



Metropolitan Transportation Authority

Capital Program Oversight Committee Meeting

July 2019

Capital Program Oversight Committee Meeting

2 Broadway, 20th Floor Board Room

New York, NY 10004

Monday, 7/22/2019

2:30 - 3:30 PM ET

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES JUNE 24, 2019

- Minutes from June '19 - Page 3

3. COMMITTEE WORK PLAN

- 2019 - 2020 CPOC Committee Work Plan - Page 6

4. MTACC CAPITAL PROGRAM UPDATE

- Update on East Side Access - Page 8*
- IEC Project Review on East Side Access - Page 37*
- IEC East Side Access Appendix - Page 43*
- Progress Report on LIRR Expansion - Page 44*
- IEC Project Review on LIRR Expansion - Page 56*
- Update on Second Avenue Subway Phase II - Page 60*
- Update on Penn Station Access Project - Page 65*

5. CAPITAL PROGRAM STATUS

- Commitments, Completions, and Funding Report - Page 75

6. EXECUTIVE SESSION

Date of next meeting: Monday, September 23, 2019 at 2:30 PM

MINUTES OF MEETING
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE
June 24, 2019
New York, New York
2:30 P.M.

MTA Board members present:

Hon. Patrick Foye
Hon. Andrew Albert
Hon. Robert Lin
Hon. Susan Metzger
Hon. Neal Zuckerman

MTA staff present:

Ronnie Hakim
Tom Savio
Don Spero

NYCT staff present:

Mark Bienstock
Andy Byford
Alok Saha
Pete Tomlin

Independent Engineering Consultant staff present:

Joe DeVito
Nabil Ghaly
Dianne Rinaldi
Hassan Tavassoli

* * *

Chairman Foye called the June 24, 2019 meeting of the Capital Program Oversight Committee to order at 2:55 P.M.

Public Comments Period

There were four public speakers in the public comments portion of the meeting: Jason Pineiro; Finley Staub; Omar Vera; and Kevin Zeng.

Meeting Minutes

The minutes to the meeting held on April 23, 2019 (with corrections, as requested by Commissioner Albert), as well as the minutes to the meeting held on May 20, 2019, were approved.

Committee Work Plan

Mr. Spero announced that there were no changes to the Work Plan.

NYCT Update on Signals and Train Control Division

Mr. Tomlin provided an update and overview of a number of projects, including those in the closeout phase (CBTC Flushing Line, 34th Street Interlocking, and West 4th Street Interlocking), those currently in construction ((CBTC Queens Boulevard Line (QBL), CBTC Equipment Supplier Interoperability, CBTC Culver Line, ISIM-B: Modules 3 and 3A, Ultra-Wideband-Based Train Control Pilot Program and the Kings Highway Interlocking on the Culver Line)), as well as one project in the procurement phase (CBTC

8th Ave/Interlockings at 30th Street and 42nd Street). In its oral remarks on the 8th Avenue CBTC Project, the IEC stated that it had facilitated a quantitative risk assessment, developed a risk log to monitor project risks, and worked closely with the project team to identify risk mitigations. With respect to the QBL CBTC schedule, the IEC noted that the current Substantial Completion (SC) date of March 2021 is at risk, adding that the project team has recognized this risk and is taking mitigation measures to maintain the schedule. The IEC currently forecasts a delay in the SC date, mainly due to: early delays in design and interim milestones, which compressed remaining activities; time needed to resolve typical software and interoperability issues and stabilize CBTC system performance; and the schedule update from CBTC supplier continues to reflect a delay to substantial completion. The IEC stated that it will analyze proposed mitigations to quantify potential benefits to the project schedule. With respect to the QBL CBTC budget, the IEC's review and analysis indicate that the projects remain within budget; the IEC then stated that installation of carborne equipment is progressing on schedule, and noted improved management of software, including close adherence to Requirements Traceability Matrix (RTM) standards, and formal software working group meetings to review and discuss software documents. With respect to the installation contract, while the IEC verified that project remains on schedule and within budget (having made good progress in the installation of wayside equipment within the Intermediate Section, which is on the critical path), the IEC cited its concern regarding delays by the subcontractor in providing signal equipment for remaining sections, which is being addressed by the project team. The IEC further noted that a delay in the design and furnish contracts will require an extension to the contract schedule. With regard to CBTC Equipment Supplier Interoperability, the IEC noted that while the CBTC supplier improved the quality of its design, SC slipped an additional six months. The IEC then stated its concern that the additional delays will adversely impact the availability of a third CBTC supplier to compete for the CBTC projects. With respect to CBTC Flushing, the IEC noted that while SC was declared in March 2019, based on its budget review, additional funds are needed to cover soft cost overruns and remaining activities. The IEC concluded its oral remarks with the following recommendations: NYCT perform a simulation on the Flushing Line to identify infrastructure and operational constraints and bottlenecks, and undertake initiatives to enhance line capacity; and NYCT clarify the criteria for achieving SC on CBTC projects to include specific requirements related to achieving main CBTC operating functions. Such clarifications could be part of the project special conditions section and will provide leverage to the project team when dealing with CBTC contractors. 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.

NYCT Update on Systems and Security Division

Mr. Bienstock provided an overview of projects completed to date, including: countdown clocks in all subway stations; cellular and WiFi service in all underground subway stations; Public Address & Customer Information Screens at 91 B Division subway stations; Help Points & Passenger Station Local Area Network (PSLAN) at all subway stations; digital Customer Information Centers and advertising screens; electronic security systems and the first phase of the Connection Oriented Ethernet (COE) network upgrade. Mr. Bienstock then reviewed in detail the Flushing Public Address System, the Bus Radio System (BRS) and the Bus Command Center (BCC). In its oral remarks on the BRS the IEC verified that the current budget of \$280 million is sufficient to complete the project at the current Estimate at Completion (EAC). Concerning the schedule, the IEC stated that little progress has been made since its November 2018 report, and the IEC review of contractor's schedule updates shows a month-for-month delay since then. The IEC forecasts a delay of at least six months to Substantial Completion (SC) if progress on the project is not accelerated. The IEC then recommended that the following be developed: a recovery plan to resolve outstanding issues, so SC is not further delayed; with respect to testing, a master defect list to track all variances and their dispositions, starting from Factory Acceptance Testing of all sub systems, and throughout the project; and with respect to system rollout, a clear process to safely implement any hardware, software and configuration changes to the live system. Once the system is in operation, all changes must be approved, tested, and verified in the test environment before system-wide implementation. With respect to the BCC, the IEC stated that all major work is completed; however, the completion of minor code- compliance work is delaying occupancy of the building and additional funding will be required to cover soft costs through closeout and pending change orders. 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

Ms. Hakim noted that the MTA made four major commitments through May, and while there was a slip of three additional commitments, by year-end the MTA expects to meet its commitment goal. With respect to completions, the MTA made six out of the eight major completions through May, and while two were delayed, there is a path forward so that by year end the MTA will be on track to meeting or exceeding the completions goal.

Capital Program Traffic Light Reports

Mr. Spero noted that in the Capital Core Program Traffic Light Report for the first quarter of 2019, a total of 325 projects were reviewed: 53 in design and 272 in construction. About two-thirds were designated green, 22% were yellow and 13% were red. With respect to Sandy Program projects, a total of 72 projects were reviewed: 3 in Design, 13 in Post-Design to Construction, and 56 in Construction. Of the 72 projects reviewed: 61% were green, 26% were yellow and 13% were red.

Adjournment

Upon motion duly made and seconded, Chairman Foye adjourned the June 24, 2019 meeting of the MTA Capital Program Oversight Committee at 3:57 PM.

Respectfully submitted,
Michael Jew-Geralds
Office of Construction Oversight



2019-2020 CPOC Committee Work Plan

I. Recurring Agenda Items

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

II. Specific Agenda Items

September

NYCT Capital Program Update

- Sandy Recovery and Resiliency Division
- Stations Division

Quarterly Traffic Light Reports

October

LIRR Capital Program Update

- Jamaica Capacity Improvements
- Mid Suffolk Yard
- Morris Park Locomotive Shop and Employee Facility

MNR Capital Program Update

- Harmon Shop Replacement
- Customer Information System

LIRR and MNR Joint Update on Rolling Stock
LIRR and MNR Update on Positive Train Control (PTC)

November

NYCT Capital Program Update
Update on New Fare Payment System
Update on Minority, Women and Disadvantaged Business Participation
Update on Small Business Development Program

December

MTACC Capital Program Update
Quarterly Traffic Light Reports

January

NYCT Capital Program Update
NYCT Rolling Stock Procurement Program

February

B&T Capital Program Update

Update on Capital Program Security Projects (in Executive Session)

March

NYCT Capital Program Update

Quarterly Traffic Light Reports

April

MTACC Capital Program Update

May

LIRR Capital Program Update

MNR Capital Program Update

LIRR and MNR Update on Positive Train Control (PTC)

