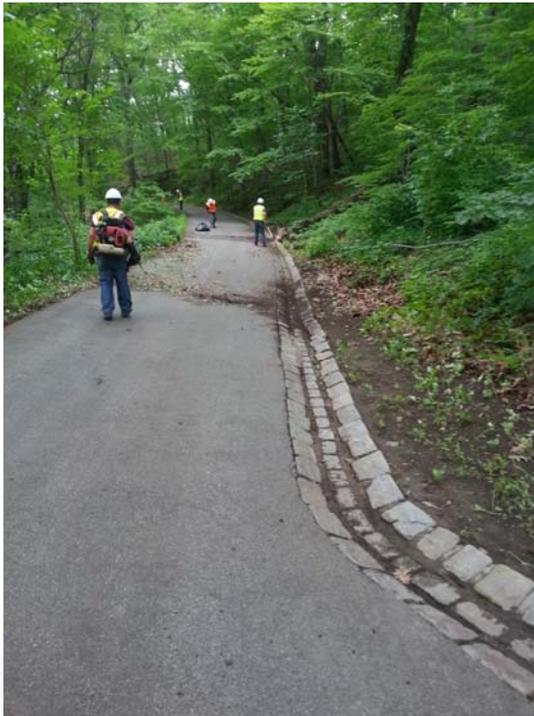
# Voltamp Electrical Contractors, Inc.

- Mentor contractor since 2010
  - \$440K in MTA SBDP prime contract award
  - 1 SBDP contract award



# Classico Building Maintenance Inc.

- Mentor contractor since 2014
  - \$650K in MTA SBDP prime contract awards
  - 2 SBDP contract awards



# Emerging Contractors Program

Prequalified Emerging Contractors				
	Prequalified	Transitioned	Projects	Amount
Black American	22	6	3	\$0.94M
Subcontinent Asian American	13	6	3	\$1.40M
Hispanic American	9	6	3	\$1.25M
Asian Pacific American	1	0	0	\$0.00M
Other	8	3	1	\$0.28M
<b>Totals for SBMP-Tier 1 Emerging Contractors</b>	<b>53</b>	<b>21</b>	<b>10</b>	<b>\$3.87M</b>



# SBDP Training Program

- As of Spring 2018, 446 firms participated in the training program
- 13-Session Technical & Business Development Classroom Training:
  - Doing Business with the MTA
  - Prevailing Wages & Project Management
  - Estimating and Bidding Strategies at the MTA
  - Project Scheduling at the MTA
  - Cash Flow and Financial Management
  - Marketing Your Business to the NY Construction Industry
  - Developing a Profitable Business in the MTA Region
  - Safety & Quality Planning at the MTA
  - Requisition and Change Order Process
  - Construction Law and Contract Review
  - How to Acquire Surety Bonding and Access to Capital
  - Navigating MTA Contracts and MWBE Compliance
  - How to be a Prime Contractor



# SBDP Training Program (continued)

- Summer Leadership Institute
  - Training in Communications, Marketing, Leadership, and Business Operations
  - Presentation Skills
  - Financial Statement Analysis
  - PLA's
  - Business Communications
  - Strategic Business Development



# Business Development Activities

- Business Development Activities are Diverse
  - Recruiting of and outreach to potential program contractors
  - Mandatory and voluntary training classes
  - Assessment & Action Plans of existing contractor businesses
  - Ongoing contractor interface with high level of customer service
  - Business Consulting and guidance
  - Technical and Business Operations support



**Thanks to All MTA Agency Personnel and  
Our External Partners  
Who Worked Hard to Continue  
the Success of the  
SBMP and SBFP!**



# Metropolitan Transportation Authority Department of Diversity and Civil Rights

M/WBE, DBE, and SDVOB Participation on  
Capital Projects

November 13, 2018



# MWDBE and SDVOB Participation on MTA Capital Projects with Goals

## ■ **Federal Participation Goal: 18%**

(First half Federal Fiscal Year 2018 (October 2017 to March 2018))

