



**Metropolitan Transportation Authority**

# **Capital Program Oversight Committee Meeting**

## **September 2021**

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### **Committee Members**

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

# **Capital Program Oversight Committee Meeting**

**2 Broadway, 20th Floor Board Room**

**New York, NY 10004**

**Monday, 9/13/2021**

**2:00 - 3:00 PM ET**

## **1. PUBLIC COMMENTS PERIOD**

## **2. APPROVAL OF MINUTES JULY 19, 2021**

*CPOC Committee Minutes - Page 3*

## **3. COMMITTEE WORK PLAN**

*2021 - 2022 CPOC Committee Work Plan - Page 5*

## **4. C&D LIRR / MNR CAPITAL PROGRAM UPDATE**

*C&D LIRR Capital Program Committee Update - Page 7*

*IEC Project Review on Morris Park Locomotive Shop - Page 10*

*IEC Project Review on Jamaica Capacity Improvement-Phase 1 - Page 14*

*C&D MNR Capital Program Committee Update - Page 18*

*IEC Project Review on Harmon Shop Replacement Phase V Stage 2 - Page 23*

*IEC Project Review on Customer Service Initiative (CSI) Program - Page 28*

## **5. CAPITAL PROGRAM STATUS**

*Commitments, Completions, and Funding Report - Page 32*

## **6. QUARTERLY TRAFFIC LIGHT REPORTS**

*Second Quarter 2021 Core & Sandy Traffic Light Reports - Page 50*

MINUTES OF MEETING  
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE  
July 19, 2021  
New York, New York  
8:30 A.M.

CPOC members present in person:

Hon. Patrick Foye  
Hon. Andrew Albert  
Hon. Randolph Glucksman  
Hon. Rhonda Herman  
Hon. Robert Linn  
Hon. Vincent Tessitore, Jr.

CPOC members present via video conference:

Hon. Norman Brown  
Hon. David Mack

CPOC members not present:

Hon. Jamey Barbas  
Hon. Michael Fleischer  
Hon. David Jones  
Hon. Kevin Law  
Hon. John Samuelsen  
Hon. Neal Zuckerman

MTA staff present:

Janno Lieber  
Evan Eisland  
Barney Gray  
Tim Mulligan  
Mark Roche  
Tom Savio

Independent Engineering Consultant staff present via video conference:

Joe Devito  
Kent Haggas  
Mark Sielucka

\* \* \*

Chairman Foye called the July 19, 2021 meeting of the Capital Program Oversight Committee to order at 8:30 A.M.

Public Comments Period

There were two public speakers in the public comments portion of the meeting: Jason Anthony; Murray Boden.

Meeting Minutes

The minutes to the meeting held on June 23, 2021 were approved.

Committee Work Plan

There were no changes to the CPOC Work Plan.

## C&D Capital Program Update

Mr. Lieber provided a brief introduction to the stations-related work under C&D, citing this as an area that has been prioritized during the COVID period. Mr. Gray then gave an overview of the Stations Business Unit, including details on the following projects Accessibility Upgrade at Eight Stations (\$340M budget; substantial completion scheduled for July 2023; currently 15% complete), and ADA upgrade to 149th Street & Tremont Avenue in the Bronx (\$170M budget; substantial completion scheduled for July 2023; currently 11% complete). In its Project Review of the Accessibility Upgrade at Eight Stations, the IEC noted that the Estimate at Completion is within budget, but initial construction activities have slipped their preliminary schedule by three months -- primarily due to the time required to develop commercial agreements with utility companies. The IEC then offered the following observations: 1) While the IEC believes the project's mitigation strategies will avoid any delay to the completion date caused by utility issues (given that there are fully two years to go in the contract), the IEC suggests that C&D explore business process improvements with the regional utility companies to reduce the risk of delay to future design-build projects; and 2) The Program Management Consultant has been proactive in managing risks and establishing processes to maintain timely review of the Design-Builder's product. In its Project Review of the ADA upgrade to 149th Street & Tremont Avenue, the IEC noted that while the project is on budget and on schedule, recovery efforts allowing the project to remain on schedule have been accomplished through both the resequencing of activities and reducing the durations of remaining work, which may limit the options available to mitigate any future delays. The IEC then commented that project risks have been well managed to date, and that potential design and early construction risks have not materialized. However, because the original risk assessment focused only on 149<sup>th</sup> Street and did not include Tremont Avenue, the IEC suggests that a risk review update be undertaken to revisit existing concerns and incorporate the Tremont Avenue portion of the work. 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. Mulligan reported that through June, agencies have achieved commitments of \$1.54B out of a \$2.12B target, but that most of those commitments that were not achieved in the 2<sup>nd</sup> quarter will be accomplished in the 3<sup>rd</sup> quarter. Further, he stated that the Capital Plan pause of last year is not causing a retreat in this year's goal and ambition of \$6.2B of commitments. With respect to completions, Mr. Mulligan reported that the agencies have completed just over \$2B out of a \$3.25B goal, and that 97% of the historic \$7.2B commitment goal is anticipated to be met by year's end. Further details of the presentation, and Committee Members' comments and questions with respect thereto, are included in the video recording of the meeting maintained in MTA's records.

## Adjournment

Upon motion duly made and seconded, Chairman Foye adjourned the July 19, 2021 meeting of the MTA Capital Program Oversight Committee at 9:07 AM.

Respectfully submitted,  
Michael Jew-Geralds  
Office of Construction Oversight



## 2021- 2022 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

**October**

Overall Capital Program

- Infrastructure

**November**

Overall Capital Program

- Signals and Train Control

Minority, Women and Disadvantaged Business Participation  
Small Business Development Program

**December**

Overall Capital Program

- Integrated Megaprojects

OMNY  
Quarterly Traffic Light Report

**January**

Overall Capital Program

- Stations

**February**

Overall Capital Program

- B&T
- Railroads

**March**

Overall Capital Program

- Infrastructure

Quarterly Traffic Light Report

**April**

Overall Capital Program

- Signals and Train Control

Minority, Women and Disadvantaged Business Participation

Security Projects

**May**

Overall Capital Program

- Integrated Megaprojects

**June**

Overall Capital Program

Rolling Stock

OMNY

Quarterly Traffic Light Report

**July**

Overall Capital Program

- Stations

**September**

Overall Capital Program

- Railroads

Quarterly Traffic Light Report

## MTA Board & Capital Program Committee Update: LIRR Business Unit Projects

September 2021

MTA Construction & Development's last report to the Capital Program Oversight Committee on Long Island Rail Road Business Unit Projects was in October 2019. Despite severe constraints on MTA finances and challenges presented by COVID-19, C&D's LIRR Business Unit successfully awarded ten contracts from October 2019 to August 2021. In the final third of this year the plan is to commit another 11 contracts (of which five are part of the Small Business Development Program), bringing the total commitment value for third-party projects in 2021 to \$91.5M.

C&D's LIRR Business Unit has also been able to complete 12 projects since the October 2019 presentation with a value of \$ \$466.2M. These included high profile projects like the Station Initiative Phase 1, Jamaica Platform F, elevators at Nostrand Avenue and Murray Hill, new Mid-Suffolk Yard, and the Diesel Locomotive shop at Morris Park.

This document summarizes the progress of three major projects: Mid-Suffolk Yard, Morris Park Locomotive Shop and Jamaica Capacity Improvements Phase I.

### **New Mid Suffolk Yard**

*This Design-Build project is to build a new yard facility, with 11 new tracks, needed to support East Side Access service. The project is in closeout phase.*

Contract 6259

PROJECT STATUS	Original	Actual
Substantial Completion	March 2020	Oct. 2020
Budget	\$136.0 M	\$134.5 M

The project is approximately 99% complete.

The project included the construction of 11 new storage tracks each capable of holding a 12-car train sets, a material-storage building, AC & DC substations, secure laydown areas, and a two-story employee facility. The project also includes furnishing and delivering new train-control signal infrastructure and special trackwork that will allow for universal access to the yards.

- The new yard was placed in service in March 2021.
- The delivery of new main line switches is ongoing, due to be completed by October 2021.
- The new Signal System was delivered in June. It will be installed by LIRR internal forces along with the special trackwork in a second phase of the project.

**Morris Park Locomotive Shop**

*C&D-LIRR is building a new Locomotive Shop at Morris Park to replace a 131-year-old facility. The new shop will shorten repair turn-around times, support overhaul and heavy maintenance efforts, which will increase the reliability of LIRR’s diesel fleet.*

Contract 6241

PROJECT STATUS	Original	Actual
Substantial Completion	March 2020	July 2021
Budget	\$102.3 M	\$106.0 M
The project is approximately 99% complete.		

As part of this project, C&D-LIRR built new shop tracks and a new lead track into the yard (the “Motor Lead”), the section of the Yard where out-of-service equipment is stored, and a brand-new locomotive maintenance facility to support the railroad’s fleet of DE 24 and DM 21 diesel and dual-mode diesel-electric locomotives and work train diesel locomotives. With these improvements, the new facility is expected to increase productivity by providing a more efficient shop environment. The existing Sheridan and Roundhouse shops lack adequate space, shop equipment, and at times require locomotive transfer between facilities depending on the required work.

Two main issues have delayed the project. First, the original shop equipment manufacturer went out of business in early 2019; the Design-Builder working with C&D-LIRR had to find a new manufacturer. Second, the original plans called for Con Edison to install a fifth feeder to the existing Morris Park Electrical Service Building. Ultimately Con Edison required C&D-LIRR to utilize the existing four feeders, requiring the Design-Builder and C&D-LIRR to redesign the distribution system accordingly.

Construction on the building, shop and office space was completed in October 2020, and the project reached substantial completion in July 2021.

**Jamaica Capacity Improvements Phase I**

*The Jamaica Capacity Improvement project is a multi-decade initiative to dramatically increase through-put at Jamaica, the busiest node in the LIRR network. The first phase of the project (Phase 1), which is underway now, includes multiple contracts, as well as in-house work, managed as one integrated project. The work includes a new Platform F to accommodate Brooklyn-to-Jamaica service, a requirement for the East Side Access project. It also includes new universal interlockings to support operational flexibility and prepare for the next phase of the greater project, the reconfiguration of all tracks around Jamaica.*

Platform F  
Contract 6185A

Beaver Interlocking Structural Platforms (SBMP)

Contract 6392

PROJECT STATUS	Original	Forecast
Substantial Completion*	Oct. 2021	June 2022
Budget	\$301.6 M	\$301.6 M
The project is approximately 84% complete. * Project Level Substantial Completion		



The portion of the project that is required to provide East Side Access service – including the reconfiguration of Johnson Avenue Train Yard, the construction of freight bypass track [south bypass], the new Platform, and the associated infrastructure work including the installation of switches, realignment of track in Jay/Hall/Dunton Interlockings, and modifications to existing signal system – is nearly complete. The work on Platform F, which completed in February 2020, is also ready for ESA opening-day service.

Work on the additional project scope – including the installation of a new universal interlocking (Beaver) and new cross-overs in Metropolitan Interlocking and Union – is progressing. A Small Business Mentor contract to provide structural platforms for the new signal system at Beaver Interlocking was awarded March 2021.

The project has been delayed because LIRR in-house forces have been diverted to other priority projects, including Double Track, Third Track, East Side Access and PTC during the course of the project. C&D-LIRR is mitigating these delays by resequencing work where possible, coordinating track outages and supporting resource planning efforts.

#### **Factors affecting the delivery of C&D LIRR Business Unit projects**

The LIRR Business Unit is facing several challenges related to the delivery of its Capital Program.

- Staffing: Development and opportunities for existing and new staff.
- Training: Expansion of Design-Build; New consolidated C&D Processes and Procedures are in development.
- Resources: Significant work in 2021 and 2022 requiring Force Account and Track Outages are in development.

**September 2021 CPOC  
Independent Engineering Consultant  
Project Review**

**Morris Park Locomotive Shop**



*McKISSACK  
MTA Independent Engineering Consultant*

# Morris Park Locomotive Shop

## Scope

Morris Park Locomotive Shop project constructs a modern locomotive maintenance facility for the railroad's fleet of diesel and dual-mode diesel-electric locomotives, as well as work train diesel locomotives. The new building, which includes storage and employee facilities, will improve yard functionality and increase worker productivity through efficiencies.

Railroad Construction Company, in association with AMCC Corp., were selected as Design Builder and given NTP December 2017.



McKISACK

MTA Independent Engineering Consultant

# Morris Park Locomotive Shop

## Schedule Review

The design-build contract was declared Substantially Complete in July 2021, a delay of 8 months since the last CPOC report in October 2020 due to:

- A delay to delivery and installation of permanent power required for acceptance and commissioning of the building systems which is needed to obtain the temporary Certificate of Occupancy.

## Budget Review

The project budget is \$102.2M and the current reported project EAC is \$106.M. IEC believes while the project's EAC is in line with the remaining work, the negotiation of an outstanding claim adds cost risk.

## Risks

The completion of final testing and commissioning of all the locomotive drop tables is expected in September 2021.

- A newly designed thrust bearing is being retested and will be replaced on all drop tables (at the expense of the contractor).

The timely completion of the remaining punch list items and obtaining a permanent Certificate of Occupancy.

- MTA C&D is asking the contractor to increase their manpower level during this phase to ensure best possible Final Completion date.



McKISACK

MTA Independent Engineering Consultant

# Morris Park Locomotive Shop

## Observations

- The timely occupancy and beneficial use of this facility was adversely affected by the previously stated design delays and Con Edison connectivity issues.
  - The move in date is now planned for September 2021.
- The level of effort to required to secure the permanent power, install and commission the fire suppressant system, and quality issues with drop table components was not anticipated.
  - The PMT made every effort to pretest systems with temporary power in order to minimize schedule impact.

## Recommendation

- Incorporate Lessons Learned from the challenges experienced on this project with electric utility connectivity and implementation as a tool for risk recognition and development of mitigations on future shops and yards projects.



**September 2021 CPOC  
Independent Engineering Consultant  
Project Review**

**Jamaica Capacity Improvement-Phase 1**



*MTA Independent Engineering Consultant*

# Jamaica Capacity Improvement Phase 1

## Scope

The scope of work for the Jamaica Capacity Improvement Phase 1 project is comprised of 3 third-party contracts along with significant force account work. Major work elements include the following:

- Construction of a new Jamaica Platform (Platform F) for Brooklyn-to-Jamaica Service, the removal / installation of switches and realignment of track.
- Demolition and installation of third rail infrastructure, reconfiguration of Johnson Avenue Train Yard, construction of freight bypass track [south bypass] and modifications to the existing signal system.



McKISACK

MTA Independent Engineering Consultant

# Jamaica Capacity Improvement Phase 1

## Schedule Review

- Johnson Yard reconfiguration construction was completed and placed in-service May 31, 2016.
- Platform F was completed and placed in-service March 13, 2020.
- Substantial completion (SC) of Phase 1 which includes the remaining track, switch and signal work, is scheduled for completion in June 2022. The 8-month slip from the original schedule date of October 2021 is primarily due to force account needs on competing priority projects(PTC and LIRR Expansion).
- Based on review of the remaining work, the Independent Engineering Consultant (IEC) finds the forecast June 2022 SC is achievable.

## Budget Review

- The original project budget and EAC of \$301.6M have not changed.
- IEC's cost review indicates the current budget of \$301.6M remains adequate to complete Phase 1.



MTA Independent Engineering Consultant



# Jamaica Capacity Improvement Phase 1

## Risks

The project top schedule and cost risks and corresponding mitigations include the following:

- Force account availability
  - The Project Management Team (PMT) has obtained operations approval to complete switch work during the end-of-year LIRR moratorium which will reduce this schedule risk.
  - Claims
    - A claim has been submitted by the Platform F contractor and the PMT has performed a detailed review with supporting documentation in response.

## Observations

- The project was challenged with the neighboring NYS DOT Van Wyck Expwy Widening project being within the boundaries of work for this project. Close coordination between MTA C&D/LIRR and NYS DOT was required in order to minimize schedule impacts.
- The PMT continues to be flexible when planning for opportunities associated with force account availability.



MTA Independent Engineering Consultant

## MTA Board & Capital Program Committee Update: C&D MNR

September 2021

MTA Construction & Development's last report to the Capital Program Oversight Committee on Metro-North Railroad (MNR) projects was submitted in October 2019. Since then, C&D's MNR Business Unit has successfully awarded 25 contracts, despite severe constraints and uncertainty on MTA finances. Now that the MTA's financial outlook is more certain, C&D-MNR is planning to award another 19 contracts by December 2021 worth \$945 M, bringing the total financial commitment for 2021 to \$2.4 B.

Since October 2019, the Metro-North Railroad Business Unit reached substantial completion on 19 contracts and made significant progress on dozens more projects. Through C&D's Acceleration Program, the MNR Business Unit was able to take advantage of reduced train schedules to perform more work on tracks and in stations.

This document summarizes the progress on four of the Business Unit's most significant initiatives: Harmon Shop Replacement, Customer Service Initiatives, Communication and Signals improvements (Harlem Wayside Communication and Signal Improvements, Harmon to Poughkeepsie Signal Phase 1 and Sandy Communication and Signals Infrastructure Restoration) and the Park Ave Viaduct Priority Repairs and Replacement.

**Harmon Shop Phase 5 Stage 2** *This Design-Build project will replace MNR's 100+ year old maintenance facility in Croton-on-Hudson. The Harmon shop, along with its supporting facilities, are the largest electric car maintenance facility for MNR rolling stock.*

Main Shop  
(Building 6)

Building 5  
Storeroom

PROJECT STATUS	Original	Forecast
<b>Substantial Completion</b>	October 2022	April 2023
<b>Budget</b>	\$439.6 M	\$439.6 M
<b>The project is approximately 41% complete.</b>		

The Phase 5, Stage 2, portion of this project scope is to demolish and reconstruct the 250,000 sq ft Main Shop and its storeroom, as well as replacing the facility's heavy equipment including truck hoists, railcar hoists, overhead cranes and lifts, etc.

C&D is repositioning several buildings/structures within the facility to streamline workflow efficiency by allowing materials to be prepped, assembled into components, installed onto the cars, and finally inspected and tested more easily. This includes the construction of a new overpass to connect the Main Shop with the Wheel Shop for more efficient transportation of parts and components.

The project also entails replacing shop equipment with newer and more efficient technology, allowing MNR in-house forces to perform a larger percentage of component overhauls and saving on the premium cost of shipping the components

out to a third-party vendor for repair and maintenance. Factory acceptance testing of the new equipment is on-going.

This project is expected to stay on budget. Substantial completion is delayed six months because a delay in the close-out of Phase 5 Stage 1.