Update on New Fare Payment System

Update on Minority, Women and Disadvantaged Business Participation

June

NYCT Capital Program Update

Quarterly Traffic Light Reports

July

MTACC Capital Program Update

BRINGING LONG ISLAND RAIL ROAD SERVICE TO THE EAST SIDE OF MANHATTAN

Capital Oversight Committee Report
July 2019



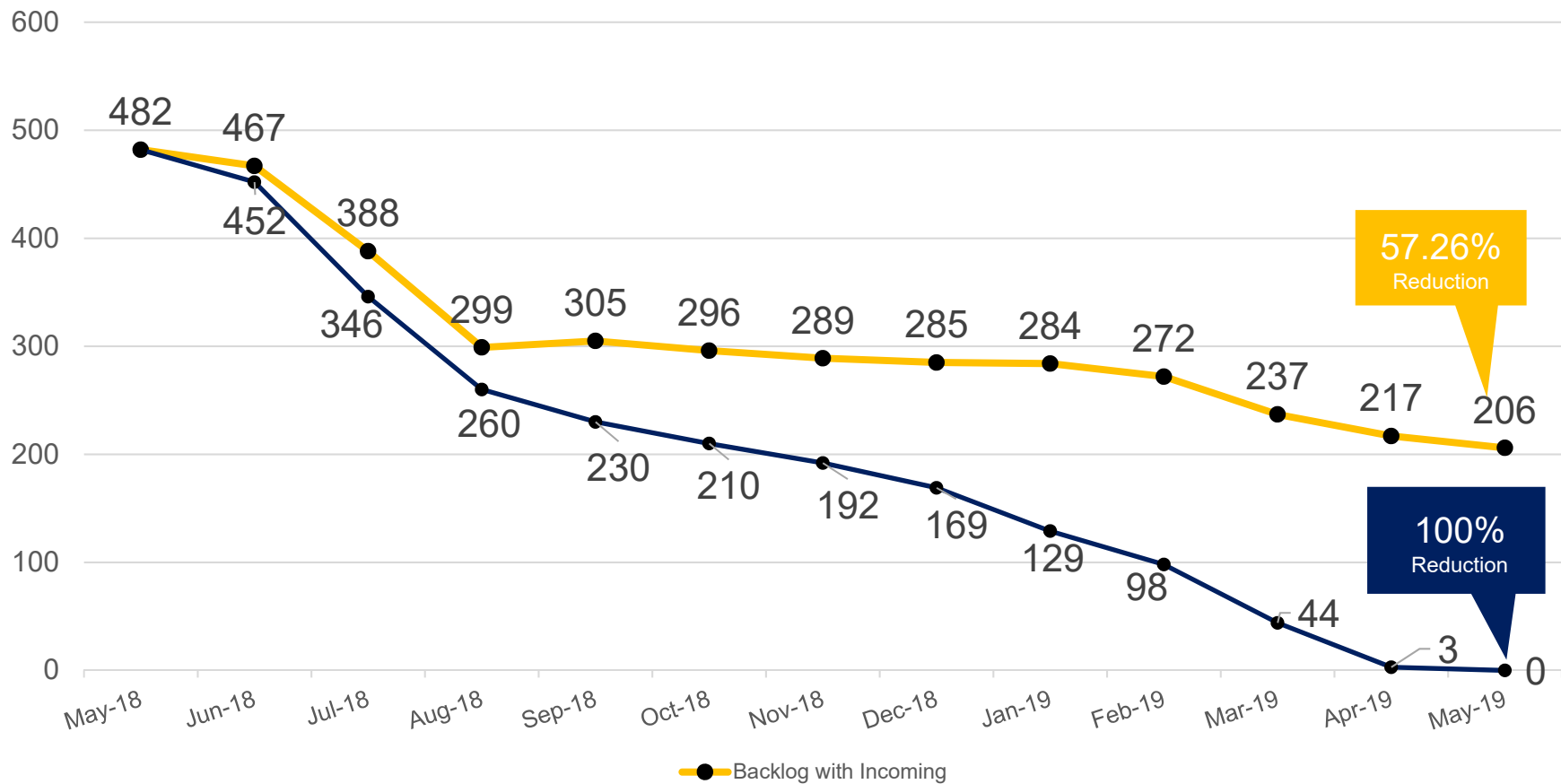
BRINGING LONG ISLAND RAIL ROAD SERVICE TO THE EAST SIDE OF MANHATTAN

Current EAC \$11.1B
RSD : December 2022

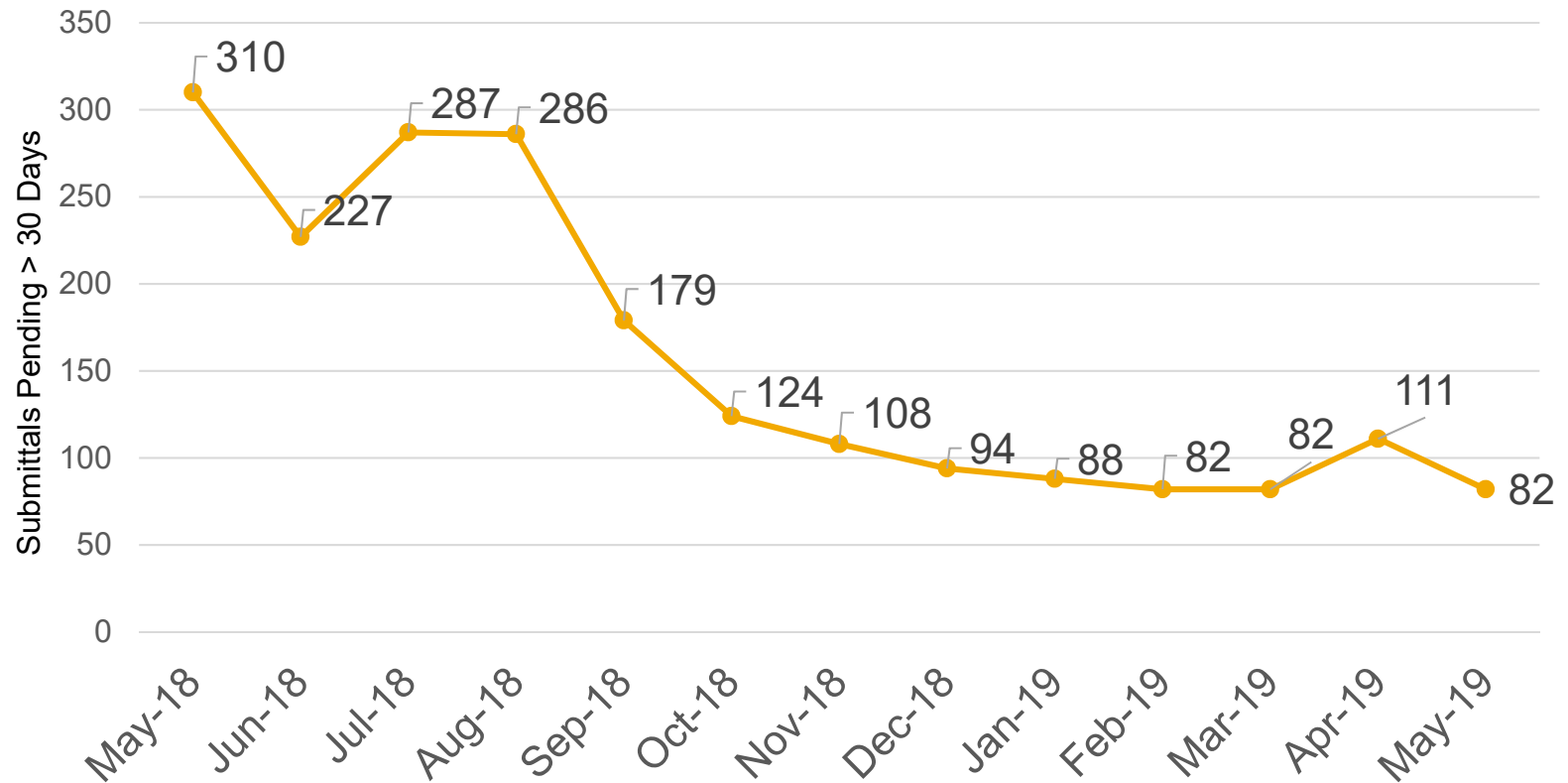
- Saving Long Island passengers to Manhattan's East side up to 40 minutes/day
- 45% increased capacity of LIRR during peak hour service
- Opportunities for true reverse commuting to Long Island
- Redundancy in our regional transportation system
- Making Long Island an even more desirable place to live and work
- Allows Metro North access to Penn Station



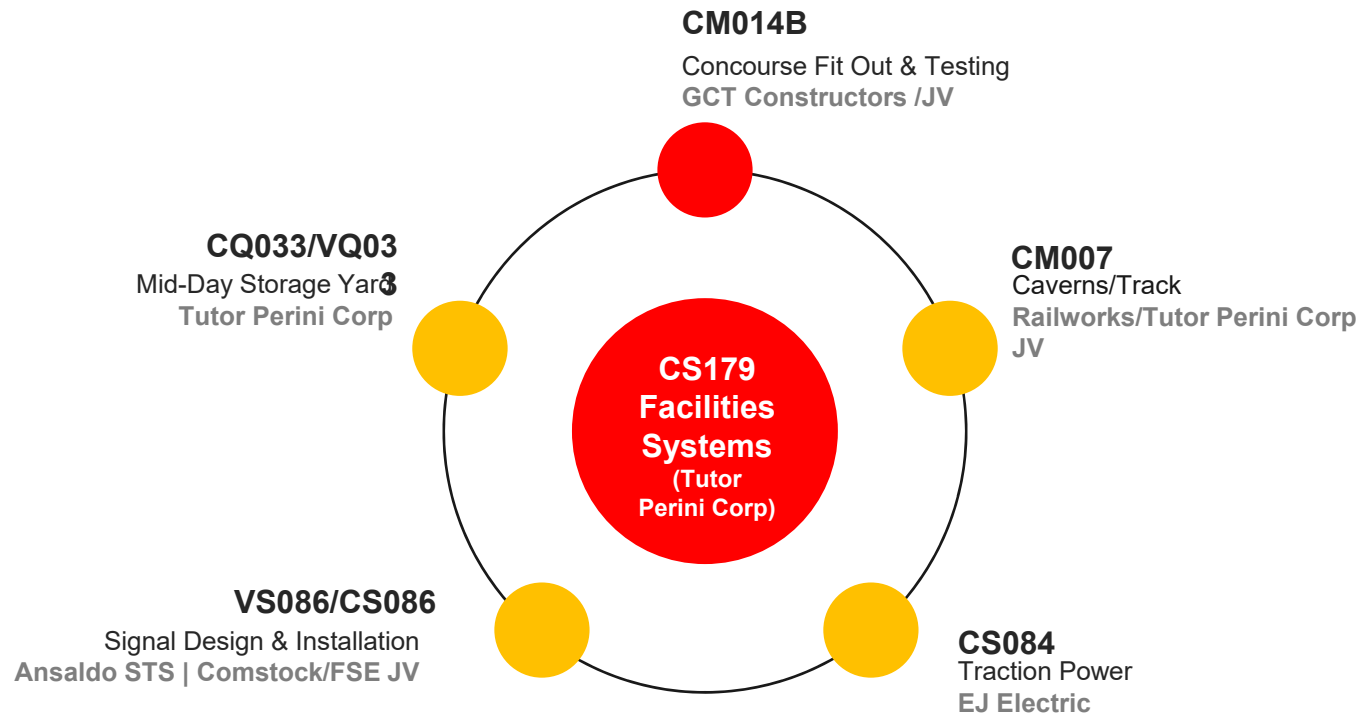
Key Performance Indicators Change Management Group – Open Change Orders and Contract Issues for CM007, CM014B & CS179



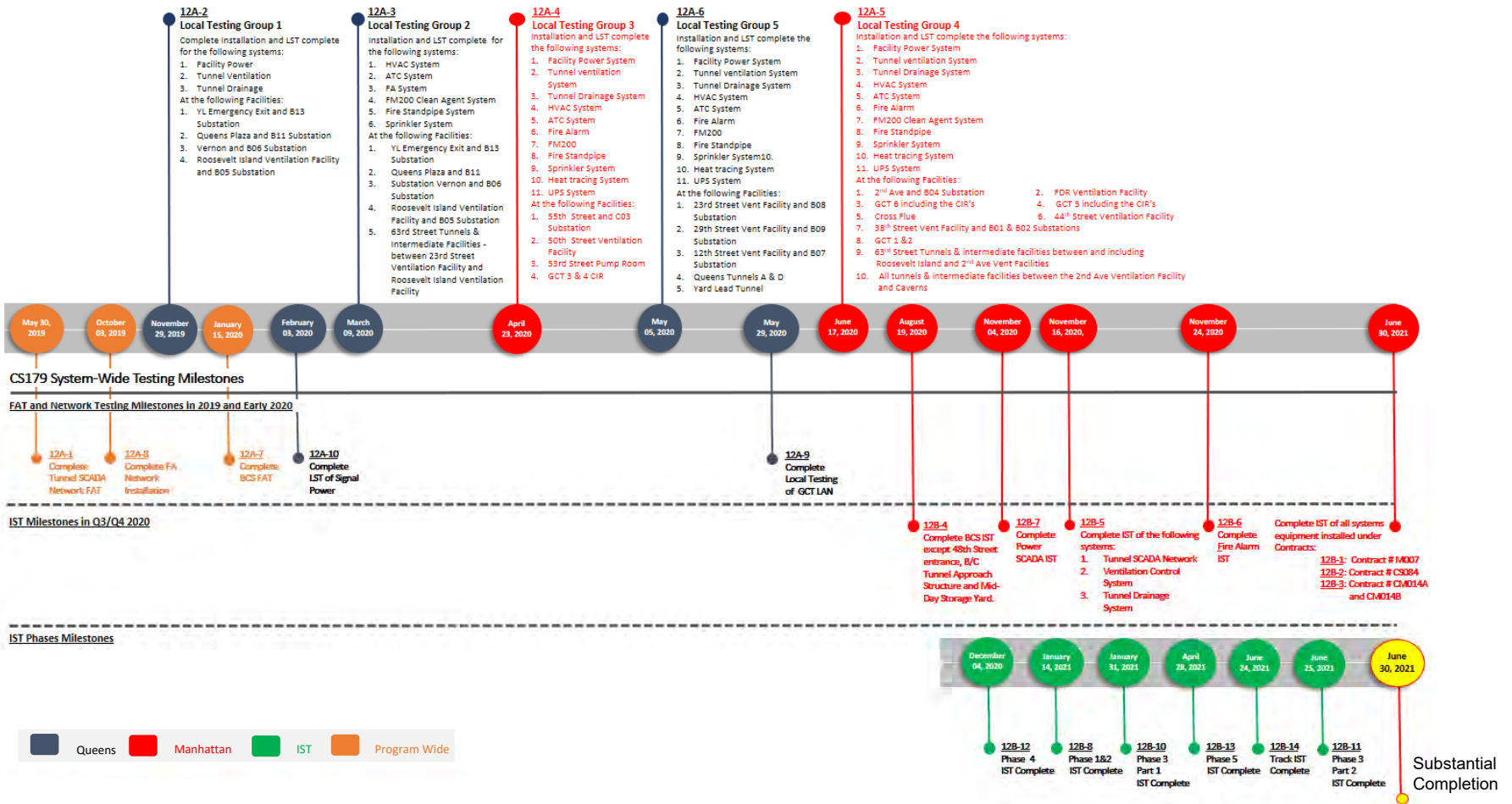
Key Performance Indicators – Submittals Review Performance (GEC/CM/LIRR)



Facility Systems and Concourse Contract Modifications



CS179 Detailed Schedule Milestones





Harold Contributors to Success

Planning

- IPS to identify and mitigate Program Risks
- Third Party Interfaces (Adjacent ESA Contracts, Railroads, Other Agencies)
- Lessons Learned from prior Contracts

Design

- Constructability Review
- BIM – Conflict Avoidance

Pre-construction

- Railroad Coordination – Staging & Potential Outages

Construction

- Railroad Involvement (Outages, protection and logistics)
- Resequencing of Work – Tunnel D, Loop A Trackwork
- BIM – Conflict Resolution
- IST/Operational Readiness
- Regular site inspections with Railroad user groups



CQ033 – Mid-day Storage Yard
Filled and graded area for Mid-Day Storage
Yard

AUGUST 2017



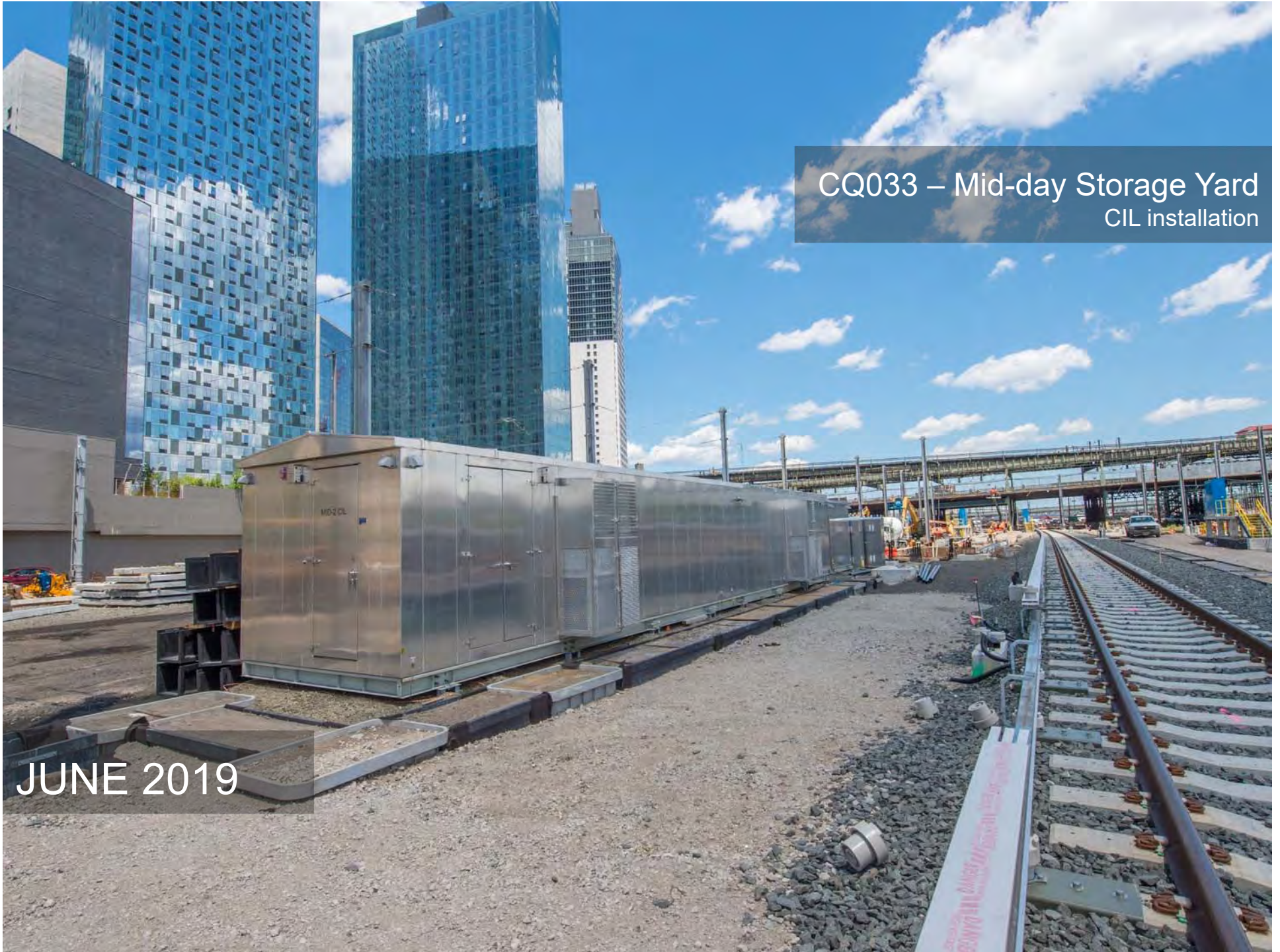
CQ033 – Mid-day Storage Yard
Personnel Bridge and Track Installed