- Total Awards: \$349M\*
- Total Payments: \$571M
- Total DBE Awards: \$41M (12%)
- Total DBE Payments: \$97M (17%)

## ■ **New York State MBE Participation Goal: 15%\*\***

(Fourth quarter NYS Fiscal Year 2017-2018 and first quarter NYS Fiscal Year 2018-2019 (January 2018 to September 2018))

- Total Awards: \$1.9B\*
- Total Payments: \$954M
- Total MBE Awards: \$289M (15%)
- Total MBE Payments: \$110M (12%)

## ■ **New York State WBE Participation Goal: 15%\*\***

(Fourth quarter NYS Fiscal Year 2017-2018 and first quarter NYS Fiscal Year 2018-2019 (January 2018 to September 2018))

- Total Awards: \$1.9B\*
- Total Payments: \$954M
- Total WBE Awards: \$266M (14%)
- Total WBE Payments: \$102M (11%)

## ■ **Service Disabled Veteran-Owned Business Participation Goal: 6%**

(Fourth quarter NYS Fiscal Year 2017-2018 and first quarter NYS Fiscal Year 2018-2019 (January 2018 to September 2018))

- Total Awards: \$1.6B
- Total Payments: \$95M
- Total SDVOB Awards \$6M (.38%)
- Total SDVOB Payments: \$903,000 (1%)

\*Report is based on original contract amount provided by MTA Agencies for third-party design and construction contracts (excluding rolling stock and signals).

\*\*Report includes MTA Bridges and Tunnels' major maintenance projects funded from operating budget.



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# **MTA Capital Program Commitments & Completions**

## **through October 31, 2018**

### Capital Projects – Major Commitments – October 2018

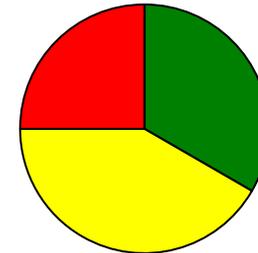
In 2018, agencies plan for a goal of \$7.3 billion in overall commitments with 43 major commitments planned.

Through October, agencies have committed \$4.9 billion versus a \$6.3 billion YTD goal. The shortfall was partly due to delays in the awards of NYCT's Culver Line Interlocking & CBTC (\$424M), Time Square Reconstruction & ADA Phase 3 (\$259M), ADA: 59<sup>th</sup> Street/4<sup>th</sup> Ave (\$45M), and the Rehabilitate Forsyth St. Fan Plant (\$93M). Delays with other non-major commitments, such as \$135M in LIRR Expansion Project support costs, \$26M in East Side Access support costs and \$153M of NYCT's Sandy-related commitments contributed to the balance of the shortfall. Nearly all will be achieved by year-end.

Twelve major commitments were made on time or early, fifteen were delayed but have now been committed, and nine other major commitments remain delayed. The delays are explained on the following pages.

By year end, the MTA currently forecasts meeting or exceeding its overall \$7.3 billion goal although doing so is increasingly challenging.

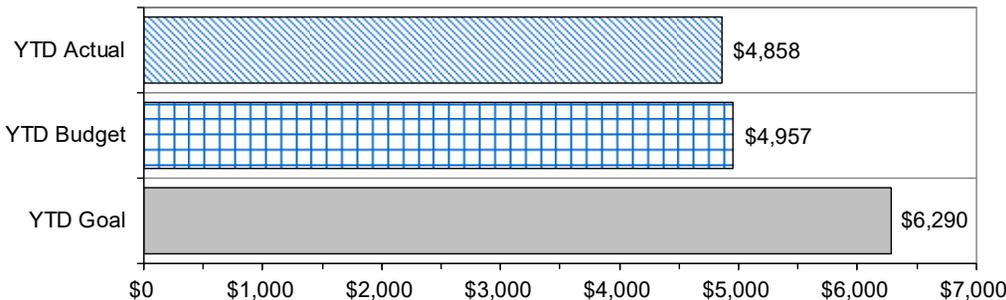
### Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
<b>GREEN</b> = Commitments made/forecast w within Goal	<b>12</b>	<b>33%</b>	-
<b>YELLOW</b> = Commitments delayed beyond Goal (already achieved)	<b>15</b>	<b>42%</b>	↑ 6
<b>RED</b> = Commitments delayed beyond Goal (not yet achieved)	<b>9</b>	<b>25%</b>	↓ 2
<b>Total</b>	<b>36</b>	<b>100%</b>	<b>↑ 4</b>

