



**Metropolitan Transportation Authority**

# **Capital Program Oversight Committee Meeting**

## **November 2014**

---

### **Committee Members**

T. Prendergast, Chair

F. Ferrer

A. Albert

R. Bickford

A. Cappelli

S. Metzger

J. Molloy

M. Pally

A. Saul

J. Sedore

V. Tessitore

I. Weinshall

C. Wortendyke

# Capital Program Oversight Committee Meeting

347 Madison Avenue - Fifth Floor Board Room

New York, NY 10017

Monday, 11/17/2014

1:45 - 2:45 PM ET

## 1. PUBLIC COMMENTS PERIOD

## 2. APPROVAL OF MINUTES OCTOBER 27, 2014

*Minutes from October '14 - Page 4*

## 3. COMMITTEE WORK PLAN

*CPOC Work Plan November 2014 - Page 6*

## 4. ANNUAL UPDATE ON B & T CAPITAL PROGRAM

### a. Progress Report on B&T Capital Program

*B&T Project Review - Page 7*

- **B&T Risk Assessment**

*RA Report CPOC - Page 52*

### b. IEC Project Review on VN80B

*IEC Project Review on VN80B - Page 55*

### c. IEC Project Review on RFK Bronx Plaza

*IEC Project Review on RFK Bronx Plaza+HCL+QMT - Page 59*

## 5. ANNUAL UPDATE ON LIRR MAIN LINE DOUBLE TRACK

### a. Progress Report on LIRR Main Line Double Track

*LIRR Project Review on Main Line Double Track - Page 63*

### b. IEC Project Review on Main Line Double Track

*IEC Project Review on Main Line Double Track - Page 85*

## 6. ANNUAL UPDATE ON MTAPD POLICE RADIO

### a. Progress Report on MTAPD Police Radio

*MTAPD Police Radio CPOC Report - Page 89*

## 7. ANNUAL UPDATE ON MNR CUSTOMER SERVICE INITIATIVES

### a. Progress Report on MNR Customer Service Initiatives

*MNR Customer Service Initiatives CPOC Report - Page 93*

## 8. ANNUAL REVIEW OF CPOC CHARTER

**Oral announcement at meeting**

## **9. CAPITAL PROGRAM STATUS**

### **a. Commitments, Completions and Funding Report**

*CPM Status reports - Page 102*

Date of next meeting: Monday, December 15, 2014 at 1:45 PM

**MINUTES OF MEETING  
MTA CAPITAL PROGRAM OVERSIGHT COMMITTEE  
September 22, 2014  
New York, New York  
1:45 P.M.**

MTA CPOC members present:

Hon. Thomas Prendergast, Chairman  
Hon. Fernando Ferrer  
Hon. Andrew Albert  
Hon. Robert Bickford  
Hon. Susan Metzger  
Hon. John Molloy  
Hon. Mitchell Pally  
Hon. James Sedore  
Hon. Iris Weinshall  
Hon. Carl Wortendyke

MTA CPOC members not present:

Hon. Alan Cappelli  
Hon. Andrew Saul  
Hon. Vincent Tessitore

MTA Board members present:

Hon. Ira Greenberg  
Hon. Neal Zuckerman

MTA staff present:

Craig Stewart  
Michael Wetherell

NYCT staff present:

Mark Bienstock  
Nidhish Patel  
Fred Smith

Independent Engineering Consultant staff present:

Jerry Gardvits

\* \* \*

Chairman Prendergast called the October 27, 2014 meeting of the Capital Program Oversight Committee to order at 2:10 P.M.

**Public Comments Period**

There were no public speakers in the public comments portion of the meeting.

**Meeting Minutes**

Upon motion duly made and seconded, the CPOC members approved the minutes to the previous meeting held on September 22, 2014.

## **Committee Work Plan**

Mr. Stewart noted two changes to the CPOC Work Plan, which will be provided in early '15, instead of today: New Fare Payment System and the Track Program Update.

### **NYCT Update on Signals and Train Control Division**

Mr. Patel first provided an update on the Signals and Train Control Division's CBTC Flushing Line: as he reported in his last update, the project's substantial completion is scheduled for the second quarter of 2017, and remains within the \$550 million budget. He then provided an update on the Culver Line CBTC Integrated Test Facility, stating that the project remains on schedule for substantial completion in July 2015 and is within the \$101 million budget. Mr. Patel then highlighted several other projects, all of which are currently on schedule and within budget. In its Program Review, the IEC stated that it is in general agreement with project information as provided in NYCT's report. Further details of this presentation, and Committee Members' comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA's records.

### **NYCT Update on Systems and Security Division**

Mr. Bienstock outlined progress in implementing the Integrated Service and Management (ISIM) System on the B Division, as well as VHF Radio System Upgrades since his last presentation to CPOC. He then provided an overview of the New Bus Command Center, scheduled for substantial completion in January 2017, and the Bus Radio System, scheduled for substantial completion in February 2020. In its Project Review of the VHF radio, the Independent Engineering Consultant (IEC) recommended that in order to avoid fines and penalties, efforts be focused on attaining narrowband operations before the end date. Further details of this presentation, and Committee Members' comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA's records.

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

Mr. Stewart noted that in 2014 agencies plan to commit a total of \$6.5B. Through September, the MTA planned thirty-five major commitments: twenty have been committed and fifteen are delayed. Overall, agencies have committed \$3.3B through September versus a \$4.7B goal. Many of the delays are forecast for achievement within 2014 and those slipping out of the year are largely offset by unplanned commitments, particularly at MTACC. By year end, the MTA forecasts making 99% of its annual goal. In terms of Completions, Mr. Stewart noted that in 2014 agencies plan a total of \$5.7B in completions. Through September the MTA planned thirty-two major completions: seventeen have been achieved and fifteen are delayed. In addition, three other projects have been completed early. Agencies have completed \$3.1B through September versus a \$4.5B goal. By year end, the total completions should be 77% of the annual goal based on the latest forecasts.

## **Adjournment**

Upon motion duly made and seconded, Chairman Prendergast adjourned the October 27, 2014 meeting of the MTA Capital Program Oversight Committee at 2:40 PM.

Respectfully submitted,  
Michael Jew-Geralds  
Office of Construction Oversight



## **2014 CPOC Committee Work Plan**

---

I. Recurring Agenda Items

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

II. Specific Agenda Items

November 2014

Annual Update on B & T Capital Program  
Annual Update on LIRR Main Line Double Track  
Annual Update on MTAPD Police Radio  
Annual Update on MNR Customer Service Initiatives  
Annual Review of CPOC Charter

December 2014

Quarterly MTA Capital Construction Company Update  
Quarterly Update on Positive Train Control  
Semi-Annual Update on NYCT Stations Division  
Quarterly Capital Change Order Report  
Quarterly Traffic Light Report

# Semi-Annual CPOC Capital Program Update

Joe Keane, P.E.

Chief Engineer and Vice President

MTA – Bridges and Tunnels



November 17, 2014

# OVERVIEW

---

- **Major Construction Completions**
  - BW-89C – Replacement of the Queens Approach at the BWB
  - RK-73 – Reconstruction of the MQ Ramp at the RFK
  - BB-45 - Replacement of Electrical Switchgear & Power Distribution Equipment at Hugh L Carey Tunnel
- **VNB Program Update/On-going Projects at the VNB**
  - VN-03B – Toll Plaza Improvement at the VNB
  - VN-80C – New Bus/HOV Ramp at the VNB
  - VN-80B – Replacement of the Upper Level Deck at the VNB
- **Update on Capital and SBMP Programs**
- **Look Ahead to Major projects being awarded soon**



# Major Completions: BW-89C – Replacement of the Queens Approach at the BWB

---

- **Project Scope**
  - Complete replacement of the 72 year old deteriorated Queens Approach Structure
  - New footings, substructure, steel, deck, and utilities including LED lighting
- **Project Awarded July 2011**
- **Original Construction Budget/WAR - \$114.5m with a duration of 42 months**
- **Project is on schedule and projected to be completed on time and within budget.**



# Replacement of Queens Approach at BWB (BW89C)



View of the Deteriorated Bridge Steel  
Bridges and Tunnels



# Replacement of Queens Approach at BWB (BW89C)



Construction of Pier Caps

Bridges and Tunnels



# Replacement of Queens Approach at BWB (BW89C)

Removal of old steel



# Replacement of Queens Approach at BWB (BW89C)

## Demolition of old Deck



Bridges and Tunnels



# Replacement of Queens Approach at BWB (BW89C)

Placement of new steel



Bridges and Tunnels



# BW-89C Maintenance Protection of Traffic for Stage Work with a permanent lane closure.

## Movable Concrete Barrier Machine.



## Daily Lane Reversals – AM & PM.



# Major Completion: RK-73 – Reconstruction of the MQ Ramp at the RFK

---

- **Project Scope**
  - **Substructure rehabilitation including replacement of several deteriorated pier caps**
  - **Complete replacement of structural steel and deck including LED lighting**
- **Design-Build Project**
- **Project Awarded July 2012**
- **Original Construction Budget/War - \$52.7m with a duration of 26 months**
- **Project was completed under budget and 2 months ahead of schedule**



# Reconstruction of Manhattan-Queens Ramp at RFK (RK73)



**View of the deteriorated deck and pier caps**

Bridges and Tunnels



# Reconstruction of Manhattan-Queens Ramp at RFK (RK73)



**Rehabilitation substructure, new pier caps and new steel**

Bridges and Tunnels



# Reconstruction of Manhattan-Queens Ramp at RFK (RK73)



## Rehabilitated Piers and New Steel

Bridges and Tunnels



# Reconstruction of Manhattan-Queens Ramp at RFK (RK73)



**New MQ ramp deck with LED lighting**

Bridges and Tunnels



## Major Completion: BB-45 - Replacement of Electrical Switchgear & Power Distribution Equipment at Hugh L Carey Tunnel

---

- **Project Scope**
  - Replacement of obsolete electrical switchgear and power distribution equipment
  - Replacement of power and communication cables for Governor's Island.
- **Project Awarded - December 2010**
- **Original Construction Budget/War - \$42.3m with a duration of 45 months**
- **Project was completed on schedule with minimal cost growth**



# Brooklyn Battery Tunnel - Overview



# BB-45 Replacement of Electrical Switchgear & Power Distribution Equipment at Hugh L Carey Tunnel



Existing 64 year old hybrid obsolete switchgear/motor control center



Failing 64 years old medium voltage cable

# ***BB-45 Replacement of Electrical Switchgear & Power Distribution Equipment at Hugh L Carey Tunnel***

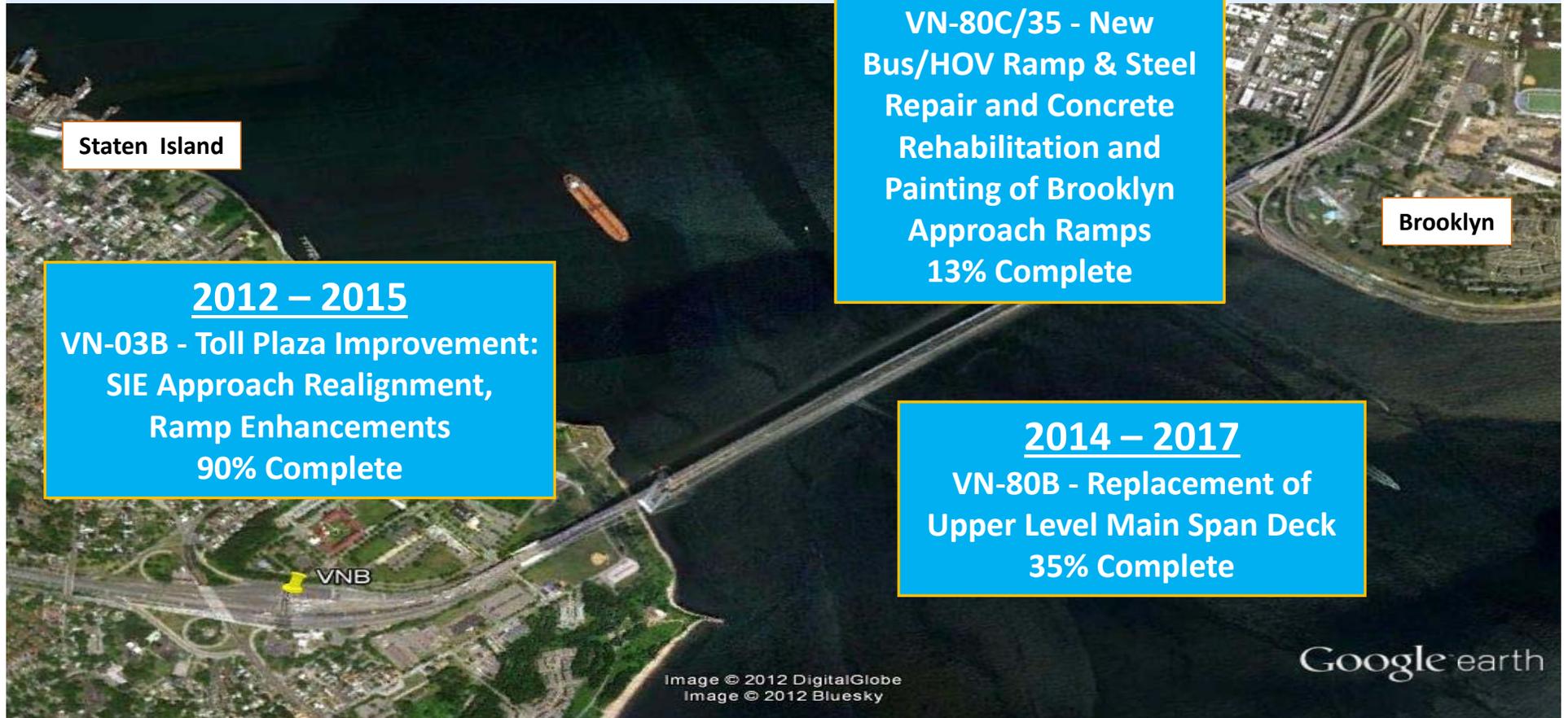


New state-of-the art properly rated switchgear

Bridges and Tunnels



# Verrazano-Narrows Bridge Program Update 2013-2017



**2012 – 2015**  
VN-03B - Toll Plaza Improvement:  
SIE Approach Realignment,  
Ramp Enhancements  
90% Complete

**2014 – 2017**  
VN-80C/35 - New  
Bus/HOV Ramp & Steel  
Repair and Concrete  
Rehabilitation and  
Painting of Brooklyn  
Approach Ramps  
13% Complete