JULY 2019



CQ033 – Mid-day Storage Yard
Site prep and grading

OCTOBER 2017



CQ033 – Mid-day Storage Yard
CIL installation

JUNE 2019



CH058A – B/C Approach Structure
Original site conditions

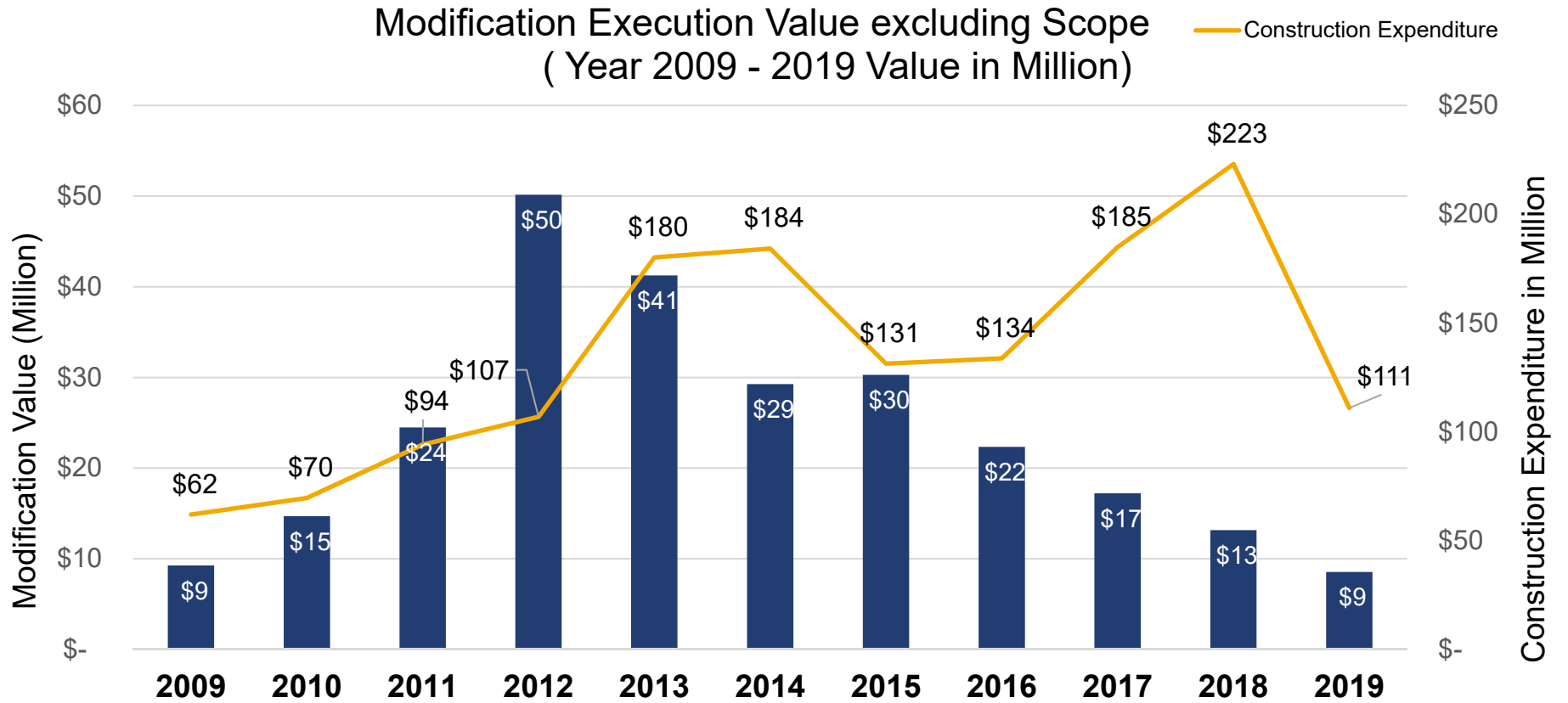
MAY 2018



CH058A – B/C Approach Structure
Site clearing, bridge underpinning prep

JUNE 2019

Harold Interlocking Program Modification Execution Value



JP Morgan Chase World Headquarters – 270 Park Avenue

- MTA & JPMC continue pre-construction analysis and negotiations.
- An Integrated Construction Schedule has been finalized which protects ESA Revenue Service Date.
- JPMC Early Work protects and prioritizes ESA critical systems.
- A Construction Agreement with JPMC has been finalized for MTA Board action in July as well as other agreements under negotiation with owner of 415 Madison (48th Street ESA / LIRR Entrance)



Construction Progress Highlights

Harold & Queens

- De-commissioned old G02 Substation, and signal facilities to allow the construction of Tunnel B/C Approach Structure to commence.
- Mobilized and completed installation of mini-piles for B/C Approach Structure. Continued construction of 39th Street underpinning foundations and installation of soldier piles at the east end.
- Completed Arch Street reroute track installation at Mid-day Storage Yard. Continued installation of track and turnouts along the south side.
- Installed the fourth of 8 signal huts in Midday Storage Yard.
- Completed ET catenary wire transfer at R Tower (predecessor to Midday Storage Yard construction at the east end).

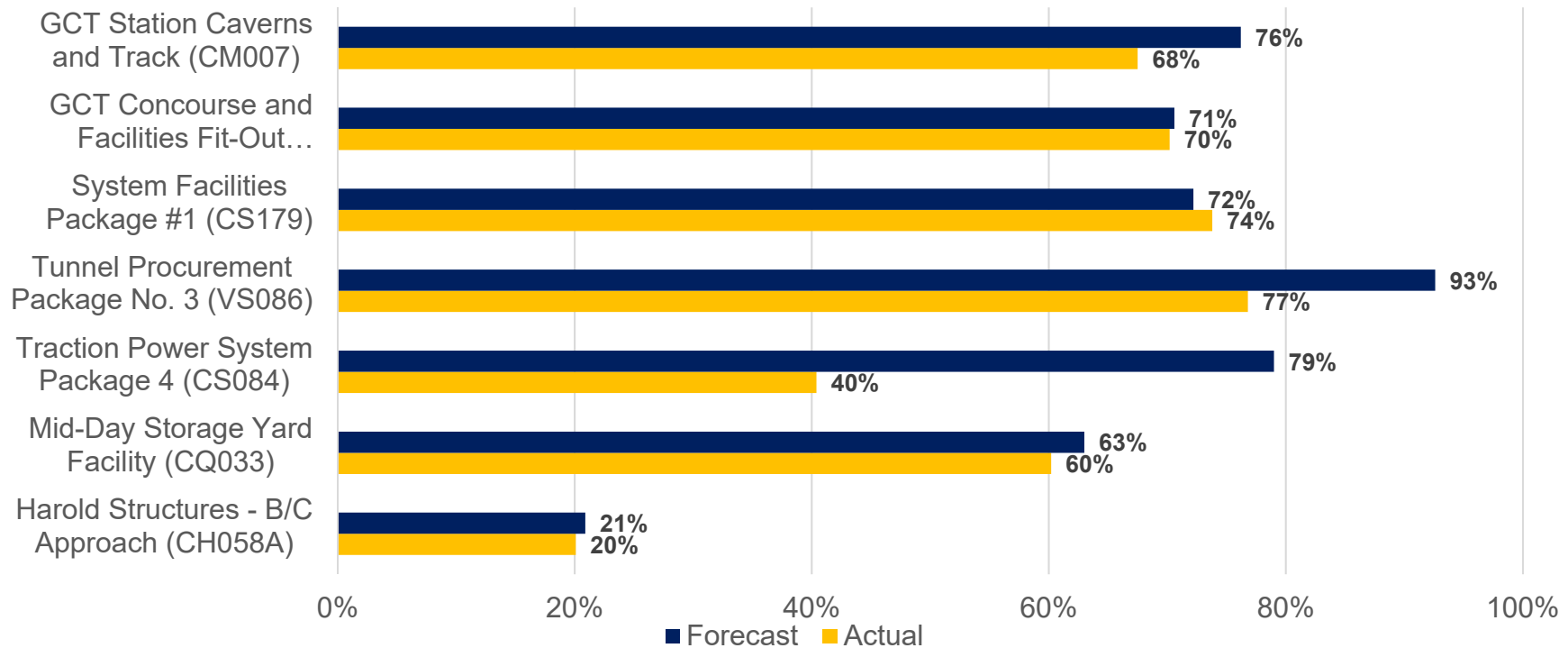
Systems

- Tunnel SCADA network Factory Acceptance Test (FAT) completed.
- Facility Power System: 2 of 6 Substations in Queens energized.
- Traction Power System: All 8 Substation equipment fabricated and FAT completed of which equipment for 2 substations delivered and installation in progress and delivery of equipment for 2 additional substations in progress.
- Fabrication & delivery of signal Interlocking Equipment is complete.

Tunnels, Terminal & Concourse

- Completed work in communication closets and turned over rooms to CS179 Contract. CS179 has begun installing equipment in the communications rooms and pulling cable into those rooms.
- Completed installation of communication conduits in Zones 1 & 2 and turned over to CS179 Contract. CS179 has pulled cable through the available conduits.
- Completed work in the 44th and 50th Street ventilation buildings and turned them over to the CS179 contract. At 44th Street, the majority of the tunnel ventilation fan equipment has been installed. At 50th Street, CS179 is resolving several change orders before the equipment installation can begin.
- Completed work in traction power room and turned it over to the CS084 contract.
- Completed installation of elevator 7 (EL-1,2,9,12,13,17 and EL-21) to be operational.
- Completed installation of wellway 4 escalators and escalators 30/31.
- Completed structural steel construction required for Biltmore Connection.

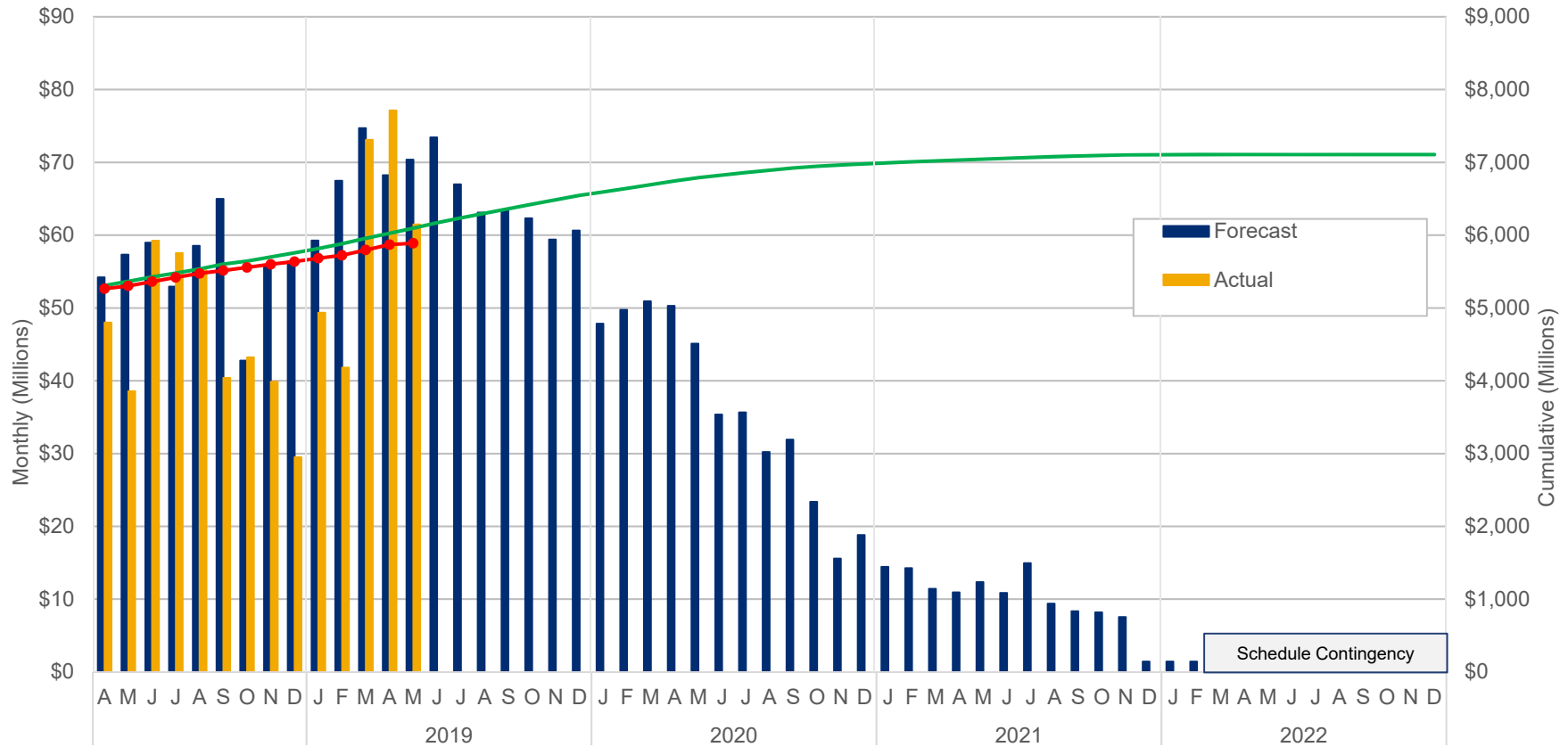
Active Construction Progress : Forecast vs. Invoiced Amount