### Budget Analysis

2018 Annual Goal	\$7,337	(\$ in millions)
2018 Forecast	103%	of Annual Goal
Forecast left to Commit	35%	(\$2,670)



### Year-to-Date Agency Breakdown

2018 Goals	Prior month variance		
	GREEN	YELLOW	RED
<b>New York City Transit</b>			
4 5 7	---	+1 YELLOW	+1 RED
<b>Long Island Rail Road</b>			
4 1	---	+1 YELLOW	-1 RED
<b>Metro-North Railroad</b>			
2 2	---	+1 YELLOW	-1 RED
<b>Bridges and Tunnels</b>			
2 2 2	---	+1 YELLOW	+1 RED
<b>Capital Construction Company</b>			
2	---	+1 YELLOW	-1 RED
<b>MTA Bus Company</b>			
2	---	---	---
<b>MTA Police Department</b>			
1	---	+1 YELLOW	-1 RED

## Capital Projects – Major Commitments – October 2018 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
<b>9 All-Agency Red Commitments (4 new this month)</b>							
<b>NYCT</b>				<b>NYCT (cont.)</b>			
<i>Passenger Stations</i>				<i>Traction Power</i>			
Times Square Reconstruction & ADA, Phase 3 - Shuttle	Construction Award	Jun- 18 \$259.3	Dec- 18 \$285.2	<b>Replace High Tension Switchgear at 7 Substations (New Item)</b>	Construction Award	Oct- 18 \$51.9	Nov- 18 \$26.5
Award re- scheduled due to additional time needed to review and approve final design estimate. Project cost increased due to additional scope, changes to construction phasing, and extension of construction duration by 3 months.				Project cost decreased as a result of the reduction in the number of substations in the scope. Project award delayed due to an additional Circuit Breaker Housing scope added to the project.			
ADA: 59 Street / 4th Avenue	Construction Award	Jul- 18 \$44.9	Nov- 18 \$55.3	<b>B&amp;T</b>			
Design completion delay due to NYC DOT Office of Construction Mitigation and Coordination performing a User Cost Benefit Analysis to provide concurrence to the recommended maintenance and protection of traffic scheme taking longer than expected.				<i>Roadways and Decks</i>			
<i>Track</i>				<b>Rehabilitation of HCT</b>			
Mainline Track & Switch Program (6 Projects) - 3rd Qtr	Construction Award	Aug- 18 \$44.0	Apr- 19 \$44.0	Construction Award	Oct- 18 \$66.9	Dec- 18 \$66.9	
Five of the six projects remain uncommitted at this time. Award of the Flushing line Switches re-scheduled to April 2019 due to track access issues.				The forecasted commitment date for this design- build contract has been extended due to scope clarification and questions from interested bidders.			
<i>Signal Modernization</i>				<b>Steel Repair &amp; Concrete</b>			
Culver Line Interlockings & CBTC	Construction Award	Sep- 18 \$424.0	Dec- 18 \$430.3	Construction Award	Oct- 18 \$55.3	Dec- 18 \$55.3	
Project award re- scheduled due to addenda added to the contract bidders' questions. Project Cost increased slightly reflecting estimate at advertisement.				Additional time for multiple site tours requested by bidders to address questions from bidders and to clarify scope.			
<i>Shops &amp; Yards</i>							
207 St Maintenance & Overhaul Shop Roof & Component Repair	Construction Award	Sep- 18 \$66.3	Nov- 18 \$57.6				
Project award delayed due to several bid postponements. Project cost decreased reflecting favorable bids received.							
<b>Rehabilitate Forsyth St. Fan Plant (New Item)</b>	Construction Award	Oct- 18 \$92.8	Nov- 18 \$103.1				
Bid opening delayed due to an addendum issued which resulted in prospective bidders requesting additional time to prepare bids.							