**2014 – 2017**  
VN-80B - Replacement of  
Upper Level Main Span Deck  
35% Complete



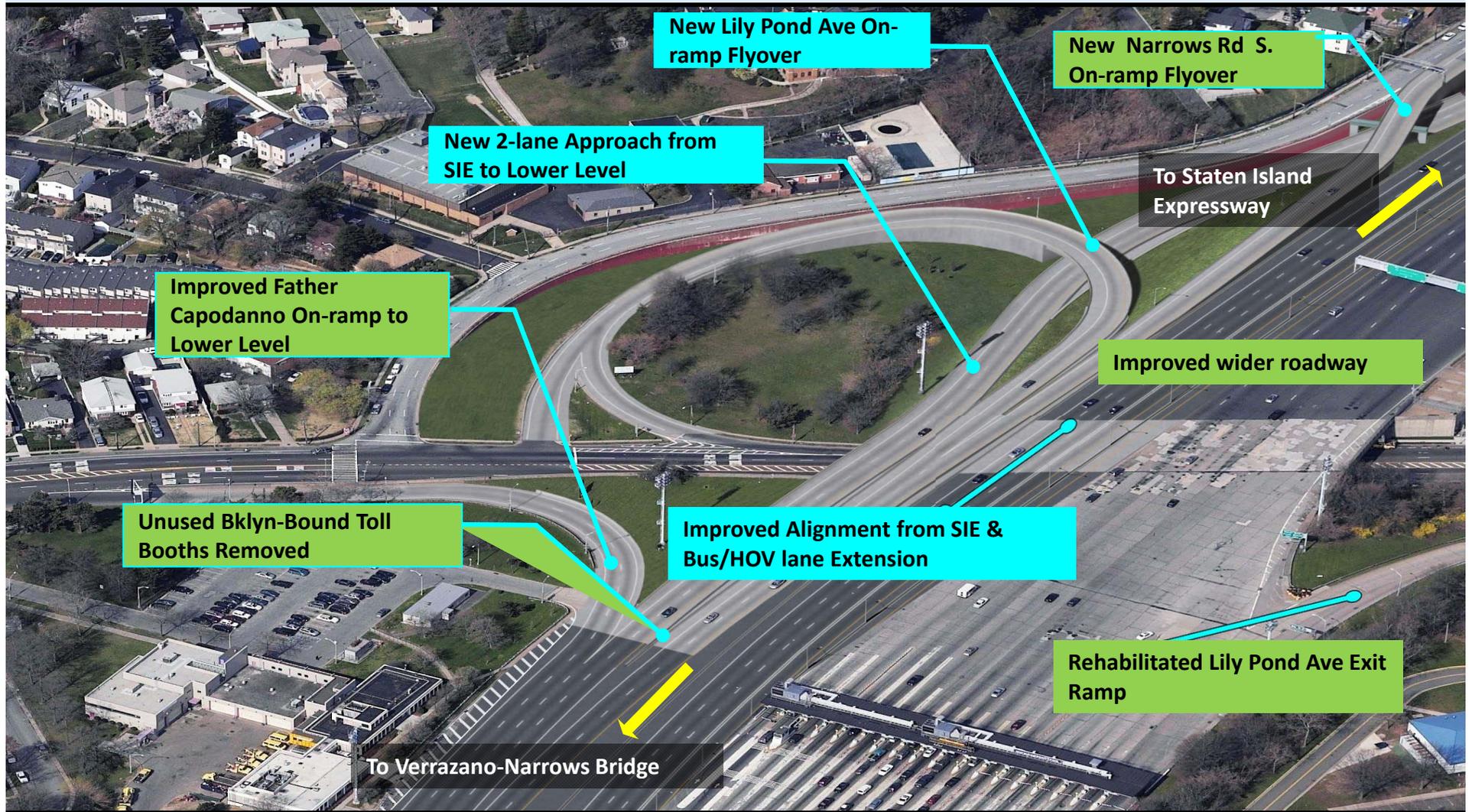
# Ongoing projects at the VNB: VN-03B – Toll Plaza Improvements

---

- **Project Scope**
  - Reconstruct east bound toll plaza and remove remaining booths
  - Construct new Lily Pond Flyover Ramp
  - Construct new on ramp from Narrows Road South
  - Rehabilitate on-grade approaches to bridge
- **Project Awarded September 2011**
- **Original Construction Budget/War - \$52.4m with a duration of 45 months**
- **Project is 90% complete and currently 169 days ahead of schedule**



# VN-03B - VNB Toll Plaza Improvement Project: Brooklyn-bound Plaza; Ramps and SIE Approach



(VN-03B)



07/19/2012 08:36

**Demolition of NRS ramp**

Bridges and Tunnels



# (VN-03B)

Construction of retaining walls for NRS Ramp



**(VN-03B)**



**Filled structure for NRS ramp**

Bridges and Tunnels



# (VN-03B)

Construction of New NRS ramp deck



**(VN-03B)**



**New curved steel girders for Lilly Pond Flyover Ramp**

Bridges and Tunnels

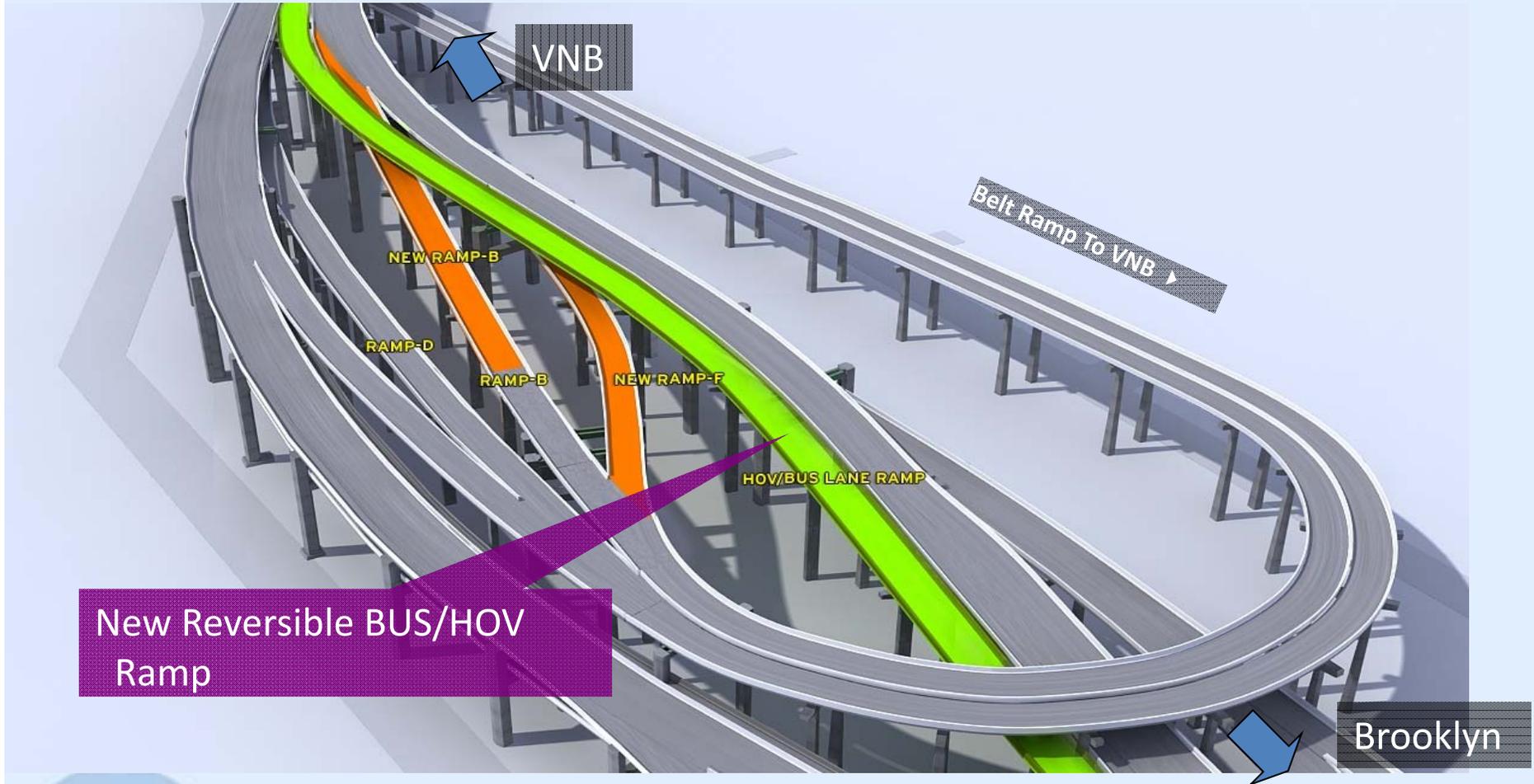


Ongoing projects at the VNB:  
VN-80C/35 – Construction of New HOV Ramp and  
Steel Repair and Concrete Rehabilitation

---

- **Project Scope**
  - Construct a new Bus/HOV Ramp to upper level
  - Perform steel repairs and concrete rehabilitation on the Belt parkway ramps
  - Painting of lower level approach ramps
- **Project Awarded December 2013**
- **Original Construction Budget/War - \$88.5m with a duration of 42 months**
- **Project is 13% complete**

# New Bus/HOV Ramp - VNB to Gowanus Approach



New Reversible BUS/HOV  
Ramp



# New HOV Ramp (VN-80C)



**Construction of new piers for Bus/HOV Ramp**

Bridges and Tunnels



# New HOV Ramp (VN-80C)



**Construction of new piers for Bus/HOV Ramp**

Bridges and Tunnels



# Ongoing projects at the VNB: VN-80B – Replacement of the Upper Level Deck

---

- **Project Scope**
  - **Replace deteriorated concrete filled deck with orthotropic deck**
    - **Widen deck to add 7<sup>th</sup> lane for Bus/HOV use**
    - **Reduce overall weight of deck and increase cable safety factor**
    - **Improve wind resistance**
- **Project Awarded November 2012**
- **Original Construction Budget/War - \$247.5m with a duration of 60 months**
- **Project is 35% complete**



# Ongoing projects at the VNB: VN-80B – Replacement of the Upper Level Deck

## Schedule and Budget Update

- **Budget:** The project is on budget.
- **Schedule:** The project is on schedule.
  - Until recently, delivery of Stage 1 orthotropic deck panels was delayed by up to 3 months.
  - The contractor has developed a recovery plan which brings the project back on schedule, and eliminates all delays.