**Includes fabrication, installation, and testing*

**As of May
2019**

Financial Performance: 3rd Party Construction – Forecast vs. Actual

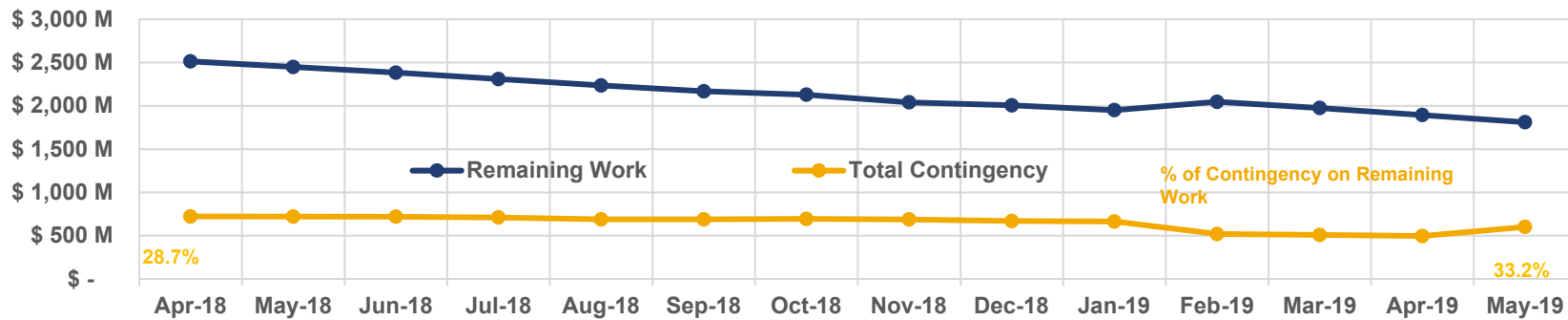


*Cumulative values include all 3rd Party Construction Costs (ESA Only) from the beginning of the project until December 2022

**As of May
2019**

Financial Performance: Cost Contingency

Remaining Work Vs. Contingency

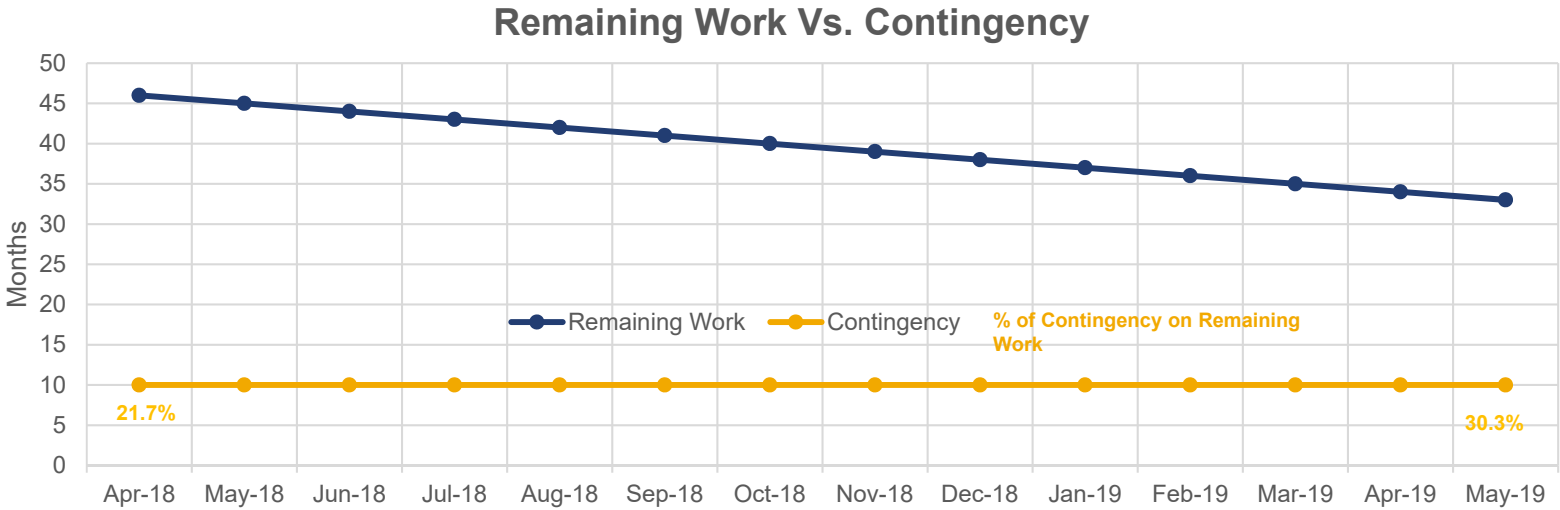


April 2018 EAC Contingency	\$723 million
Unallocated contingency	\$267 million
Allocated contingency	\$456 million
May 2019 EAC Contingency	\$602 million
Unallocated contingency	\$314 million*
Allocated contingency	\$288 million

*110M Unallocated Contingency, Management Reserve, is included due to the transfer of HSR

**As of May
2019**

Schedule Performance: Schedule Contingency



Category	February 2019 Total	May 2019 Total
Program Contingency – Manhattan/Systems (Critical Path)	10 months	10 months
Program Contingency – Harold (3 months off Critical Path)	15 months	13 months
Program Contingency – Mid-Day Storage Yard (8 months off Critical Path)	14 months	18 months

As of May 2019



90-Day Look Ahead

Harold & Queens

- Complete installation of soldier piles for Tunnel B/C Approach Structure.
- Complete Load Transfers of 39th Street Piers for B/C Approach Structure
- Complete Tunnel D Approach Structure East.
- Install the fifth Mid-day Storage Yard Signal Hut
- Continue track/switch installations in Midday Storage Yard


Systems




- Energize Substation B13 in Queens
- Complete Fire Alarm Network Installation except in zone 4
- Complete installation, termination & testing of all BCS Fiber
- Deliver and assemble Traction Power Substation CO8
- Start installation of Signal equipment in Central Instrumentation Rooms (CIR)

Tunnels, Terminal & Concourse


- Complete Chiller Plant Work and HVAC Conditioning of Zone 1,2 & 3
- Complete Architectural Finishes – Zone 1 & 2 and Turnover to CS179 Contract for device installation
- Complete Universal Support Systems in Caverns
- Energize of US1 and US2 breakers
- Complete special trackwork at GCT 3 (Diamond Crossing)
- Complete third rail in Upper Level Cavern




Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	Contractor Agreement on Incremental Systems Testing Approach, Schedule, and Cost (CM007)	December 2019	<p><u>Issue:</u></p> <ul style="list-style-type: none"> Timely contractor buy-in (agreement on the approach, schedule, and cost) is required for the program in order to commence testing on time. <p><u>Impact:</u></p> <ul style="list-style-type: none"> Delays may result in additional cost and schedule impacts to the contract and the program. The contractor may expect higher compensation than the amount anticipated by the project team. <p><u>Mitigation:</u></p> <ul style="list-style-type: none"> A time impact for 5 change proposal requests has been negotiated, which extended the substantial completion by 7 months to August 2020 and supports the handover sequence and dates for CS179 to complete their work by June 2021. As part of this agreement, Milestone 4 (Completion of Track Work), is also being re-negotiated.


	Red	Significant impact to Project Cost and/or Schedule (Milestones, Project Completion and/ or Revenue Service Date.)
	Yellow	Impact to Contract Cost and/or Schedule.
	Green	No Near Term Impact for Design, Procurement & Construction.




Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	Factory Acceptance Testing (FAT) for Backbone Communications System (BCS) (CS179)	January 2020 (Previously November 2019)	<p>Issue:</p> <ul style="list-style-type: none"> Design documents to be completed by the contractor to facilitate BCS FAT; RFIs in connection with executed modifications for FON Connectivity and IP Addresses to be answered to allow completion of design documents; CPR-203 (Corporate IT) tied to completion of BCS design documents in current accelerated syndicated contractor schedule. <p>Impact:</p> <ul style="list-style-type: none"> Delaying the start of BCS FAT will delay deployment of BCS equipment and subsequently delay the start of IST. <p>Mitigation:</p> <ul style="list-style-type: none"> Monitor design progress by Securitas through bi-weekly over-the-shoulder reviews at their facility to ensure that BCS FAT will be executed as planned. 39 out of 42 design RFIs have been answered (average review time is 13 days) The BCS design documents are being reviewed as they become available to expedite review time and allow the design to go forward.


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Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Red	Predecessor Work and Equipment Manufacturing (CS084)	November 2019 (Delivery of Final Substation Equipment) (Previously September 2019)	<p>Issue:</p> <ul style="list-style-type: none"> Risk to timely handover of the traction power rooms to CS084 from other contracts, due to water ingress and rework of installations Risk to the fabrication and delivery schedule of traction power equipment. <p>Impact:</p> <ul style="list-style-type: none"> Delays to equipment installation in the traction power rooms, required for track, traction power and signal (CTC) Integrated Systems Testing. <p>Mitigation:</p> <ul style="list-style-type: none"> Leak mitigation at 55th Street and rework at other facilities is being advanced. Equipment delivery dates are being coordinated with traction power room availability and tunnel access for equipment delivery with the track installation contractor (CM007).


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Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	Correct Traction Power Monuments (CM007)	September 2019	<p><u>Issue:</u></p> <ul style="list-style-type: none"> Traction power monuments throughout the ESA track alignment are out of tolerance and need to be corrected to facilitate the traction power contractor's (CS084) cable installation in the tunnels. <p><u>Impact:</u></p> <ul style="list-style-type: none"> A delay in the completion of the CS084 tunnel work will postpone the completion of local testing and may ultimately impact track IST and the substantial completion of CS179. <p><u>Mitigation:</u></p> <ul style="list-style-type: none"> Advance track installation and proceed with monument repair as quickly as possible to support the planned CS084 tunnel work phasing. Provide alternatives to structural modifications of monuments in coordination with LIRR, such as adjusting length in local third rail connection cables.


	Red	Significant impact to Project Cost and/or Schedule (Milestones, Project Completion and/ or Revenue Service Date.)
	Yellow	Impact to Contract Cost and/or Schedule.
	Green	No Near Term Impact for Design, Procurement & Construction.




Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	Availability of Amtrak Resources for Harold	Ongoing	<p>Issue:</p> <ul style="list-style-type: none"> The levels of Amtrak ET Direct Work resources may not be sufficient to support ESA work in Harold. Based on historical performance, the Amtrak resources allocated to ESA have been less than required to support the schedule in accordance with prior agreements between Amtrak and MTA. <p>Impact:</p> <ul style="list-style-type: none"> Insufficient Amtrak ET Direct Work resources to support 3rd party construction and LIRR direct work in Harold Interlocking may result in delays to work on the Harold critical path. <p>Mitigation:</p> <ul style="list-style-type: none"> To reduce pressure on Amtrak ET Direct Work resources, MTACC has a procurement underway for a 3rd party contractor to perform ET direct scope as part of a design-build contract. The contract was advertised in Q1, 2019 and NTP is expected in Q4, 2019. Access and protection has been on/close to requested levels.


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	Green	No Near Term Impact for Design, Procurement & Construction.




Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	LIRR Operational Readiness	Ongoing	<p><u>Issue:</u></p> <ul style="list-style-type: none"> Hiring and training of LIRR personnel required for ESA revenue service is a significant effort that may be affected by the current hiring freeze. <p><u>Impact:</u></p> <ul style="list-style-type: none"> Impact ESA revenue service operations (number of trains, schedules, crew assignments, etc.) <p><u>Mitigation:</u></p> <ul style="list-style-type: none"> The RAP durations, which align with the revenue service date, are monitored as part of the ESA integrated project schedule LIRR is looking at hiring freeze relief along with other mitigation measures to address current hiring and training constraints and the hiring freeze.

	Red	Significant impact to Project Cost and/or Schedule (Milestones, Project Completion and/ or Revenue Service Date.)
	Yellow	Impact to Contract Cost and/or Schedule.
	Green	No Near Term Impact for Design, Procurement & Construction.

Key Milestones and Issues

Status	Activity	Date Needed	Issues
 Yellow	270 Park Avenue	Ongoing	<p>Issue:</p> <ul style="list-style-type: none"> JPMC's construction of its new headquarters at 270 Park Ave presents challenges to ESA construction and MNR at Grand Central. <p>Impact:</p> <ul style="list-style-type: none"> Shear walls to be constructed by JPMC affect the architectural, MEP and systems work in the ESA/ LIRR Concourse. JPMC construction on MNR train operations continues to be under review and will be properly addressed. <p>Mitigation:</p> <ul style="list-style-type: none"> An integrated construction schedule to merge and mitigate impacts to ESA's project schedule has been finalized among JPMC, ESA and MNR. To follow up to the March, 2019 MTA Board's approval of a Memorandum of Understanding (MOU) between JPMC and MTA that: 1. Ensures no delay in ESA revenue Service Date, 2. Requires mitigating any service impact to MNR or GCT, 3. Provides JPMC proportional funding to both the GCT Train Shed improvements and a future ESA Entrance at 48th St. -- a series of agreements to support these principles have been finalized. They include the following: <ul style="list-style-type: none"> A fully developed Construction Agreement with JPMC to memorialize the details of design and construction schedule. A Construction Agreement and Easement Agreement with the owner of 415 Madison Ave, Rudin Management Company, where ESA's 48th St Entrance will be constructed. Negotiations on both are satisfactorily concluding and will be presented to the MTA July Board for approval

	Red	Significant impact to Project Cost and/or Schedule (Milestones, Project Completion and/or Revenue Service Date.)
	Yellow	Impact to Contract Cost and/or Schedule.
	Green	No Near Term Impact for Design, Procurement & Construction.

Capital Program Oversight Committee Report

East Side Access, July 2019

July 2019 CPOC IEC Project Review

East Side Access

While there are major risks that remain to the program that follow in this report, the IEC would like to acknowledge the project team's efforts to improve management and execution of the program.

Some of the noteworthy areas are:

- Negotiated critical milestones have been added to the schedule.
- Key experts have been added to the management team.
- Advancements in concourse finishes and track installation have been observed.
- Significant work has been completed in Harold.