## Capital Projects – Major Commitments – October 2018 – Schedule Variances

Project	Commitment	Goal	Actual	Project	Commitment	Goal	Actual
<b>15 All-Agency Yellow Commitments (6 new this month)</b>							
<b>NYCT</b>				<b>LIRR</b>			
<i>Passenger Stations</i>				<i>Power</i>			
ADA: Eastern Parkway- Brooklyn Museum / EPK	Construction Award	May- 18	Aug- 18 (A)	<b>Substation Components (New Item)</b>	Construction Award	Jun- 18	Oct- 18 (A)
Project award re- scheduled due to delay in advertisement.		\$39.3	\$39.2			\$13.6	\$12.4
ADA: Gun Hill Rd / Dyre	Construction Award	Mar- 18	Apr- 18 (A)	Project delayed for rebid due to vendor disqualification. A new advertisement was progressed in July 2018.			
Delayed due to final procurement activities. Project cost increased reflecting unfavorable bids received as well as additional scope items.		\$37.8	\$52.0	<b>MTA Bus Company</b>			
ADA: Bedford Park Boulevard / Concourse	Construction Award	Mar- 18	Apr- 18 (A)	<i>Bus Company Projects</i>			
Delayed due to several bid extensions and final procurement activities. Project cost reflects favorable bids received.		\$37.8	\$29.7	53 Articulated Buses	Fleet Procurement	Apr- 18	Jun- 18 (A)
Replace 12 Traction Elevators / Broadway-7th Avenue	Construction Award	Mar- 18	Apr- 18 (A)	Award was revised due to an audit for Buy America adherence.		\$53.2	\$50.2
Delayed due to final procurement activities. Project cost increased due to scope changes and unfavorable bids.		\$88.1	\$97.9	Bus Digital Information Screens (DIS)	Construction Award	Apr- 18	Jun- 18 (A)
<i>Signals and Communication</i>				Schedule was pushed out 2 months due to a lengthy award process.		\$11.7	\$7.5
<b>Low-Resistance Contact Rail &amp; Negative Cables / QBL (New Item)</b>	Construction Award	Jun- 18	Oct- 18 (A)	<b>MTACC</b>			
Project schedule delayed due to a budget modification staff summary required to fund budget shortfall. Project cost reflects latest estimates at advertisement with increases to the bid estimate and support costs.		\$25.5	\$63.2	<i>East Side Access</i>			
<b>MNR</b>				Harold Structures - Trackwork	Construction Award	Mar- 18	Apr- 18 (A)
<i>Signals &amp; Communications</i>						\$48.5	\$36.4
Harlem Cable Installation	Construction Award	Feb- 18	Mar- 18 (A)	Award was delayed due to the contractor's delay in finalizing administrative elements required by procurement to award the contract. Award value reflects good bid savings.			
The delay in award was due to pre- award activities required to comply with the contract's diversity compliance goals.		\$47.7	\$47.7	<b>Harold Structures - Part 3A: B/C Approach (CH058A) (New Item)</b>	Construction Award	Jul- 18	Oct- 18 (A)
<i>Shops &amp; Yards</i>						\$100.2	\$73.5
<b>Harmon Shop Replacement - Phase V (New Item)</b>	Construction Award	Jul- 18	Oct- 18 (A)	Advertisement was delayed to align contract with LIRR and Amtrak resource availability, and as a result, award date was impacted.			
Due to the transitioning from the Harmon Shop Replacement Stage 1 completion to an immediate Stage 2 commencement the start date has been pushed back to October 2018.		\$388.4	\$376.1	<b>MTA Police</b>			
				<i>SI County District Office (New Item)</i>			
				SI County District Office (New Item)	Construction Award	Aug- 18	Oct- 18 (A)
				The commitment delay was due to contractors' requests for additional time to review the project. In order to maximize vendor interest these accommodations were made and the bid opening was rescheduled to September.			