# VN-80B Overhead Sign Gantry



**Erection of Overhead Sign Gantries at Tower Locations.**

Bridges and Tunnels



# VN-80B Overhead Gantry Cranes.



**Erection – Full Upper Level Closure at Night.**

Bridges and Tunnels



# VN-80B Overhead Gantry Cranes



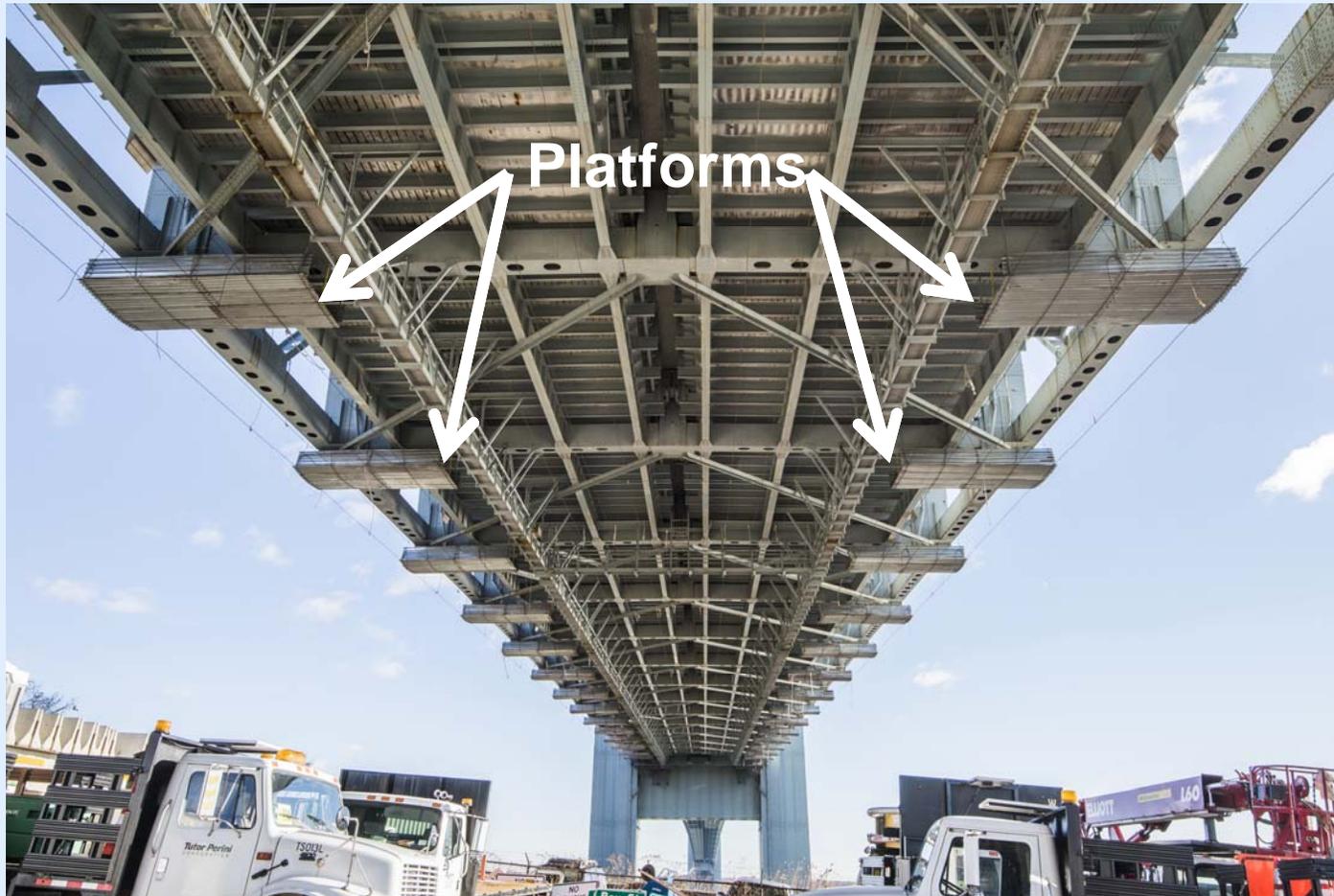
**Four Overhead Crane locations.**

Bridges and Tunnels



# VN-80B

## Painting Platforms installed under Lower Level

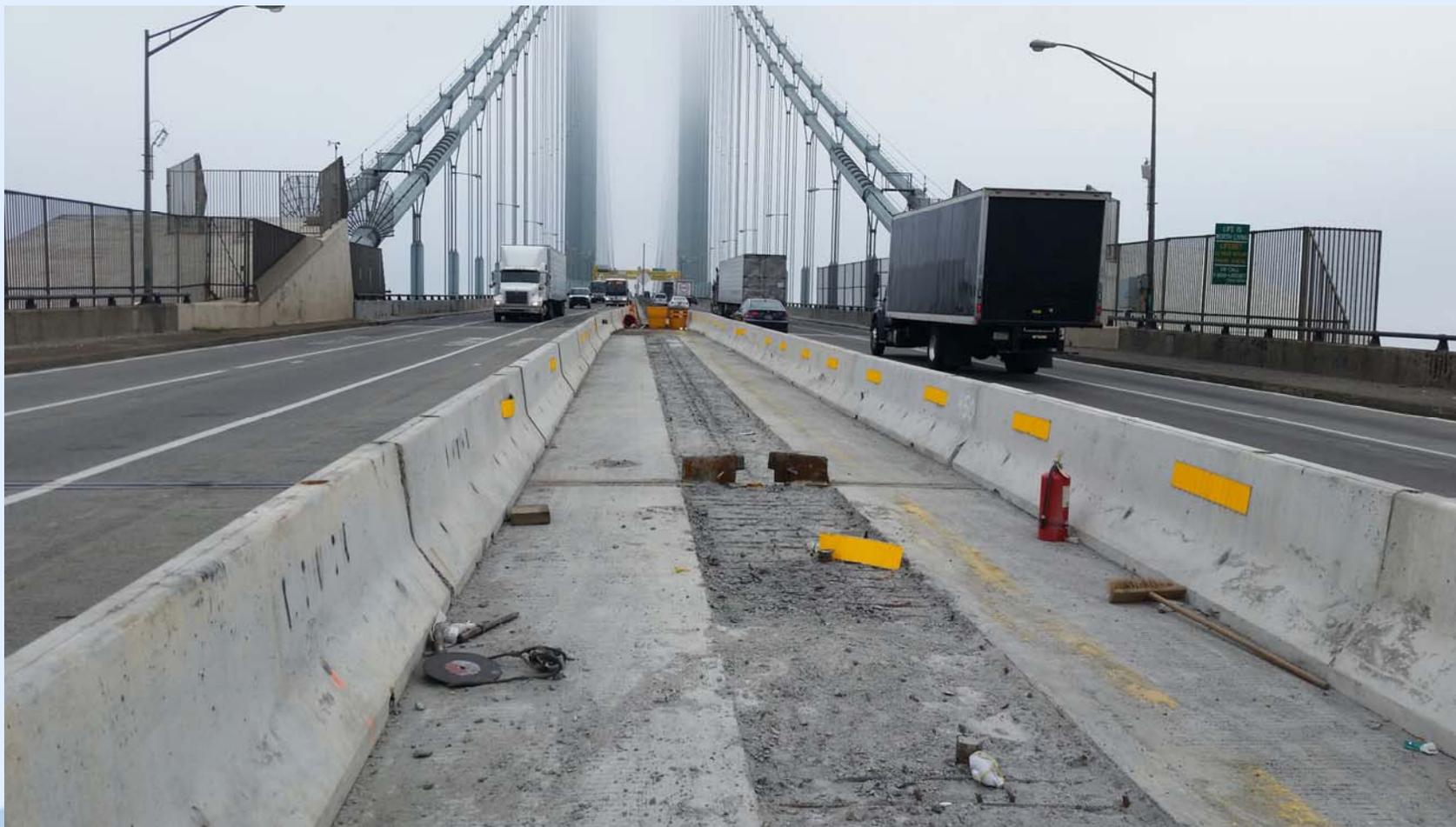


Bridges and Tunnels



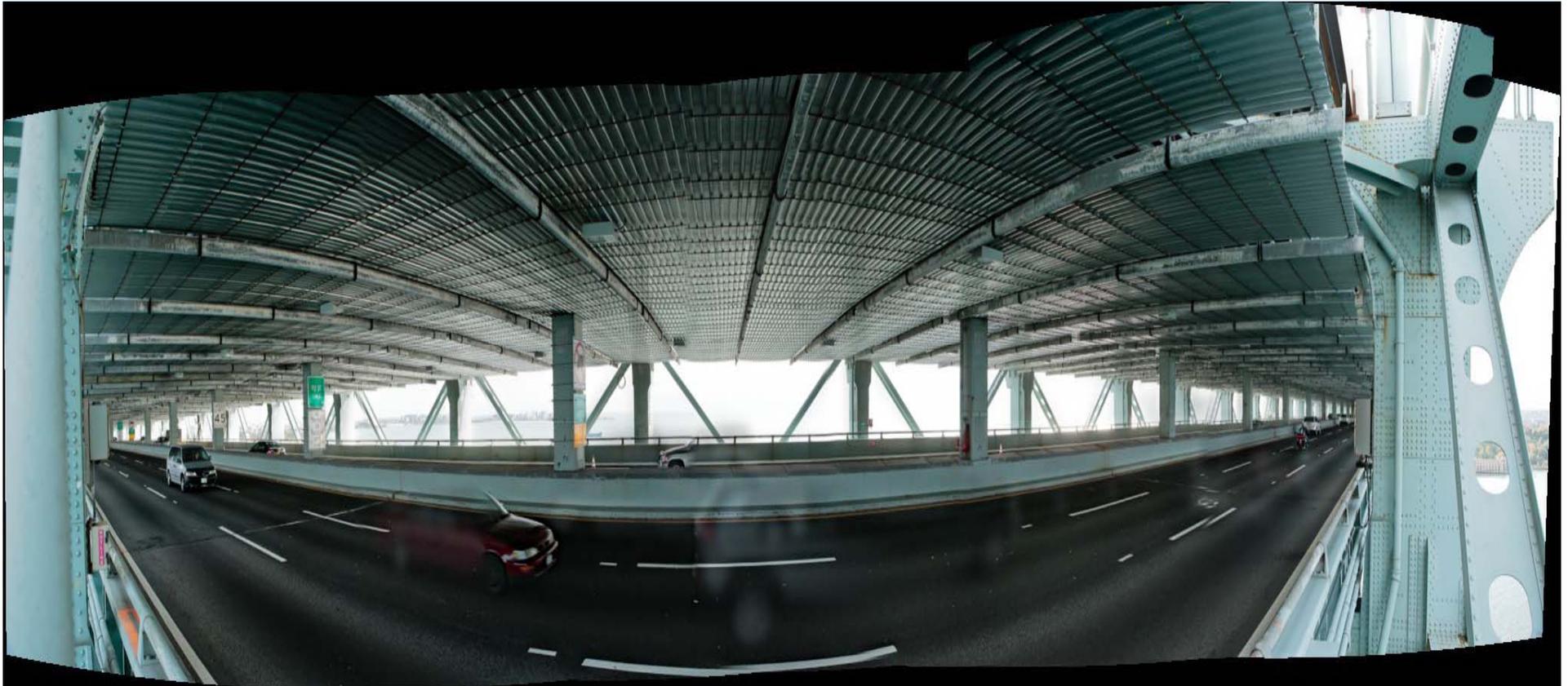
# VN-80B

## Removal of Center Median

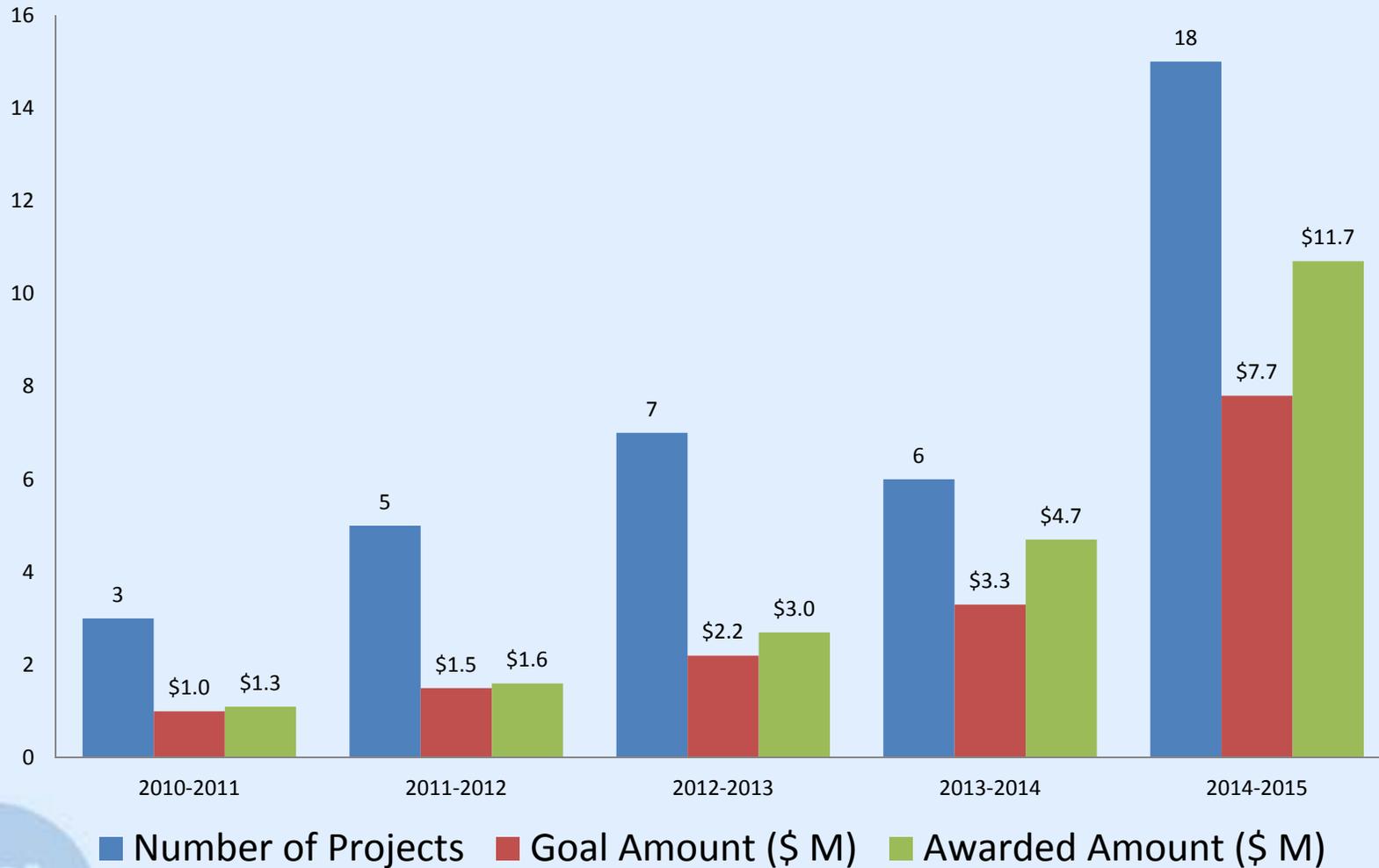


# VN-80B

## Panoramic View of Shielding Installed to protect lower level traffic



# B&T Current SBMP Program Status



# MP-99S – Replacement and Elevating Sandy Damaged Security and Navigation Lighting at the Marine Parkway Bridge

- Completed by Tier 1 SBMP Contractor
- Completed ahead of schedule
- Completed within budget

New Elevated Navigation Light

New Elevated Security Lights



# Status of Current 2010-2014 Capital Program

By the end of 2014, we project that approximately 90% of the current \$2,078M program will be committed. Remaining Major commitments are listed below:

Project	Description	Low Bid/ Approx. Budget
BB-28/28S/54	Restore Hugh L Carey Tunnel (Mix of Core, Sandy and Operating)	\$ 282M (low bid)
HH-88A	Replace upper and lower level plaza at Henry Hudson Bridge	\$ 18.3M (low bid)
RK-23A	Misc Rehabilitation of Manhattan Approach Ramp at RFK Bridge (Mix of Capital and Operating)	\$ 68.3M (low bid)
RK-65A	Deck Replacement of Bronx/Manhattan Ramp at RFK Bridge (Mix of Capital and Operating)	\$ 213M (low bid)
QM-40/40S/18	Restore Queens Midtown Tunnel (Mix of Core, Sandy and Operating)	\$370M (total project budget)

# Bid Results for HLC Contract BB-28/BB-28S/BB-54

Rendering – HLC Tunnel  
Finishes

## Construction Cost Summary

Engineer's Estimate	\$ 295.1M
Low Bid	\$ 282.5M
80 <sup>th</sup> Percentile Risk-Based Bid Cost	\$ 304.4M
Budget (Construction)	\$ 322.6M

# Bid Results for RK-65A BRONX PLAZA REHABILITATION

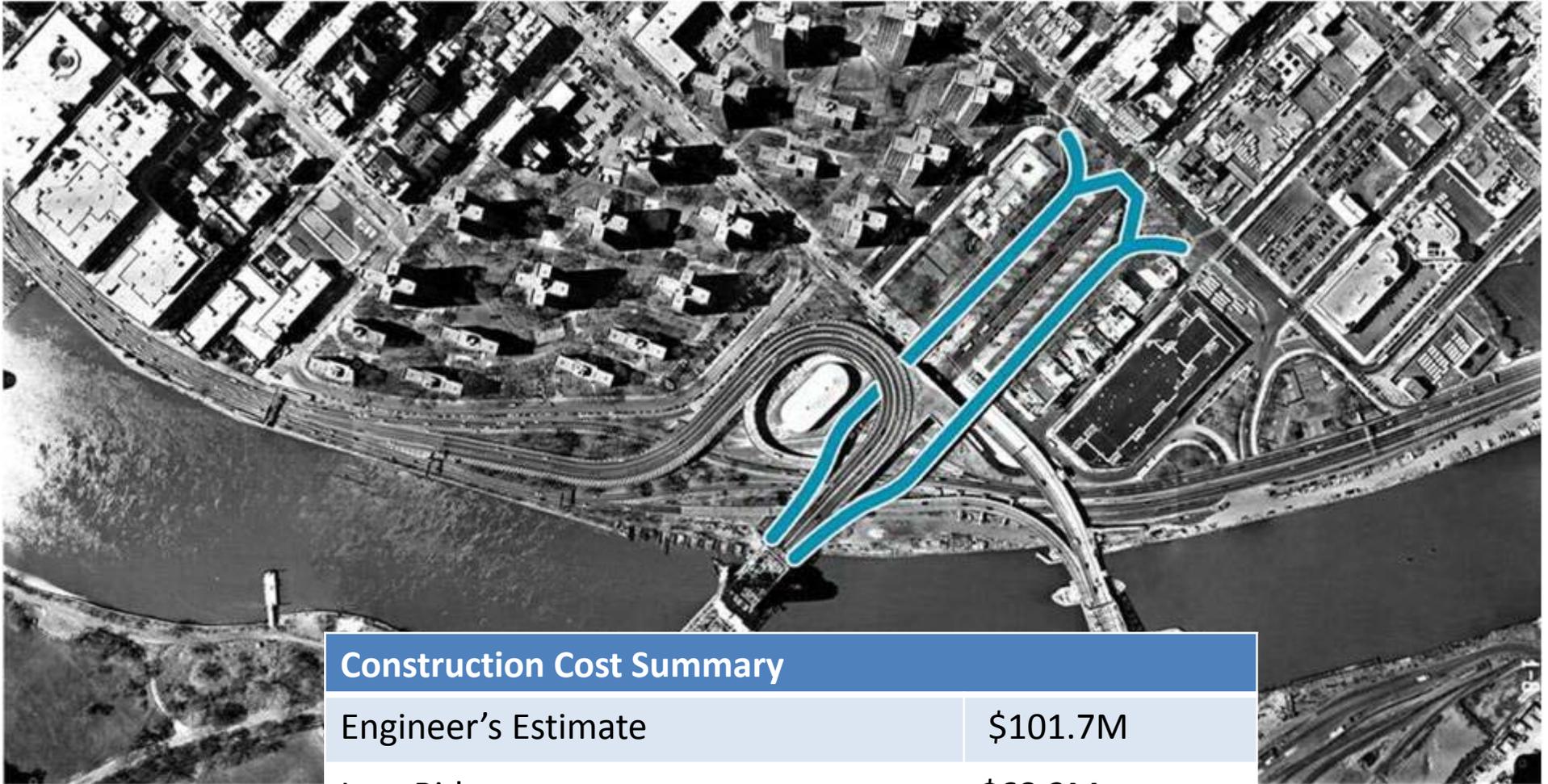


## Construction Cost Summary

Engineer's Estimate	\$204.6M
Low Bid	\$213.4M
80 <sup>th</sup> Percentile Risk-Based Bid Cost	\$213.8M
Budget (Construction)	\$211.9M



# Manhattan Approach Replacement at RFK (RK23A)



## Construction Cost Summary

Engineer's Estimate	\$101.7M
Low Bid	\$68.3M
Budget (Construction)	\$98.5M

Bridges and Tunnels

# Restore Queens Midtown Tunnel QM-40\QM-40S\QM18



## Scope of Work:

- Replacement of interior finishes
- Rehabilitation/upgrade of Electrical, Communication and Mechanical Systems
- Rehabilitation of the Manhattan Exit Plaza