**Customer Service Visual and Audio Improvements at 20+ Stations**

Grand Central Terminal  
Harlem-125<sup>th</sup> St.  
Melrose  
Wakefield  
Riverdale  
Tremont  
Ossining  
Morris Heights  
Spuyten Duyvil  
Tarrytown  
Poughkeepsie  
Pelham  
Mt Vernon East  
Larchmont  
Harrison  
Rye  
New Rochelle  
Mamaroneck  
Port Chester  
Harriman  
Nanuet

*This project is to improve visual and audio customer service information at Grand Central Terminal and 20 outlying stations on the Harlem, Hudson, New Haven and Port Jervis Lines. The project includes multiple contracts, administered together by one project manager and system integrator for project efficiencies.*

PROJECT STATUS	Original	Forecast
<b>Substantial Completion</b>	April 2021*	Dec 2021*
<b>Budget</b>	\$220 M	\$216 M
<b>The project is approximately 99% complete.</b>		

(\* ) Six of the contracts have achieved substantial completion. The seventh contract slipped nine months for software testing.

C&D is nearing completion on this multi-year initiative to dramatically modernize both the backend and frontend technology used to deploy information to our customers. The screens installed throughout the project locations not only improve the customer experience, but also generate revenue for the MTA.

At Grand Central Terminal, C&D-MNR constructed new audio and visual public address system, electronic big boards and gate boards to provide riders with up-to-date train schedules and information, and electronic displays for advertisements.

At 20 outlying stations, C&D-MNR installed new audio and visual public address systems, electronic information displays to provide riders with up-to-date train schedules and information, electronic displays for advertisements, security cameras, and elevator monitoring upgrades. A new server room was constructed to allow for a centralized, digital library of security footage.

Managing multiple contracts as one project has generated cost and schedule savings. Completed designs and detail drawings were replicated across stations, and less coordination and contractor procurement time were required. With a more substantial materials procurement, the Contractor was also able to obtain better pricing and negotiation leverage from fabricators.

**Communication & Signal Infrastructure Improvements and Restoration** *C&D-MNR is overseeing two different projects to replace outdated Communication & Signal equipment across the Metro-North network, with far more powerful and resilient equipment. The two projects are the Harlem Wayside Communication and Signal Improvements and the Harmon to Poughkeepsie Signal Phase 1.*

Harlem Wayside Communication & Signal Improvements

Harlem Line:  
Woodlawn to Southeast Stations

PROJECT STATUS	Original	Forecast
<b>Substantial Completion</b>	March 2020	March 2022
<b>Budget</b>	\$61.3 M	\$130.2 M
<b>The project is approximately 75% complete.</b>		

Harmon to Poughkeepsie Signal Phase 1

Hudson Line:  
Croton-Harmon to Poughkeepsie

PROJECT STATUS	Original	Forecast
<b>Substantial Completion</b>	February 2020	March 2023
<b>Budget</b>	\$69.8 M	\$122.7 M
<b>The project is approximately 57% complete.</b>		

Both projects will replace and modernize the existing communication cables to serve the PTC system, communications and signal systems, security system, customer service public address and ticket vending machines. The Hudson Express Cable project will also replace the signal power cable.

In Mid-2021 both projects were transferred to C&D to fully manage from MNR C&S. Both projects have extensive schedule and cost variances as a result of changes in (1) available support resources from flagging and power; (2) available time to access track; and (3) minimum pre-Contract site investigation.

Both projects are being closely managed with extensive coordination of all support, management, and contractor teams to coordinate project completion.

**Sandy Restoration Phase 2**

Greystone to Bronx

Sandy Restoration Phase 1 & 2

PROJECT STATUS	Original	Forecast
Substantial Completion	July 2019	June 2022
Budget	\$303 M	\$369 M
<b>The project is approximately 93% complete (Infrastructure only, cutover and commissioning will follow).</b>		

The Sandy Restoration Phase 2 project replaced critical signal power and communication infrastructure from Greystone to the Bronx that was damaged during Hurricane Sandy. The new infrastructure is not only up to modern standards, but also more resilient to environmental hazards.

C&D-MNR is constructing new conduits and signal power above and below ground, positive/negative feeders, track assets, as well as elevated infrastructure such as substations, snow melters, RTU houses, electrical meter boxes, electrical equipment, etc. on platforms.

One of the main challenges on these projects was obtaining track outages needed to perform the work. As the project progressed, C&D improved the efficiency of these outages by both sharing the track outages with on-going maintenance projects, and concurrently performing work in multiple locations during both nights and weekends. The project also capitalized on the reduced revenue train schedule during the pandemic. Additionally, MNR BU dedicated a seasoned engineer to coordinate on a daily basis the necessary internal support in order to ascertain that each outage is used productively.

Advancing the work at the interlocking was done during the reduced service stemming from the Pandemic.

Lack of initial site investigation during preliminary design resulted in unforeseen site conditions during the construction. The project also experienced insufficient flagging, power and C&S support due to PTC high priority. Additionally, the contractors lack of productivity contributed to the delays.

**Park Avenue Viaduct Priority Repairs**

*The Park Avenue Viaduct Priority Repairs project will retrofit parts of the 128-year-old Park Avenue Viaduct, which carries 98% of all MNR trains – all trains arriving and departing from the Grand Central Terminal.*

<b>PROJECT STATUS</b>	<b>Original</b>	<b>Forecast</b>
<b>Substantial Completion</b>	May 2022	May 2022
<b>Budget</b>	\$10.3 M	\$10.3 M
<b>The project is approximately 25% complete.</b>		

The Park Avenue Viaduct Priority Repairs project is performing immediate retrofit to the viaduct structure, including the installation of retrofit brackets on the fascia columns along the Park Avenue Viaduct between E 115 St and E 123 St, and between E 128 St and E 132 St.

C&D-MNR BU is also planning to replace a portion of the viaduct between E 115 St and E 132 St, starting in late 2022, under a separate, follow-up contract. That work will consist of replacing the foundation, removing the existing bridge structure, and replacing it with a new bridge. Work will be challenging as the Viaduct stretches through many communities in upper Manhattan, and train service will need to remain in operation.

**Factors affecting the delivery of C&D-MNR projects**

The C&D-MNR Business Unit is facing several challenges related to the delivery of its Capital Program.

- Staff attrition continues to be an MTA-wide issue affecting the C&D-MNR Business Unit, especially as the volume of work increases post-COVID. C&D Human Resources has obtained permission to hire new team members as well as process employee movement.
- In the upcoming year, many MNR projects will be Design-Build. MNR BU has taken the initiative to take full advantage of that delivery method. The C&D Delivery Department is running workshops and providing a range of other learning opportunities on that topic.
- Oversubscription of projects compared to available outages; need to prioritize capital projects over maintenance projects where there can be delayed with no impact.
- Shortage of Power, C&S and Flagging support staff due to attrition and past hiring freeze contributed to the delays.

# September 2021 CPOC Independent Engineering Consultant Project Review

## Harmon Shop Replacement Phase V Stage 2

### Metro North Railroad



# MNR Harmon Shop Replacement Phase V Stage 2

The Harmon Shop Replacement follows a long-term master plan to upgrade and modernize the entire shop and yard complex over two decades, funded by successive capital programs. Phase V Stage 2 is the final stage of the program.



## Previous phases (2001 – 2013):

Phase I (completed): Yard Infrastructure

Phase II (completed): MoW Bldg, Communication Building, Material Distribution Center

Phase III (completed): Wheel True Facility, Coach and Locomotive Shops

Phase IV (completed): Priority roof repairs to Building #6

## Current Phase (2014 – present):

The current and final “Phase V” replaces the old equipment maintenance facility (“Building 6”) with new state-of-the-art Electric Car and Support Shop facilities.

The work of Phase V is being completed in two separate contracts. Both contracts were awarded to the design-build team Skanska-ECCO III (“SE3”).

**Phase V - Stage 1 (completed)**: Stage 1 completed the design and construction of the new Consist Shop and EMU Annex Buildings. This phase also completed the required preliminary engineering design work for both the Stage 1 and Stage 2 contracts.

**Phase V - Stage 2 (current work, 41% complete)**: The scope of work includes the demolition of the remainder of Building 6 as well as the associated Building 5 storeroom and the construction of the balance of the Phase V Electric Car Shop and Support Shop facilities. The Stage 2 EMU Running Repair and Support Shop Facility will be constructed directly adjacent and functionally connected to the Consist Shop and will be connected to the EMU Annex Building via a new second-floor bridge overpass.



# MNR Harmon Shop Replacement Phase V Stage 2

## Budget Review

### Stage 2 remains within budget.

The project budget and the Estimate at Completion (EAC) of \$439.6 M have not changed since award.

IEC analysis of project expenditures to date, contingency draw down, projected expenditures and remaining risks indicate the project will remain within budget.



Phase V Stage 2  
Running Repair and Support Shop  
July 2021

# MNR Harmon Shop Replacement Phase V Stage 2

## Schedule Review

**Stage 2 progress is being impacted by MNR operations, COVID and worksite access restrictions caused by delays to the previous stage.**

NTP was awarded to the design-build team Skanska-ECCO III (SE3) in October 2018 with a contract duration of 48 months.

- A six-month time extension to April 30, 2023, was granted for delays associated with completing Stage 1.
- The latest schedule submitted by the design-build team indicates substantial completion on May 19, 2023.
  - Reduced MNR service during the pandemic created an operational need for additional train storage space at Harmon Yards. Because of this, the South Yard has not been turned over to the design-builder as planned.
  - In order to mitigate this construction impact and delay, track work has been re-sequenced between the north and south yards.



McKISSACK

MTA Independent Engineering Consultant

# MNR Harmon Shop Replacement Phase V Stage 2

## IEC Observations

The IEC notes that current completion forecasts require the following:

- Finalization of required 4 months of continuous track outage planned in the north yard starting in December 2021.
- Critical work activities in the yards are constrained by a contractual black-out period from April to December. North yard track work must be completed prior to April 2022. MNR is coordinating with the design-build team and MNR Operations to re-sequence the affected work and complete before the start of the blackout period.

## Risk Review

- The top schedule risk is MNR Operations approval of contractor access to yard as detailed earlier in this report.
  - Mitigation: Track work is being re-sequenced to accommodate MNR Operations and the location of laydown and staging areas were moved.
- Contractor productivity to complete required track work during the 4-month outage.
  - Mitigation: The project team should confirm if contractor and force account resources allocated are sufficient to complete the work within the prescribed window.
- The top cost risk is unforeseen site conditions.
  - Mitigation: Budgeted allowances were included in the contract for unforeseen utility work and underground conditions.

**September 2021 CPOC  
Independent Engineering Consultant  
Project Review**

**Metro North Railway  
Customer Service Initiative (CSI) Program**



*McKISSACK  
MTA Independent Engineering Consultant*

# CSI Program

## Project Scope

- The CSI program provides real time customer information at Grand Central Terminal (GCT), as well as twenty Outlying Stations while upgrading all associated security and communication equipment.
- In December 2017, MNR awarded 7 individual contracts, to perform the civil work, supply hardware and head-end equipment, software and database. An 8<sup>th</sup> contract for the Consultant Construction Manager (CCM) services was awarded to WSP who performed the system integration activities.



MTA Independent Engineering Consultant

# CSI Program

## Budget Review

- The current project Budget and Estimate at Completion of \$220M and \$216M, respectively, have remained the same since last reported at CPOC in October 2019.
- The IEC concurs with the project costs based on our review of expenditures to date of third party, force account, soft costs and forecast for remaining work.

## Schedule Review

- As of September 2021, 6 packages related to civil work, hardware development, equipment supply, and installation have met Substantial Completion (SC).
- Package 7 (Video surveillance) has slipped by 9 months to December 2021, due software testing issues.
- The IEC concurs with C&D assessment of the schedule.



MTA Independent Engineering Consultant

# CSI Program

## Observation

- The project contracted with a third party CCM (WSP), to integrate the work performed by the individual contractors. This project structure helped minimize the interface and coordination issues between the various contractors.
- The Project Team identified a single resource to manage the access to GCT to overcome initial delays experienced by the Contractors.



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# **MTA Capital Program Commitments & Completions**

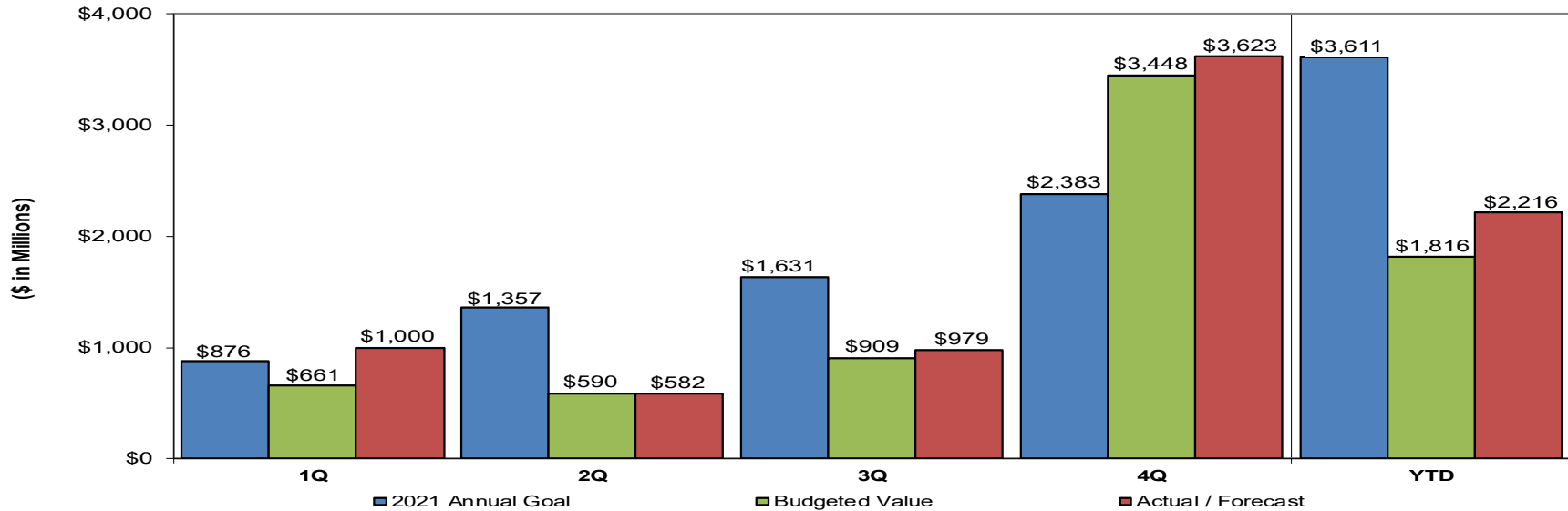
**through  
August 31, 2021**





Capital Projects – Commitments – August 2021

MTA-wide 2021 Commitments



**Annual Goals:** Dollar and time-based programmatic milestones for the commitment of contracts established at the start of each year and which are achievable during the year.

**Actuals:** The value of the goals and any additional unplanned commitments as they are achieved during the year.

**Forecasts:** The updated estimates by quarter for remaining goals as well as any unplanned commitments that might occur during the year.

**Budget:** The budgeted value assumed in the capital program for the Actual and Forecasted commitments being tracked during the year.

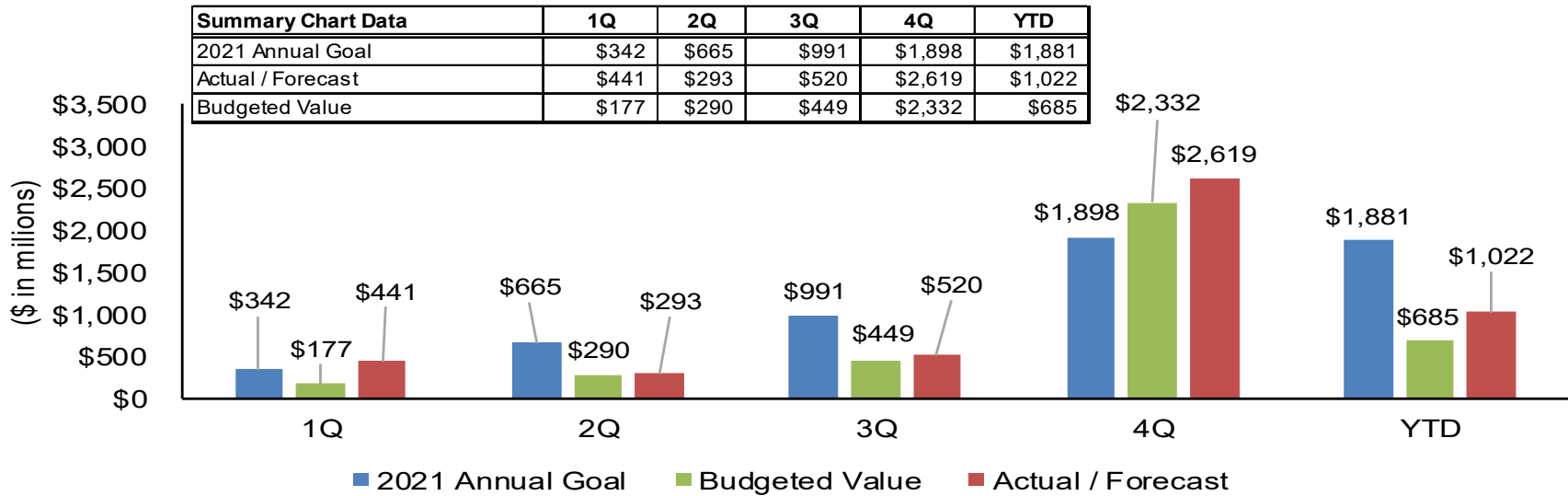
Commitments Summary

In 2021, agencies have a goal of \$6.2 billion in overall commitments, including \$3,839 million for NYCT, \$485 million for LIRR, \$777 million for MNR, \$57 million for MTA Bus, \$40 million for MTA Interagency, \$867 million for MTA Network Expansion, and \$173 million for B&T.

Through August, agencies have committed \$2.2 billion versus a \$3.6 billion goal including a total of ~\$0.5 billion of unplanned commitments that partially offset slippages of ~\$1.9 billion. Currently, the MTA forecasts achieving \$6.2 billion during the year primarily due to the impact of unplanned commitments. At the end of each quarter in 2021, schedule variances are explained on the following pages with current explanations covering the first half of 2021.

## NYCT/MTA Bus Capital Projects – Commitments – August 2021 – Budget Analysis and Schedule Variances

### NYCT and MTA Bus Budget Analysis



### Q1 and Q2 Schedule Variances

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
<b>2 NYCT/MTA Bus Amber Commitments</b>				<b>4 NYCT/MTA Bus Red Commitments</b>			
<b>NYCT</b>				<b>NYCT</b>			
<i>Passenger Stations</i>				<i>Stations</i>			
Replace 8 Traction Elevators / Various	Construction Award	Q1	Q2(A)	Connection-Oriented Ethernet (COE) at 265 Stations, Ph 3B-2	Construction Award	Q2	Q4
		\$66.0	\$50.0			\$43.5	\$26.4
Award was delayed due to multiple bid opening postponements. Bids received in March. Project cost decreased reflecting favorable bids received.				Project award rescheduled to reflect expected FTA funding availability. Project cost reflects latest estimate.			
<i>Superstorm Sandy Repairs</i>				Replace 12 Escalators			
Roackaway Line Wrap-Up	Construction Award	Q2	Q3(A)		Construction Award	Q2	Q3
		\$56.4	\$40.2			\$120.5	\$111.1
Project award was delayed pending resolution of procurement and award issues. Lower actual project cost reflects favorable bids received.				Bid Opening Date postponed to address suspension of Executive Order 202. Contract documents revised to add a schedule value to each station where an escalator is being replaced. Project cost reflects latest estimate.			