## Capital Projects – Major Commitments – October 2018 – Schedule Variances

Project	Commitment	Goal	Forecast
<b>B&amp;T</b>			
<i>Roadways and Decks</i>			
Reconstruct Manhattan Toll Plaza Structure & Ramps	Construction Award	Jul- 18 \$21.0	Aug- 18 (A) \$21.0
Delay due to advertisement date being extended for final design approval.			
<b>Tower Pier Rehab/Construct Mooring Platform/Elevator Rehabilitation (New Item)</b>	Construction Award	Jul- 18 \$27.2	Oct- 18 (A) \$27.2
Technical proposals were not ready for the July Board meeting and was presented at the September Board meeting.			

### Capital Projects – Major Completions – October 2018

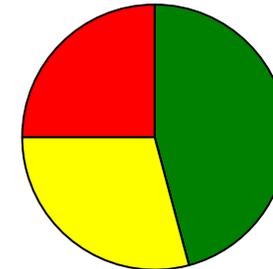
In 2018, agencies plan for a goal of \$6.3 billion in overall completions, with 39 major completions.

Through October, agencies have completed \$2.6 billion versus a \$4.4 billion YTD goal. The shortfall is partly due to delays with MNR's completion of Harmon Shops Improvements (\$316M), the NYCT 34<sup>th</sup> St Interlocking/6<sup>th</sup> Ave (\$165M), West 4<sup>th</sup> St Interlocking/6<sup>th</sup> Ave (\$154M), the acceptance of 62 B-Division R179 Cars (\$128M), and the completion of assorted mainline track replacement projects (\$215M), most of which are forecast for achievement by year end.

Eleven major completions were made on time or early, seven major completion were delayed but have now been completed, and six major completions remain delayed. The delays are explained on the following pages.

By year end, the MTA currently forecasts meeting 90% of its overall \$6.3 billion completion goal with 23 commitment forecasted through the 3<sup>rd</sup> Quarter. This shortfall is primarily due to two Sea Beach stations project (\$393M) slipping into 2019.

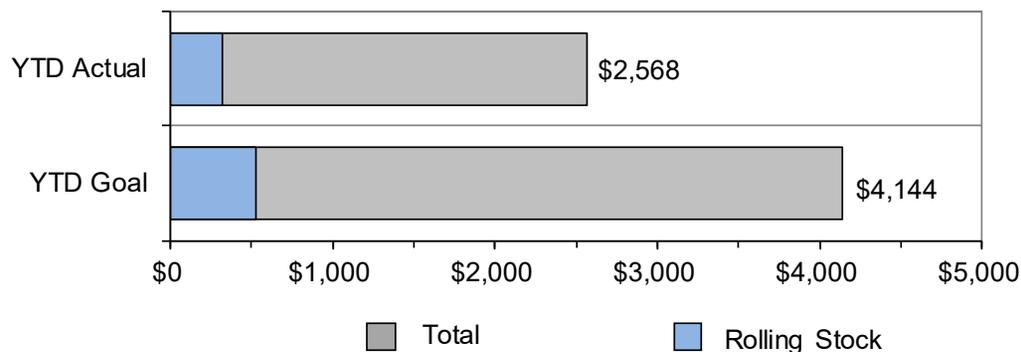
### Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
<b>GREEN</b> = Completions made/forecast w ithin Goal	11	46%	↑ 2
<b>YELLOW</b> = Completions delayed beyond Goal (already achieved)	7	29%	-
<b>RED</b> = Completions delayed beyond Goal (not yet achieved)	6	25%	↑ 1
<b>Total</b>	<b>24</b>	<b>100%</b>	<b>↑ 3</b>