Cost and Schedule Review

■ Cost

- The IEC's analysis indicates that the Estimate at Completion (EAC) established in April 2018 remains sufficient. The analysis consisted of:
 - Validation of soft cost, third party and force account allocations.
 - Review of monthly invoices for soft cost, third party and force account.
 - Burn rates forecast for all construction contracts.
 - Verification of available contingency to cover known and unknown change orders/ issues.

■ Schedule

- The IEC forecasts a consumption of 4 of the 10 months of program schedule contingency to the December 2022 Revenue Service Date. This projection is based on additional time required for Reliability Demonstration Testing and LIRR Takeover of ESA, once track, signal and traction power Integrated Systems Testing (IST) is complete.
 - LIRR and ESA have yet to finalize the duration and criteria required for LIRR Takeover of ESA, including the training and qualification of train and engine crews.



Risks – Systems

- In addition to the forecasted consumption of contingency cited in the schedule review, the following schedule risks remain to the program.
- The contractor plans to perform Integrated Systems Testing (IST) in 16 months, starting in late February 2020. This duration may not be sufficient for a project of this size and complexity.
 - The IEC observes that the IST duration has been significantly compressed since the introduction of the incremental testing approach, which had allowed time for lessons learned and corrective work. This compression has resulted in a significant amount of concurrent activities in multiple locations.
 - A resource-loaded schedule and additional detail on the quantification of tests are required to further evaluate the schedule.
- The approved IST Plan indicates that a percentage of devices for certain systems (Backbone Communication System, Field Networks, Radio, Fire Alarm, and others) will be tested during IST. This sampling methodology remains a schedule risk to the program.



Observations – Systems

- Increased productivity for installation and local testing is necessary to achieve the planned start of Integrated Systems Testing (IST) in late February 2020, particularly for the first systems to be tested: Backbone Communication System (BCS), Tunnel SCADA and Fire Alarm.
- Water intrusion issues and Systems (CS179) installation rework are impacting the Traction Power (CS084) and Signal Installation (CS086) contract work, which may subsequently impact IST by CS179.
- Negotiations need to be scheduled for Traction Power (CS084) and Signal Installation (CS086) contracts upon finalization of the GCT Caverns and Track (CM007) contract agreement.



Observations – Program

- JPMorgan Chase 270 Park Ave. work will delay the completion of Integrated Systems Testing (IST) within the footprint of the building (GCT Concourse – Zone 4). As a result, the program schedule reflects testing within this zone to be fully concurrent with LIRR Takeover of ESA, adding coordination and schedule risk.
- The JPMorgan Chase work has the potential to delay some of the recently modified contractual milestones for the GCT Concourse (CM014B) and Systems (CS179) contracts.
- The IEC will further evaluate the extent of the impact to IST and LIRR Takeover of ESA upon receipt of the JPMorgan Chase Construction Agreement and detailed schedule.



Recommendation

- The IEC recommends the following:
 - LIRR and ESA finalize the required duration for LIRR Takeover of ESA and further develop the existing Takeover Plan.
 - Detail for specific takeover criteria for the required elements and final acceptance of the various assets should be provided.
 - Re-introduce Key Performance Indicators (KPI) to measure the progress of installation and testing of critical systems against plan, including:
 - Facility Power
 - Track and Third Rail
 - Traction Power
 - Signal
 - Communications



Recommendation Log

ESA – IEC Recommendations / Observations Log

Recommendations (April 2018)	Agency Response/ Action	Status
Perform a Systems Risk Assessment and identify mitigations based on the incremental testing approach.	A system risk refresher will be performed, once the impacts of 270 Park work on the program schedule are fully known; in the meantime the system risk are being monitored through a risk register and monthly risk meetings with IEC and OCO	Ongoing
Manage in-house Force Account (FA) to balance resources between East Side Access and other projects.	LIRR Department of Program Management is refreshing their 5-year outlook to determine what resources will be needed leading to revenue service, to ensure it will be supported.	Ongoing
Recommendations (April 2019)	Agency Response/ Action	Status
<p>The project team and the Systems (CS179) contractor must fill key positions as soon as possible, to effectively progress the incremental testing work in accordance with an approved Comprehensive Systems Testing Plan.</p> <ul style="list-style-type: none"> • System Integrator • System Technical Manager 	<p>The contractor's key positions have been filled as follows:</p> <ul style="list-style-type: none"> • System Integrator – J. Marut • System Technical Director – J. Bekisz 	Closed



A Modern LI

LIRR Expansion Project Floral Park to Hicksville

CPOC Report July 2019

EXPANSION PROJECT

FLORAL
PARK

HICKSVILLE

- **Award Date:**
December 2017
- **Contract Type:**
Design-Build
- **Project Budget Contained In:**
Approved 2015-2019 Capital Plan: \$2,050M
Future 2020-2024 Capital Plan: \$ 538M

Design-Builder (3TC)

DESIGN BUILD

3rd TRACK CONSTRUCTORS
Picone | Dragados USA | CCA Civil | Halmar

LEAD OUTREACH

RUBENSTEIN

LEAD DESIGNER

Stantec

Project Management Team (PMT)

- MTACC • NYSDOT
- LIRR • Consultants

DECEMBER
2017



PROJECT
AWARD

Q4
2018



ADVANCE
HEAVY
CONSTRUCTION

Q4
2022



END HEAVY
CONSTRUCTION/
TRAINS RUNNING

MID -
2023



SUBSTANTIAL
COMPLETION



Financial Summary

	TOTAL
Current 2020-2024 Capital Plan	
Design-Build Budget	\$ 1,494,838,172
LIRR/Force Account	\$ 213,860,388
Project/Other	\$ 200,700,330
Contingency	\$ 140,601,110
Total Budget with Contingency	\$ 2,050,000,000
Expenditures	
Projected	\$ 490,895,363
Actual	\$ 440,111,554
Change Orders	
Allocated	\$ 1,039,304
Temp. allocation for Adv. of Grade Crossings	\$ 46,091,776
Under Negotiations	±\$5M Debits and Credits
Remaining Contingency	\$130M-\$135M
Future 2020-2024 Capital Plan	
Total Budget	\$ 538,532,692

1. Project remains under budget:

- 18% expended
- Under negotiations additional ±\$5M that includes credits and debits

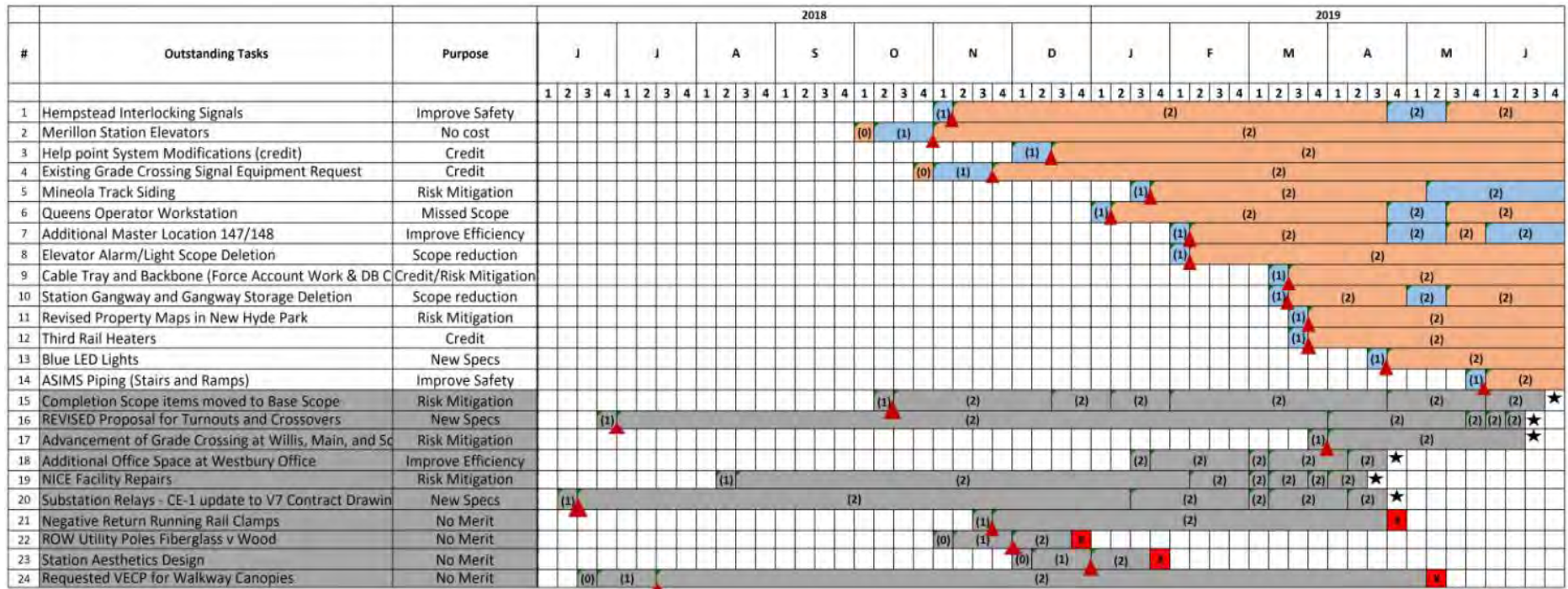
2. Project is on schedule:

- 18% actual progress
- All project elements proceeding per schedule
- Off Right-Of-Way elements advancing ahead of schedule
- On Right-Of-Way elements are advancing per schedule, prior concerns mitigated. Next critical milestone Nassau 1 interlocking
- Advancing two undergrade crossings and two substations early

3. Future Capital Program

- Completion Scope \$538M
- Swapped future scope of \$50M between Base Scope and Completion Scope
- \$46M borrowed from Completion Scope for grade crossing advancement financed by use of contingency in Base Scope

Ball in Court Tracker



Since our last CPOC:

- 4 new change orders commenced
- 3 more change orders were approved
- 4 change orders were found to have no merit

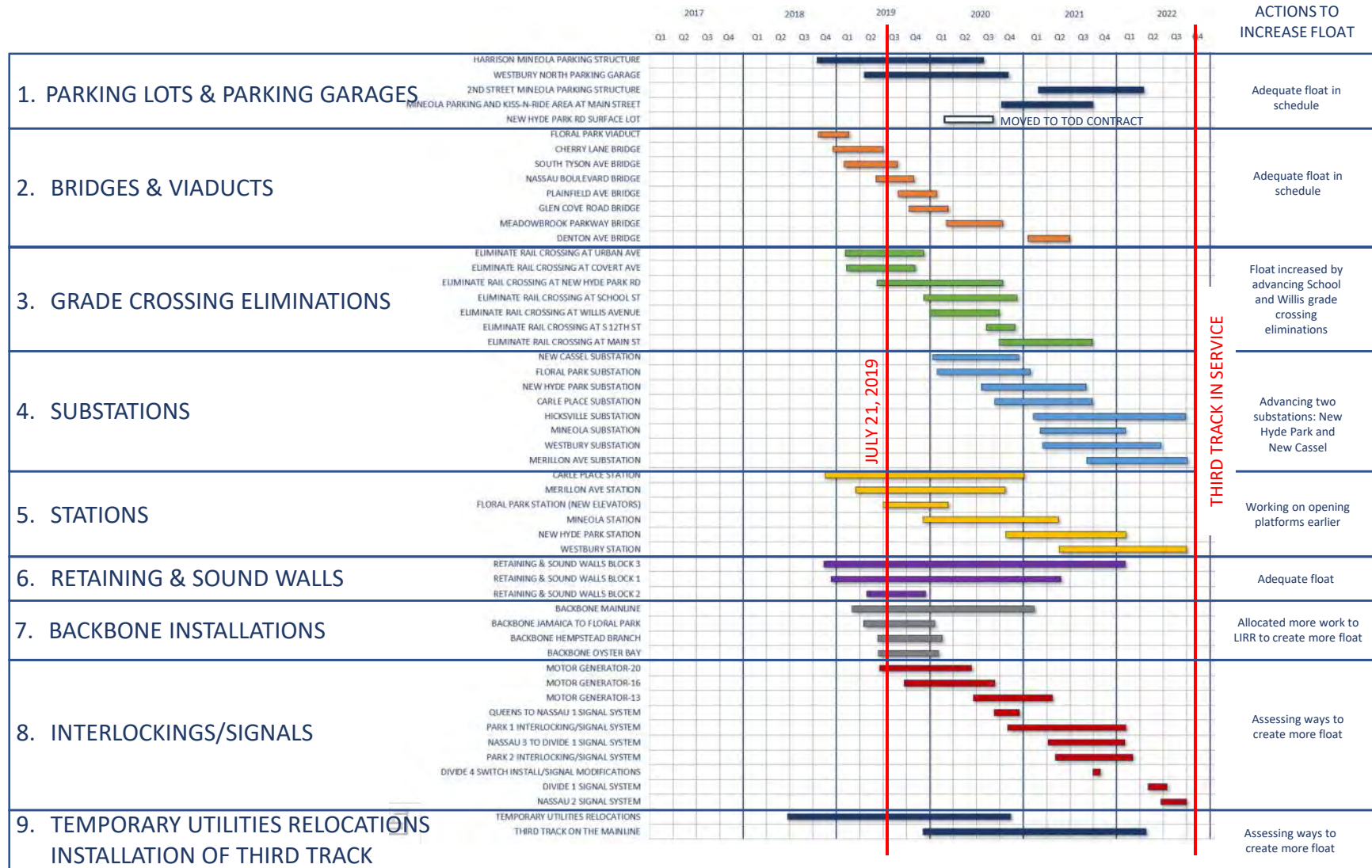
Out of 14 active change orders:

- 4 credits and 2 scope reduction
- 1 no cost scope swap
- 2 risk mitigations
- 1 missed scope and 1 new specs
- 3 improved safety/efficiency

LEGEND

- | | |
|-----|----------------------------|
| | 3TC Ball In Court |
| | PMT Ball In Court |
| (x) | Step # in Approval Process |
| ▲ | RFP Sent |
| ★ | Complete |
| X | No merit |

Construction Schedule Summary



Key Milestones in 2019

Double Track Outages:

1. Project Related:

✓ June 1-2 at Cherry Lane (Mineola-Hicksville)

- July 20-21 at Urban Ave (Mineola-Hicksville)
- August 17-18 at South Tyson (Hempstead)
- August 24-25 at Covert Ave (Floral Park to Hicksville)
- Oct 5-6 at Nassau Boulevard (Floral Park to Hicksville)

2. LIRR (Outage Queens to Nassau 3, train service removal between Floral Park and Hicksville) :

- Up to four double-track outages

Road Closures:

- March 9 Closed Urban Ave for 6 months, opening September 2019
- April 15 Closed Covert Ave, opening October 2019
- October close NHP Road (Restrict to 2 Lanes)

Other Key Activities:

- Installation of track switches at Nassau 1 November 2019
- 18,000 retaining / sound attenuation walls to be completed: currently at over 6,000 linear feet



June 2019

Construction Progress at Covert Avenue



Construction Progress at Urban Avenue



**Installing New Retaining Walls for
New Cherry Lane Bridge**



June 2019

Constructing Ground Level Floor at Harrison Avenue Parking Structure in Mineola



Merillon and Carle Place station reconstruction: day and night



Caisson installation for sound walls around Nassau 1

Risk Mitigation

Risk	Issue	Concern	Mitigation
Temporary Utility Relocations	Extent of temporary utility relocations	Utility relocations may take longer than allocated in the schedule	<ul style="list-style-type: none"> • Integrated solution finding of LIRR, 3TC and designers • Aggressive design approval process • Dedicated personnel to enable same day decisions
Fulfilling Demand for Flagging Resources	Provision of flaggers needs to keep up with rising work demands	We may not have enough flaggers to meet demand	<ul style="list-style-type: none"> • Reassessing construction sequencing based on construction needs • Working to identify implications on the rest of LIRR system
Work Sequencing at Mineola	Construction at Mineola is the most complicated part of the corridor	Potential for significant unknowns	<ul style="list-style-type: none"> • Advancing Willis Avenue Grade Crossing allowing work to start now • Working with Mineola Mayor to ensure construction staging matches local needs
Systems Integration	Subdivided responsibilities for systems delivery within design-build team	Potential for gaps in scope and ineffective system integration	<ul style="list-style-type: none"> • New task force created to ensure all experts are at the same table • Working to bring more capable system integrators to the design-build team

July 2019 CPOC IEC Project Review

Long Island Rail Road Expansion



Budget Review

- Budget
 - The IEC's analysis of the project budget reflects no change.
 - During the past quarter, productivity has improved significantly as measured by the contractor's average burn rate which has increased from \$24.5M to \$46M. This level of productivity needs to be sustained to meet the project's completion date.
 - The percent complete to date compares favorably to total expenditures, remaining contingency and overall budget.



Schedule Review

- The IEC's review verifies that the project remains on schedule:
 - The longest path runs through the design, procurement and installation of Nassau 1 and Nassau 3 interlocking signal systems.
 - All major milestones to date have been met.
 - Some future milestone dates have been postponed, however the project completion remains the same.



Risk

- The top risk are as follows:
 - Design, procurement and delivery of long-lead items, e.g. signal equipment, sub-stations, track and precast concrete.
 - Temporary and permanent utility relocations, specifically at Nassau 1 and Mineola, e.g. underground utilities including signal and power, and overhead electrical utilities need to be relocated before installation of retaining wall and raising of track.
- In the opinion of the IEC, based on field observations, schedule and risk reviews, the agency is taking appropriate steps to mitigate risks associated with achieving remaining 2019 key milestones.





MTACC Report to CPOC Second Avenue Subway Phase 2

■ July 22, 2019



Benefits

- Serves transit-dependent community; over 70% of residents use public transportation to get to work vs. 55% city-wide
- Improves access to jobs, health care options, and educational institutions
- Improves reliability and reduces crowding along the Lexington Avenue Line - among the busiest transit lines in America



Federal Funding

Goal: Funding Agreement by Q4 2020



Project Development



Engineering

Funding Agreement

- Entered into Project Development Dec. 2016
- NEPA Re-evaluation SEA (Supplemental Environmental Assessment) completed and FONSI (Finding of No Significant Impact) issued Nov. 2018.
- Enter into Engineering
 - Goal Q3 2019
 - FTA Risk & Readiness Review Workshop: June 4 -6, 2019
 - FTA Risk Workshop: July 2 & 3, 2019
- Submit request for an FFGA (Full Funding Grant Agreement) (April 2020)



Comprehensive FTA Readiness Review

Assessment Focus

Second Avenue Subway Phase II
Sampling Plan

Assessment Prioritization/Focus:

Project Scope:

Design Plans/Specifications
/Technical Provision

Project Cost:

Quantity Checks/Price/
Composition/Constructability

Project Schedule:

Productivity/Construction
Sequencing & Interfaces

Design Documents:

- TBM
- SOE Slurry Wall
- Excavation
- Drill & Blast
- Cut and Cover
- Stations
- Site Utilities
- Systems

Technical Provisions:

- Roles and responsibilities

Other:

- ROW
- Third party agreements
- Permits

Quantity Checks:

- SOE Slurry wall
- Cut & Cover excavation
- Running tunnels TBM
- Utility Relocation

Unit Price Composition:

- Running Tunnels:
 - TBM
 - P/C Concrete Lining
 - Soil Stabilization
- SOE:
 - Slurry walls
 - Secant Piles
 - Struts
 - Tie-backs
- Mined Cavern:
 - Drill & blast
 - Muck out
 - Rock Anchors
 - Shotcrete

Productivity

- TBM
- SOE Slurry wall
- Excavation
- Drill & blast

Sequencing/Interfacing

- Environmental impact
- Permits/Agreements
- Procurement
- Utility Relocation
- FTA Grant Process
- Construction Packaging
- Sequencing
- Force Account
- Systems Compatibility

Next Steps

- Advanced Works Design
 - Completed design documents
 - Ongoing:
 - Finalize third-party and Interagency MOUs/agreements
 - Obtain necessary easements
- Contract Packaging Strategy
- Completion of structural Design/Build documents expected by end of Q3 2019
- Value Engineering & Cost Containment ongoing





PENN STATION ACCESS PROJECT

CAPITAL PROGRAM OVERSIGHT COMMITTEE

JULY 22, 2019



Capital Construction



PROJECT BENEFITS

Enhancement of existing infrastructure to expand opportunities:

REGION

- METRO-NORTH SERVICE FROM CONNECTICUT TO PENN STATION NY
- NEW TRAVEL OPTIONS ALONG THE ENTIRE NORTHEAST CORRIDOR

LOCAL COMMUNITY

- REDUCTION IN TRAVEL TIME TO MANHATTAN'S WEST SIDE
- EASY ACCESS FOR BRONX RESIDENTS TO WESTCHESTER

STAKEHOLDERS

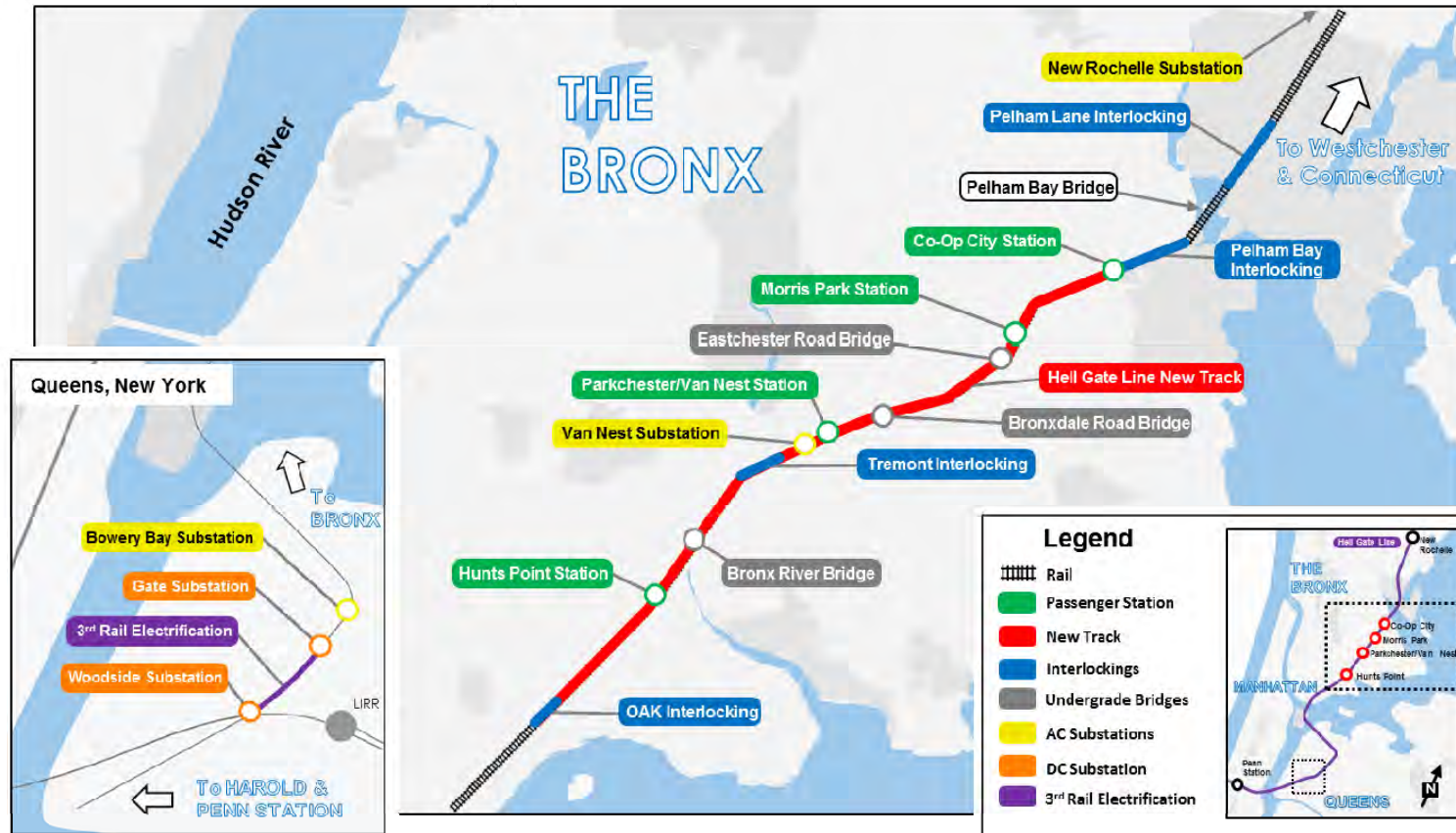
- EXPANDED MNR SERVICE
- ENHANCED OPERATIONAL FLEXIBILITY & REDUNDANCY

ECONOMY

- NEW OPPORTUNITIES FOR JOBS, TRADE, AND SHOPPING IN UNDERSERVED COMMUNITIES



PROJECT ELEMENTS





PROJECT HIGHLIGHTS



FEB. 2019: Preliminary Design Phase – NTP issued

MAY 2019: LiDAR Survey complete

JUNE 2019: Preliminary Draft Environmental Assessment submitted to FTA



CHALLENGES | STRATEGY

CHALLENGE 1:

Project Complexity

- Building on Amtrak active Right-of-Way
- Requires close coordination and integration
- Execution of Agreements with Amtrak
- Environmental requirements

STRATEGY 1:

- MTACC will fund a dedicated Engineering Force Account Team (Amtrak/MNR/LIRR)
- Foster an integrated team by establishing a co-located office space
- Design Phase Agreement being negotiated



CHALLENGES | STRATEGY

CHALLENGE 2:

Busy construction
market/lack of competition

- Obtaining the desired level of competition among qualified design/build teams, to achieve our schedule.

STRATEGY 2:

- Reach out to contracting community to build interest.
- Work with qualified contractors to analyze project risks
- Negotiate risk mitigation with contractor prior to award by introducing contract provisions such as risk allocation, incentive/disincentive clauses, allowance items



CHALLENGES | STRATEGY

CHALLENGE 3:

Amtrak support during construction

- Amtrak Force Account to support construction is key to achieve the PSA on time and within budget
- Many competing projects within the region demand Amtrak resources

STRATEGY 3:

- MTACC will fund, hire and train a dedicated Amtrak Force Account
- Close coordination with concurrent projects through regional schedule review



CHALLENGES | STRATEGY

CHALLENGE 4:

Selection of the optimal alignment for all stakeholder railroads operating on the Hell Gate Line

STRATEGY 4:

- Working with railroads to refine the alignment
- The Design Team has developed multiple options which have been reviewed by stakeholders
- Select preferred alignment by fall 2019



CHALLENGES | STRATEGY

CHALLENGE 5:

Capital Funding

- In the current Capital Program we have \$695M
- Funding needed in the next Capital Program 2020-2024

STRATEGY 5:

- Develop cost containment strategies
- Conduct value engineering/peer review

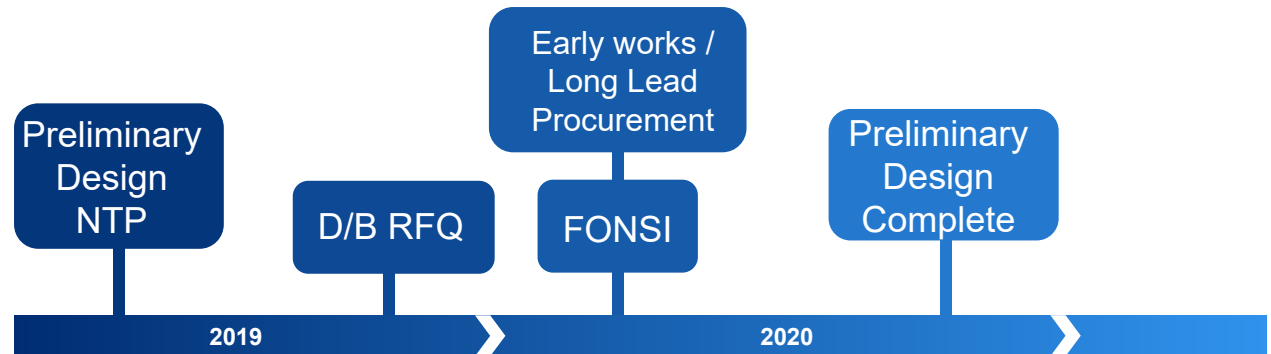


PRELIMINARY DESIGN LOOK AHEAD

SIX MONTHS

- Select preferred alignment
- Complete base mapping and boring program
- Develop budget based on selected alignment
- Identify long lead items / Early procurement
- Identify Early Work Packages
- Perform risk assessment

PRELIMINARY DESIGN SCHEDULE



MTA Capital Program Commitments & Completions

through June 30, 2019

Capital Projects – Major Commitments – June 2019

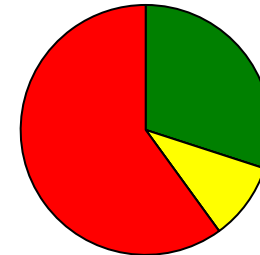
In 2019, agencies have a goal of \$5.6 billion in overall commitments. 37 major commitments are included; nineteen for NYCT, two for LIRR, four for MNR, six for B&T, one for MTACC, two for MTA Bus and three for MTA Police Department.