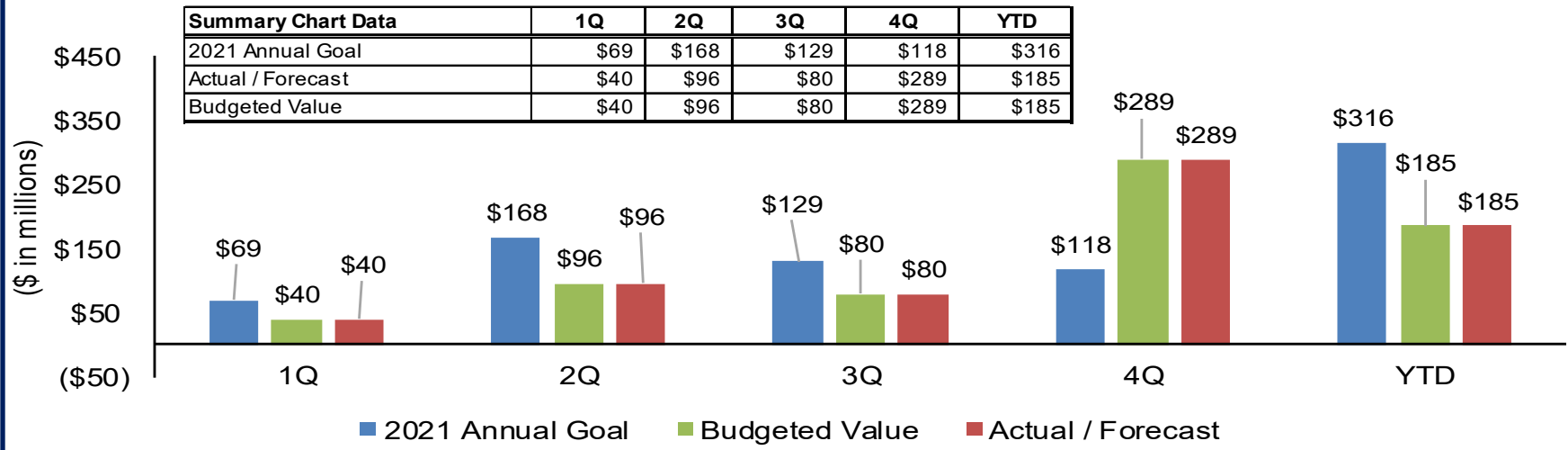
NOTE: schedule variances continue onto next page.

## NYCT/MTA Bus Capital Projects – Commitments – August 2021 – Schedule Variances

Project	Commitment	Goal	Forecast
<b>4 NYCT/MTA Bus Red Commitments (continued)</b>			
<b>NYCT</b>			
<i>Misc./Emergency</i>			
Livingston Plz Elec and Mech Sys Improvements, Ph B	Construction Award	Q2 \$53.6	Q4 \$53.4
Award re-scheduled to accommodate contract advertisement and procurement. A recent additional award delay is due to extended time to finalize request for information (RFI) responses and process addenda.			
<i>Track</i>			
8th Ave ROW (Misc. ) Bundle	Construction Award	Q2 \$83.2	2022 \$133.7
Project award rescheduled to accommodate for contract advertisement and procurement. Project cost reflects latest estimates for construction and support.			

## LIRR Capital Projects – Commitments – August 2021 – Budget Analysis and Schedule Variances

### LIRR Budget Analysis

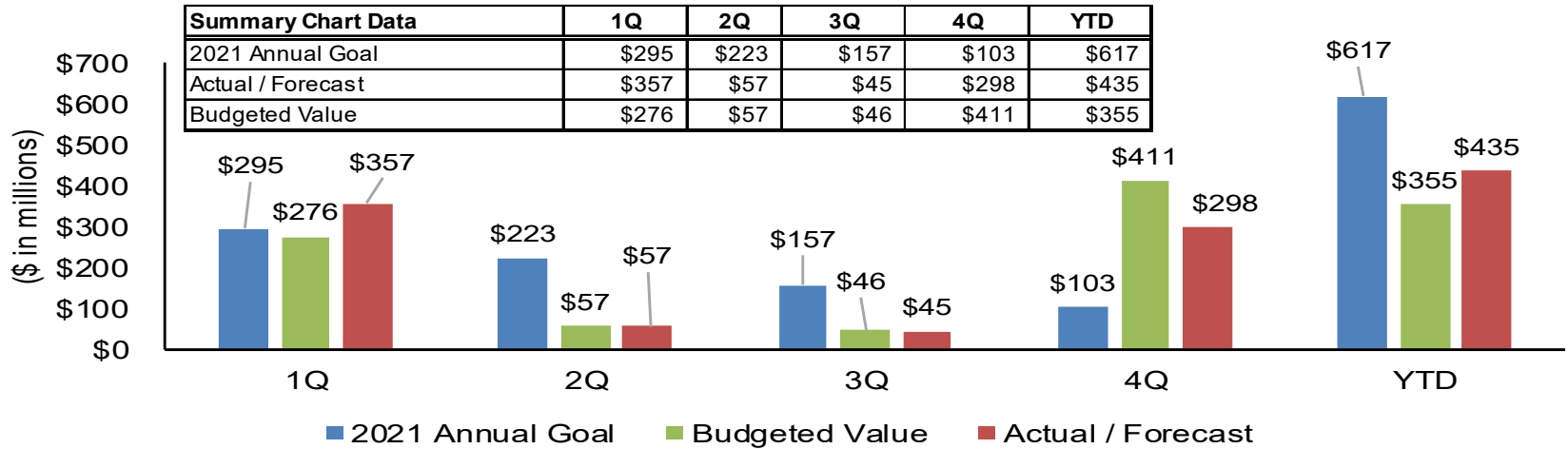


### Q1 and Q2 Schedule Variances

Project	Commitment	Goal	Forecast
<b>2 LIRR Red Commitments</b>			
<b>LIRR</b>			
<i>Superstorm Sandy</i>			
Long Island City Yard Restoration and Resiliency	Construction Award	Q2 \$13.4	Q4 \$13.4
Project award delayed due to additional bidder questions impacting bid opening schedule.			
<i>Rolling Stock</i>			
Work Locomotives	Purchase	Q2 \$35.7	Q4 \$45.7
Project award delayed to allow more time to negotiate with vendor.			

MNR Capital Projects – Commitments – August 2021 – Budget Analysis and Schedule Variances

MNR Budget Analysis

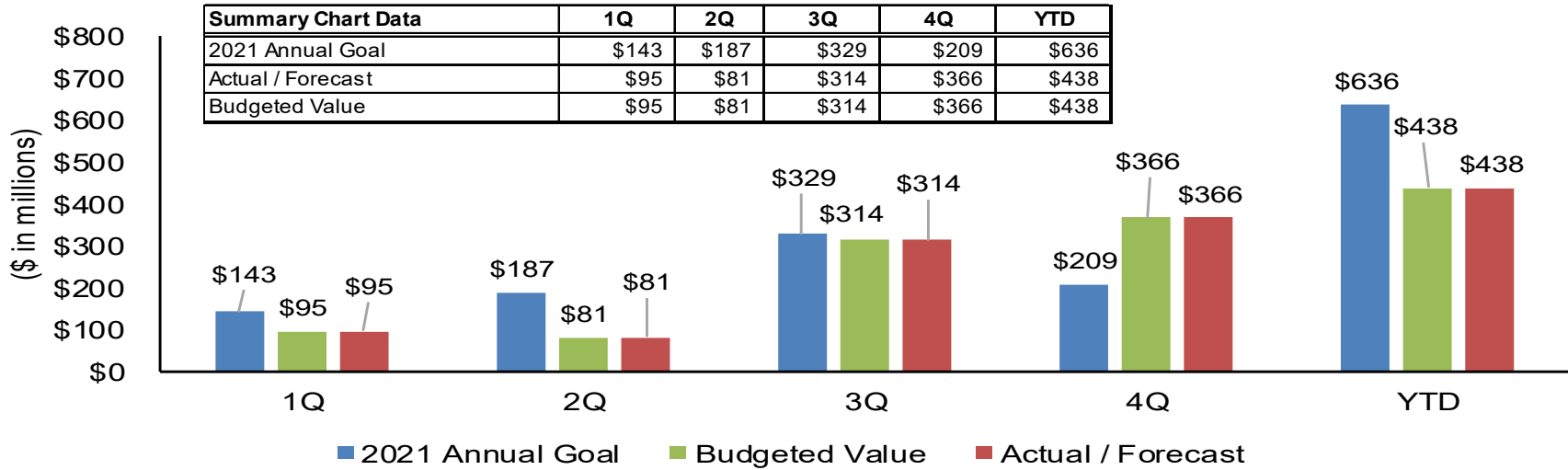


Q1 and Q2 Schedule Variances

Project	Commitment	Goal	Forecast
<b>1 MNR Amber Commitment</b>			
<i>MNR Stations</i>			
GCT Trainshed	Construction Award	Q2 \$183.3	Q4 \$183.3
JP Morgan Chase has again shifted the award date in order to respond to requests for information (RFIs) from proposers.			

MTA Expansion Capital Projects – Commitments – August 2021 – Budget Analysis and Schedule Variances

MTA Expansion Budget Analysis

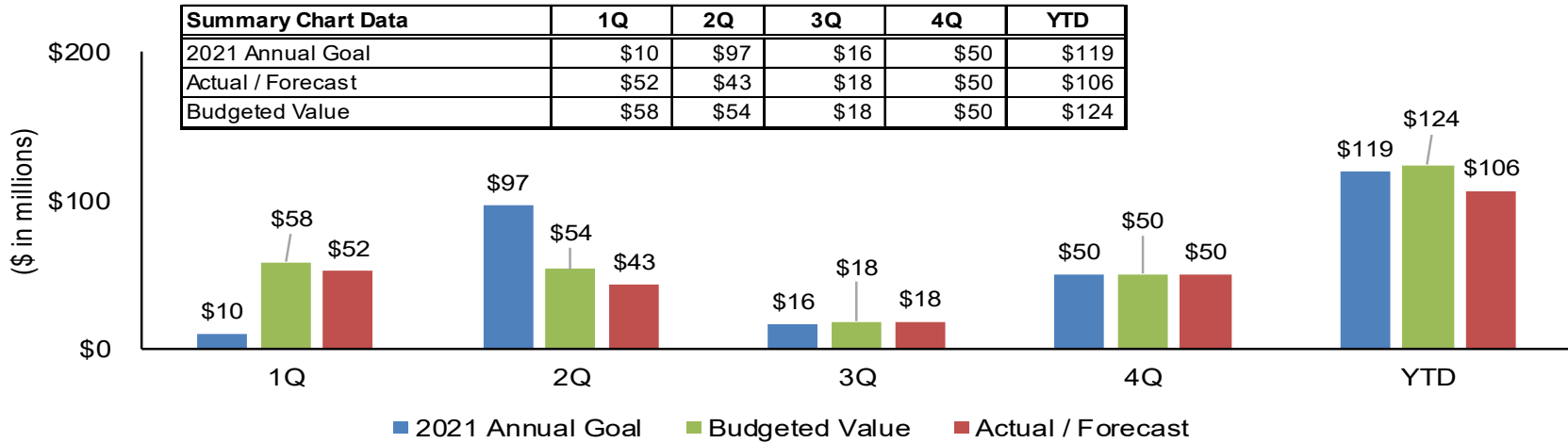


Q1 and Q2 Schedule Variances

Project	Commitment	Goal	Forecast
<b>1 MTA Expansion Amber Commitments</b>			
<i>MTA Expansion</i>			
<i>East Side Access</i>			
Rail Replacement	Construction Award	Q1	Q2(A)
		\$20.0	\$3.0
Project award was delayed to provide bidders additional time to submit bids. Award value reflects reduced material quantities.			

**B&T Capital Projects – Commitments – August 2021 – Budget Analysis and Schedule Variances**

**B&T Budget Analysis**



**Q1 and Q2 Schedule Variances**

The Q1 schedule variance reflects the early award of the installation of protective fencing at the Verrazzano-Narrows Bridge. There are no Q2 schedule slippages to report. Q3 schedule variances will be reported in October 2021.

### Capital Projects – Completions – August 2021

Goal	Actual	MTA-wide 2021 Major Completions												Post 2021	
		Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21		
Total	51	1	1	1	5	3	1	3	0	7	8	2	15	4	
Jan-21	1	1													
Feb-21	2				1			1							
Mar-21	1			1											
Apr-21	3				2					1					
May-21	7		1		2	1				2				1	
Jun-21	7					2	1			2	1			1	
Jul-21	3									1	1			1	
Aug-21	5							1			1			3	
Sep-21	2									1				1	
Oct-21	7							1			5				1
Nov-21	2											2			
Dec-21	11												8	3	

**BLUE** = Forecast/Actual earlier than Goal  
**GREEN** = Forecast/actual matches Goal  
**AMBER** = Forecast/actual w within 2 months of Goal  
**RED** = Forecast/actual beyond 2 months of Goal

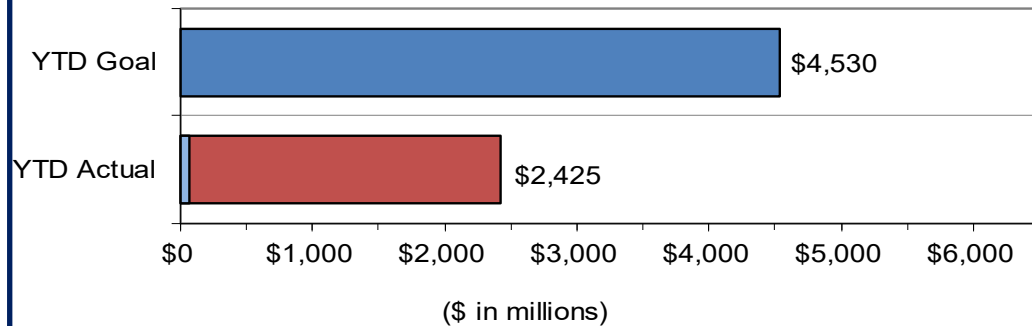
#### Completions Summary

In 2021, agencies have a goal of completing \$7.2 billion in work including 51 major completions. Major completions are generally those that have significant dollar value or have high visibility. In 2021, major completions total 72% of the annual goal. Major completions for 2021 by agency include 26 for NYCT, 7 for LIRR, 7 for MNR, 2 for MTA Bus, 5 for MTA Expansion, and 4 for B&T.

Through August, agencies have completed \$2.4 billion versus a \$4.5 billion goal. The shortfall is mainly due to slips of 15 major completions. Schedule slips are explained on the following pages. The MTA currently anticipates achieving 97% of its overall 2021 annual completion goal.

#### Budget Analysis

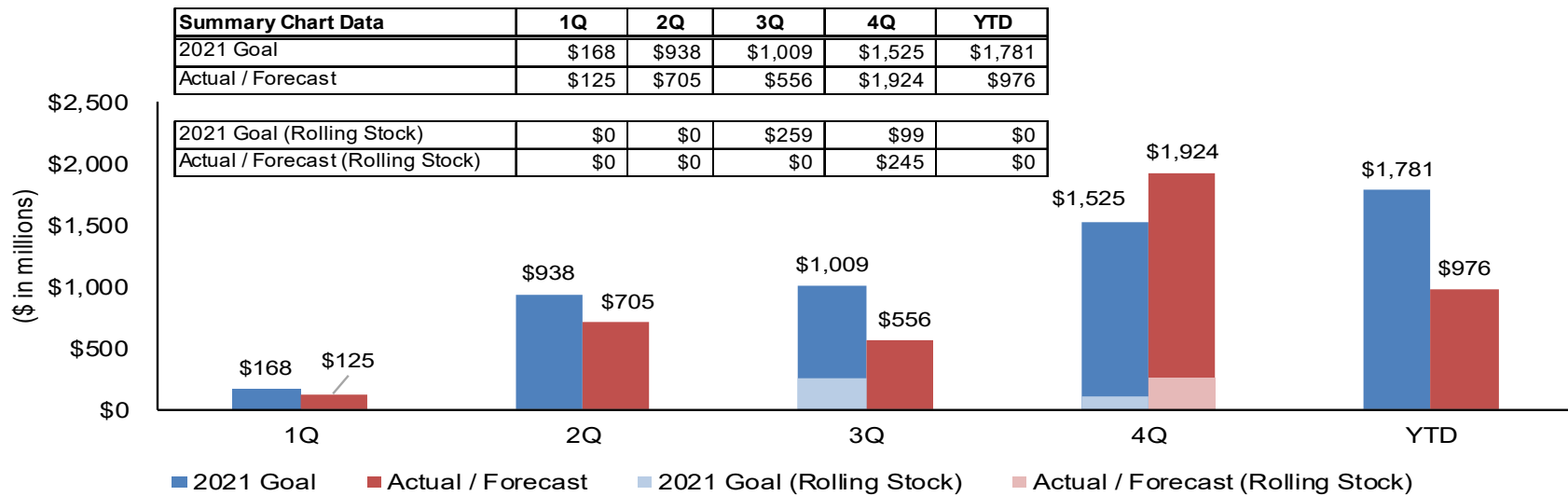
	(\$m)	
2021 Annual Goal	\$7,183	
2021 Forecast	\$6,933	97% of Annual Goal
Forecast left to Complete	\$4,508	





## NYCT/MTA Bus Capital Projects – Completions – August 2021 – Budget Analysis and Schedule Variances

### NYCT and MTA Bus Budget Analysis



### Schedule Variances

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
<b>2 NYCT/MTA Bus Amber Completions (1 New This Month)</b>				<b>12 NYCT/MTA Bus Red Completions (4 New This Month)</b>			
<b>NYCT</b>				<b>NYCT</b>			
<i>Passenger Stations</i>				<i>Signals &amp; Communications</i>			
ADA: Gun Hill Rd / Dyre	Construction	Feb-21	Apr-21(A)	CBTC Queens Blvd West - 50 St to Union Tpke: Ph 1	Construction	Aug-21	Dec-21
		\$55.1	\$59.5			\$235.8	\$254.8
Project completion was delayed due to an additional work order for the redesign of the fire sprinkler and fire alarm system as a result of changes to standards identified during pre-final inspection. Cost increase reflects additional project support costs.				Project completion delayed due to software reliability issues as well as additional time needed to monitor each section of the line's performance prior to entering beneficial use. Project cost increase in part due to additional TA support services, additional work orders, as well as additional administrative services.			
<i>Miscellaneous/Emergency</i>				<i>Staten Island Railway</i>			
<b>Overcoating: Below Track-Level, 48th St to 72nd St/FLS (New Item)</b>	Construction	Aug-21	Oct-21	SIR: New Power Station: Clifton & New Dorp	Construction	Jun-21	Sep-21
		\$56.1	\$56.1			\$49.8	\$50.4
Delay due to the addition of new scope to the contract for the demolition of a signal room at 114th Street. (currently under review by C&D Contracts).				Project completion rescheduled due to fire alarm final acceptance testing and Con Ed delay in providing low tension and High Tension service. Project cost increase due to additional support services needed as a result of extended project duration.			