## Project Schedule & Budget:

- Contract Duration: 48 months
- Total Project Budget - \$370M
- Construction Award – 1<sup>st</sup> Qtr 2015
- Risk Assessment Completed - 80<sup>th</sup> Percentile Risk Based Cost - \$338.2 M

QMT Inundated with 12M  
Gallons of Saltwater

<b>MTA Agency: Bridges and Tunnel</b>	<b>Risk Assessment Workshop Dates: Apr 22 – 24, 2014</b>
<b>Project Name: Super Storm Sandy Restoration and Mitigation, and Rehabilitation of the Tunnel Walls, Roadway and Manhattan Exit Plaza at the Queens Midtown Tunnel Rehabilitation (Project QM40/40S/18)</b>	<b>Status of Project when Risk Assessment Was Performed: 100% Design</b>

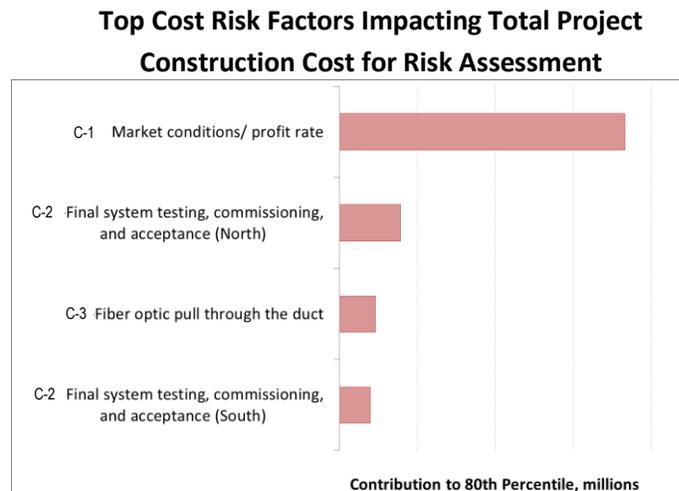
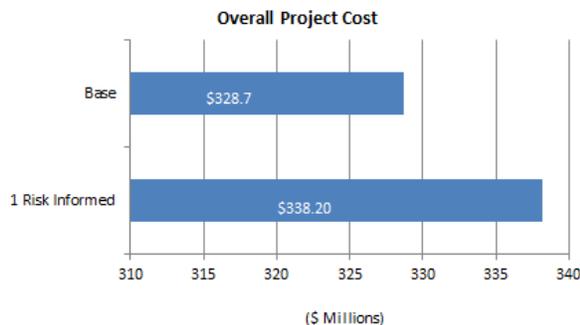
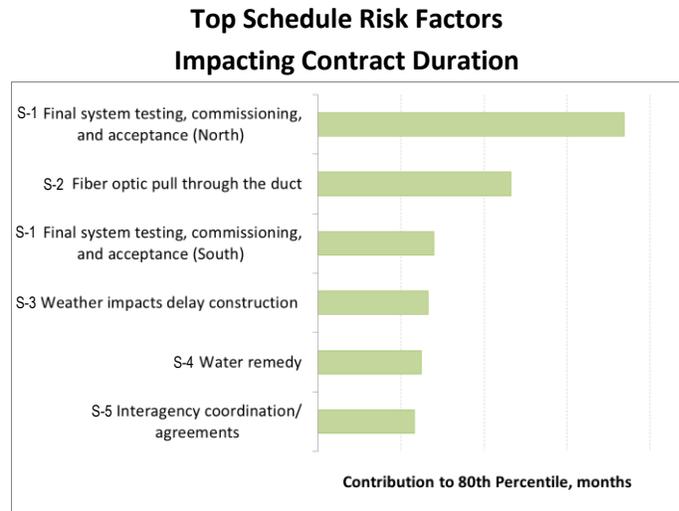
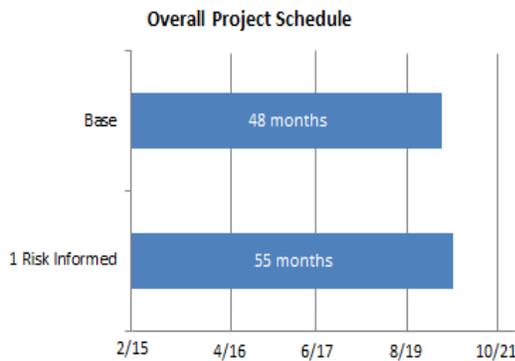
**Project Description**

Restore the QMT to pre-storm state-of-good repair (QM-40S). Work includes system replacements as follows: tunnel drainage; electrical; lighting; communications, monitoring and control systems; tunnel structural and civil repairs; tunnel wall tile, ceiling panels, polymer panels, curbs and gutters. This project will also address planned capital project QM-40 and QM-18 which scope of work include fire line replacements and rehabilitation of the Manhattan Exit Plaza.

**Risk Assessment Findings**

The Risk Informed Project duration is 55 months, adding 7 months of unallocated contingency to the overall project schedule duration of 48 months. The Risk Informed Estimate is within the project’s budget of \$370 million.

**Risk Informed Cost and Schedule Results**



<sup>1</sup> Based on 80% probability of occurrence



<b>Summary of Major Risks &amp; Mitigations</b>			
<b>Risks</b>	<b>Mitigation Measure</b>	<b>Resources Required</b>	<b>Time Frame for Mitigation</b>
<b>Schedule Risks</b>			
S-1 Final system testing and commissioning (North and South tubes)	<ul style="list-style-type: none"> <li>▪ Commissioning activities are included and coordinated in the schedule.</li> <li>▪ Develop and complete software programming prior to Commissioning.</li> <li>▪ Start Commissioning concurrently with construction activities.</li> </ul>	Contractor, Design Consultant, B & T engineering, Consultant Construction Manager	During Construction
S-2 Pull Fiber Optic through the duct bank	<ul style="list-style-type: none"> <li>▪ Pull Fiber Optic cables from Vent Buildings to Portal prior to duct bank completion.</li> <li>▪ Perform duct bank demolition and reconstruction during weeknights and weekends.</li> </ul>	Contractor, B & T engineering and Consultant Construction Manger	During Construction
S-3 Weather Impact (abnormal)	<ul style="list-style-type: none"> <li>▪ Weather impacts are consider in the schedule development</li> <li>▪ A small amount of additional weekend(s) might be provided</li> </ul>	B & T Engineering and Operations  Coordination with other agencies	During Construction
S-4 Water Remedy	<ul style="list-style-type: none"> <li>▪ Extensive survey was performed during design. Contingency factor was included in the identified quantity</li> <li>▪ Continuous inspections to identify additional leaks after initial ones have been sealed.</li> </ul>	Design Consultant B & T Engineering Contractor Consultant Construction Manager	Pre and Post award.
S-5 Inter agency coordination / agreements	<ul style="list-style-type: none"> <li>▪ Public –Outreach</li> <li>▪ Contractor- outreach</li> <li>▪ Coordination with other agencies and utility companies.</li> <li>▪ Coordination with B &amp; T Operations</li> </ul>	Design Consultant B & T Engineering and Operations  Consultant Construction Manager  Other agencies and utility companies	Pre and Post award.

<sup>1</sup> Based on 80% probability of occurrence



Cost Risks			
C-1 Market Conditions/Profit	<ul style="list-style-type: none"> <li>Independent Bid Cost Estimate and reconciliation</li> <li>Independent Bidability, Constructability and Operability Review(BCOR)</li> <li>Value Engineering Review</li> <li>HLC Bid results.</li> </ul>	B&T engineering and estimating staff	Prior to advertisement and award
C-2 Final system testing, commissioning and acceptance (North and South tubes)	<ul style="list-style-type: none"> <li>Commissioning activities are included and coordinated in the schedule.</li> <li>Develop and complete software programming prior to Commissioning.</li> <li>Start Commissioning concurrently with construction activities.</li> </ul>	Contractor, Design Consultant, B & T engineering, Consultant Construction Manager	During Construction
C-3 Pull Fiber Optic through the duct bank	<ul style="list-style-type: none"> <li>Proper construction phasing.</li> <li>Pull Fiber Optic cables from Vent Buildings to Portal prior to duct bank completion.</li> <li>Perform duct bank demolition and reconstruction during weeknights and weekends.</li> </ul>	Contractor, B & T engineering and Consultant Construction Manger	During construction

<sup>1</sup> Based on 80% probability of occurrence

# November 2014 CPOC IEC Project Review



## Verrazano Narrows Bridge Upper Deck Replacement



November 17, 2014

# Budget Review

## Verrazano Narrows Bridge Upper Deck Replacement (VN80B):

- **Budget:** Currently, the project is on budget and the expenditures to date reflect the percent of project completion.



# Schedule Review

- **Schedule** - The orthotropic deck panel fabrication activity incurred three (3) months of delays as a result of additional time needed to meet the B&T quality requirements.
  - The contractor provided a recovery plan, which has been incorporated in the project schedule, and brings the project back on schedule and eliminates all delays.
  - The IEC identified some risks in the contractor's recovery plan which have been addressed by the agency. This mitigation will be continued to be monitored by the IEC.



# Findings

- After a sample panel destructive testing showed manufacturing nonconformance, the following steps were taken:
  - Submittal of a Non-Conformance Report (NCR) by the project team suggesting design modifications & enhancements to the Quality Control Plan.
  - A peer review group has reviewed the NCR, and agreed with the proposed approach.
- In the opinion of the IEC, the appropriate steps were taken after the discovery of the nonconformance.



# November 2014 CPOC IEC Project Review



**RK-65A**

**RFK Bridge Bronx Plaza Deck Reconstruction**

**&**

**BB-28/28S, BB-54**

**Hugh Carey Tunnel Restoration**

**&**

**QM-40/40S, QM-18**

**Queens Midtown Tunnel Restoration**

**November 17, 2014**



# IEC Findings

- **Bronx Toll Plaza (RK-65A)**
  - The lowest bid for the project was approximately 4% **above** the engineer's estimate.
  - Based on the 80<sup>th</sup> percentile risk-based results, the IEC finds the following:
    - **Budget:** The 80<sup>th</sup> percentile bid risk of \$213.8M was realized. The project bid was \$3.5M above the budgeted contract cost. A funding source for the \$3.5M overrun needs to be identified.
    - **Schedule:** The schedule mitigations previously identified by B&T should be incorporated into the contractor's schedule submission.



# IEC Findings

- **Hugh Carey Tunnel Restoration (BB-28/28s, BB-54)**
  - The lowest bid for the project was approximately 4% **below** the engineer's estimate.
  - Based on the 80<sup>th</sup> percentile risk-based results, the IEC finds the following:
    - Budget: The bid risk has been mitigated.
    - Schedule: A draft project schedule will be submitted within 30 days of the award whereby 5 months of project schedule contingency risk are to be evaluated at that time.



# IEC Findings

- **Queens Midtown Tunnel Restoration (QM-40/40s, QM-18)**
  - Risk assessment workshop conducted on September 15-16, 2014.
  - Review of preliminary results with all participants in late October 2014.
    - The total project budget is within the range of 80<sup>th</sup> percentile risk based project cost.
    - The overall project schedule has a potential of 7 months of un-mitigated schedule project risk which will be mitigated with 7 months of project contingency.
  - Final report due in November 2014.



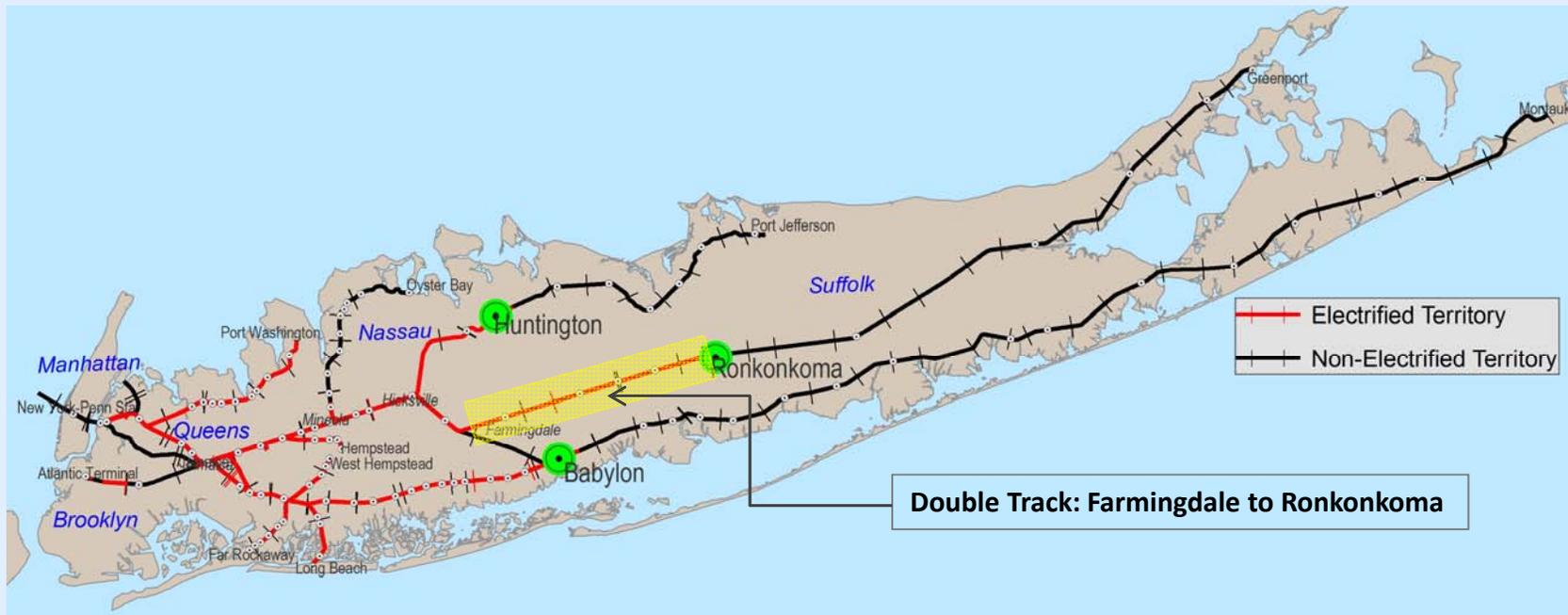
# Capital Program Oversight Committee

Long Island Rail Road  
Main Line Double Track Project



# LIRR's Main Line

- 1988 – Electrification to Ronkonkoma provides a one-seat ride and reduced commute time to Penn Station from Central Suffolk County by 20 to 30 Minutes



- Today, the Main Line track between Farmingdale and Ronkonkoma (17.9 miles) consists of 12.6 miles of Single Track. The only existing double track segments are located in stations and passing sidings. 5.3 miles are currently double tracked.
- The Single-track operation makes for fragile operations, makes it difficult to recover from disruptions & imposes scheduling constraints