Through June, agencies have committed \$1.4 billion versus a \$2.4 billion YTD goal. The shortfall is primarily due to slips of six major commitments explained on the following page. The remaining total shortfall is due to delays of non-major commitments, including force account and support costs related to MTACC projects as well as MNR rehabilitation projects.

Three other major commitments were made on time or early and one major commitment was delayed but is now committed.

By year-end, the MTA forecasts meeting its overall \$5.6 billion goal.

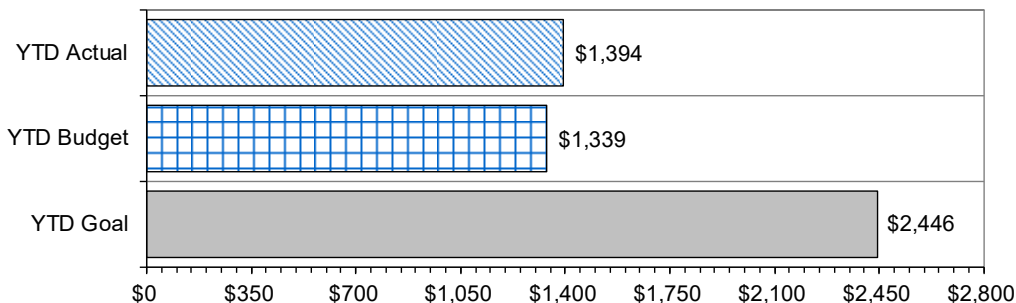
Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
GREEN = Commitments made/forecast w within Goal	3	30%	-
YELLOW = Commitments delayed beyond Goal (already achieved)	1	10%	-
RED = Commitments delayed beyond Goal (not yet achieved)	6	60%	↑ 3
	10	100%	↑ 3

Budget Analysis

2019 Annual Goal	\$5,613	(\$ in millions)
2019 Forecast	110%	of Annual Goal
Forecast Left to commit	77%	(\$4,781)



Year-to-Date Agency Breakdown

2019 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit	1	4	+2 RED
Long Island Rail Road	1	1	
Metro-North Railroad	1	1	+1 RED
Bridges and Tunnels			
Capital Construction Company			
MTA Bus Company			
MTA Police Department			

Capital Projects – Major Commitments – June 2019 – Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
6 All-Agency Red Commitments (3 New Items)							
NYCT				LIRR			
<i>Signals & Communications</i>				<i>Rolling Stock</i>			
8th Ave CBTC and Interlockings (New Item)	Construction Award	Jun- 19	Aug- 19	Work Locomotives	Construction Award	Mar- 19	Aug- 19
		\$513.7	\$523.2			\$32.2	\$32.2
Construction award delayed due to change in procurement strategy. Project cost increase is based on final engineer drawings.				An independent firm reviewed the procurement and recommended that work locomotives must not exceed required braking horsepower in order to deliver the cleanest locomotives. The award was rescheduled for vendors to revise their submissions.			
NYCT				MNR			
<i>Passenger Stations</i>				<i>Stations</i>			
Replace 11 Hydraulic Elevators / Various (New Item)	Construction Award	Jun- 19	Aug- 19	Harlem Line Station Improvements (New Item)	Construction Award	Jun- 19	Dec- 19
		\$46.4	\$66.9			\$54.2	\$54.2
Construction award delayed due to change in procurement strategy. Project cost increased due to additional scope including expansion of existing elevator machine rooms and new secondary machine room and an increased construction duration.				Construction award delayed due to limited flagging resources.			
NYCT							
<i>Structures</i>							
Station and Tunnel Priority Structural Defect Repairs, 1-8 Av/CNR	Construction Award	Apr- 19	Jan- 20				
		\$43.8	\$77.8				
Bid opening scheduled for May 2019 was postponed to re- examine the scope of work in light of the changed service plan of the Canarsie Tube. Project cost increased due to scope modifications to structural repairs and revised construction support costs.							
NYCT							
<i>Passenger Stations</i>							
Replace 8 Traction Elevators / Various	Construction Award	May- 19	Aug- 19				
		\$57.9	\$67.4				
Construction award delayed due to change in procurement strategy. Project cost increased due to additional scope including expansion of existing elevator machine rooms and new secondary machine room and an increased construction duration.							

Capital Projects – Major Commitments – June 2019 – Schedule Variances

Project	Commitment	Goal	Actual
1 All-Agency Yellow Commitments			
MNR			
<i>Structures</i>			
Overhead Bridge Program East of Hudson	Construction Award	Feb- 19	Mar- 19 (A)
		\$23.4	\$25.6
Award was delayed to March due to revisions made to the notice of award which resulted in a protracted approval process.			

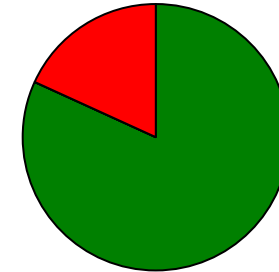
Capital Projects – Major Completions – June 2019

In 2019, agencies plan for a goal of \$3.4 billion in overall completions. 24 major completions are planned, including 14 for NYCT, four for LIRR, three for MNR, one for B&T, one for MTACC, and one for MTA Bus.

Through June, agencies have completed \$1.6 billion versus a \$1.9 billion YTD goal. The shortfall is mainly due two major completion slips and delays of non-major completions, such as NYCT's Mainline Track work. The two major completion slips are explained on the following page. Nine other major completions were made on time or early.

By year-end, the MTA forecasts meeting its overall \$3.4 billion completion goal.

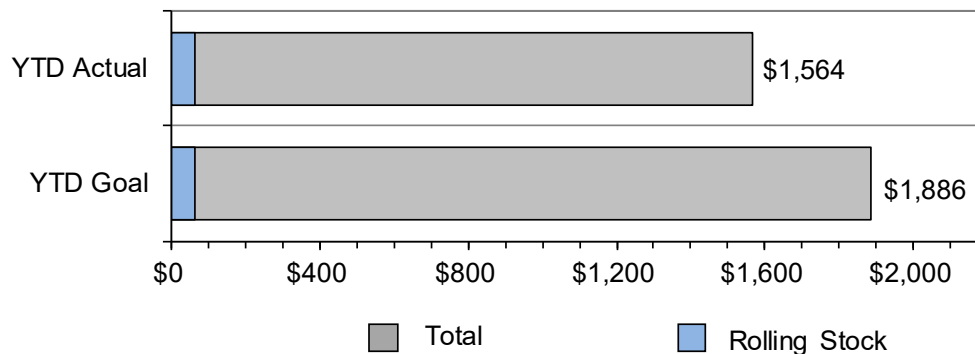
Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
GREEN = Completions made/forecast within Goal	9	82%	↑ 3
YELLOW = Completions delayed beyond Goal (already achieved)	0	-	-
RED = Completions delayed beyond Goal (not yet achieved)	2	18%	-
	11	100%	↑ 3

Budget Analysis

2019 Annual Goal \$3,428 (\$ in millions)
 2019 Forecast 103% of Annual Goal
 Forecast left to Complete 56% (\$1,959)



Year-to-Date Agency Breakdown

2019 Goals	Prior month variance		
	GREEN	YELLOW	RED
New York City Transit			
6 1	+1 GREEN	----	----
Long Island Rail Road			
1	+1 GREEN	----	----
Metro-North Railroad			
1 1	----	----	----
Bridges and Tunnels			
	----	----	----
Capital Construction Company			
1	+1 GREEN	----	----
MTA Bus Company			
	----	----	----
MTA Police Department			
	----	----	----

Capital Projects – Major Completions – June 2019 – Schedule Variances

Project	Completion	Goal	Forecast
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2 All-Agency Red Completions

NYCT

Passenger Stations

Station Component: 4 Stations / Jamaica	Construction	Feb- 19 \$87.0	Sep- 19 \$96.6
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Project extension granted to the contractor to complete additional work. Track access will not be available until August. Project cost increased to repair 30 tons of steel after a detailed steel repair survey revealed significant amount of steel deterioration.

MNR

Stations

GCT Utilities	Construction	Apr- 19 \$44.7	Aug- 19 \$51.0
---------------	--------------	-------------------	-------------------

Field conditions required modification of fire pump controller cabinet. The current forecast for completion has been moved to August 2019. The project cost has increased due in part to the inclusion of additional required fire safety systems.

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



Prior Years' Major Commitments – Quarterly Update: June 2019

The status of 2016 through 2018 major commitments delayed beyond 2018 are tracked until committed and reported to CPOC quarterly.

In 2016, agencies set an overall MTA commitments goal of \$6.6 billion including 41 major commitments. In 2016, 27 major commitments and a total of \$5.0 billion were made. Of the remaining projects, one remains delayed and is forecast for award by the end of 2019.

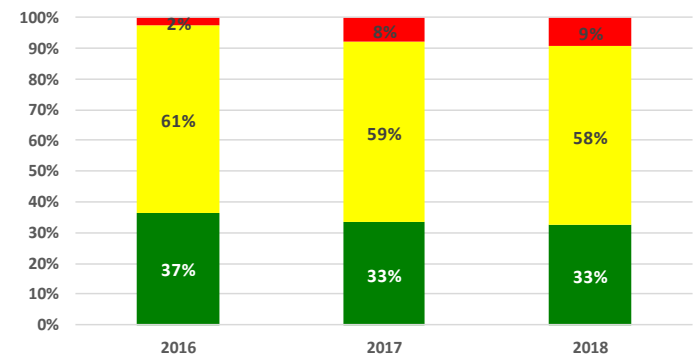
In 2017, agencies set an overall MTA commitments goal of \$7.3 billion including 51 major commitments. In 2017, the MTA achieved 100% of its \$7.3 billion commitments goal, including 39 major commitments. Of the remaining projects, one was awarded in the first quarter of 2019, and four are forecast for award in 2019 or 2020.

In 2018, agencies set an overall MTA commitments goal of \$7.3 billion including 43 major commitments. In 2018, the MTA achieved 86% of its \$7.3 billion goal, including 36 major commitments. Of the remaining projects, three were awarded in the first or second quarters of 2019, and four are forecast for award by the end of 2019.

Actual		MTA-Wide Prior Years' Major Commitments															Post 2020
Goal		On Time	Achieved Late	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19		
Total	135																
2016	41	15	25												1		
2017	51	17	29	1						1							3
2018	43	14	22		1	1	1			1		1	2				

This chart tracks when all major commitments are forecast/achieved versus original goal, starting with those that were committed within 2016, 2017, and 2018 followed by those that slipped beyond 2018. 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.

% of Project Status by Year



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 – June 2019 – Schedule Variances

Project	Commitment	Goal	Forecast
9 All-Agency Red Commitments			
NYCT			
<i>Passenger Stations</i>			
ADA: 68 St- Hunter College / Lexington	Construction Award	Sep- 16 \$66.8M	Dec- 19 \$116.3M
Award schedule delayed to 2019 due to MTA Board resolution of Real estate issues at Imperial House and Hunter College properties. Project cost increased because of added architectural, structural, electrical and utility relocation work. The complexity of the utility relocation under the street work with limited space constraints requires multiple construction phasing to keep the street open to both vehicular and pedestrian traffic throughout construction.			
Access Improvements: Grand Central: Phase 2	Construction Award	Jul- 17 \$66.7M	Jul- 20 \$66.7M
Procurement process will involve multiple phases reflecting the various activities in the project. The last activities are expected to be awarded in 2020.			
<i>Service Vehicles</i>			
Purchase 35 Locomotives - and Option for up to Additional 35	Purchase Award	Dec- 17 \$128.3M	Jul- 19 \$248.6M
Proposals received. Committees reviewing and evaluating proposals. July Board action is anticipated. <i>Previously reported committed in Q1.</i>			
<i>Employee Facilities</i>			
Livingston Plz Electrical and Mechanical Sys Improvements	Construction Award	Dec- 17 \$62.7M	Mar- 20 \$62.6M
The project was split into 2 parts (phase "A", the redundant Dry Coolant System for the 4th Floor Data Center awarded in July 2018, and phase "B" for the remaining scope). Design for phase "B" started in July 2018 with projected award in early 2020.			
<i>Track</i>			
Mainline Track & Switch Program (6 Projects) - 3rd Qtr	Construction Award	Aug- 18 \$44.0M	Oct- 19 \$44.0M
Award of the Flushing line Switches re- scheduled to 2019 due to track access issues.			

Project	Commitment	Goal	Forecast
MNR			
<i>Sandy</i>			
Power and Signal Mitigation	Construction Award	Nov- 17 \$20.6M	Mar- 20 \$20.6M
This project is being pushed to March 2020 when more in- house resources to support the project will be available.			
MTA Bus Company			
<i>Bus Company Projects</i>			
HVAC - College Point	Construction Award	Dec- 18 \$8.5M	Oct- 19 \$9.6M
The latest project specification was resubmitted to Specification Review. Project cost increased due to additional time needed for comments and approval.			
MTACC			
<i>Regional Investments</i>			
Rolling Stock Procurement M- 9A Cars	Purchase Award	Dec- 18 \$367.0M	Sep- 19 \$367.0M
RFP modified to maximize competition and associated negotiations have extended the procurement phase.			
Bridges and Tunnels			
<i>Verrazano Narrows Bridge</i>			
Miscellaneous Steel Repair, Concrete Rehab, & Structural Painting	Construction Award	Oct- 18 \$79.5M	Jul- 19 \$79.5M
Bids were received and rejected for this contract as they were not within a reasonable range of the engineer's estimate. Contract will be rebid.			