NOTE: schedule variances continue onto next page.

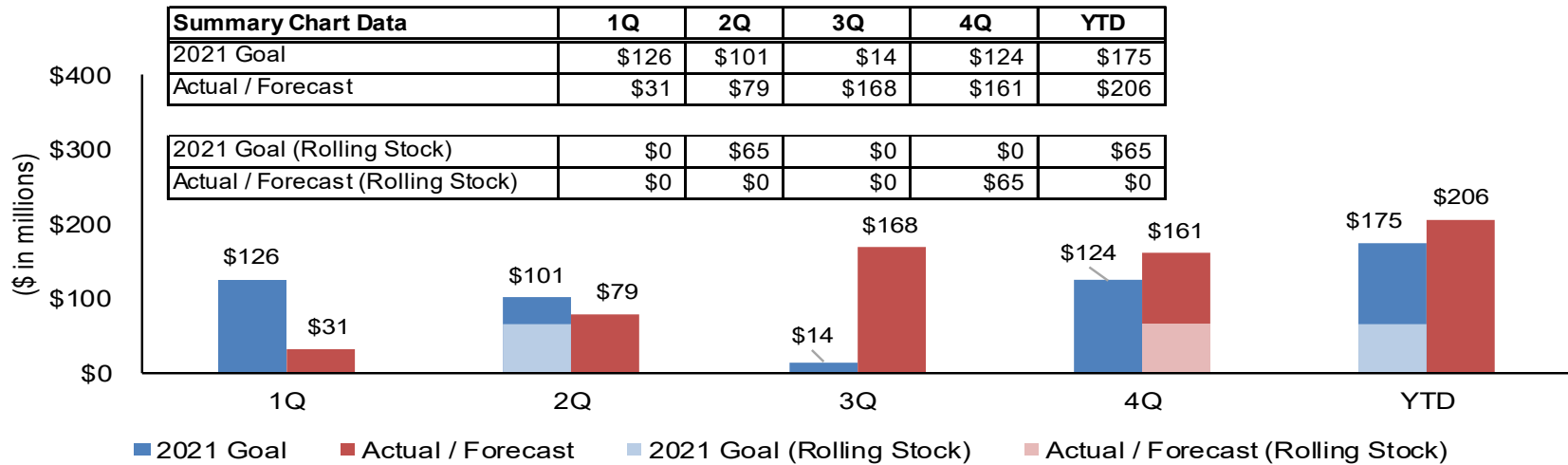
## NYCT/MTA Bus Capital Projects – Completions – August 2021 – Schedule Variances

Project	Completion	Goal	Forecast
<b>12 NYCT/MTA Bus Red Completions (continued)</b>			
<b>NYCT</b>			
<i>Bus Purchases</i>			
<b>Purchase 165 Hybrid-Electric Standard Buses (New Item)</b>	Bus Procurement	Sep-21 \$150.7	Dec-21 \$145.9
Project completion schedule extended to account for COVID-19 impact on delivery schedule.			
<b>Purchase 126 Hybrid-Electric Standard Buses (New Item)</b>	Bus Procurement	Oct-21 \$107.9	Feb-22 \$107.9
Recent, additional delay until February 2022 is attributable to resources and parts shortages.			
<i>Miscellaneous/Emergency</i>			
<b>Livingston Plaza: Facade &amp; Perimeter Hardening (New Item)</b>	Construction	Aug-21 \$33.5	Dec-21 \$33.5
Project completion delayed due to issues preventing the contractor from removing the scaffolding.			
<i>Superstorm Sandy Repairs</i>			
<b>Sandy: Rutgers Tube (New Item)</b>	Construction	Aug-21 \$159.2	Dec-21 \$168.7
The completion delay is due to time needed to complete additional work orders (AWOs). The project's cost increase is primarily driven by the estimated cost for			

Project	Completion	Goal	Forecast
<b>NYCT</b>			
<i>Traction Power</i>			
New Substation & CBHs: Maspeth Av-Humboldt St / Canarsie	Construction	May-21 \$59.2	Sep-21 \$59.2
Project completion delayed due to pending Con Ed energization of High Tension (HT) feeder. Con Edison cannot commit to a date for energization of the 2nd HT Feeder due to emergency feeder outages caused by the ongoing Summer heat events.			
New Substation: Harrison Pl / Canarsie	Construction	May-21 \$51.3	Sep-21 \$51.3
Project completion delayed due to pending Con Ed energization of the substation of the 2nd feeder. See above for Con Ed energization issues.			
<i>Signals &amp; Communication</i>			
Upgrade SONET Rings A,C	Construction	Jun-21 \$29.4	Dec-21 \$29.6
Project completion delayed due to limited In-house resources to support the migration work.			
<i>Depots</i>			
Bus Radio System - NYCT	Construction	Dec-21 \$195.4	Jun-23 \$219.5
Project completion delayed due to utility issues, poor contractor performance, conformed design issues, and delays related to the COVID-19 pandemic. Delays are being analyzed by MTA Legal and MTA C&D Program Controls. Ongoing project cost increases reflect latest, revised cost estimates to complete the project.			
<i>Bus Company Projects</i>			
Bus Radio System	Construction	Dec-21 \$27.8	Jun-23 \$27.8
See Bus Radio System - NYCT explanation above.			
Bus Radio System, Pt II	Construction	Dec-21 \$37.4	Jun-23 \$37.4
See Bus Radio System - NYCT explanation above.			

## LIRR Capital Projects – Completions – August 2021 – Budget Analysis and Schedule Variances

### LIRR Budget Analysis



### Schedule Variances

#### 2 LIRR Red Completions

##### LIRR

###### Shops and Yards

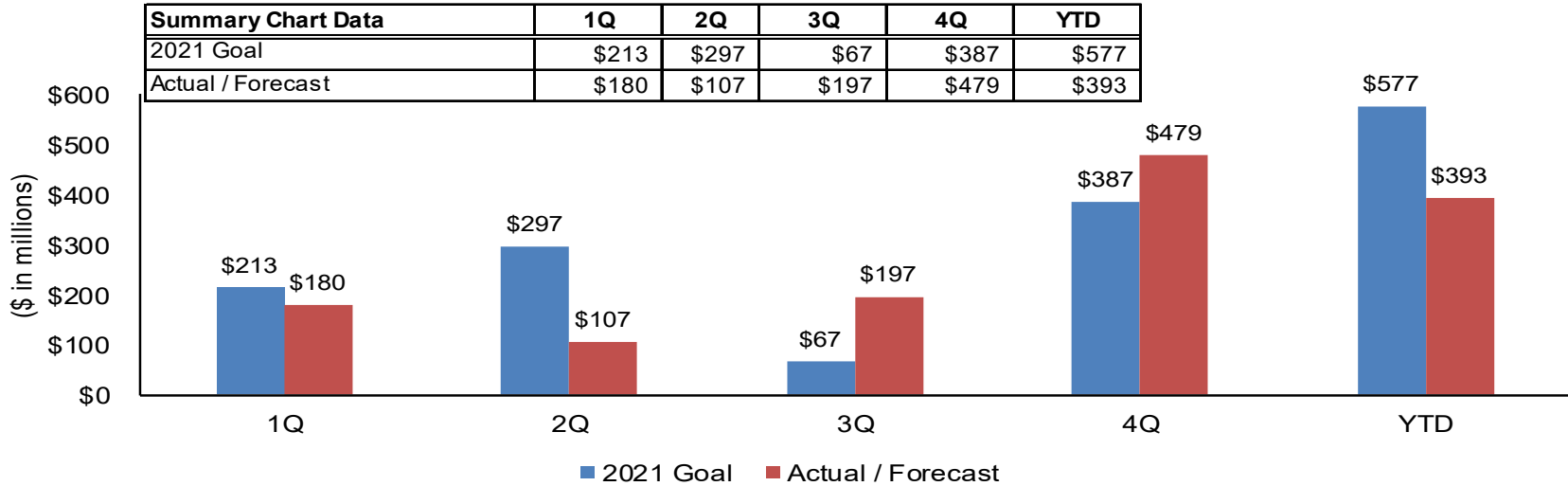
Diesel Locomotive Shop Improvements	Construction	Feb-21	Jul-21 (A)
		\$94.4	\$95.6
Project completion was delayed due to and extended process of acceptance of the Fire Alarm System.			

###### Rolling Stock

Rolling Stock: M-9 Procurement	Fleet Procurement	May-21	Dec-21
		\$64.8	\$64.8
Project delayed due to workmanship issues and impacts related to the COVID-19 pandemic.			

MNR Capital Projects – Completions – August 2021 – Budget Analysis and Schedule Variances

MNR Budget Analysis



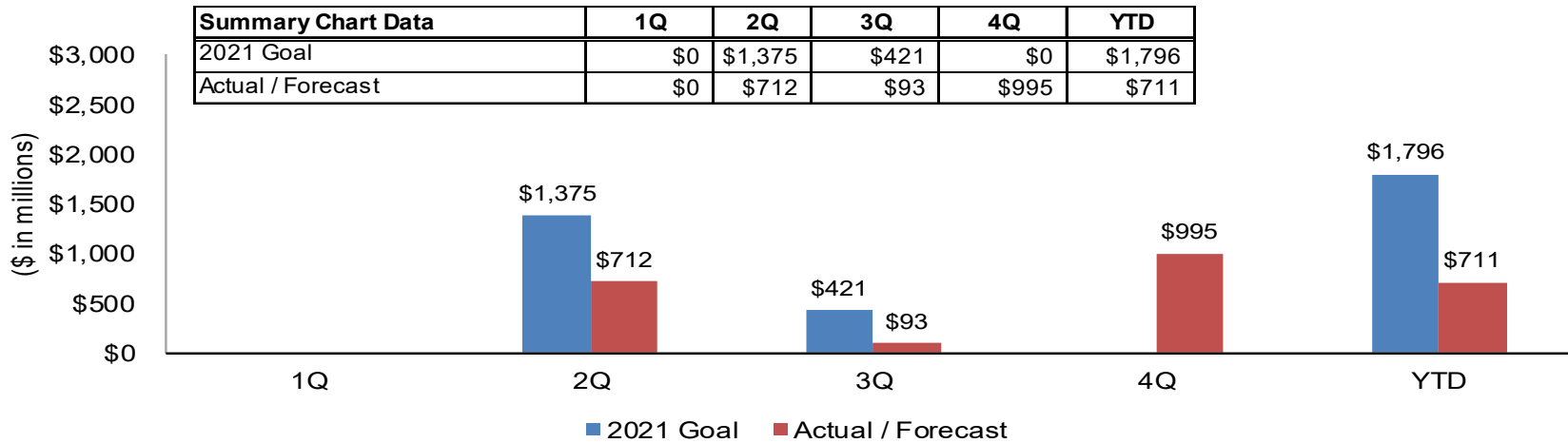
Schedule Variances

Project	Completion	Goal	Forecast
<b>1 MNR Red Completion</b>			
<b>MNR</b>			
<i>Track &amp; Structures</i>			
3rd Ave Bridge Replacement	Construction	Jun-21	Sep-21
		\$14.4	\$14.4

There is a no cost time extension being processed due to COVID-related delays in material and equipment.

## MTA Expansion Capital Projects – Completions – August 2021 – Budget Analysis and Schedule Variances

### MTA Expansion Budget Analysis

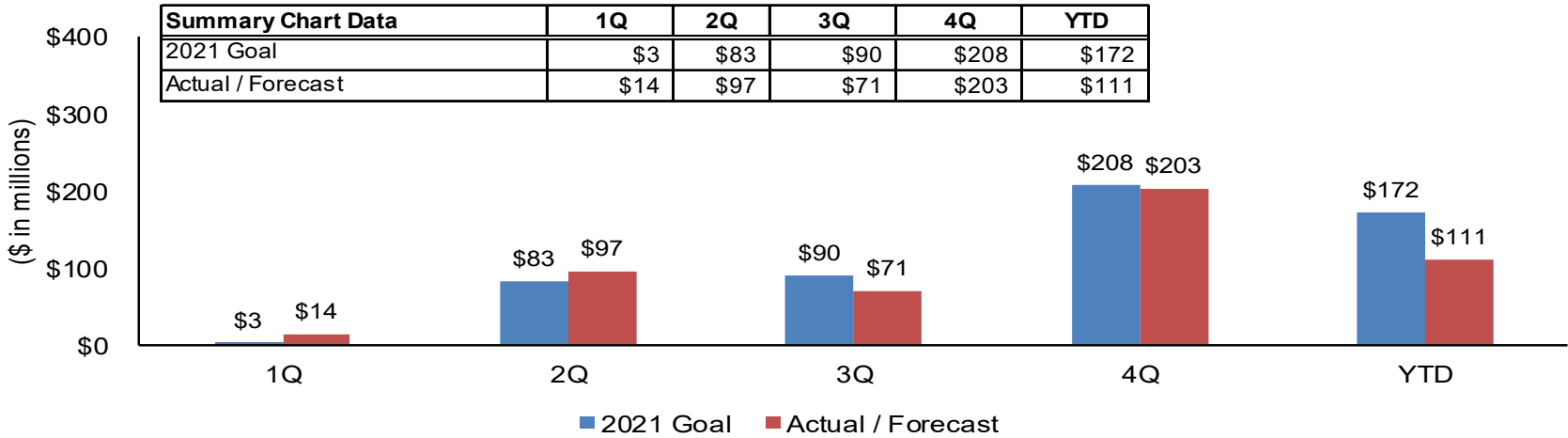


### Schedule Variances

Project	Completion	Goal	Forecast	Project	Completion	Goal	Forecast
<b>4 MTA Expansion Red Completions</b>				<b>MTA Expansion</b>			
<i>MTA Expansion</i>				<i>East Side Access</i>			
<i>East Side Access</i>				<i>East Side Access</i>			
B/C Approach	Construction	Apr-21	Sep-21	Systems Package 2 - Tunnel	Construction	Jul-21	Oct-21
		\$92.9	\$92.9	Systems		\$72.0	\$72.0
Project substantial completion was extended to include Loop 1A trench excavation and catenary work. An additional, recent delay was due to receipt of Amtrak final acceptance.				Delays are due to permanent power delivery scheduling.			
GCT Concourse & Facilities	Construction	Jun-21	Oct-21				
		\$574.5	\$574.5				
Scheduled completion impacted by local systems testing (HVAC, fire protection) delays.							
Mid-Day Storage Yard	Construction	Jul-21	Dec-21				
		\$348.6	\$348.6				
Scheduled completion impacted by Signals/Systems integration testing delays.							

**B&T Capital Projects – Completions – August 2021 – Budget Analysis and Schedule Variances**

**B&T Budget Analysis**



**Schedule Variances**

Project	Completion	Goal	Forecast
<b>1 B&amp;T Red Completion</b>			
<i>Structures</i>			
CB Scour Protect/Repair/Replace	Construction	Jul-21	Sep-21
CB/MP Pier Fender		\$65.9	\$65.9

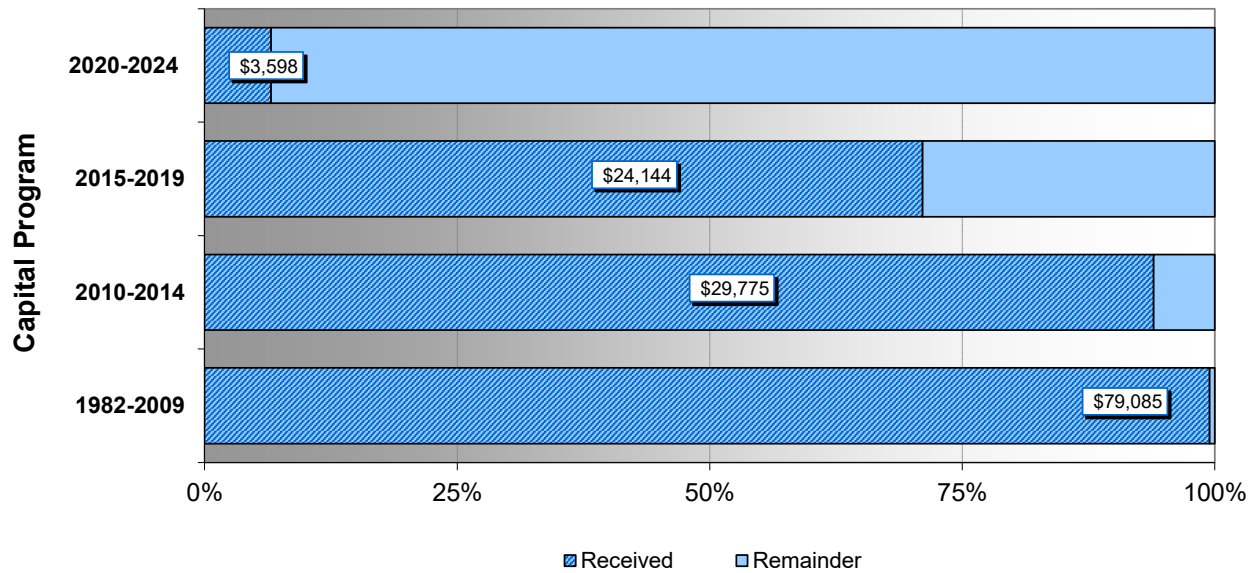
Project completion schedule was delayed due to weather-related impacts.