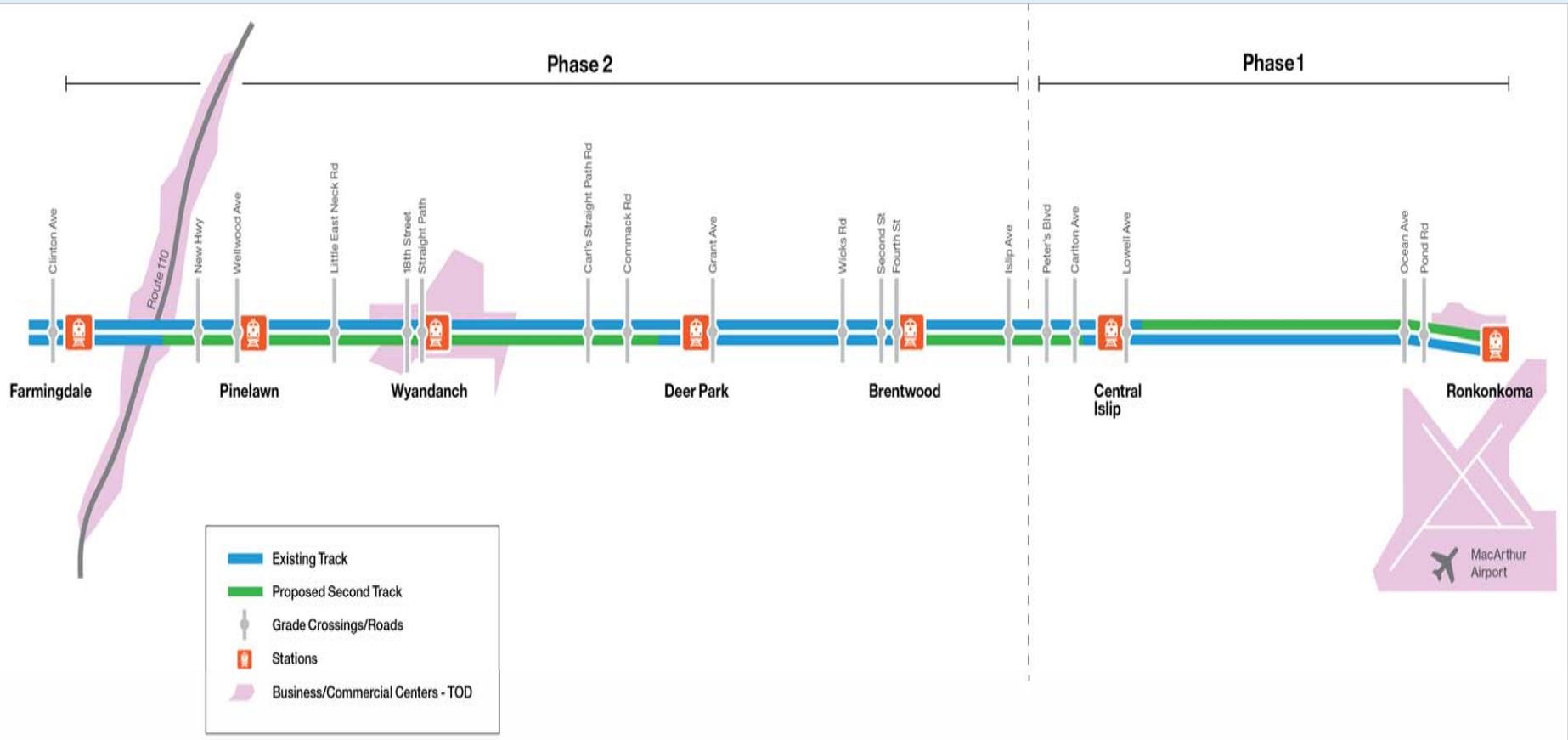


# Double Track – Service Benefits

- **Allows for Half-Hour, Off-Peak Service East and West Direction**
- **Increase Train Service Reliability on one of LIRR’s Busiest Branches**
  - Improve below average On-Time Performance
  - Increase operating capacity
  - Improve recovery from service disruption
  - Relieve strain on single track capacity
  - Reduced busing programs and more efficient scheduling of maintenance
- **Increase Reverse Peak and Intra-Island Rail Travel Opportunities**
- **Supports Opportunities for Additional Rail Service in the Future**
- **Second Track will be Completed Entirely Within the Existing LIRR ROW, NO Property Acquisition is Needed**



# Main Line Double Track Phase 1 and Phase 2 Construction



## Phase 1 - \$138M (2010-2014 Capital Program)

- 5.3 Miles of Track

## Phase 2 - \$250M (Proposed 2015-2019 Capital Program)

- 7.3 Miles of Track
- New Platforms at Wyandanch and Pinelawn Stations

# Double Track Project Scope

RIGHT OF WAY & TRACK	SWITCHES , POWER & SIGNAL SYSTEMS
<ul style="list-style-type: none"><li>• <b>Widen Track Beds, and Improve Drainage</b></li><li>• <b>Install Retaining Walls &amp; Right of Way Fencing, where required</b></li><li>• <b>Modified grade crossings to accommodate second track</b></li><li>• <b>Complete full length of Double Track</b></li></ul>	<ul style="list-style-type: none"><li>• <b>New switches / crossovers / interlockings</b></li><li>• <b>Power upgrades/modifications as required ( i.e. circuit breakers, cable, control wire at substations)</b></li><li>• <b>Install Third Rail</b></li><li>• <b>Signal system upgrades/ modifications/ rehabilitation, as required</b></li></ul>



**Retaining Wall Construction**



**Switches and Interlockings**



**Signal and Third Rails Systems**

MTA Long Island Rail Road

# Double Track Project Scope (Con't)

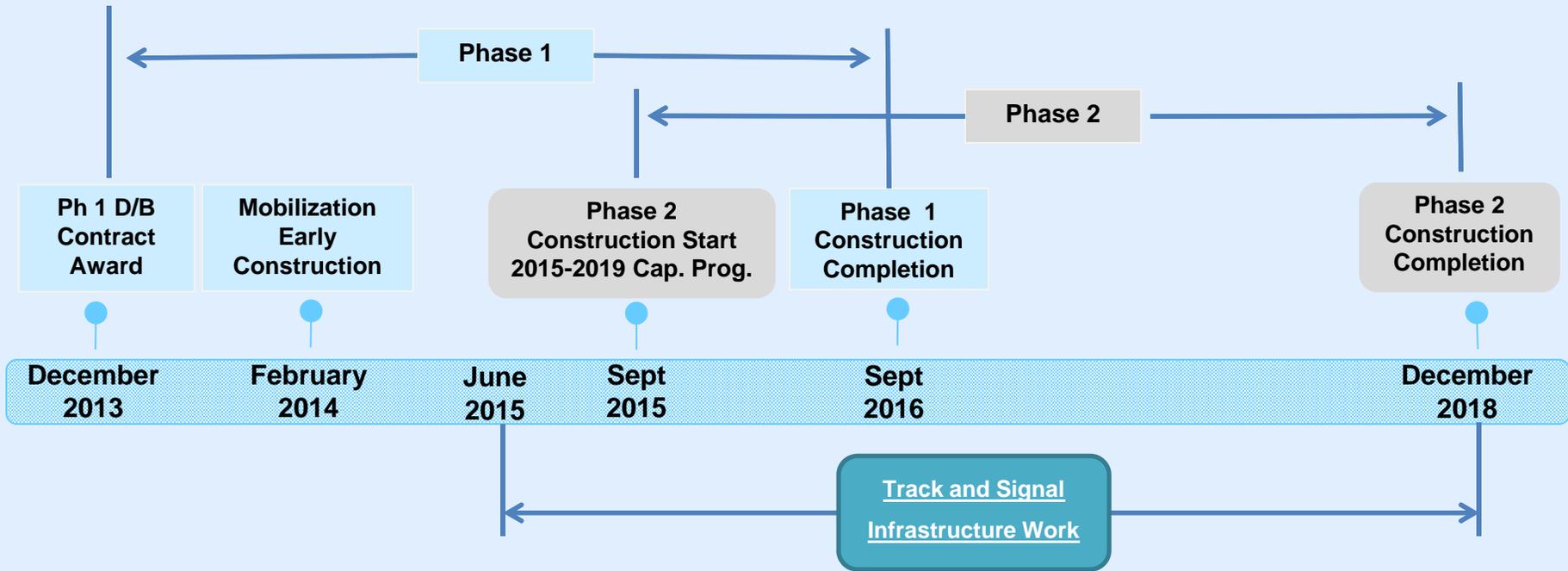
## PHASE II STATION ELEMENTS

- **Wyandanch Station:** A new south platform along with associated station facilities
- **Pinelawn Station:** New north & south platforms along with a new station waiting room



# Double Track – Schedule

## Phase 1 and Phase 2 Construction



### Phase I - West of Central Islip to Ronkonkoma

- Award of Design/Build Contract (Civil and Structural work) Dec 2013
- Completion of Design/Build Construction July 2015
- Track and Systems Installation May 2015 - Sept 2016

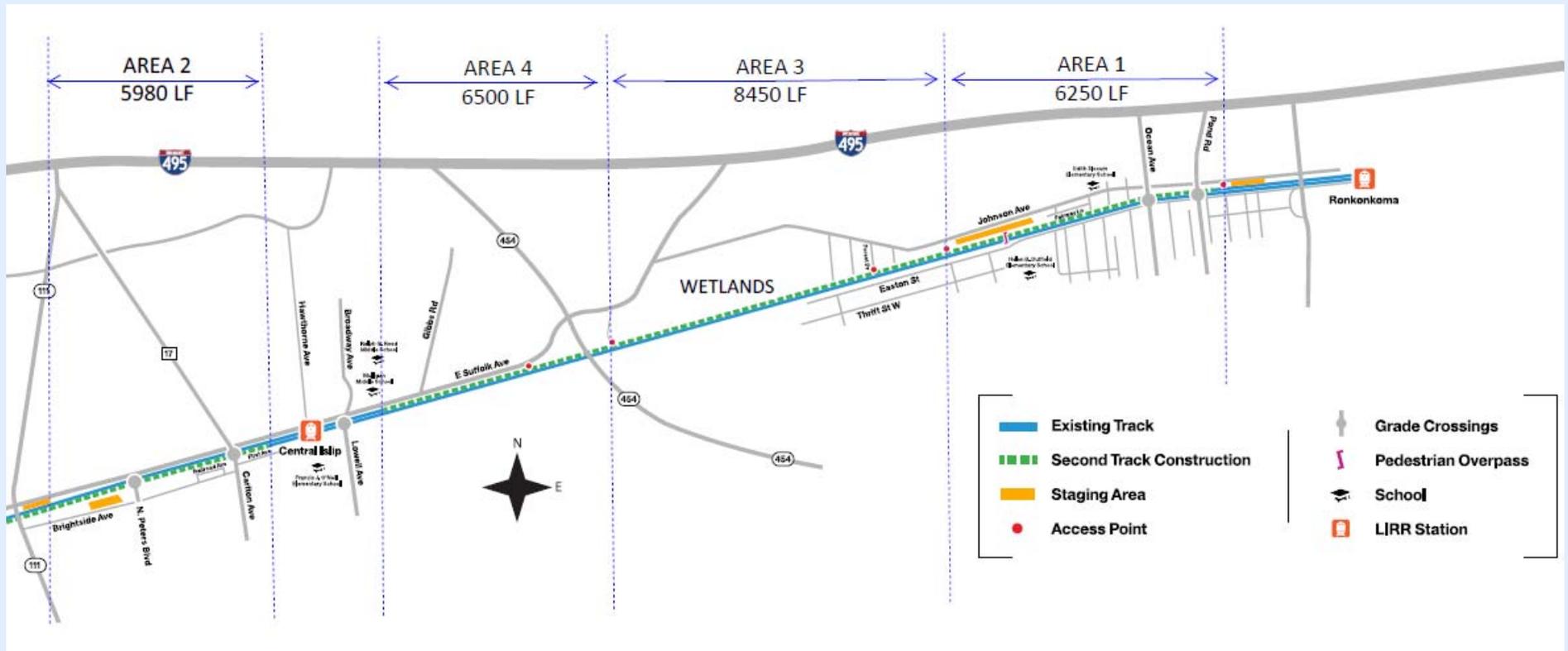
### Phase 2 - Farmingdale to West of Central Islip

- Proposed in the 2015-2019 Capital Program
- Prelim. Design for Design Build March 2015
- Award of Design/Build Contract (Civil and Structural work) Sept 2015
- Completion of Design/Build Construction July 2017
- Track and Systems Installation April 2017 – Dec 2018

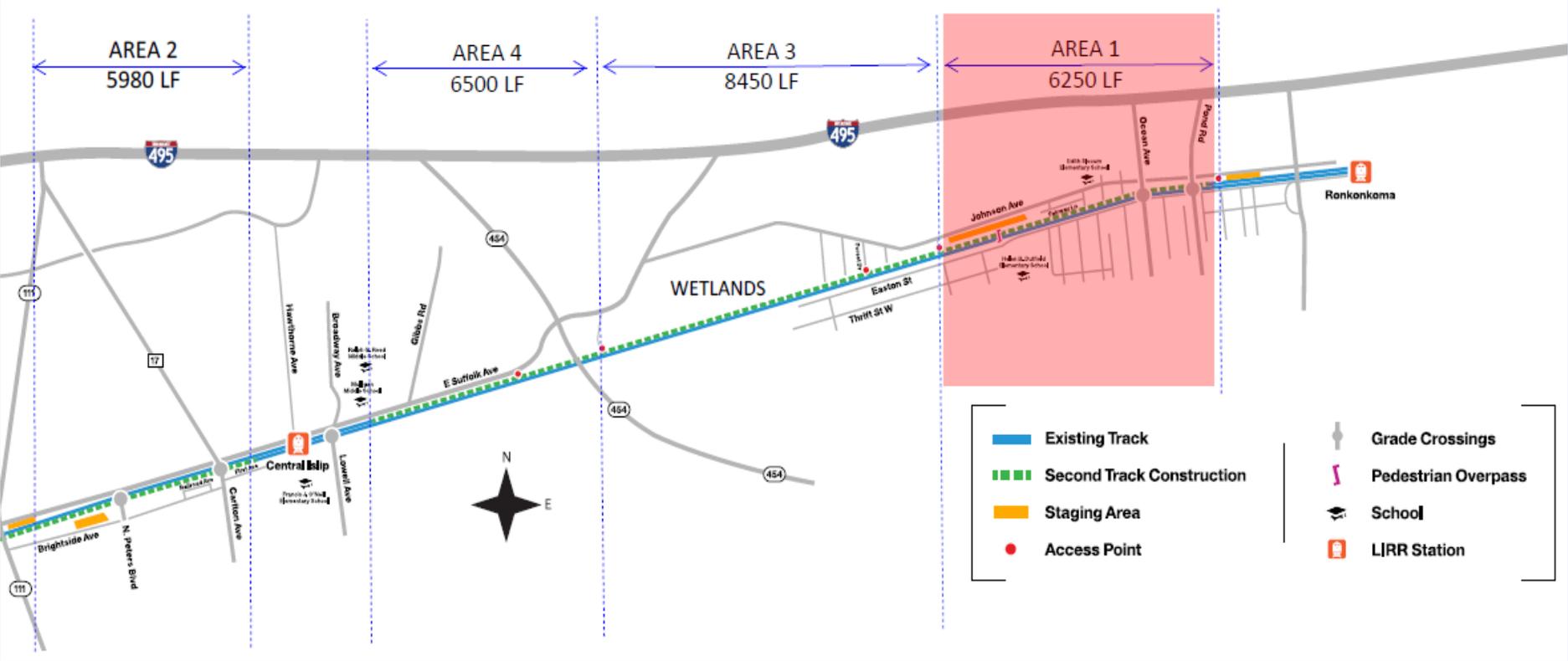


# Double Track – Phase I

Project was divided into 4 work areas to allow various work elements to be progressed concurrently



# Area 1



- █ Existing Track
- █ Second Track Construction
- █ Staging Area
- Access Point
- Grade Crossings
- Pedestrian Overpass
- School
- LIRR Station



# Area 1

- 6,250 lf. long
- No retaining walls
- Pedestrian Bridge relocation
- Wide ROW allows for staging areas
- Good site access