### Budget Analysis

2018 Annual Goal \$6,299 (\$ in millions)  
 2018 Forecast 90% of Annual Goal  
 Forecast left to Complete 55% (\$3,093)



### Year-to-Date Agency Breakdown

2018 Goals	Prior month variance		
	GREEN	YELLOW	RED
<b>New York City Transit</b>			
1 3 2	----	----	----
<b>Long Island Rail Road</b>			
3 3 1	+1 GREEN	----	+1 RED
<b>Metro-North Railroad</b>			
1 1	----	----	----
<b>Bridges and Tunnels</b>			
5 1	+1 GREEN	----	----
<b>Capital Construction Company</b>			
1 1	----	----	----
<b>MTA Bus Company</b>			
	----	----	----
<b>MTA Police Department</b>			
1	----	----	----

## Capital Projects – Major Completions – October 2018 – Schedule Variances

Project	Completion	Goal	Forecast
<b>6 All-Agency Red Completions (1 new this month)</b>			
<b>NYCT</b>			
<i>Signal Modernization</i>			
34th St Interlocking / 6th Avenue	Construction	Sep- 18	Nov- 18
		\$164.8	\$172.1
Project schedule delay due to unfinished work involving the decommissioning of the old tower and the in- service of the new dispatcher's office. Project cost includes reserves for additional TA Labor and engineering services			
West 4 St Interlocking / 6th Avenue	Construction	Sep- 18	Dec- 18
		\$153.7	\$165.9
Project schedule delay due to unfinished work involving the decommissioning of the old tower and the place in- service of the new dispatcher's office. Project cost includes reserves for additional TA Labor and engineering services			
<b>LIRR</b>			
<i>Track</i>			
<b>Mainline Double Track (Switch Equipment) (New Item)</b>	Construction	Oct- 18	Mar- 19
		\$33.0	\$33.0
Due to lack of availability of track outages for remainder of 2018, completion moved to March 2019 to include switches.			
<b>MNR</b>			
<i>Shops and Yards</i>			
Harmon Shop Improvements	Construction	Jun- 18	Nov- 18
		\$315.6	\$315.6
Scheduled completion is now projected to be November 2018 due to a delay performing SCADA testing for permanent power, equipment deliveries, and testing of the Consist Shop DC substation and Bug and Stinger system.			
<b>B&amp;T</b>			
<i>Tunnels</i>			
Queens Midtown Tunnel - Vent Building Electrical Upgrades/Flood Mitigation - Equipment Relocation	Construction	Jul- 18	Apr- 19
		\$57.4	\$57.4
Additional time required for motor modification. Extention to substantial Completion required to provide additional factory acceptance testing and additional field installation verification/testing. Additional factory acceptance testing on the motors revealed a flaw that will be corrected at no cost to the Authority.			

Project	Completion	Goal	Forecast
<b>MTACC</b>			
<i>7 Line Extension</i>			
Construction: (Site P) Core & Shell	Construction	Sep- 18	Nov- 18
		\$102.2	\$102.2
Although the secondary entrance opened on September 1, 2018, Substantial Completion is delayed due to longer than expected duration to complete administrative items, such as As-Built submittals for all critical systems.			