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## Status of MTA Capital Program Funding

### Capital Funding (August 2021)

\$ in millions





## Capital Funding Detail (August 2021)

\$ in millions

	Funding Plan		Receipts	
	Current	Thru June	This month	Received to date
<b>2010-2014 Program</b>				
Federal Formula, Flexible, Misc	\$5,862	\$5,843	\$15	\$5,857
Federal High Speed Rail	173	173	-	173
Federal New Start	1,271	1,257	-	1,257
Federal Security	89	89	-	89
Federal RRIF Loan	-	-	-	-
City Capital Funds	719	608	-	608
State Assistance	770	770	-	770
MTA Bus Federal and City Match	132	112	2	113
MTA Bonds (Payroll Mobility Tax)	11,625	10,647	-	10,647
Other (Including Operating to Capital)**	1,277	1,277	-	1,277
B&T Bonds	2,175	2,019	-	2,019
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	6,697	6,697	-	6,697
<i>PAYGO</i>	18	18	-	18
<i>Sandy Recovery MTA Bonds</i>	659	225	-	225
<i>Sandy Recovery B&amp;T Bonds</i>	230	23	-	23
<b>Total</b>	<b>31,696</b>	<b>29,759</b>	<b>16</b>	<b>29,775</b>

	Funding Plan		Receipts	
	Current	Thru June	This month	Received to date
<b>2015-2019 Program</b>				
Federal Formula, Flexible, Misc	\$6,681	\$5,118	\$468	\$5,586
Federal High Speed Rail	\$122	\$122	-	\$122
Federal Core Capacity	100	-	-	-
Federal New Start	500	-	-	-
Federal Security	18	15	(0)	15
State Assistance	9,091	4,598	-	4,598
City Capital Funds	2,667	1,473	577	2,050
MTA Bonds	8,474	8,175	-	8,175
Asset Sales/Leases	943	315	-	315
Pay-as-you-go (PAYGO)**	2,156	1,572	-	1,572
Other	273	60	8	67
B&T Bonds & PAYGO/Asset Sale	2,942	1,644	-	1,644
<b>Total</b>	<b>33,969</b>	<b>23,091</b>	<b>1,053</b>	<b>24,144</b>

	Funding Plan		Receipts	
	Current	Thru June	This month	Received to date
<b>2020-2024 Program</b>				
Capital from Central Business District Tolling	\$15,000	\$ -	\$ -	\$ -
Capital from New Revenue Sources	10,000	-	461	461
MTA Bonds and PAYGO	9,792	202	-	202
Federal RIFF Loan	3	-	-	-
Federal Formula	7,435	1,717	751	2,468
State of New York	3,000	-	-	-
City of New York	3,000	80	40	120
Federal New Start (SAS Ph2)	2,905	-	-	-
Federal Flexible	275	-	51	51
Federal Other	73	0	56	56
Federal Security	10	10	-	10
B&T Bonds	3,327	1	230	231
<b>Total</b>	<b>54,819</b>	<b>2,009</b>	<b>1,589</b>	<b>3,598</b>

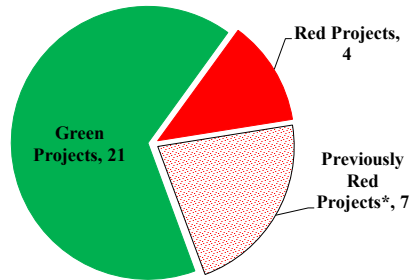


## 2<sup>nd</sup> Quarter 2021 Traffic Light Report on the MTA Capital Program

A total of 328 Projects were Reviewed for the 2<sup>nd</sup> Quarter 2021

The 328 active projects include 32 projects in Design, 9 in Post-Design to Construction Award, 287 in Construction

### 32 of 328 Projects in Design

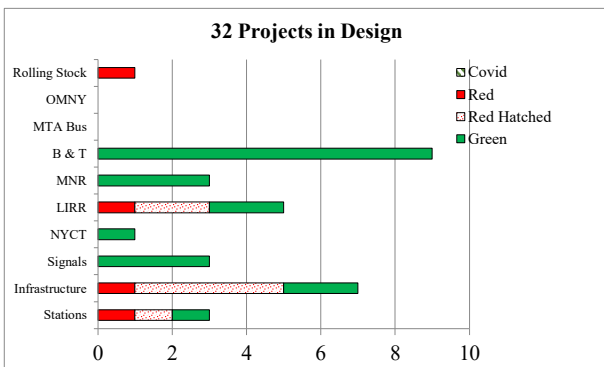


\* see Terms and Definitions page

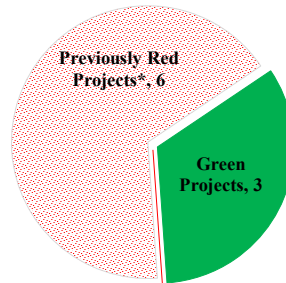
**Second Quarter:** 32 projects were reviewed in this phase with 21 designated green, 7 as previously red and 4 red. The 4 projects were red in part to a design change, coordination with stakeholders, and added scope.

**Covid Impacts:** No projects in design were impacted by Covid-19 this quarter.

**First Quarter 2021:** 39 projects were reviewed in this phase with 22 designated green, 14 as previously red and 3 red.



### 9 of 328 Projects in Post-Design to Construction Award

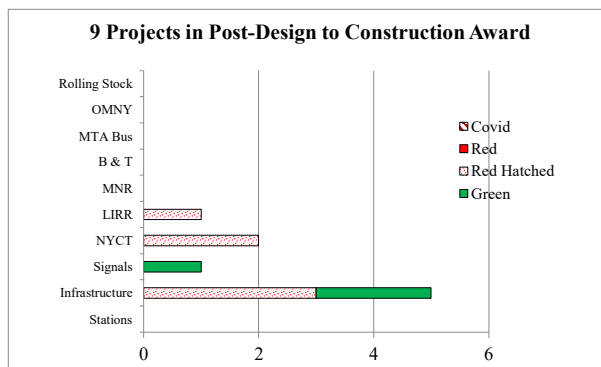


\* see Terms and Definitions page

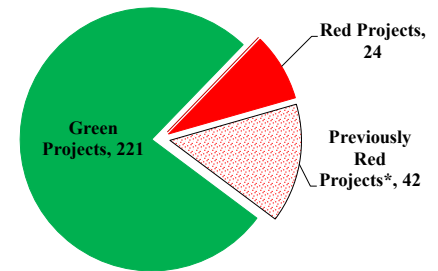
**Second Quarter:** 9 projects were reviewed in this phase with 6 designated as previously red and 3 green.

**Covid Impacts:** No projects in Post-Design to Construction Award were impacted by Covid-19 this quarter.

**First Quarter 2021:** 11 projects were reviewed in this phase with 9 designated as previously red, 1 green, and 1 red.



### 287 of 328 Projects in Construction

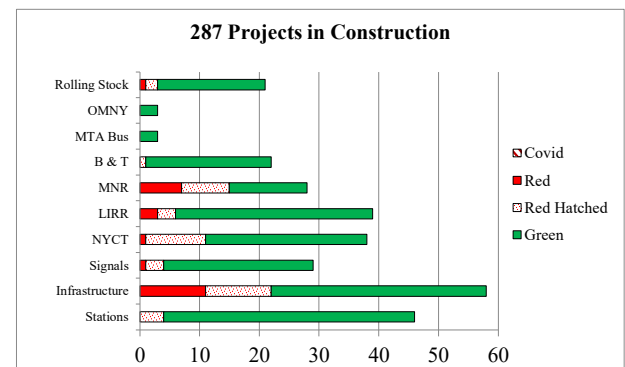


\* see Terms and Definitions page

**Second Quarter:** 287 projects were reviewed in this phase with 221 designated green, 42 previously red, and 24 red. The 24 projects were red due in part to scope changes, contractor performance, unforeseen site conditions, and coordination with other agencies.

**Covid Impacts:** No projects in Construction were impacted by Covid-19 this quarter.

**First Quarter 2021:** 277 projects were reviewed in this phase with 201 designated green, 42 previously red, and 30 red.



## Project Terms and Definitions 2<sup>nd</sup> Quarter 2021 Traffic Light Report

The following Terms and Definitions are used to identify a project's Traffic Light color designation using variances from quarter to quarter and are based on two performance indicators: cost and schedule. A project is designated a "**green light project**" when no performance indicator has exceeded the Traffic Light Report thresholds. A project is designated a "**red light project**" when one or more of the two indicators exceed a specified threshold. Variance reports are required for all qualified red light projects. Included in these reports are one-page project summaries (on pink paper stock) of issues associated with each project showing a **red** indicator and how the issues are being resolved. \*A project is designated a "**previous red project**" after one or more performance indicators had triggered a red in a previous quarter(s). A "**previous red project**" may revert back to green after two consecutive quarters if the performance indicator(s) have not worsened.

### Project Terms and Definitions

#### Projects in Design: 32

- Green: Indices less than 110% and index movement of less than 10%.
- Red: Cost Index - An EAC increase of 10% (or index movement of 10% or more since the last Traffic Light Report).
- Red: Schedule Variance - An increase of 3 months or more to substantial completion since the last Traffic Light Report.
- Traffic Light Report / A project in design that has been designated as Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

#### Projects in Post Design to Construction Award Phase: 9


- Green: Phase Duration less than either the default of 128 calendar days for all agencies or the agency entered duration.
- Red: Phase Duration is greater than either the default 128 calendar days or the agency entered duration.
- Previous Red: Previously indicated as **red** with no new substantial change since the last Traffic Light Report. Project may be returned to Green when it has been in compliance with two performance indicators for two consecutive quarters.


#### Projects in Construction: 287


- Green: Indices less than 110% and index movement of less than 10%. Other indices not exceeding those criteria specified in index formulas and criteria.
- Red: Cost Index - An increase of 10% (or index movement of 10% or more since the last Traffic Light Report).
- Red: Schedule Variance - An increase of 3 months or more to substantial completion since the last Traffic Light Report.
- Previous Red: Previously indicated as **red** with no new substantial change since the last Traffic Light Report / A project in construction that has been designated as Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

**Projects impacted by Covid-19 (Temporary TLR Criteria): 0**

Projects in this category have triggered one or more reporting variances that are impacted by the Covid-19 pandemic. The Key Performance Indicators have exceeded one or more of the Traffic Light reporting thresholds this quarter, however, a project issue has been directly attributed to Covid-19. The issues may include; the implementation of safety protocols, new work rules and occupancy restrictions, travel limitations, reduced personnel availability, funding delays, etc. Covid-19 is a temporary imposition on the MTA's Capital Program and therefore a temporary TL has been developed for these projects.

 Red Lined: Cost Index - An increase of 1p00% (or index movement of 10% or more since the last Traffic Light Report).

 Red Lined: Schedule Variance - An increase of 3 months or more to substantial completion since the last Traffic Light Report.

 Previous Red: Previously indicated as Red Lined with no new substantial change since the last Traffic Light Report / A project in design, procurement or construction that has been designated Previous Red may be returned to Green when it has been in compliance with the two performance indicators for two consecutive quarters.

**Projects in Planning:**

➤ Projects in Planning are reviewed but not displayed in the TLR until the project reaches the design phase.

**Completed Projects:**

➤ Projects that were completed in previous quarters are not displayed in the current quarter's report but, continue to be maintained in the TLR database for historical reporting purposes.

**Report Index Formulas and Criteria:**

➤ Cost Index = Total Project EAC / Current Approved Budget.

(Note: Current Budget is not Budget at Award)

➤ Cumulative Cost Variance = 3 consecutive quarters with a total cost index increase that cumulatively exceeds the TLR threshold of 10% over 3 quarters.

➤ Schedule Variance = Number of months of change in schedule since the last Traffic Light Report.

➤ Cumulative Schedule Variance = 3 consecutive quarters with a total change in schedule that cumulatively exceeds the TLR threshold of 3 months or more.

➤ The TLR includes projects in CPOC's Risk-Based Monitoring Program which are listed at the end of the report.

➤ Only projects with budgets of \$7M or greater are included in the current quarter's Traffic Light Report. Projects with budgets below \$7M are not displayed in the current report but will be maintained in the TLR database. If the current budget increases above the \$7M minimum threshold, the projects will return to an active status.

**2nd Quarter 2021 Traffic Light Report  
Projects in Design and Construction**

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<b>Construction &amp; Development</b>									
<b>Stations</b>									
<b>Stations - ADA Accessibility Program - Projects in Construction</b>									
T6041311	ADA Phase 2 at 57 St Station-Broadway Line	Construction	\$35,857,557	1	1.00	■	-1	▼	G
T7041305	ADA: Gun Hill Road DYR	Construction	\$61,547,272	97	.99	■	0	■	R
T7041307	ADA: Times Square Complex, Ph 3 - Shuttle	Construction	\$217,860,912	73	1.00	■	0	■	G
T7041310	ADA: 59 St 4AV	Construction	\$58,733,105	1	1.00	■	0	■	R
T7041315	ADA: 149 Street-Grand Concourse Complex	Construction	\$114,670,181	11	.98	■	0	■	G
T7041323	ADA: 57 Street BWY Additional Support Costs	Construction	\$52,038,195	1	1.00	■	-1	▼	G
T7041331	ADA: Livonia Ave CNR	Construction	\$87,290,193	33	1.00	■	0	■	G
T7041332	ADA: 170 Street JER	Construction	\$62,244,252	60	1.00	■	0	■	G
T7041338	ADA: Tremont Ave BXC	Construction	\$54,345,378	11	.99	■	0	■	G
T7041350	Additional elevator 34 St BW7 PSNY-33rd	Construction	\$16,541,862	15	1.00	■	0	■	G
T8041303	ADA: Dyckman St (NB) BW7	Construction	\$21,579,539	15	1.00	■	0	■	G
T8041313	ADA: Avenue H (NB) BRT	Construction	\$10,962,281	85	.43	■	0	■	G
T8041317	ADA: Grand St CNR	Construction	\$28,958,238	15	1.00	■	0	■	G
T8041319	ADA: 7th Ave CUL	Construction	\$40,867,099	15	1.00	■	0	■	G
T8041327	ADA: Lorimer St CNR	Construction	\$64,967,338	15	1.00	■	-1	▼	G
T8041328	ADA: Metropolitan Ave XTN	Construction	\$50,179,438	15	1.00	■	-1	▼	G
T8041332	ADA: East 149th St PEL	Construction	\$42,162,238	15	.97	■	0	■	G
T8041337	ADA: Beach 67th St FAR	Construction	\$45,334,386	15	.99	■	0	■	G
S8070108	ADA: New Dorp SIR	Construction	\$36,957,704	15	.97	■	0	■	G
<b>Stations</b>									
<b>Non ADA Stations Projects</b>									
T6040706	Replace 2 Hydraulic Elevators at GCT LEX	Construction	\$18,686,359	1	.82	▼	0	■	G
T7040701	Replace 11 Hydraulic Elevators / Various	Construction	\$73,783,585	14	1.00	■	0	■	G

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<b>Construction &amp; Development</b>									
<b>Stations</b>									
<b>Non ADA Stations Projects</b>									
T7040702	Replace 12 Traction Elevators BW7	Construction	\$109,833,900	78	1.00	■	0	■	Ⓡ
T7040703	Replace 8 Traction Elevators / Various	Construction	\$55,965,335	2	.90	▲	0	■	Ⓢ
T7040704	Replace 6 Traction Elevators 8AV	Construction	\$47,237,083	80	1.00	■	0	■	Ⓢ
T7040705	Replace 2 Hydraulic Elevators: Borough Hall CLK	Construction	\$14,082,111	100	1.00	■	0	■	Ⓢ
T7040708	Replace 2 Escalators: Pelham Pkwy WPR	Construction	\$15,816,293	5	1.00	■	0	■	Ⓢ
T7040709	Replace 6 Escalators / Various	Construction	\$46,783,039	5	1.00	▲	0	■	Ⓢ
T7040711	Replace 2 Hydraulic Elevators: Franklin Av FRK	Construction	\$13,537,851	95	1.00	■	0	■	Ⓢ
T7040712	Replace 3 Escalators: Main St FLS	Construction	\$27,294,471	80	.99	■	-1	▼	Ⓢ
T7040714	Replace 1 Hydraulic Elevator: Grand Central FLS	Construction	\$7,904,814	1	.57	▼	0	■	Ⓢ
T7041401	Station Signage Improvements	Construction	\$10,225,624	75	.94	■	0	■	Ⓢ
T7041404	Reconstruction: Times Sq Complex, Ph3 - Shuttle	Construction	\$29,816,315	73	1.00	■	0	■	Ⓢ
T7070308	Rehab Emergency Exits (3rd Party) - Var Locs	Construction	\$21,036,295	46	1.04	■	0	■	Ⓢ
T7160729	RTO Facility Repair: 3 Avenue-138 Street PEL	Construction	\$15,540,733	80	1.02	■	0	■	Ⓡ
T8040707	Replace 3 Hydraulic Elevators: 34th BW7 PSNY-33rd	Construction	\$21,586,064	10	.99	■	0	■	Ⓢ
T8041215	Design: Station Components DES	Construction	\$14,696,945	67	1.00	▼	0	■	Ⓢ
T8041216	Platform Components: E Broadway 6AV	Construction	\$14,837,508	78	1.00	■	0	■	Ⓢ
T8050204	2020 Mainline Track Repl: Rutgers	Construction	\$18,600,588	78	1.00	■	0	■	Ⓢ
S8070101	Station Components: Various Locations	Construction	\$35,893,705	76	.90	■	12	▲	Ⓢ
T7041201	Water Remediation - Renewal: Borough Hall LEX	Design	\$5,537,976	60	.22	■	2	▲	Ⓡ
T7041322	ADA: 95 St 4AV	Design	\$50,019,153	25	1.42	■	9	▲	Ⓡ
T8041210	Water Condition Remedy: Various Locations	Design	\$28,574,225	0	1.00	■	0	■	Ⓢ
<b>Infrastructure</b>									
T6100454	207th St. OH Shop: Boiler Upgrades & Site Remed	Construction	\$11,423,059	83	1.00	■	0	■	Ⓡ

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<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
T6120403	Replace Bus Radio System	Construction	\$213,846,959	73	1.02	▲	18	▲	R
T6160611	Replace Fire Alarm Systems at 13 Locations	Construction	\$27,545,620	57	1.00	■	0	■	G
T6160717	Livingston Plaza Repairs	Construction	\$26,420,913	63	.51	■	2	▲	R
T7060503	Replace Supervisory Vent Controls - Var Locs	Construction	\$30,122,072	46	1.00	■	0	■	R
T7060506	Rehab Forsyth St Vent Plant	Construction	\$90,374,945	26	.99	■	0	■	R
T7070303	Struct Rehab: Livonia Yard Overpass & Retain Wall	Construction	\$27,083,332	48	1.00	■	0	■	R
T7070316	Overcoat: Broadway - End of Line MYR	Construction	\$58,258,534	43	.99	■	0	■	G
T7070317	Overcoat: 48 St - 72 St FLS	Construction	\$57,133,383	88	1.00	■	0	■	G
T7070323	LSCR: Brooklyn (EPK)	Construction	\$82,731,099	27	.99	■	0	■	G
T7070344	Repairing 'A' and 'B' Column Base Conditions WPR	Construction	\$17,000,070	82	.97	■	2	▲	R
T7080602	Upgrade Async Network to SONET, Rings A and C	Construction	\$30,961,649	76	1.00	■	6	▲	R
T7080651	Help Point: Upgrades and CAI Removals	Construction	\$21,776,194	65	1.07	▲	6	▲	R
T7090201	Substation Renewal: Burnside Av BXC	Construction	\$22,857,912	10	1.00	■	2	▲	R
T7090202	Substation Renewal: Av Z CUL	Construction	\$32,172,288	85	.99	■	0	■	G
T7090203	Substation Rnwl & New Rectifier: Centr SS 6AV	Construction	\$43,504,282	64	1.00	■	0	■	G
T7090205	Replace 25Hz Freq Converters - Various Locs	Construction	\$19,857,653	100	1.03	■	0	■	R
T7090206	Replace HT Switchgear - Various Locs	Construction	\$30,430,773	75	1.00	■	0	■	G
T7090215	Supplemental Negative Cables QBL	Construction	\$53,023,972	45	1.00	■	0	■	G
T7090218	Install Low-Resistance Contact Rail QBL	Construction	\$47,828,349	99	1.00	■	0	■	G
T7090222	New Substation: Maspeth Av-Humboldt St CNR	Construction	\$46,240,962	99	.89	■	4	▲	R
T7090223	New Substation: Harrison PI CNR	Construction	\$52,773,517	99	.89	■	4	▲	R
T7090406	Rehab CBH # 85 & New Ducts: Bedfrd-N 6 St SS CNR	Construction	\$13,361,050	80	.99	■	4	▲	R
T7090414	Repl Control & Bat Cables: Substation CZs	Construction	\$28,783,652	60	1.00	■	0	■	G
T7100401	DCE Shop Components Ph 1: 180 St, CI, PEL	Construction	\$34,194,855	94	1.01	■	0	■	G