# Area 1



**VIDEO FOR AREA 1**

**AREA 1 LOOKING EAST**



# Area 1 Pedestrian Bridge Relocation

- Pedestrian bridge moved the night of 9/26/14 during a prescheduled outage.
- Hi-tension, Comm. and Signal Dept. coordination to move utilities



# Area 1

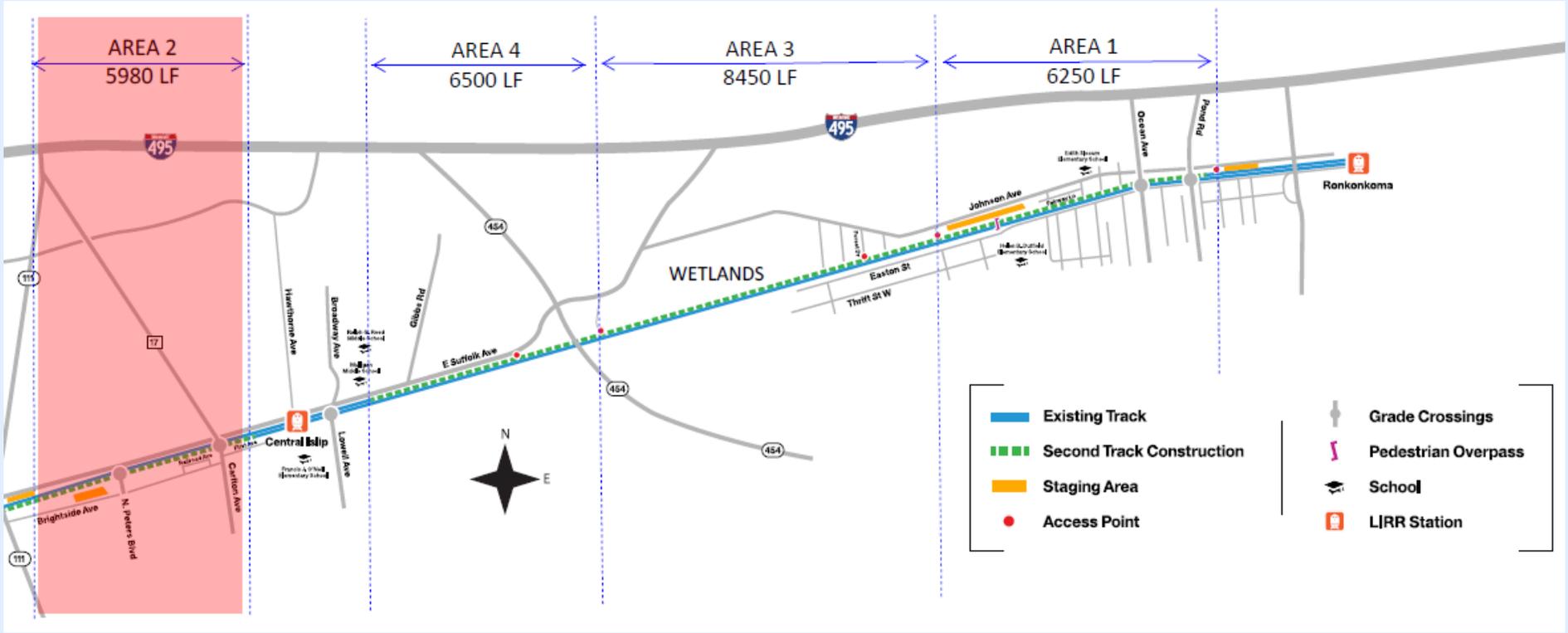
## Pedestrian Bridge Relocation

**VIDEO FOR AREA 1  
PEDESTRIAN BRIDGE**



MTA Long Island Rail Road

# Area 2



## Area 2



- 5,980 lf. Long, 2 grade crossings
- Approx. 1,600 lf of retaining walls to be installed
- Adjacent properties mostly commercial
- Good site access



MTA Long Island Rail Road

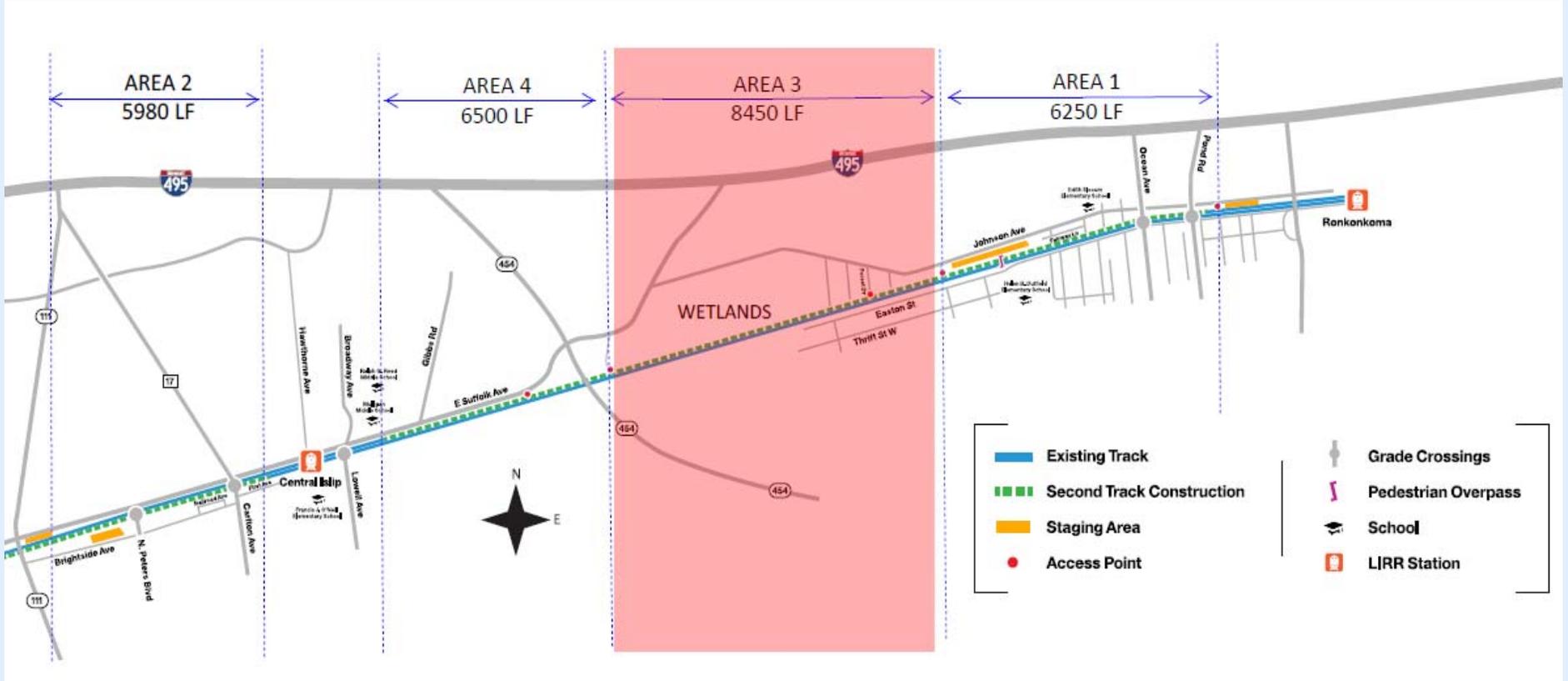


# Area 2



MTA Long Island Rail Road

# Area 3



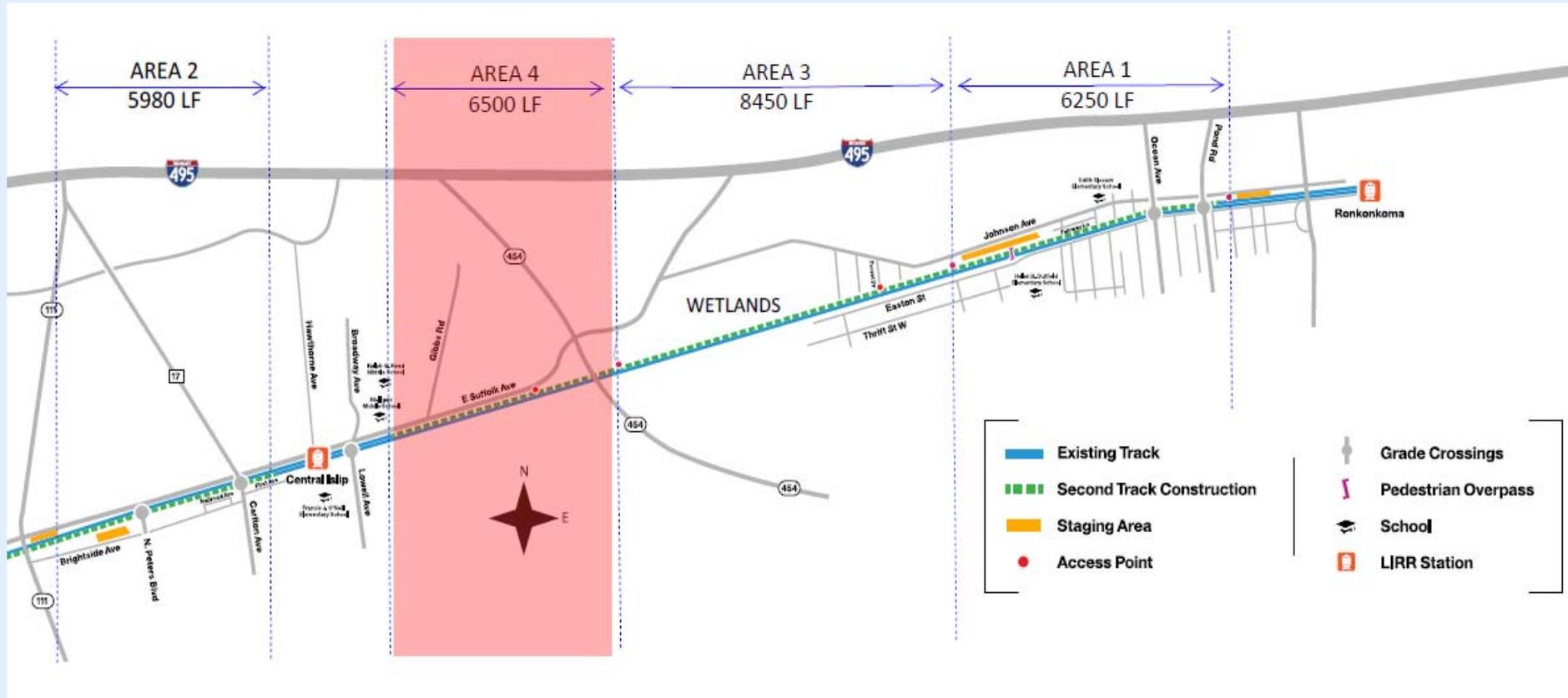
## Area 3



- 8,450 lf. Long
- 5,500 lf. of retaining walls
- Wetlands impact & mitigation req'd.
- Tall retaining walls, 12'-14' above grade
- Connetquot River State Park Preserve on the south side and the Lakeland County Park on the north
- Limited site access



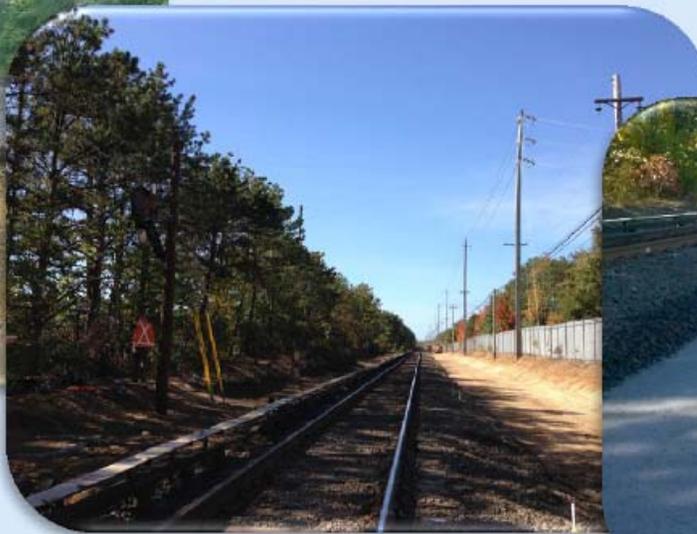
# Area 4



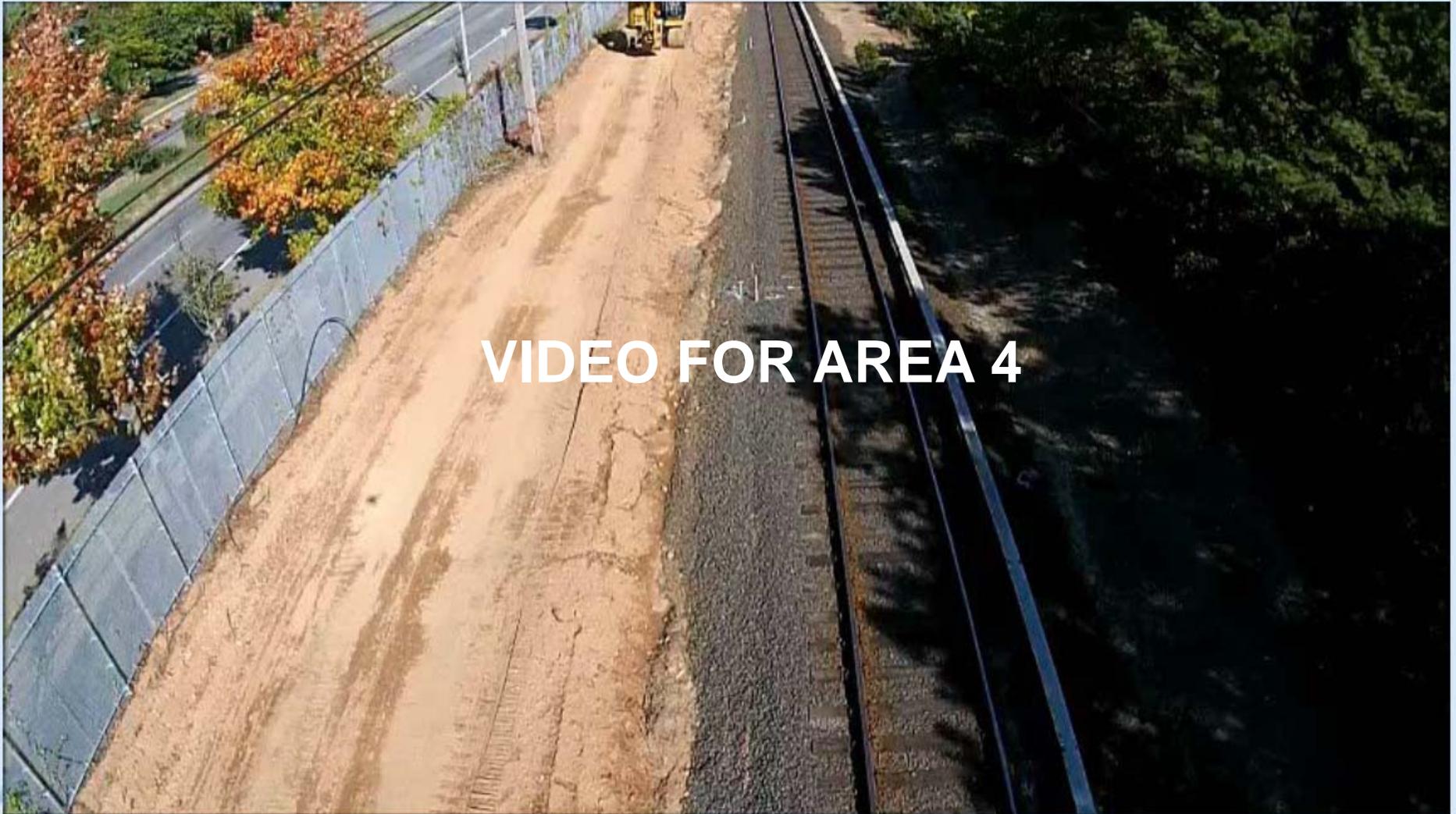
MTA Long Island Rail Road

# Area 4

- 6,500 lf. long
- Approx. 1,400 lf retaining walls
- Tallest fill walls, up to 15 ft. high
- Good site access, adjacent to Suffolk Ave.