## Capital Projects – Major Completions – October 2018 – Schedule Variances

Project	Completion	Goal	Actual
<b>7 All-Agency Yellow Completions (0 new this month)</b>			
<b>NYCT</b>			
<i>Line Equipment</i>			
Vent Plant: 46th Street- Northern Blvd / Queens Blvd Line	Construction	May- 18 \$80.9	Aug- 18 (A) \$78.9
Project completion schedule was extended by three months due to testing issues.			
<i>Signals and Communications</i>			
2 Interlockings: Union Turnpike & 71 Av	Construction	May- 18 \$297.8	Jun- 18 (A) \$306.0
Delay due to new scope added to the project. An additional work order was issued for the installation of a communication component.			
<i>Buses</i>			
Purchase 92 Articulated Buses (Nova)	Fleet Procurement	Mar- 18 \$83.9	Sep- 18 (A) \$82.2
All buses delivered except one single pilot bus were retrofitted. Additional technical requirements, processed post- award, resulted in a longer turn- around time for Nova's overall production of each bus.			
<b>LIRR</b>			
<i>Signals and Communications</i>			
New Elevators - Flushing - Main St	Construction	Jun- 18 \$ 14.9	Jul- 18 (A) \$ 14.9
Delay due to vandalism at elevator site. Repairs are complete.			
<i>Track Improvement</i>			
Main Line Double Track Ph 2 (Signal Equipment)	Construction	Apr- 18 \$30.0	Sep- 18 (A) \$30.0
Delay due to additional signal modifications required of the manufacturer.			
Main Line Double Track Ph 2 (Track and Systems)	Construction	Jun- 18 \$71.0	Sep- 18 (A) \$73.3
Budget increase due to 3rd party construction change orders.			

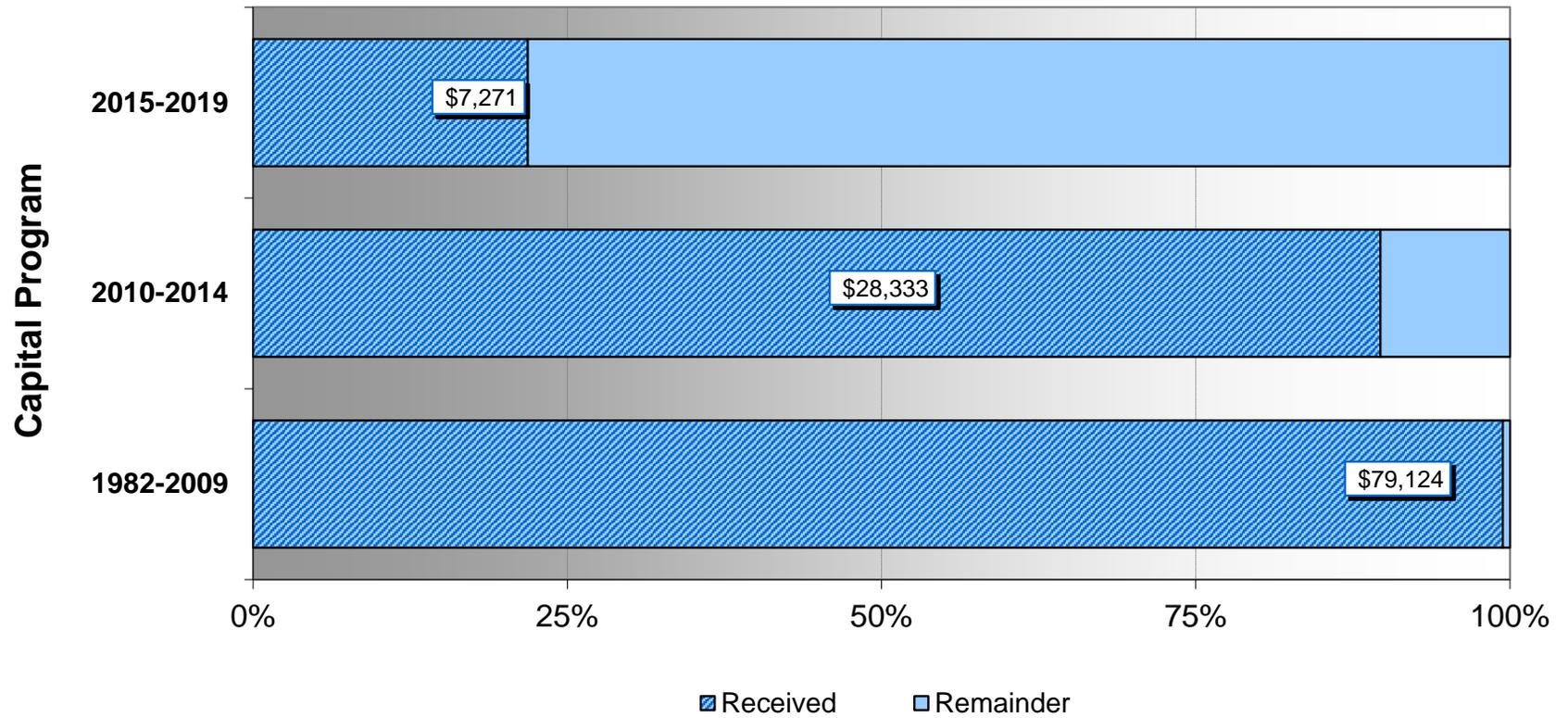
Project	Completion	Goal	Actual
<b>MTA CC</b>			
<i>East Side Access</i>			
Harold Tunnel A Cut and Cover Structures (CH061A)	Construction	May- 18 \$42.0	Aug- 18 (A) \$42.0
Contractor productivity was less than expected. Resource shortages limited ability to mitigate delays.			