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<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
T7100402	207th St Maint & OH Shop Roof & Component Repl	Construction	\$59,951,102	51	1.00	■	0	■	G
T7100403	DCE Shop Components Ph 2: 239 St, Concourse, ENY	Construction	\$45,862,515	83	.99	■	0	■	R
T7100405	DCE Shop Components Ph 4: 207 St Admin	Construction	\$25,883,431	98	1.05	■	0	■	G
T8040404	Wide Turnstiles: Procurement/Installation	Construction	\$25,018,512	0	1.00	■	0	■	G
T8060505	Rehab Deep Wells & Control Upgrade Nostrand Line	Construction	\$22,995,247	0	1.03	▲	0	■	G
T8060506	Rehab Fan Plant Damper Systems - 7 Locations	Construction	\$33,771,531	0	1.00	▲	0	■	G
T8160706	EMD Facility: Hoyt-Schermerhorn FUL	Construction	\$14,001,893	18	1.00	■	0	■	G
S7070102	SIR Station Component Program	Construction	\$18,917,569	87	.99	■	0	■	G
S7070106	New Power Substation: New Dorp	Construction	\$25,476,307	95	1.04	■	3	▲	R
S7070107	New Power Substation: Clifton	Construction	\$30,646,073	95	1.00	■	3	▲	R
S7070111	Relocate HQ to Clifton Shop	Construction	\$9,127,751	91	.99	■	0	■	G
S7070113	SIR Clifton Yard Track and Switch Replacement	Construction	\$17,070,406	74	.98	■	0	■	G
S8070109	Track and Switch Rehab: SIR Mainline (Addtnl Work)	Construction	\$15,096,650	75	.97	■	0	■	G
U6030226	Bus Radio System	Construction	\$30,027,894	80	1.07	■	18	▲	R
U7030211	Bus Radio System - MTA Bus Share	Construction	\$39,516,593	73	1.05	▲	18	▲	R
T8120303	Jamaica Depot Reconstruction	Design	\$375,541,493	80	.98	■	0	■	G
S8070102	Track and Switch Replacement	Design	\$74,800,000	80	.61	■	4	▲	R
S8070103	Bridge Structures: Various Locations	Design	\$54,447,052	0	1.01	■	1	▲	R
<b>Signals / Train Controls</b>									
T50803QB	CBTC QBL Phase 1	Construction	\$80,085,069	92	1.37	■	0	■	R
T6080319	CBTC Queens Blvd Ln West Ph 1	Construction	\$115,225,996	95	.97	■	7	▲	R
T6080661	ISIM-B Module 3A RCC Build Out	Construction	\$25,425,919	62	1.00	■	3	▲	R
T7080301	CBTC: QBL West Ph2 (50 St - Union Tpke)	Construction	\$471,317,306	80	1.11	■	0	■	G
T7080304	CBTC: 8AV (59 St - High St)	Construction	\$220,201,814	23	1.00	■	0	■	G



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<b>Construction &amp; Development</b>									
<b>Signals / Train Controls</b>									
T7080307	Interlocking Modernization: Ditmas CUL	Construction	\$133,574,754	63	1.00	■	0	■	G
T7080308	Interlocking Modernization: Kings Highway CUL	Construction	\$179,435,283	95	1.00	■	0	■	G
T7080322	AC to DC Line Relay Upgrade BCT	Construction	\$25,168,851	46	1.00	■	0	■	G
T7080323	Signal Key-By Modifications, Ph4	Construction	\$18,429,499	88	1.00	■	0	■	G
T7080324	Code Cable Replacement BW7	Construction	\$41,314,985	19	1.00	■	0	■	G
T7080325	Signal Room Fire Suppression, Phase 2	Construction	\$25,609,793	20	1.00	■	0	■	G
T7080326	Life Cycle Replacement of Code Systems	Construction	\$51,725,537	14	1.00	■	0	■	G
T7080327	Life Cycle Mod - Speed Enforcement Systems	Construction	\$65,429,183	11	1.00	■	0	■	G
T7080332	CBTC: CUL (Church Av to W8 St)	Construction	\$116,051,095	63	.99	■	0	■	G
T7080333	Interlocking Modernization: Ave X CUL	Construction	\$200,040,640	63	1.00	■	0	■	G
T7080335	Interlocking Modernization: 30 St & 42nd St / 8AV	Construction	\$258,971,200	34	1.00	■	0	■	G
T7080342	CBTC: Carborne Equipment Purchase	Construction	\$84,663,722	8	1.00	■	0	■	G
T7080343	2018 M/L Switch Repl: 7 Switches CBTC CUL	Construction	\$32,479,364	63	1.00	■	0	■	G
T7080344	2019 M/L Switch Repl: 10 Switches CBTC 8AV	Construction	\$27,563,382	34	1.00	■	0	■	G
T7080345	2019 M/L Switch Repl: 12 Switches Kings Hwy CUL	Construction	\$26,368,385	0	1.00	■	0	■	G
T7080349	Signal Quality Enhancements (SAP)	Construction	\$18,195,000	39	1.00	■	0	■	G
T7080603	PBX Upgrade	Construction	\$48,564,396	91	1.17	■	0	■	R
T7080604	Fiber Optic Cable Replacement Ph2	Construction	\$22,656,053	70	.78	▼	0	■	G
T7080614	ISIM-B Module 3: Rail Traffic Systems	Construction	\$91,696,705	49	1.00	■	0	■	G
T7080617	LiftNet Transition to Ethernet	Construction	\$15,792,305	92	.99	■	0	■	G
T7080649	COE at 88 Stations, Phase 3B-1 [SBDP]	Construction	\$7,067,767	50	1.00	■	0	■	G
T7160716	RCC and PCC Power Upgrade	Construction	\$63,370,962	97	1.00	■	0	■	G
T8080313	CBTC: Flushing Line Equipment Removals	Construction	\$19,273,595	40	1.00	■	0	■	G
T8080601	Comm Network Upgrades: Various Locations	Design	\$185,044,145	70	.85	■	-1	▼	G

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<b>Construction &amp; Development</b>									
<b>Signals / Train Controls</b>									
T8080603	Fiber Optic Cable Replacement: Various Locations	Design	\$47,194,595	36	1.00	■	0	■	⊙
T8160601	Fire Alarms and Sprinklers: Various Locations	Design	\$105,942,301	60	1.01	■	1	▲	⊙
<b>New York City Transit</b>									
T6040401	MetroCard-Electronic Components Replacement	Construction	\$16,340,035	89	1.00	■	3	▲	⊙
T6160402	NYCT-Wide Storage Area Network/Disaster Recovery	Construction	\$22,484,619	85	1.00	■	0	■	⊙
T7041274	Station Lighting: 7 Locs / Various	Construction	\$7,686,619	42	1.00	■	0	■	⊙
T7041275	Station Ventilators: 2 Locs (2019)	Construction	\$5,571,319	76	.67	■	0	■	⊙
T7100409	Heavy Shop Equipment	Construction	\$14,729,150	47	1.00	■	0	■	⊙
T7120301	Artic Modification: ENY Depot	Construction	\$17,997,111	100	1.00	■	0	■	⊙
T7120306	Generator: Yukon Depot	Construction	\$11,011,373	14	.93	■	0	■	⊙
T7120307	Roof, Office, HVAC: Fresh Pond Depot	Construction	\$15,240,139	5	1.00	■	0	■	⊙
T7120321	Artic Modification Windows/Façade: ENY Depot	Construction	\$18,061,652	31	1.00	▼	0	■	⊙
T7160704	Emp Fac Component Repairs: 7 Locs / Manhattan	Construction	\$9,739,980	100	1.00	▼	0	■	⊙
T8050205	Mainline Track Replacement 2020 / Queens	Construction	\$7,700,196	36	1.00	■	0	■	⊙
T8050206	Mainline Track Replacement 2020 / 8th Avenue	Construction	\$20,726,225	53	1.00	■	0	■	⊙
T8050207	Mainline Track Replacement 2020 / Broadway-7th Ave	Construction	\$35,259,977	86	1.00	■	0	■	⊙
T8050208	Mainline Track Replacement 2020 / Flushing	Construction	\$59,886,344	65	1.00	■	0	■	⊙
T8050209	Mainline Track Replacement 2020 / Lexington	Construction	\$27,318,000	78	1.24	▲	2	▲	⊙
T8050210	Mainline Track Replacement 2020 / Brighton	Construction	\$15,212,679	13	1.00	■	0	■	⊙
T8050211	Mainline Track Replacement 2020 / Jamaica	Construction	\$28,061,426	26	1.00	■	0	■	⊙
T8050212	Mainline Track Replacement 2020/ Lenox-White Plain	Construction	\$16,778,667	86	1.27	■	0	■	⊙
T8050213	Mainline Track Replacement 2020 / 6th Avenue	Construction	\$21,672,764	50	1.08	■	0	■	⊙
T8050214	Mainline Track Replacement 2020 / Astoria	Construction	\$21,026,790	29	1.00	■	0	■	⊙
T8050215	Mainline Track Replacement 2020 / Dyre	Construction	\$7,765,213	10	1.00	■	0	■	⊙

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<b>Construction &amp; Development</b>									
<b>New York City Transit</b>									
T8050223	Continuous Welded Rail 2020	Construction	\$35,009,063	49	1.00	■	2	▲	G
T8050224	2020 Track Force Account	Construction	\$35,000,000	75	1.00	■	0	■	G
T8050227	Mainline Track Replacement 2021 / 11th st Cut	Construction	\$19,926,544	40	1.00	■	0	■	G
T8050230	Mainline Track Replacement 2021 / Concourse	Construction	\$15,611,732	3	1.00	■	0	■	G
T8050231	Mainline Track Replacement 2021 / Bway-7th	Construction	\$27,246,472	84	1.00	▼	0	■	R
T8050232	Mainline Track Replacement 2021 / Jamaica	Construction	\$27,039,948	27	1.00	■	0	■	G
T8050234	Mainline Track Replacement 2021 / Jerome	Construction	\$8,621,107	16	1.00	■	0	■	G
T8050236	Mainline Track Replacement 2021 / Pelham	Construction	\$8,225,700	36	1.00	■	0	■	G
T8050240	Mainline Track - 2021 Support Costs	Construction	\$15,628,292	2	1.00	■	0	■	G
T8050243	Mainline Track Replacement 2021 / Lexington	Construction	\$19,122,747	49	1.00	▲	0	■	G
T8050302	Switch Replacement: Various Locations	Construction	\$462,203,500	0	1.00	■	0	■	G
T8050306	Mainline Track Switches 2020 / Queens	Construction	\$7,531,710	5	1.00	■	0	■	G
T8050310	Mainline Track Switches 2020 / White Plains Rd	Construction	\$21,100,168	86	1.00	■	0	■	R
T8050311	Mainline Track Switches 2020 / Broadway	Construction	\$12,433,728	84	1.00	■	0	■	G
T8050317	Mainline Track Switches 2021 / Pelham	Construction	\$11,511,600	3	1.00	▼	0	■	G
T8050320	Mainline Track Switches- 2021 Support Costs	Construction	\$12,179,185	2	1.00	■	0	■	G
T8130204	Purchase 27 Flat Cars	Construction	\$21,772,241	45	1.00	■	-24	▼	G
T8120402	Miscellaneous Depot Investments	Design	\$23,153,452	0	1.18	▲	0	■	G
<b>Long Island Rail Road</b>									
L50304TQ	MLC-Hicksville North Siding	Construction	\$43,714,446	88	.99	■	0	■	G
L60304TU	Jamaica Capacity Improvements - Phase One	Construction	\$301,653,240	84	1.00	■	8	▲	R
L60701AR	Replacement of Richmond Hill Substation	Construction	\$17,033,549	75	1.02	■	3	▲	R
L70204U9	Jamaica Station - Planning & Engineering	Construction	\$10,000,000	85	1.00	■	-1	▼	G
L70204VZ	Elmont Station	Construction	\$106,050,000	50	1.00	■	0	■	G

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<b>Construction &amp; Development</b>									
<b>Long Island Rail Road</b>									
L70206EG	PSNY-33rd Corridor (Phase 2 Construction)	Construction	\$435,414,160	23	1.00	■	0	■	G
L70206VP	Penn Sta Elevator/Escalator Renewal	Construction	\$11,446,500	95	1.00	■	0	■	R
L70401BS	Bridge Waterproofing	Construction	\$8,048,756	34	1.00	■	-12	▼	G
L70401BU	MENTOR ALLOWANCE - LINE STRUCTURES	Construction	\$14,780,320	88	1.00	▲	-1	▼	G
L70401D4	Lynbrook & Rockville Centre Renewals [SBDP]	Construction	\$8,686,291	95	1.00	■	-1	▼	G
L70501SD	Fiber Optic Network	Construction	\$34,460,000	98	1.00	■	0	■	G
L70502LN	Babylon to Patchogue	Construction	\$45,639,479	16	.99	■	0	■	G
L70601YG	DIESEL LOCOMOTIVE SHOP IMPROVEMENTS	Construction	\$101,965,000	98	.99	■	3	▲	R
L70701XB	Substation Components	Construction	\$24,306,295	40	.66	■	6	▲	R
L70701XF	3rd Rail -Composite Rail	Construction	\$11,600,000	89	1.00	■	0	■	G
L70701XU	Substation Repl Pkg 2: Construction	Construction	\$24,235,477	10	1.00	■	0	■	G
L8020418	Mets-Willets EIC Relocation	Construction	\$208,700,000	1	7.27	■	-3	▼	G
L8020604	PSNY-33rd Phase 2 LIRR 20-24 Plan Contribution	Construction	\$18,806,909	20	1.00	■	0	■	G
L8020701	GCT Facility Needs	Construction	\$30,481,224	1	1.01	■	0	■	G
L8030101	Construction Equipment & Geometry Cars	Construction	\$59,996,450	0	1.09	▲	0	■	G
L8030102	Various Right of Way Projects	Construction	\$10,000,000	11	1.00	■	-3	▼	G
L8030105	2020 - Annual Track Program	Construction	\$148,445,459	3	.98	▲	0	■	G
L8030106	2021- Annual Track Program	Construction	\$95,000,000	0	1.87	▲	0	■	G
L8030110	Concrete Tie Program	Construction	\$55,153,995	93	1.00	■	0	■	G
L8030401	Amtrak Territory Investments	Construction	\$100,000,000	100	1.00	■	0	■	G
L8050101	Comm. Pole Line	Construction	\$14,933,555	23	1.86	■	0	■	G
L8050102	Comm Component Replacement	Construction	\$15,066,667	2	1.88	■	0	■	G
L8050205	Signal Replacement and Interlocking Improvements	Construction	\$30,400,000	22	.50	▲	0	■	G
L8070102	Lighting Improvements	Construction	\$18,000,000	0	1.00	▼	0	■	G

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<b>Construction &amp; Development</b>									
<b>Long Island Rail Road</b>									
L8070103	Power Component Repairs and Replacements	Construction	\$35,000,000	0	.69	▲	0	■	G
L8070104	3rd Rail Upgrades	Construction	\$43,000,000	0	1.00	■	0	■	G
L70204UO	East Yaphank Station	Design	\$20,000,000	26	1.00	■	4	▲	R
L70304WU	Jamaica Capacity Improvements Ph 2 DES	Design	\$42,490,000	68	1.00	■	0	■	R
L70502LH	Babylon Interlocking Renewal	Design	\$32,640,000	8	1.00	■	0	■	R
L80204DD	ADA Accessibility and Components 24 Stations DES	Design	\$10,000,000	12	1.00	▼	0	■	G
<b>Metro-North Railroad</b>									
M6020208	Customer Communication / Connectivity Improvements	Construction	\$16,520,172	92	.98	■	0	■	R
M6040102	West of Hudson Signal Improvements	Construction	\$63,461,327	95	.93	■	0	■	G
M6050101	Substation Bridge 23 - Construction	Construction	\$41,452,052	98	.99	■	4	▲	R
M6050103	Harlem & Hudson Lines Power Improvements	Construction	\$44,867,282	94	1.05	■	6	▲	R
M7020207	Customer Communication-Stations	Construction	\$73,117,951	100	.90	■	0	■	G
M7020211	Customer Communication-Systems	Construction	\$12,702,514	74	.95	■	0	■	R
M7030109	Purchase MoW Equipment	Construction	\$19,796,793	66	1.03	■	0	■	R
M7030201	Overhead Bridge Program - E of H	Construction	\$69,801,798	96	1.05	■	0	■	G
M7030203	Undergrade Bridge Rehabilitation	Construction	\$78,585,693	60	.95	■	0	■	G
M7030209	Harlem River Lift Bridge	Construction	\$9,785,122	40	.94	■	0	■	G
M7030303	Undergrade Bridge Rehabilitation	Construction	\$11,092,972	90	.92	■	0	■	G
M7040102	Harmon to Poughkeepsie SignalSystem	Construction	\$155,896,024	52	1.54	■	0	■	R
M7040111	West of Hudson Signal Improvements	Construction	\$21,079,000	95	1.00	■	0	■	G
M7040112	Harlem Wayside Comm & Signal Improvements	Construction	\$81,548,080	80	1.56	■	0	■	R
M7050101	Replace MA's in Signal Substations	Construction	\$22,668,445	48	.93	■	0	■	G
M7050104	Harlem & Hudson Power Rehabilitation	Construction	\$13,286,001	60	.88	■	0	■	G
M7050105	Harlem and Hudson Power Improvements	Construction	\$22,985,848	75	.92	■	4	▲	R