# Area 4

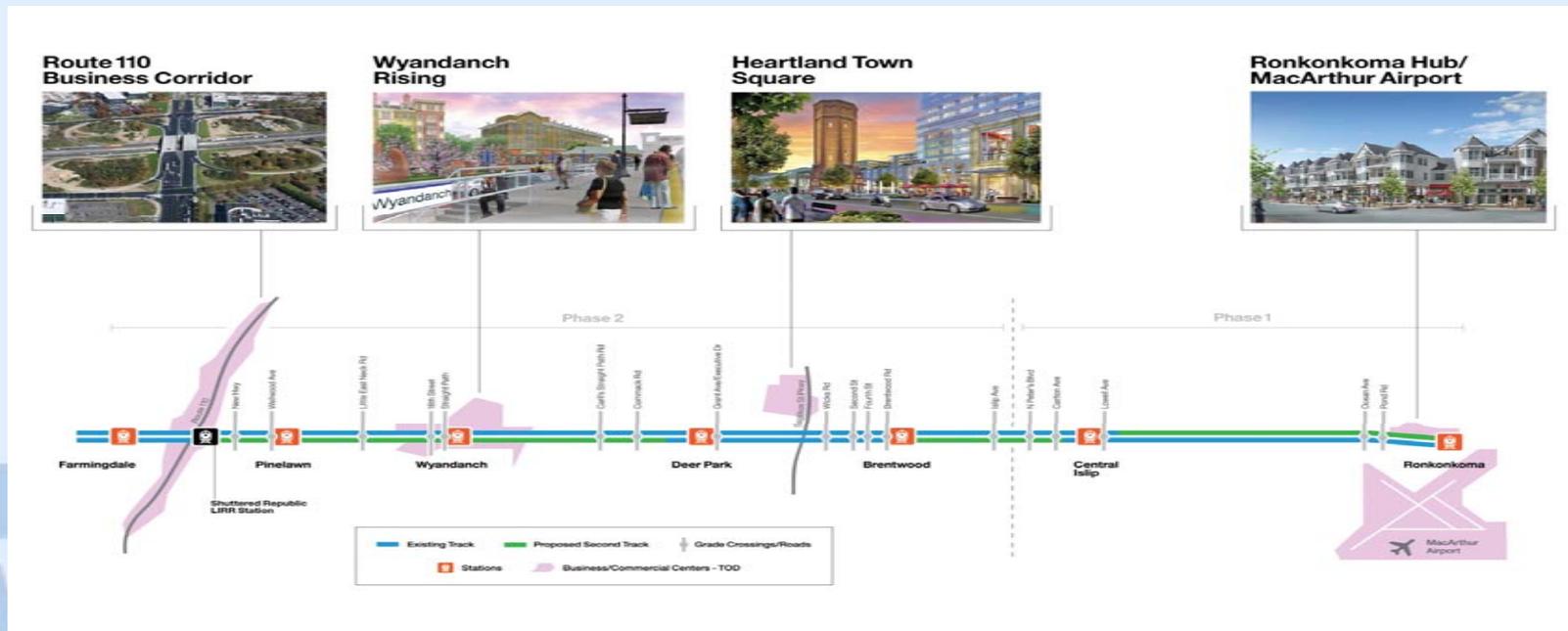


**VIDEO FOR AREA 4**

MTA Long Island Rail Road

# Main Line Double Track - Economic Development Benefits

- Supports Transit-Oriented Development
- Increase Train Service Reliability on one of the LIRR's Busiest Branches
- Enhanced regional connectivity to MacArthur Airport (via Ronkonkoma station)
- Construction jobs for Long Islanders



MTA Long Island Rail Road

# November 2014 CPOC IEC Project Review



## Main Line Double Track



November 17, 2014

# Schedule Review

## Main Line Double Track Project

- **Budget: Schedule:** The Main Line Double Track Segment 1 Civil Contract was awarded on December 26, 2013.
  - Currently there are 32 working days of delay due to coordination between 3<sup>rd</sup> party contractor and Force Account services for utility relocations.
  - The agency continues to explore opportunities of construction activity re-sequencing to recover some of this delay.
  - In the opinion of the IEC, the project is on the correct path.



# Budget Review

## Main Line Double Track Project

- **Budget:** The project is on budget and the expenditures to date reflect the percent of project completion.
- **Opportunities:** The IEC has identified and shared, cost savings opportunities for track installation by using the Automated Track Installation Machine, with the LIRR on October 31, 2013.



## Segment 1 Risk Assessment

**Risk Assessment:** The IEC participated in the Risk Assessment (RA) Workshop in June 2013. At the time of the RA the project was at 30% Design. The LIRR and IEC were active participants in developing the risk logs including estimated cost, schedule impacts, and mitigation strategies.

**Results:** The IEC is satisfied with the RA Workshop process. The P80 results of the RA, showed a project substantial completion within 1 month of the LIRR forecast, and project budget within 3% of the LIRR estimate.



# MTAPD Police Radio System Replacement

November 2014

Capital Program Oversight Committee Meeting



# MTAPD Police Radio System Replacement

- Project Description:

- This project will replace the existing radio infrastructure to improve MTAPD radio coverage and communications to a level of a “public safety grade” system.
- The new radio system will provide officers with increased coverage and uninterrupted communications at all railroad facilities, along railroad right-of-ways, and on the service streets contained within the counties in which the MTAPD operates.
- The design shall provide interoperability among the regional first responders within the MTA operational area.

- RFP For Radio System DBOM: Currently Active Procurement

- Aspects of the project are being progressed outside the DBOM Procurement. For example “In Building” Coverage (Penn Station, Atlantic Terminal) requires different type of system.

- Estimated Award: 1Q 2015



# MTAPD Police Radio System Replacement

## Overall Status

Item	Comments
Schedule	On schedule for completion November 2018
Budget/Funding	All current activities are within budget (2005-2014 Capital Programs) Some Future Activities require 2015 – 2019 Capital Funding

### Progress:

- 30% Design used for DBOM RFP (completed: Oct 2013)

### Outside DBOM:

- New portable radios distributed to MTAPD Officers (completed: Nov 2014)
- New mobile radios currently being installed in MTAPD vehicles (ongoing)
- Connecticut “Zone”, utilizing existing Connecticut Emergency Services System, completed and fully operational (beneficial use: Oct 2014)
- Radio system fully operational on Staten Island utilizing NYSP Metro 21 System (beneficial use: July 2013)
- GCT Radio System, utilizing Metro 21 System, currently in progress (beneficial use April 2015)

# MTAPD Police Radio System Replacement

## Issues

- **“In Building” Coverage requires approval of 2015 – 2019 Capital Program Funding by July 2015 to meet schedule.**

### **180 Day Look Ahead:**

- Award Radio System contract (1Q 2015)
- Radio System Contractor to provide Project Management Plan, Schedule (June 2015)



# Customer Service Initiatives



CPOC

November 2014

MTA Metro-North Railroad



# Discussion

- Background
- Review Business Case
- Recommendations/Funding



# Background

- Metro-North has been working on a number of initiatives to enhance the provision of real time information:



MTA Metro-North Railroad



# Background



*A business case was completed to refine the strategy and incorporate other elements*

MTA Metro-North Railroad



# Background - Business Case

Metro-North formulated a Business Case for 10 Customer Service Initiatives:

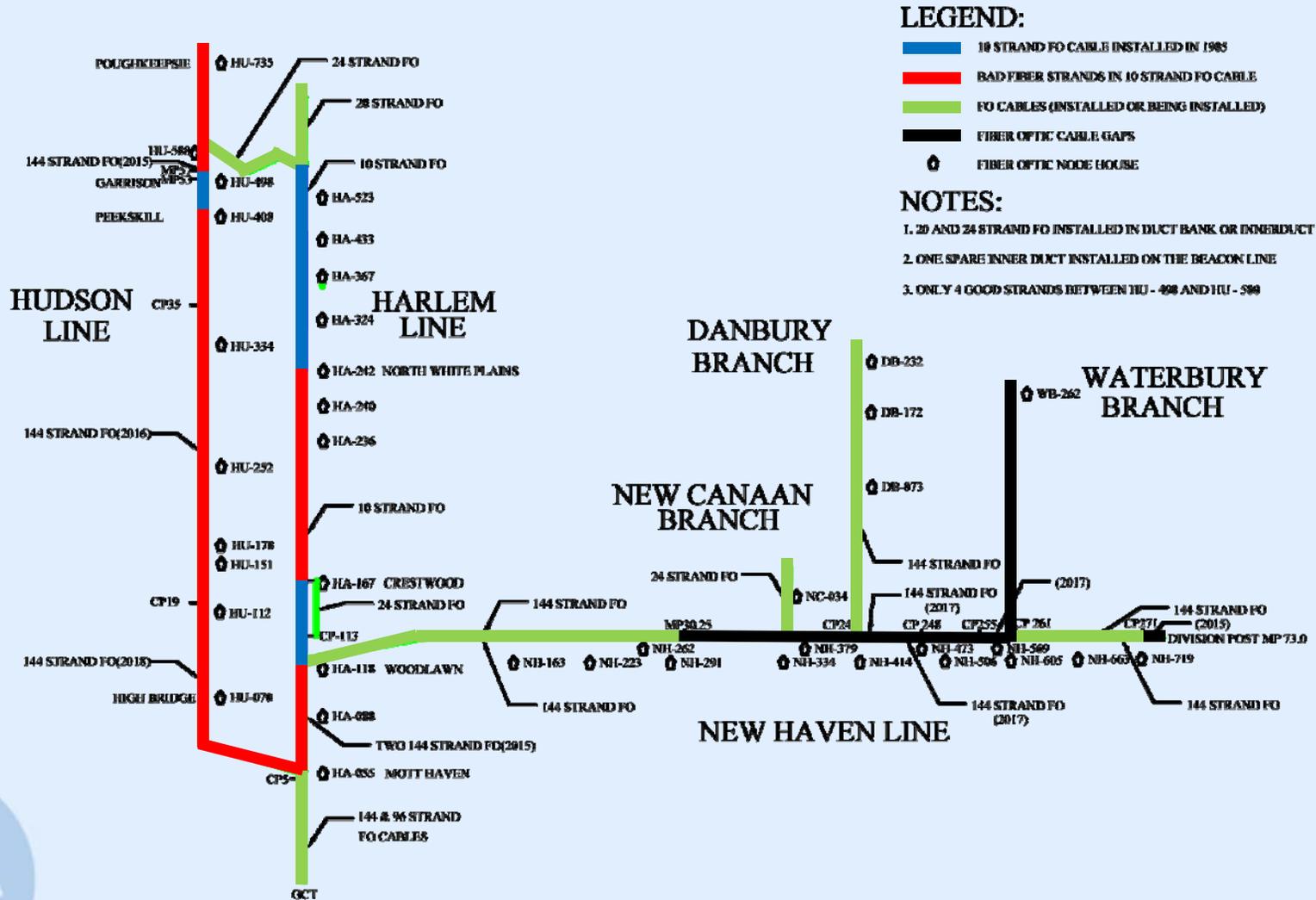
- 1. Increase Communication network bandwidth**
- 2. Provide accurate real time train information**
- 3. Provide Visual Information Displays at all passenger stations**
- 4. Provide a higher level of advertising and vending opportunity**
- 5. Upgrade PA systems at all passenger stations**
- 6. Increase monitoring & recording capability of CCTV systems**
- 7. Centralize control and command functions to the Security Command Center**
- 8. Provide faster and more robust data transfer capability for the existing TVM System and Customer Assistance Telephones**
- 9. Provide front-line employees with the same real-time information as provided to customers by providing a local area network (LAN) in stations**
- 10. Remotely monitor and control elevators and escalators**



# Summary Conclusions

- The railroad's Stations Public Address Central Control (PENTA System) is overdue for replacement; *replacement is necessary.*
- GCT VIS system reliability and flexibility substandard; *replacement is necessary*
- Fiber optic and copper cable plant, which supports signaling and communications functions of the railroad, was determined to be in far worse condition than originally thought

# Current Condition of Fiber Optic Plant



MTA Metro-North Railroad



# Business Case Recommendations

- Short-term:

- Integrated Design for PA Central Control (Penta Replacement), GCT VIS Replacement and Customer Service Initiatives
  - Design will allow for advancement of GCT VIS as a design-build if railroad recommends this approach.
- Cellular LCD roll-out (\$1.7MM/year Operating Budget Initiative) – phased roll-out to 60 stations continues
  - Information includes Departure Time, Destination, Track, Status and Stops
- Interim PC-based Central Monitoring Existing Cameras at 525 North Broadway (9 stations)

- Intermediate/Long-term:

- Replace Fiber Optic and copper cable plant under a variety of either stand-alone, “Sandy recovery” or signal system replacement projects
- Implement PA Central Control Replacement, GCT VIS Replacement and phased rollout of Customer Service Initiatives



# Funding

- 2010-2014 Capital Program

- Design GCT VIS; PENTA replacement and CSI improvements (award 1<sup>st</sup> quarter 2015)
- Design Fiber Optic Upgrade Fiber Optic Upgrades – Woodlawn to Brewster (award 1<sup>st</sup> quarter 2015)
- Construct Security Control Command Center

\$ 55 million

- Proposed 2015-2019 Capital Program\*

- GCT VIS Replacement \$ 60 million
- PENTA Replacement \$ 3 million
- Phased CSI Implementation \$ 99 million

- Separately, the Upper Hudson Signal System replacement is proposed for the 2015-2019 Capital Program. Fiber replacement is included in this project.
- Seeking CDOT funding participation for other Connecticut stations.



---

# **MTA Capital Program Commitments & Completions**

## **through October 31, 2014**

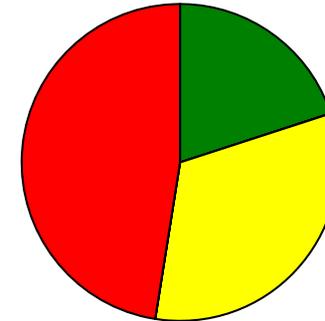
### Capital Projects – Major Commitments – October 2014

55 major commitments are planned for 2014, totaling \$6.5 billion; 40 are reported on through October. There are 32 slips through October, of which 19 commitments are late and 13 others were late, but have now been achieved. All variances are discussed on the following pages.

Agencies have committed a total of \$3.5 billion through October, versus a \$5.1 billion goal. The YTD shortfall is mostly due to delays, including the purchase of 256 Articulated Buses, South Ferry Sandy restoration work, two East Side Access projects and RFK Deck Replacement. Despite a \$1.6 billion YTD shortfall, the MTA still forecasts meeting 96% of its year-end goal in large part due to \$0.6 billion in unplanned MTACC commitments to date, \$129 million in additional cost for ESA's GCT Concourse Finishes contract, and \$1.1 billion of YTD goals that are late but still forecasted to be committed within the year.