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## Status of MTA Capital Program Funding

# Capital Funding (October 2018)

\$ in millions



## Capital Funding Detail (October 31, 2018)

\$ in millions

	Funding Plan	Receipts		
	Current	September	This month	Received to date
<b>1992-1999 Program</b>	18,099	18,099	-	18,099
<b>2000-2004 Program</b>	21,691	21,691	-	21,691
<b>2005-2009 Program</b>	24,401	23,940	3	23,943

	Funding Plan	Receipts		
	Current	September	This month	Received to date
<b>2010-2014 Program</b>				
Federal Formula, Flexible, Misc	\$5,853	\$5,839	\$ -	\$5,839
Federal High Speed Rail	295	295	-	295
Federal New Start	1,257	1,257	-	1,257
Federal Security	189	100	-	100
Federal RIFF Loan	-	-	-	-
City Capital Funds	719	608	-	608
State Assistance	770	400	-	400
MTA Bus Federal and City Match	132	108	-	108
MTA Bonds (Payroll Mobility Tax)	11,483	11,176	304	11,480
Other (Including Operating to Capital)	1,314	1,187	-	1,187
B&T Bonds	2,025	2,025	-	2,025
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,329	4,800	-	4,800
<i>PAYGO</i>	235	81	-	81
<i>Sandy Recovery MTA Bonds</i>	758	12	16	28
<i>Sandy Recovery B&amp;T Bonds</i>	230	124	-	124
<b>Total</b>	<b>31,589</b>	<b>28,013</b>	<b>320</b>	<b>28,333</b>

	Funding Plan	Receipts		
	Current	September	This month	Received to date
<b>2015-2019 Program</b>				
Federal Formula, Flexible, Misc	\$6,704	\$3,084	\$ -	\$3,084
Federal Core Capacity	100	-	-	-
Federal New Start	500	-	-	-
Federal Security	3	3	-	3
State Assistance	8,640	403	111	514
City Capital Funds	2,666	565	102	667
MTA Bonds	7,968	12	529	541
Asset Sales/Leases	1,018	297	-	297
Pay-as-you-go (PAYGO)	2,145	1,691	-	1,691
Other	592	-	-	-
B&T Bonds & PAYGO	2,936	475	-	475
<b>Total</b>	<b>33,273</b>	<b>6,529</b>	<b>742</b>	<b>7,271</b>