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<b>Construction &amp; Development</b>									
<b>Metro-North Railroad</b>									
M7050113	H&H Power (86th St / 110th St)	Construction	\$12,203,556	94	1.07	■	6	▲	R
M7060101	Harmon Shop Replacement - Phase V	Construction	\$431,817,796	40	1.00	■	0	■	G
M7080113	Customer Communication-CM	Construction	\$15,185,854	95	.95	■	0	■	G
M8030103	Turnouts - Mainline, GCT, & Yards	Construction	\$88,653,494	0	1.02	■	0	■	G
M8030108	2020 Cyclical Track Program	Construction	\$19,653,484	9	1.02	■	0	■	G
M7030301	Rock Slope Remediation	Design	\$9,814,119	85	.76	■	0	■	G
M7060103	Brewster YD Improvements - Design	Design	\$7,176,021	55	.95	■	1	▲	G
M7060104	West of Hudson Capacity Improvements	Design	\$23,923,618	26	.98	■	0	■	G
<b>Bridges &amp; Tunnels</b>									
D701BW07	Fender Protection around Tower Piers (Const)	Construction	\$18,194,169	56	.86	▼	0	■	G
D701CB18	CB Scour Protect/Repair/Replace CB/MP Pier Fender	Construction	\$57,608,371	51	.87	▼	2	▲	G
D701HH07	Structural Rehabilitation	Construction	\$38,223,974	59	.92	■	0	■	G
D701RK19	Seismic/Wind Retrofit & Structural Rehab Ph1	Construction	\$47,414,841	58	.83	▼	0	■	G
D701RK70	Miscellaneous Structural Rehabilitation	Construction	\$28,537,255	58	.81	▼	0	■	G
D701TN53	Approach Viaduct Seismic Retrofit/Structural Rehab	Construction	\$190,787,353	24	.85	▼	0	■	G
D701VN10	Anchorage & Piers Rehabilitation and Sealing	Construction	\$44,841,046	94	.92	■	-1	▼	G
D701VN32	Steel Repair & Concrete Rehabilitation	Construction	\$28,305,892	48	.82	▼	0	■	R
D702TN49	Replacement of Grid Decks on Suspended Span	Construction	\$285,533,443	54	.90	▼	0	■	G
D702VN11	Brooklyn Approach Reconstruction	Construction	\$25,115,843	87	.86	▼	0	■	G
D702VN84	Reconstruction of VN Approach Ramps - Phase1	Construction	\$189,680,145	53	.85	▼	0	■	G
D704HC07	Rehabilitation of HCT Ventilation Systems	Construction	\$76,578,503	86	.87	■	0	■	G
D707HH30	Replacement of HHB Overcoat System	Construction	\$16,469,531	59	.83	■	0	■	G
D707TN49	Painting of Suspended Span	Construction	\$17,644,527	54	.82	▼	0	■	G
D707VN49	Paint Suspended Span Upper & Lower Level Steel	Construction	\$72,751,527	51	.98	■	0	■	G

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<b>Construction &amp; Development</b>									
<b>Bridges &amp; Tunnels</b>									
D801RK70	Structural Repairs/Flag Repairs	Construction	\$56,698,020	9	.91	▼	0	■	G
D801RK81	Facility Interoperability Improvements	Construction	\$4,986,252	89	.56	▼	0	■	G
D806MPX1	Operational Improvement	Construction	\$9,440,661	0	.83	▼	0	■	G
D806VNX1	Install Safety Fencing on Both Levels of the VNB	Construction	\$42,853,603	0	.98	■	0	■	G
D807MPPT	MP Facility-Wide Painting Program	Construction	\$17,469,166	5	.84	▼	0	■	G
D807RKPT	RK Facility-Wide Painting Program	Construction	\$75,240,143	1	.95	▲	0	■	G
D801BW14	Miscellaneous Structural Rehabilitation	Design	\$18,662,443	85	.84	▼	0	■	G
D801CB30	Structural Rehabilitation of CBB	Design	\$30,201,080	4	.75	▲	-60	▼	G
D801HH36	Dyckman St. Abutment Repl. & Substation Upgra	Design	\$71,821,439	40	.59	■	0	■	G
D801RK04	Ward's Island/Queens Anchorage Rehabilitation	Design	\$172,462,248	5	1.00	■	0	■	G
D801RK19	Suspended Span Retrofit	Design	\$133,095,810	5	.97	■	0	■	G
D801RK83	Lift Span Fender Upgrades	Design	\$34,043,699	9	.76	■	0	■	G
D801TN52	Miscellaneous Structural Rehabilitation	Design	\$24,400,000	9	.89	▼	0	■	G
D804BW96	Lighting, Power Redundancy & Resiliency Imprv	Design	\$38,223,845	25	.69	▼	0	■	G
D804VN12	Misc. Bridge Lighting & Electrical Improvem	Design	\$23,402,937	15	.89	▼	0	■	G
<b>MTA Bus</b>									
U6030232	HVAC Upgrade at College Point Bus Depot	Construction	\$9,521,950	32	1.00	■	1	▲	G
U7030207	Storerooms and Depot Reconfiguration: LaGuardia	Construction	\$7,418,500	3	1.00	■	0	■	G
U7030209	Rehab and Facility Upgrade: College Point	Construction	\$9,364,126	20	1.00	■	0	■	G
<b>One Metro New York Program</b>									
M8020206	New Fare Payment Equipment	Construction	\$19,084,820	0	.76	▼	0	■	G
<b>Construction &amp; Development</b>									
<b>Rolling Stock</b>									
T7030224	AEB Charging Infrastructure - Support of 5 Depots	Construction	\$49,798,004	0	1.00	■	0	■	G

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<b>Cross Agency</b>									
<b>One Metro New York Program</b>									
T7040401	New Fare Payment System, Phase 2	Construction	\$463,323,580	42	1.00	■	0	■	G
L70204UV	NEW FARE PAYMENT SYSTEM	Construction	\$8,920,000	0	1.00	■	0	■	G
<b>Rolling Stock</b>									
T7010101	Purchase 440 B-Division Cars	Construction	\$1,402,231,935	10	1.00	■	0	■	G
T7010102	Purchase 20 Open Gangway Prototype Cars	Construction	\$79,905,106	8	1.00	■	0	■	G
T7030203	Purchase 165 Standard Hybrid Buses (Nova)	Construction	\$146,226,253	28	.96	■	2	▲	R
T7030206	Purchase 50 Express Buses	Construction	\$34,002,485	42	1.00	■	0	■	G
T7030215	AVLM for Paratransit Vehicles	Construction	\$26,828,317	46	1.00	■	0	■	R
T7030223	Purchase 110 Standard Hybrid Buses (New Flyer)	Construction	\$99,287,668	5	1.00	■	0	■	G
T7130208	Purchase 12 3-Ton Crane Cars	Construction	\$32,211,961	20	1.00	■	0	■	G
T7130211	Purchase Locomotives	Construction	\$256,092,473	14	1.00	■	0	■	G
T7130213	Purchase Various Non-Revenue Vehicles	Construction	\$15,966,218	34	1.39	■	2	▲	G
T7130215	Conversion of 10 R77E Locomotives	Construction	\$34,272,847	18	1.00	■	0	■	G
T8030208	Purchase 126 Hybrid (Nova)	Construction	\$107,949,896	1	1.00	■	1	▲	G
T8030209	Purchase 209 Standard Diesel (Nova)	Construction	\$141,211,796	1	1.00	■	2	▲	G
T8030210	Purchase 84 Hybrid-Electric (New Flyer)	Construction	\$71,210,653	0	1.00	■	1	▲	G
T8030211	Purchase 139 Standard Diesel (New Flyer)	Construction	\$98,808,397	0	1.00	■	0	■	G
U7030202	Purchase 257 Express Buses	Construction	\$166,665,518	14	1.00	■	0	■	G
L60101MA	M-9 Rolling Stock Procurement - 92 cars	Construction	\$364,836,340	41	1.00	■	7	▲	R
L70101ME	M-9 PROCUREMENT	Construction	\$611,800,000	37	1.00	■	0	■	G
M7010101	Locomotive Purchase	Construction	\$259,842,062	3	1.01	■	0	■	G
M7010102	M-8 Fleet Purchase	Construction	\$113,867,497	80	.97	■	0	■	G
M8010102	Locomotive Replacement	Construction	\$381,715,210	3	1.03	■	0	■	G



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<b>Construction &amp; Development</b>									
<b>Stations</b>									
ET040339	Sandy Mitigation: 138 St / JER	Construction	\$8,288,679	8	1.02	■	-6	▼	G
<b>Infrastructure</b>									
ET100211	Power Cable/Comm. Equipt. Repl- Coney Island Yard	Construction	\$164,562,094	59	.99	■	0	■	G
ET100307	Coney Island Yd: Long Term Perimeter Protection	Construction	\$339,437,463	59	.97	■	0	■	G
ET100209	Power Cable Replacement- 148th Street Yard	Construction	\$14,570,909	95	1.00	■	0	■	G
ET100309	Long Term Perimeter Protection: 148th St Yard	Construction	\$74,272,313	96	.96	■	0	■	G
ET050210	Track: Rutgers Tube	Construction	\$10,763,493	78	1.00	■	0	■	G
ET060214	Tunnel Lighting: Rutgers Tube	Construction	\$7,984,298	78	1.00	■	0	■	G
ET060232	2 Pump Rooms: Rutgers Tube	Construction	\$20,955,350	78	1.00	■	0	■	G
ET060233	1 Fan Plant (#6375): Rutgers Tube	Construction	\$10,438,868	78	1.00	■	0	■	G
ET080213	Signals: Rutgers Tube	Construction	\$14,068,069	78	1.00	■	0	■	G
ET090219	Comm/Power Cable Repl: Rutgers Tube	Construction	\$48,919,147	78	1.02	■	0	■	G
ET100210	Power Cable Replacement- 207th Street Yard	Construction	\$37,979,241	48	.98	■	0	■	G
ET100219	Sandy Repairs: 207 St Yard Track	Construction	\$62,722,733	77	1.03	■	0	■	G
ET100220	Sandy Repairs: 207 St Yard Switches	Construction	\$30,984,884	50	.62	■	0	■	G
ET100310	Long Term Perimeter Protection: 207th St Yard	Construction	\$168,596,432	55	.99	■	0	■	G
ET100312	Sandy Mitigation: 207th Street Yard Portal	Construction	\$54,881,539	63	2.02	■	0	■	G
ET100314	Sandy Mitigation: 207th Street Sewers	Construction	\$169,415,749	19	1.19	▲	0	■	R
ET040327	Sandy Mitigation: 7 Stations (M/Q/Bx)	Construction	\$52,609,057	84	1.00	■	0	■	G
ET060332	Sandy Resiliency: 3 Pump Rooms (53rd St Tube)	Construction	\$16,031,141	78	.98	■	0	■	G
ET090304	Mitigation: Montague Substations - Various Locs	Construction	\$8,954,494	16	.87	■	0	■	G
ET120307	Flood Mitigation at 4 NYCT Depots	Construction	\$26,104,888	86	.99	■	0	■	R
ES070211	Flood Repairs- Clifton Shop (Long-Term)	Construction	\$34,657,710	91	.99	■	0	■	G

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<b>Construction &amp; Development</b>									
<b>Infrastructure</b>									
ES070302	SIR Mitigation: Clifton Shop / Yard	Construction	\$160,856,190	91	.98	▬	0	▬	G
ES070303	SIR Mitigation: St. George	Construction	\$55,677,938	90	1.03	▬	0	▬	R
ET060336	Sandy Resiliency: 4 Pump rooms(Jerome/Pelham Tube)	Design	\$2,866,204	5	.24	▬	0	▬	G
ET070310	Rockaway ROW Debris Shielding	Design	\$40,396,722	20	1.68	▬	1	▲	R
ET070311	Sandy Mit: New Crossover at Beach 105th St. / RKY	Design	\$61,182,136	20	1.03	▬	1	▲	R
ET070313	Rockaway Park Yard Compressor Room (ROW)	Design	\$7,726,207	20	1.00	▬	1	▲	R
ET070209	Sandy Repairs: Rockaway Line Wrap Up	Post Des to Const Awd	\$50,513,970	100	1.07	▼	1	▲	R
ET070308	Sandy Mitigation: Steinway Portal	Post Des to Const Awd	\$15,259,992	100	.76	▬	0	▬	G
ET090307	Hardening of Substations at 24 Locations	Post Des to Const Awd	\$98,217,710	30	1.00	▼	1	▲	R
ET090308	Sandy Mitigation: Deployable Substations	Post Des to Const Awd	\$50,230,069	100	1.06	▬	0	▬	R
ET090310	Sandy Mitigation: Back-up Power Control Center	Post Des to Const Awd	\$16,003,985	5	.94	▬	0	▬	G
ET100218	Sandy Repairs: 207th St Yard Signals	Construction	\$298,018,140	52	.99	▬	0	▬	G
<b>Signals / Train Controls</b>									
ET040317	Upgrade Emergency Booth Comm System (EBCS)	Construction	\$78,316,385	69	1.00	▬	0	▬	G
ET050217	Sandy Repairs: ML Track 200-207 St/8AVE	Post Des to Const Awd	\$73,905,394	0	.92	▲	0	▬	G
<b>New York City Transit</b>									
ET160310	Sandy Mitigation: Consolidated Revenue Facility	Post Des to Const Awd	\$3,654,754	100	.24	▼	2	▲	R

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<b>Construction &amp; Development</b>									
<b>New York City Transit</b>									
ET160312	Sandy Mitigation: Tiffany Central Warehouse	Post Des to Const Awd	\$26,225,217	100	1.04	—	2	▲	(R)
<b>Long Island Rail Road</b>									
EL0303ZH	Emergency Management Equipment Mitigation	Construction	\$24,892,132	63	.82	—	0	—	(R)
EL0502ZC	Long Beach Branch - Systems Restoration	Construction	\$68,666,958	90	.96	—	-5	▼	(G)
EL0602ZD	West Side Storage Yard Restoration	Construction	\$43,512,962	53	.99	—	0	—	(G)
EL0402ZA	East River Tunnel Signal Sys & Infra Restoration	Design	\$179,566,202	30	1.00	▲	0	—	(G)
EL0603ZS	Long Island City Yard Resiliency - CR	Post Des to Const Awd	\$37,581,253	1	1.42	—	2	▲	(R)
<b>Metro-North Railroad</b>									
EM040205	Comm & Signal Infrastructure Restoration-Ph. 1 & 2	Construction	\$104,918,378	75	1.07	▲	0	—	(R)
EM040301	Power and Signals Mitigation Phase 1	Construction	\$53,348,130	75	1.62	▲	0	—	(R)
EM040302	Hudson Line Power and Signal Resiliency	Construction	\$38,373,937	75	1.09	▲	0	—	(R)
EM050206	Power Infrastructure Restoration-Ph. 1 & 2	Construction	\$177,423,469	75	1.00	—	0	—	(R)
EM050208	Power Infrastructure Restoration-Substations	Construction	\$47,568,232	91	1.04	▲	4	▲	(R)
EM050209	Power Infrastructure Restoration-HRLB	Construction	\$7,823,165	93	.93	—	3	▲	(R)
<b>Bridges &amp; Tunnels</b>									
ED040308	Power Resiliency at RFK Bridge: Substation Upgrade	Construction	\$33,165,923	53	.89	▼	-2	▼	(G)
<b>Cross Agency Rolling Stock</b>									
ET060317	Sandy Resiliency: Conversion of 2 Pump Trains	Design	\$19,119,839	98	.71	—	3	▲	(R)

## **Infrastructure**

The C&D Infrastructure Business Unit currently oversees 560 active projects with a budget of \$15.4B, including 106 projects in construction with a budget of \$3.7B.

Notable projects under construction include upgrading MTA's bus radio system, flood mitigation at the 207 Street Yard and the Coney Island Yard, rehabilitating the Forsyth Street Fan Plant, upgrading the Power Control Center & Rail Control Center, and rehabilitating HVAC systems at College Point.

The IEC's Traffic Light Report currently tracks 70 tasks (ACEPs) in the C&D Infrastructure program. Of those, 12 tasks were flagged red, representing 7 projects. The items below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

C&D Infrastructure is also seeking to identify and remediate issues at the program level. Many projects, for instance, have been flagged red because of persistent delays and other complications with Con Edison. To mitigate, the acting Business Unit Lead coordinates with Con Edison issues across numerous projects.

### **ET100314: Sandy Mitigation: Sewer 207<sup>th</sup> Street (construction phase)**

This project will provide flood mitigation by relocating Department of Environmental Protection (DEP) owned sewers from 207 Street Yard.

Utility companies' ability to schedule MTA work is often challenging due to unavailability of skilled crews/labor. Here, the project is incurring potential substantial schedule delays due to Verizon/ECS – Empire City Subway, Spectrum and Con Edison, resulting in an impact on the schedule of up-to-310 days delay as of 8/31/21.

An additional complication is the project's limited access to 215<sup>th</sup> Street. The street is designated for snow removal staging and no street work can be performed from 10/1/21 thru 4/1/22. The New York City Department of Sanitation has also undertaken a large demolition of the furnace stacks on 215<sup>th</sup> Street (to be completed first quarter 2022). Along 10<sup>th</sup> Avenue, procuring copper cables has been heavily delayed by ECS/Verizon. The Contractor is unable to continue support of excavation work. In addition, Con Edison has added gas regulator work, which was not part of the original design, further limits access to the street.

To mitigate this, MTA is working with the utilities to expedite the approval and work on 10<sup>th</sup> Avenue and 215<sup>th</sup> Street. MTA and the contractor are working jointly on developing a schedule mitigation plan. There are on-going coordination meetings with the various stakeholders to schedule work - DEP and The City of New York Department of Sanitation (DSNY).

**S70701/06: New Power Substation: New Dorp (construction phase)**  
**S70701/07: New Power Substation: Clifton (construction phase)**

These projects will construct new power substations on Staten Island, in the vicinity of the New Dorp and Clifton Stations, to augment the electrical power requirements in these areas, thus improving the reliability of train service.

MTA completed both new facilities in August 2021; the only remaining item to Substantial Completion is Con Ed to finalize tie-in and to provide high-tension service to the new facility. The forecast substantial completion of June 2021 has been extended to September 2021, but could slip again. Con Ed has not provided date prior to 9/30/21 due to on-going summer heat conditions. The acting Business Unit Lead is in regular contact with Con Edison to prioritize this work.

**S8070102: Staten Island Railroad - Track and Switch Replacement (design phase)**

A 2015 survey identified approximately 21 miles of the Staten Island Railway's mainline track as being in "Condition 4" – in deteriorating condition and needing to be replaced. Phase 1 of the SIR Mainline Track replacement work, addressing approximately 4 miles of the Condition 4 stretch, is under construction. This project is to design Phase 2 of the work to address approximately 9 miles of the remaining Condition 4 track, as well as 132 mainline track switches.