Prior Year Major Commitments – June 2019 – Schedule Variances

Actual Results Shaded

Project	Commitment	Goal	Actual
4 All-Agency Yellow Commitments			
NYCT			
<i>Passenger Stations</i>			
Times Square Reconstruction & ADA, Phase 3 - Shuttle	Construction Award	Jun-18 \$259.3M	Mar-19 \$201.5M
Project awarded. Award was delayed several months due to service plan reassessment regarding the shutdown. Bid opening was also postponed several times delaying the award.			
<i>Signals and Communications</i>			
Culver Line Interlockings & CBTC	Construction Award	Sep-18 \$424.0M	Feb-19 \$417.1M
Project awarded in February. Bids received on November 5th and awarded on February 4th. Project Cost reflects favorable bids received.			
<i>Sandy</i>			
Sandy Mitigation: St. George (New Item)	Construction Award	Nov-18 \$70.1M	Apr-19 \$47.4M
Bids postponed but were received in early December. Project cost decreased reflecting favorable bids.			
MTACC			
GEC Design	Construction Award	Dec-17 \$37.0M	Jan-19 \$34.1M
Delay was due to change in procurement strategy. Award was further delayed due to the need to obtain Amtrak agreement. Agreement reached with Amtrak in January 2019. Budget at award reduction reflects favorable bid.			

Prior Years' Major Completions – Quarterly Update: June 2019

The status of 2016 through 2018 major completions delayed beyond 2018 are tracked until achieved and are reported to CPOC quarterly.

In 2016, agencies set an overall MTA completions goal of \$4.6 billion including 43 major completions. In 2016, 36 major completions were made including several MTACC contracts associated with 2nd Ave Subway Phase 1 which achieved beneficial use in December 2016. One project remained delayed, but was completed in the second quarter of 2019.

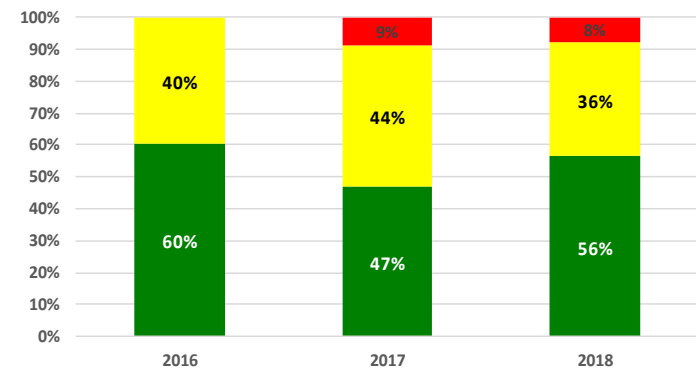
In 2017, agencies set an overall MTA completions goal of \$5.0 billion including 34 major completions. In 2017, 24 major completions were achieved. Of the remaining projects, four were completed in the first or second quarters of 2019, and three are forecast for completion by the end of 2019.

In 2018, agencies set an overall MTA completions goal of \$6.3 billion including 39 major completions. In 2018, 32 major completions were achieved. Seven completions were delayed beyond 2018. Four were completed in the first or second quarters of 2019, and the remaining three are forecast for completion by the end of 2019.

Actual Goal		MTA-Wide Prior Years' Major Completions														Post 2020
		On Time	Achieved Late	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	
Total	116															
2016	43	26	16				1									
2017	34	16	11			1	1		2	1	1				1	
2018	39	22	10	1		1	2					1		1	1	

This chart tracks when all major completions are forecast/achieved versus original goal, starting with those that were completed within 2016, 2017 and 2018 followed by those that slipped beyond 2018. 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 completed.

% of Project Status by Year



GREEN = Completions made/forecast w ithin Goal

YELLOW = Completions delayed beyond Goal (already completed)

RED = Completions delayed beyond Goal (not yet achieved)

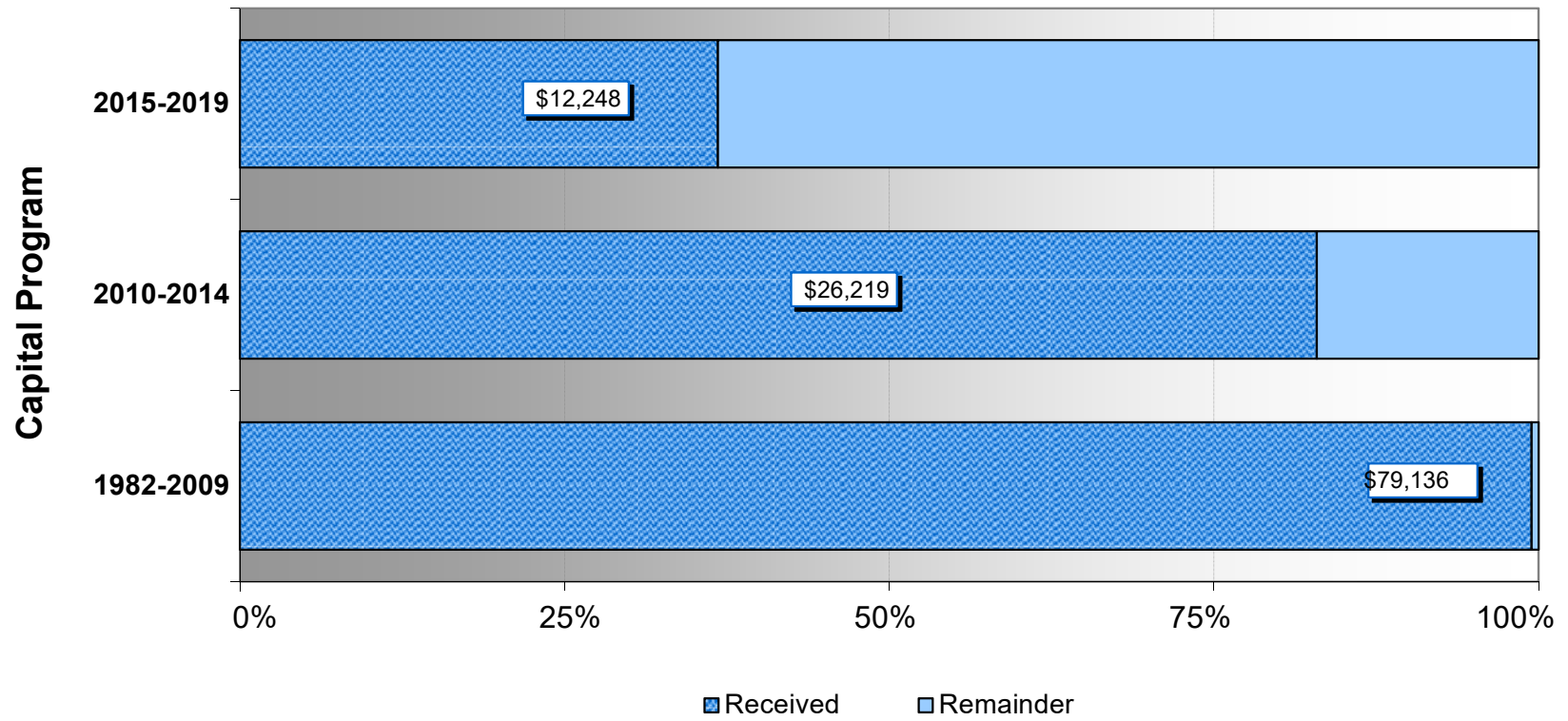
Prior Year Major Completions – June 2019 – Schedule Variances

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
6 All-Agency Red Completions				MNR			
NYCT				Shops & Yards			
<i>Subway Cars</i>				Harmon Shop Improvements			
Purchase 300 B Division R179 Cars - (234 Cars)	Procurement	Dec- 18	Nov- 19	Construction	Jun- 18	Sep- 19	
		\$577.3M	\$743.6M		\$315.6M	\$315.6M	
As of June 2019, 214 cars were accepted and placed in service.				The design and installation of an enhanced carbon monoxide detection system at the shop/building has been determined to be needed. This additional work will further extend the current forecast for completion from July 2019 to September 2019.			
<i>Passenger Stations</i>							
Sea Beach Contract at 6 Stations	Construction	Dec- 18	Dec- 19				
		\$278.7M	\$307.3M				
Extension was granted to contractor for additional work for Track Wall at 8th Avenue. The completion will be delayed further to December 2019 due to the addition of southbound elevator at 8th Ave station to the contract. Project cost increased due to contract modification for design of added work related to two new elevators at 8th Ave.							
LIRR							
<i>Track</i>							
Massapequa Pocket Track	Construction	Nov- 17	Dec- 19				
		\$19.6M	\$19.6M				
Delay due to lack of available force account resources in the signals area.							
MNR							
<i>Power</i>							
Power Infrastructure Restoration - Substations	Construction Completion	Aug- 17	Aug- 19				
		\$43.8M	\$45.7M				
Project award delayed due to additional time needed for acceptance testing and coordination with the local utility company for power cutover the forecasted completion is August 2019.							
<i>Track & Structures</i>							
Substation Bridge 23 - Construction	Construction	Oct- 17	Jul- 19				
		\$41.7M	\$41.7M				
In order to mitigate risks associated with the final cutover of the substation and to coordinate with the local utility company, unforeseen operational issues were identified which required elements of the work to be altered. The forecasted completion is July 2019.							

Prior Year Major Completions – June 2019 – Schedule Variances				Actual Results Shaded			
Project	Completion	Goal	Actual	Project	Completion	Goal	Forecast
9 All-Agency Yellow Completions (6 new this quarter)				MTACC			
NYCT				East Side Access			
<i>Bus Replacement</i>				Plaza Substation and Structures (CQ032) (New Item)	Construction Completion	Aug- 16 \$250.2M	Apr- 19 \$259.2M
Purchase 110 CNG Articulated Buses	Fleet Purchase	Dec- 18 \$104.2M	Jan- 19 \$107.4M	A final delay for mitigation of leaks and duct bench issues was resolved and the project is now complete.			
A total of 106 of the 110 buses were received in December 2018. The remaining 4 are now received.				Manhattan Northern Structures (CM006) (New Item)	Construction Completion	Jun- 17 \$361.6M	Apr- 19 \$361.6M
<i>Passenger Stations</i>				A final delay to complete punchlist work and to resolve remaining commercial issues is now complete.			
Sea Beach Contract at 3 Stations	Construction Completion	Dec- 18 \$114.1M	Mar- 19 \$130.7M	Bridges and Tunnels			
Project completed March 6th. Delays were due to fabrication of windows for the control houses. Project cost increased due to contract modification for design of added work related to two new elevators at 8th Ave.				Queens Midtown Tunnel			
<i>Signals and Communications</i>				Tunnel Ventilation Building Electrical Upgrade & Flood Mitigation (QMT) (New Item)	Construction	Jul- 18 \$57.4M	Apr- 19 \$57.4M
CBTC Flushing Line	Construction Completion	Nov- 17 \$505.2M	Mar- 19 \$564.1M	Extension to substantial completion was required to provide additional factory acceptance testing and additional field installation verification /testing.			
CBTC is in full operation for the entire Flushing line since November. Substantial completion was delayed to March pending completion of the required training and tours.							
<i>Buses</i>							
Bus Command Center Construction - NYCT (New Item)	Construction	Nov- 17 \$51.4M	Jun- 19 \$57.5M				
Substantial Completion was delayed for mitigation of sewer connectivity issues and testing of the sprinkler system. Cost increase due to extended project duration as well as funding additional scope items.							
LIRR							
<i>Track</i>							
Mainline Double Track-F/A Construction(L10683) (New Item)	Construction	Oct- 18 \$33.M	Apr- 19 \$24.7M				
Due to lack of availability of track outages for remainder of 2018, completion moved to April 2019 to include switches. Reduction in budget reflects change to to F/A Labor requirements.							
MTA Bus Company							
<i>Bus Company Projects</i>							
Bus Command Center (New Item)	Construction	Dec- 17 \$17.1M	Jun- 19 \$17.1M				
Substantial Completion was delayed for mitigation of sewer connectivity issues and testing of the sprinkler system.							

Status of MTA Capital Program Funding

Capital Funding (June 2019)
\$ in millions



Capital Funding Detail (June 30, 2019)

\$ in millions

	Funding Plan	Receipts		
	<u>Current</u>	<u>May</u>	<u>This month</u>	<u>Received to date</u>
1992-1999 Program	18,095	18,095	-	18,095
2000-2004 Program	21,668	21,668	-	21,668
2005-2009 Program	24,397	23,963	20	23,982

2010-2014 Program

Federal Formula, Flexible, Misc
 Federal High Speed Rail
 Federal New Start
 Federal Security
 Federal RRIF 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>May</u>	<u>This month</u>	<u>Received to date</u>
	\$5,853	\$5,839	\$ -	\$5,839
	295	295	-	295
	1,257	1,257	-	1,257
	189	101	-	101
	-	-	-	-
	719	608	-	608
	770	400	-	400
	132	108	-	108
	11,483	9,479	127	9,606
	1,345	1,239	-	1,239
	2,026	1,812	-	1,812
	6,329	4,800	-	4,800
	235	81	-	81
	758	55	-	55
	230	18	-	18
Total	31,620	26,093	127	26,219

2015-2019 Program

Federal Formula, Flexible, Misc
 Federal Core Capacity
 Federal New Start
 Federal Security
 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>May</u>	<u>This month</u>	<u>Received to date</u>
	\$6,704	\$3,084	\$ -	\$3,084
	100	-	-	-
	500	-	-	-
	3	3	-	3
	8,640	979	-	979
	2,667	668	122	790
	7,968	4,234	559	4,793
	1,017	318	-	318
	2,145	1,730	-	1,730
	592	-	-	-
	2,936	553	-	553
Total	33,273	11,568	681	12,248