Phase 1 of the SIR Mainline Track replacement work (Contract T-80280) is currently in construction, and is addressing approximately 4 miles 20% of the "Condition 4" stretch, is under construction areas (4.26 miles). This project is to design Phase 2 of the SIR Mainline Track replacement work and to address approximately 9 miles 40% of the remaining "Condition 4 track" areas (9.13 miles), as well as 13 mainline track switches. In an effort to achieve economies of scale, the Infrastructure Business Unit is seeking to add this work onto the Phase 1 contract.

The schedule delay is primarily due to platform clearance issues and request to reduce the project budget of \$121M by 40% budget to approximately \$76M. Rubbing boards are needed to be installed in station areas to meet the ADA-American with Disabilities act. There was a concern in installing these boards as it could be encroached (or hit) by the SIR diesel locomotives when it passed the stations. A dynamic envelope analysis was conducted, and it was confirmed that installing the rubbing board will not be encroached and can be installed to meet the ADA requirements.

In addition, a potential issue with Transit labor availability in Staten Island to support General Orders and work trains is being investigated.

Mitigation efforts include the following: 1. The Design Management Office initiated a reduction in the scope of work to meet the budget. 2. 16,000' of track are being transferred to Phase 1 as a Change Order resulting in a cost saving of approximately \$9M. 3. This project's Statement of Work currently reduced to the 13 switches and approximately 4,500' of associated track. This Contract is build-to-budget and the mileage had to be successively reduced with each budget cut. Approx. 23,000' of

trackwork was transferred to Phase 1 (T-80280) in two stages as a cost-savings measure. Subsequent to the reporting period, design completion slipped further to January 2022.

**T6120403 Replace Bus Radio System (construction phase)**

**U6030226 Bus Radio System (construction phase)**

**U7030211 Bus Radio System - MTA Bus Share (construction phase)**

The project is to implement a new digital bus radio system for NYCT and MTA Bus. The project includes: 1) Constructing 35 new radio base station sites throughout the region on properties owned or leased by the MTA; 2) Retrofitting the entire fleet of buses (approximately 6,000) and non-revenue vehicles with new radio equipment; and 3) Furnishing a new radio control and dispatch system in the new Bus Command Center.

The project has experienced delays due to Third-Party Agreements and site access, poor quality / productivity related to the installation of the new radio system into the 6000+ buses, delays in utility service and impacts from COVID-19 resulting in a slippage of substantial completion to June 2023 depending on the success of the new quality control measures and personnel recently implemented by the contractor and C&D. Further projections of the substantial completion date will be forthcoming as the impact of recent changes are quantified.

The contractor has submitted several claims requesting Extensions of Time, dating back to 2019, that are under review by MTA Legal and MTA Program Controls. The revised contractor schedule reflects these claims. The 30 months delay reflected in the schedule is a combination of 3<sup>rd</sup> Party delays, Concurrent delays, Force Majeure delays and potentially a combination of MTA and Contractor delays. The fact is that the contractor has submitted a schedule indicating a 30-month delay to substantial completion (June 2023) that is currently under review by the MTA.

Mitigation includes the following: Utility issues have been escalated and utility connections are now progressing well. Contractor quality issues have resulted in a quality plan that has been agreed upon by all stakeholders and includes contractor repairs and rework. The quality plan is currently being implemented and ramped-up. Design issues continue to be corrected and tracked daily. Problematic Third-Party sites have been escalated to MTA Real Estate, MTA Government Affairs, MTA Legal and LIRR Executives. C&D Infrastructure has requested management changes to the contractor project management team and is working on a permanent solution for the Todt Hill tower. Management changes with Parsons have been implemented.

**T7090222: New Substation Maspeth Ave. - Humboldt St. Canarsie (construction phase)**

**T7090223: New Substation Harrison Place (construction phase)**

**T7090406: Rehab CBH # 85 & New Ducts: Bedford-N 6 St Substation Canarsie construction phase)**

This project involves the construction of a new underground substation at the above locations to augment power capacity to appropriately support an increase in train services on the Canarsie Line.

The on-site construction is completed. However, the schedule has been revised for substantial completion and closeout, due to the inability to obtain Con Ed energization of the substation (second feeder). C&D is working with Con Ed continuously to schedule the second feeder energization.

**T7080651 Help Point Wrap-Up and Customer Assisted Intercom Removals (construction phase)**

This project will provide upgrade to the Help Point system and decommission Customer Assistance Intercom at 472 stations.

The schedule has been revised due to limited availability of EMD- Electronic Maintenance Division. C&D is reviewing mitigation options.

**T7080602 Upgrade of Asynchronous Fiber Optic Rings A & C (construction phase)**

This project will upgrade the existing Fiber Optic Network equipment to a SONET technology on the A and C rings at 23 sites. This work is to migrate existing live circuits from obsolete equipment to new installed equipment.

The schedule has been revised due to lack of in-house subject matter experts from EMD- Electronic Maintenance Division. C&D and Contractor are working closely with EMD on alternate solutions.

### **Long Island Rail Road**

The LIRR Business Unit currently oversees 115 active projects, including 44 projects in construction, with a budget of \$2.5B. Notable projects under construction include Jamaica Capacity Improvements, Ocean Avenue Substation, Queens Interlocking, and the Annual Track Program. The LIRR Business Unit also tracks and supports the management of capital work undertaken by LIRR in-house forces: an additional 38 active projects (7 in construction) with a budget of \$1.4B.

The IEC's Traffic Light Report currently tracks 45 tasks (ACEPs) in the LIRR program (third-party and in-house). Of those, 4 tasks were flagged red, representing 4 projects. Below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

#### **L60304TU: Jamaica Capacity Improvements – Phase I (construction phase)**

This project is the first phase of a multi-decade initiative to dramatically improve track configuration at Jamaica, where 10 of LIRR's 11 lines converge. Two factors have delayed the project by eight months. First, the completion of Track 12/A6 was initially deferred to allow for the NYSDOT to install a new bridge, for track A6, across the Van Wyck Expressway (VWE) as part of their VWE Widening Project. Subsequently, delay to completion of the previously deferred trackwork has been attributed to the lack of sufficient force account manpower supporting the track installation due to higher priority projects (Elmont, Mainline Expansion, ESA, NYSDOT Van Wyck Widening). Installation is currently in process and will be completed prior to the planned service date later this fall. The Project Management Team continues to monitor, update, and manage project risks including other major projects like Queens/Elmont, Main Line Third Track, ESA, and others relative to manpower needs vs. available LIRR resources.

Second, the installation of the universal interlockings have been delayed to second quarter of 2022 because of two factors – delays in advertisement/award for the Beaver Interlocking Signal Platform (awarded to a SBMP), and again, force account resource availability. PM staff are monitoring the progress of the SBM contractor to avoid or mitigate any further schedule delays related to the platform construction. PM staff are also closely monitoring progress of force account activities.

#### **L70204UO: East Yaphank Station (design phase)**

The proposed project is to relocate the East Yaphank Station on the Main Line Line to a new location closer to Brookhaven National Laboratory and the William Floyd corridor. Design completion is on hold until a preferred location is agreed upon by local stakeholders.



**L70601YG: Morris Park Diesel Locomotive Shop Improvements (construction phase)**

C&D-LIRR is building a new Locomotive Shop at Morris Park to replace a 131-year-old facility. The new shop will shorten repair turn-around times, support overhaul and heavy maintenance efforts, which will increase the reliability of LIRR's diesel fleet. The additional three-month project delay is attributed to two concurrent issues. First the equipment issue related to the closure of the original drop table manufacturer. A new vendor was contracted to create a new design based on the former vendor's equipment. The project achieved Substantial Completion in July 2021.

**L70701XB: Substation Components (construction phase)**

This is an on-going project to keep substations in a state of good repair. The six-month project delay is attributed to the delays in procurement of a Substation & Transformer Painting Contract and C&D resource constraints. The Substantial Completion of this project was revised from February 2022 to August 2022 to reflect the current forecasted award of the Substation & Transformer Painting Contract. C&D and the contractor are working to reduce the impacts of the delays.

## **Metro-North**

The MNR Business Unit currently oversees 64 active projects, including 24 projects in construction, with a budget of \$2.4B. Notable projects under construction include the Superstorm Sandy Power and C&S Restoration project, Harmon Shop Improvements, and the Grand Central Trainshed project.

The IEC's Traffic Light Report currently tracks 31 ACEPs in the C&D Metro-North program. Seven of those 31 ACEPs were flagged red, representing four projects. The description below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

### **EM040301: Power and Signals Mitigation (construction phase)**

### **EM050208: Power Infrastructure Restoration Substations (construction phase)**

### **EM050209: Power Infrastructure Restoration HRLB (construction phase)**

These three ACEPs are part of the same project to restore power and signal infrastructure to the Hudson Line damaged during the Super Storm Sandy. This project requires extensive Force Account Support from the Track, Power, Communication & Signal Departments, many of which are experiencing staff shortages leading to the schedule slip/cost increase. C&D is mitigating this situation by meeting biweekly with the Power Dept. user group to prioritize this work among other MNR projects. Additionally, MNR BU has designated a dedicated construction manager who coordinates daily all FA resources needed to proceed with the work, and provide an alternative work plan, if needed.

A separate issue on this project was with the commissioning of the Harlem River Lift Bridge. The commissioning is on hold due to user group request for additional scope, which is currently under discussion among the user group, PCEO and Engineer of Record for the system and design. To mitigate the delay, the project team is working with the designer expediting the design completion and providing it to the contractor by September 2021. The Harlem River Lift Bridge project (EM050209), Substantial Completion is now expected in June 2022.

### **M6050101: Bridge 23 (construction phase)**

The project is to replace a power supply substation in Mount Vernon. Although C&D-MNR is overseeing the project, work is actually performed by the New York Power Authority (NYPA).

Project is in the final phase of construction. Defective relays were found during Signal Substation testing. The contractor performed various tests to find the root cause and the solution found was to install either differential relays which had 20 weeks of lead time or time delay relays which had a shorter lead time. To mitigate the delay, the contractor & MNR have agreed to install time delay relays in lieu of differential relays. Substantial Completion is now expected by December 2021.

**M6050103: Harlem & Hudson Lines Power Improvements (construction phase)****M7050113: Harlem & Hudson Lines Power Improvements (construction phase)**

These two projects will replace two existing substations

Project has been delayed due to lengthy review of the Short Circuit/Relay Coordination Study by Con Ed. When Con Ed completes their review testing shall begin. MNR and the contractor have reached out to Con Ed to expedite their review and approval of the study. The Equipment test procedure has been submitted and is currently under review by MNR's Power Department. Energization of the 86<sup>th</sup> St. Substation is expected to commence by the end of August 21. Substantial Completion is now expected in December 2021.

**M7050105: Harlem & Hudson Power Improvement – City Water (construction phase)**

The project is to build a new power substation near Mount Kisco to mitigate existing undervoltage on a section of the Harlem Line.

Testing and commissioning has been delayed by Con Ed not approving all technical and testing documentation on the agreed-upon schedule. The project team is working and coordinating with the contractor and Con Ed to resolve and mitigate technical issues and expedite the approvals as soon as possible.

### **Signals and Train Control**

The Signals & Train Control Business Unit currently oversees 36 active projects, including 16 projects in construction, with a budget of \$2.6B. Notable projects under construction include three major CBTC projects (QBL West, Culver and Eighth Ave), as well as a number of other important signaling projects. The unit's 2021 Commitments includes QBL East, which will be procured as a Design Bid Build based on existing documents, and other smaller projects. C&D is planning to solicit the help of a General Engineering Consultant (GEC) to identify strategies to improve how MTA contracts and executes CBTC/UWB projects moving forward.

The IEC's Traffic Light Report currently tracks 33 tasks (ACEPs) in the Signals & Train Control Business Unit. Of those, 1 task was flagged red. Below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

#### **T6080661: ISIM-B Module 3A Rail Control Center (RCC) Build Out (construction phase)**

This project will renovate the 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.

The substantial completion was moved from June 2021 to November 2021 due to issues concerning the operation of the existing HVAC system at the RCC. The completion of module 3a requires the contractor to tie-in to the existing HVAC system. The existing HVAC chiller is currently operating at a lower capacity. Building maintenance will allow the contractor to tie in after temporary units are installed by others (November 2021). Premature tie into the existing chiller would create operational impacts to the RCC.

## Stations

The Stations Business Unit currently oversees 282 active projects, including 43 projects in construction, with a budget of \$10.3B. Notable projects under construction include ADA: 8 Stations on SIR, A, F, G, L, 1, and 6 lines, ADA and Reconstruction of Times Sq Shuttle, and Replacement of 12 Traction Elevator at 191 St, 181 St, and 168 St Stations on the 1 Line.

The IEC's Traffic Light Report currently tracks 49 tasks (ACEPs) in Stations Business Unite, one task was flagged red. Below describes why this project task (ACEP) was flagged, and what C&D is doing to remediate.

### **T7041322: ADA: 95 St and 4 Ave (design phase)**

The project will provide two ADA compliant elevators (1 from the street to mezzanine and 1 from the mezzanine to platform level) and reconfigure existing mezzanine and station facilities as required. Initially a stand-alone project, this is now part of the multi-station, ADA Package 4 Bundle. The design documents are being bundled to streamline design, contracting and construction; allowing MTA C&D to capitalize on the economies of scale to increase efficiency. Due to this, the design completion date was pushed out to March 2022.

### **NYCT Department of Subways**

NYCT Department of Subways (NYCT DOS) conducts a range of in-house capital work, including tracks and switches, as well as employee facilities. The IEC's Traffic Light Report flagged one Track project task (ACEP) in the NYCT DOS program.

NYCT schedules track work to take advantage of General Orders already obtained for other projects, a practice known as piggy-backing. This saves resources for the agency and reduces service disruptions for our customers. Unfortunately, this dependence on other projects' schedules makes the track program more vulnerable to schedule changes. The description below describes why this track project was flagged, and what NYCT is doing to remediate.

#### **T8050209: 2020 Mainline Track Replacement - Lexington Line (construction phase)**

This project consists of four jobs at two locations, South of Canal Street on tracks MM-1, MM-2 & MM-3 and North of Borough Hall on track M-2. Initially, the three jobs at Canal street required 300 track-feet of Type II-IIM and 600 track-feet of Ekki-Hilti work. The initial scope of work was based on the 2018 Condition Survey. However, an inspection was performed by the division of Track in the calendar year 2020 and it was discovered that this area had extensive water damage causing broken and missing concrete. Therefore, the scope of work was changed by Track to Type II-IIM work to address the damaged concrete.

In addition, the North of Borough Hall location required additional General Orders (GOs) due to limited track access to the tube area. The tube area is a high traffic location and therefore track access is not easily granted. The timeframe of each GO only allows Track Construction to complete up to 300 track-feet of work.

As a result, Track has submitted their request for an additional \$5M to offset the overruns due to the scope changes and the additional GOs required for the completion of this contract.

**Rolling Stock**

The Subways Rolling Stock Business Unit currently oversees with a budget of over \$5B. Notable projects include the Procurement of the R179 and R211 Car Classes.

The IEC's Traffic Light Report currently tracks 2 tasks (ACEPs) in the Subways Rolling Stock program. Of those, 1 task was flagged red, representing 1 project. The description below describes why these project tasks (ACEPs) were flagged, and what C&D is doing to remediate.

**ET060317: Sandy Resiliency: Conversion of 2 Pump Trains (design phase)**

This project is to procure pump trains utilized throughout the system to remove standing water from tracks to rapidly restore subway services and protect transit infrastructure.

The schedule slippage is due to lengthy negotiations with the prospective contractor regarding technical and commercial terms; additional negotiations regarding added cybersecurity requirements and changing the pickup and delivery location from a NYCT location to Port Authority of NY & NJ-South Brooklyn Marine Terminal (PANYNJ-SBMT) (negotiations are ongoing); and time needed for procurement to obtain FTA's authorization for advance payment (still awaiting FTA's response).

**Others****L60101MA: M-9 Rolling Stock Procurement - 92 cars (production phase)**

M-3 cars are experiencing performance challenges and technological obsolescence. This project will begin replacing the worst-performing units with new M-9 cars, completing the fleet replacement in the next Capital Program. The 92 Base Order of M-9 cars have all been Conditionally Accepted as of June 9, 2021. The seven-month schedule slippage to December 2021, is primarily attributed to contractor's workmanship issues which has required several areas/systems of the car to be inspected and repaired as required by LIRR.





**Projects in CPOC’s Risk-Based Monitoring Program  
(2<sup>nd</sup> Quarter 2021 Traffic Light Report – Period Ending June 30, 2021)**

The following projects in CPOC’s Risk-based Monitoring Program are currently reported on by the responsible MTA Business Unit in accordance with the CPOC Work Plan schedule and are continually monitored by the Independent Engineering Consultant. Monitored projects from multiple Capital Programs are included in the Quarterly Traffic Light Report. The list is subject to periodic review and adjustment by the MTA.

<b>Projects in CPOC's Risk-Based Monitoring Program</b>		
<b>Capital Program</b>		<b>Project</b>
<b>2010-14</b>	<b>2015-19</b>	
<b>Integrated Capital Projects</b>		
	X	Second Avenue Subway - Phase 2
X	X	East Side Access & Regional Investments
	X	Penn Station Access
	X	LIRR Expansion Project – Mainline Third Track - Floral Park to Hicksville
<b>Signals and Communications</b>		
	X	Communications Based Train Control – 8 <sup>th</sup> Ave Line
X		Communications Based Train Control - Queens Blvd. West- Phase 1
	X	Communications Based Train Control - Queens Blvd. West- Phase 2
	X	Communications Based Train Control – Culver Line
X	X	Integrated Service Information and Management B Division
X	X	Replace Bus Radio System
<b>Subway Car, Bus and Rolling Stock Procurement</b>		
X	X	New Subway Car Procurement
X	X	New Bus Procurement
X	X	Commuter Rail Road Rolling Stock Procurement
<b>Passenger Stations Program</b>		
	X	ADA Reconstruction Times Square Station – 42 Connection Project
	X	New Fare Payment System – Phase 2
	X	ADA 149 <sup>th</sup> St/Tremont Ave Stations
	X	ADA Accessibility Package A



**Projects in CPOC’s Risk-Based Monitoring Program  
(2<sup>nd</sup> Quarter 2021 Traffic Light Report – Period Ending June 30, 2021)**

<b>Capital Program</b>		<b>Project</b>
<b>2010-14</b>	<b>2015-19</b>	
<b>Shops and Yards</b>		
	X	Harmon Shop Replacement Phase V, Stage 2
X		New Mid Suffolk Electric Yard
	X	Morris Park Diesel Locomotive Shop
<b>Line Structures and Track</b>		
X		Jamaica Capacity Improvements Phase 1
<b>Bridges and Tunnels</b>		
	X	Throgs Neck Bridge Replace Suspended Span Deck
<b>Sandy Program</b>		
Sandy Program		Rutgers Tube Rehabilitation
Sandy Program		Reconstruct Clifton Repair Shop
Sandy Program		Coney Island Yard Long Term Perimeter Protection
Sandy Program		207 <sup>th</sup> Street Yard Long Term Perimeter Protection