For YTD commitments, 20% are on time and 65% are within budget. By year-end, 31% of major commitments are forecasted to be achieved on time and 65% are forecasted to be within budget. 45 of 55 major commitments are forecasted to be committed within 2014.

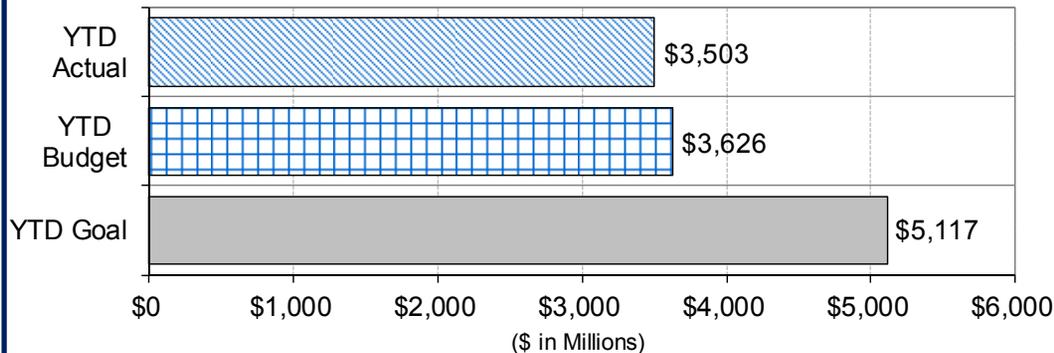
### Year-to-Date Major Commitments



	Count	Percent	Change from Prior Month
<b>GREEN</b> = Commitments made/forecast within Goal	8	20%	-
<b>YELLOW</b> = Commitments delayed beyond Goal (already achieved)	13	33%	↑ 1
<b>RED</b> = Commitments delayed beyond Goal (not yet achieved)	19	48%	↑ 4
<b>Total</b>	<b>40</b>	<b>100%</b>	<b>↑ 5</b>

### Budget Analysis

2014 Annual Goal	\$6,545	(\$ in millions)
2014 Annual Forecast	96%	of Annual Goal
Left to Complete	44%	(\$2,792)



### Year-to-Date Agency Breakdown

Agency	Prior month variance		
	GREEN	YELLOW	RED
<b>New York City Transit</b>	2	7	6
<b>Long Island Rail Road</b>	1	3	1
<b>Metro-North Railroad</b>	1	4	+3 RED
<b>Bridges and Tunnels</b>	3	2	+2 RED
<b>Capital Construction Company</b>	1	3	2
<b>MTA Bus Company</b>	3	+1 YELLOW	-1 RED
<b>MTA Police Department</b>	1		

## Capital Projects – Major Commitments – October 2014 – Schedule Variances

*Actual Results Shaded*

Project	Commitment	Goal	Forecast	Project	Commitment	Goal	Forecast
<b>19 All-Agency Red Commitments (5 new this month; net increase of 4)</b>				<b>Sandy Restoration (cont'd)</b>			
<b>NYCT</b>				<b>LIRR</b>			
<b>Signals &amp; Communications</b>				<b>Structures</b>			
PA/CIS: Furnish & Install Cabinets, 89 Stations	Construction Award	Jun-14 \$44.8M	Nov-14 \$46.3M	Clark Street Tube Restoration	Construction Award	Aug-14 \$77.4M	Feb-16 \$77.4M
Award delayed by two months due to additional time required to repackage scope for separate PA and CIS contracts. Bid opening postponed to mid September due to bid protest prior to bid opening, delaying the award by two additional months. Cost increase due to revised engineer's estimate at advertisement.				Project has been rescheduled as a result of coordination with other tube projects due to several factors, including programmatic concerns, community impacts and service impacts.			
<b>Bus Replacement</b>				<b>MNR</b>			
Purchase 256 Articulated Buses	Purchase Award	Jun-14 \$245.5M	Jun-15 \$219.1M	<b>Stations</b>			
Delay due to extended negotiations with vendors and an allowance for possible State review prior to award. Cost decrease reflects latest market conditions.				GCT Trainshed/Tunnel Structure			
<b>Depots</b>				Construction Award			
Bus Command Center	Construction Award	Aug-14 \$50.9M	Mar-15 \$42.7M	Sep-14 \$18.1M			
The project award has been delayed due to additional scope added to the contract, such as ADA compliance and electrical work, which require additional drawings and specifications. Additional addendum for scope addressing comments on structural and foundation design to delay project beyond year-end. Cost reflects Memorandum of Understanding with MTA Bus and refined engineer's estimate at advertisement.				Nov-14 \$18.6M			
<b>Sandy Restoration</b>				<b>Track</b>			
Rutgers and Cranberry Tubes	Construction Award	Jun-14 \$154.0M	Feb-16 \$161.4M	<b>2014 Cyclical Track Program - (New Item)</b>			
The Rutgers tube award has been moved to February, 2016 in order to minimize the impact to the public. Previously Rutgers and Cranberry were a single contract, but are now to be split into separate contracts. To allow for repackaging, the Cranberry award has consequently slipped to December, 2014. Project cost adjusted to reflect estimates of separated contracts.				Construction Award			
				Oct-14 \$12.7M			
				Dec-14 \$12.8M			
				Due to other competing priorities, including the Bronx Remediation Project, work was delayed and is expected to commence in December 2014.			
<b>Shops &amp; Yards</b>				<b>Harmon Shop Improvements - (New Item)</b>			
South Ferry Station Complex	Construction Award	Jul-14 \$221.3M	Nov-14 \$305.3M	Construction Award			
Project delayed to resolve design coordination issues and regulatory requirements. Cost increase reflects added scope, including leak mitigation, circuit breaker house and relay room work, and an unfavorable bid.				Oct-14 \$26.8M			
				Dec-14 \$27.8M			
				Delay due to extended design-build procurement process.			

## Capital Projects – Major Commitments – October 2014 – Schedule Variances

*Actual Results Shaded*

Project	Commitment	Goal	Forecast
<b>19 All-Agency Red Commitments (5 new this month) (cont'd)</b>			
<i>Sandy Restoration</i>			
<b>Power Infrastructure Restoration: 4 Substations - (New Item)</b>	Construction Award	Oct-14 \$48.5M	Dec-14 \$47.2M
Delay due to prioritization of design work on Harlem River Lift Bridge facility houses over design of substations. Cost decrease represents refined estimate.			
<b>MTA Bus</b>			
<i>Depots</i>			
Bus Command Center	Construction Award	Aug-14 \$8.7M	Mar-15 \$14.2M
The project award has been delayed due to additional scope added to the contract, such as ADA compliance and electrical work, which require additional drawings and specifications. Cost reflects Memorandum of Understanding with NYCT and refined engineer's estimate at advertisement.			
<i>Buses</i>			
45 Diesel Buses	Purchase Award	Sep-14 \$23.8M	Dec-14 \$23.8M
Delay is due to the determination by the NYS Comptroller to undertake a procurement review for this project.			
75 Articulated Buses	Purchase Award	Sep-14 \$61.6M	Dec-14 \$61.6M
Delay is due to the determination by the NYS Comptroller to undertake a procurement review for this project.			
<b>MTACC</b>			
<i>East Side Access</i>			
GCT Concourse & Cavern Finishes (CM014B)	Construction Award	Jul-14 \$195.5M	Dec-14 \$324.7M
Change in procurement methodology to an RFP process has added significant time to the procurement period. Forecast value increased due to the decision to include option in base contract.			

Project	Commitment	Goal	Forecast
<i>East Side Access (cont'd)</i>			
Harold Structures Part 3D (CH057)	Construction Award	Aug-14 \$106.5M	Apr-15 \$122.5M
Award date has been updated to reflect adjustments to the overall Harold schedule and in order to allow for assessment of completed work and resource availability in the area of the Harold interlocking. Cost increase reflects repackaging process.			
<b>MTA Police Department</b>			
<i>PD Communications</i>			
MTA Police Radio Project	Design-Build Award	Jul-14 \$90.3M	Jan-15 \$90.3M
A delay in starting the procurement process has pushed back the forecast project award date.			
<b>Bridges &amp; Tunnels</b>			
<i>Roadways &amp; Decks</i>			
<b>Deck Replacement - Bronx Toll Plaza - RFK Bridge - (New Item)</b>	Construction Award	Oct-14 \$190.0M	Dec-14 \$190.0M
Delay due to additional time required to answer bidder inquiries.			
<b>Paint - Plaza and Approach Ramps - (New Item)</b>	Construction Award	Oct-14 \$16.5M	Dec-14 \$16.5M
Delay due to additional time required to answer bidder inquiries.			

## Capital Projects – Major Commitments – October 2014 – Schedule Variances

*Actual Results Shaded*

Project	Commitment	Goal	Forecast
---------	------------	------	----------

### 13 All-Agency Yellow Commitments (1 new this month)

#### NYCT

##### Signals & Communication

34th Street Interlocking/ 6th Ave	Construction Award	Feb-14 \$226.9M	Apr-14 (A) \$170.0M
Delay was due to time needed to resolve a statement of adverse information (SAI) finding with a signals supplier. The budget variance is favorable due to a low bid.			
Passenger Station LAN: 30 Stations	Construction Award	Mar-14 \$28.1M	May-14 (A) \$26.5M
Project award was delayed 2 months as a result of bid period extension to address proposers' questions. The forecast cost decreased reflecting a low bid.			
West 4th Interlocking- 6th Avenue	Construction Award	Jun-14 \$221.2M	Jul-14 (A) \$155.3M
Award delayed by a month to resolve concerns of a signals supplier meeting production schedule. Project cost decreased reflecting a favorable bid.			

##### Stations

Ozone Park - Lefferts Blvd Station Renewal and ADA Liberty	Construction Award	Apr-14 \$28.0M	May-14 (A) \$23.9M
Award delayed due to a review of a supplier which was required due to prior adverse finding. The supplier was cleared. Cost decreased due to good bid savings.			
Station Renewal: Culver Line, 7 Stations	Construction Award	Jun-14 \$106.1M	Sep-14 (A) \$132.2M
Delay and cost increase reflects additional scope, including component work at two additional locations. Additional delay caused by extended time needed for procurement sign-off.			

##### Track & Switch

Track & Switch Program (18 Projects) - 1st QTR	Construction Start	Mar-14 \$174.1M	May-14 (A) \$174.2M
All but one of 18 projects was awarded in first quarter. Track work on White Plains Rd. (\$20M) rescheduled to May, 2014. Construction delayed due to issues related to track access.			

Project	Commitment	Goal	Forecast
---------	------------	------	----------

##### Sandy Restoration

St. George Interlocking	Construction Award	Jul-14 \$118.7M	Sep-14 (A) \$119.9M
Project award was delayed due to addition of Tower B restoration work to contract. Cost increase reflects added scope.			

##### LIRR

##### Track

2014 Annual Track Program	Construction Award	Apr-14 \$50.9M	May-14 (A) \$50.6M
The overall award slipped one month as a result of delays in processing the final track program commitments.			
Jamaica Capacity Improvements	Construction Award	Feb-14 \$56.6M	May-14 (A) \$46.6M
Delay due to contract addenda, requests for extensions from vendors, evaluation of Means and Methods and Value Engineering opportunities. Forecast reflects good bid savings.			

##### Stations

Escalator Program	Construction Award	Apr-14 \$11.2M	Aug-14 (A) \$11.2M
Delay due to contract addenda, requests for extensions from vendors, evaluation of Means and Methods and Value Engineering opportunities. Forecast reflects good bid savings.			

##### MTACC

##### East Side Access

System Package 1 (CS179)	Construction Award	Feb-14 \$366.9M	Mar-14 (A) \$366.9M
Delay was due to additional time needed to finalize contract award documentation.			
System Package 3 (VS086)	Construction Award	Feb-14 \$21.8M	Jun-14 (A) \$21.8M
Delay was due to additional time needed to finalize contract award documentation.			
<b>System Package 4 (CS084) - (New Item)</b>	Construction Award	Jul-14 \$114.7M	Oct-14 (A) \$78.4M
Delay due to additional time needed to finalize contract award documentation and extension of bid period. Cost decrease due to good bid savings.			

## Capital Projects – Major Commitments – October 2014 – Budget Only\* Variances

*Actual Results Shaded*

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

Project	Commitment	Goal	Forecast
<b>2 All-Agency Budget Only Commitments (0 new this month)</b>			
<b><i>Bridges &amp; Tunnels</i></b>			
<b><i>Roadways &amp; Decks</i></b>			
Deck Replacement - Bronx Toll Plaza - Training Facility, Design/Build	Design/Build	Jun-14 \$11.8M	Jun-14 (A) \$13.1M
Increase in actual value reflects additional scope, including modifications to building design specifications in order to safely coordinate with ongoing construction projects at the bridge.			
<b><i>Sandy Restoration</i></b>			
Hugh Carey Tunnel- Structural	Construction Administration	May-14 \$11.7M	May-14 (A) \$8.5M
Decrease in actual value reflects good bid savings.			

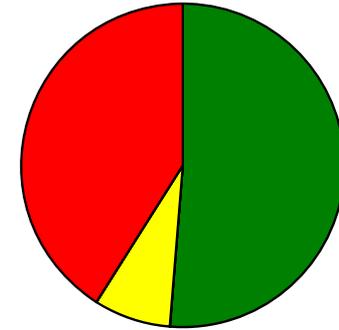
### Capital Projects – Major Completions – October 2014

46 major completions are planned for 2014, totaling \$5.7 billion; 39 are reported on through October. Fifteen projects are on-time and five additional were completed early. There are nineteen delays through October, of which sixteen are forecast as late and three were forecast as late but has now been completed. These variances are explained on the following pages.

Agencies have completed \$3.3 billion through October versus a \$5.1 billion year-to-date goal. The shortfall is due mostly to year-to-date slips, which collectively represent about \$1.8 billion. By year-end, the MTA forecasts meeting 71% of its overall \$5.7 billion goal. The decrease in annual budget forecast, from last month's forecast of 77%, is primarily due to the delay in completion of the Fulton Transit Center Building (4F) contract for systems commissioning.

For YTD completions, 51% are on time and 79% are on budget. By year-end, currently 52% of major completions are forecasted to be on time and 78% are forecasted to be on budget. 33 of 46 major completions are forecasted to be achieved within 2014.

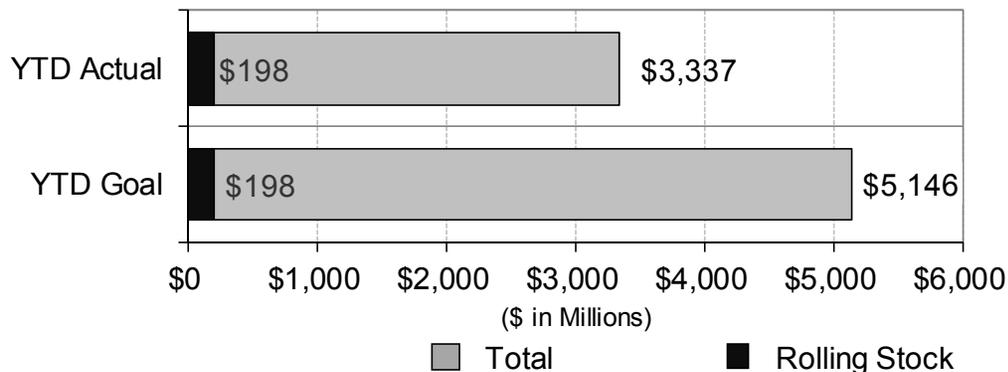
### Year-to-Date Major Completions



	Count	Percent	Change from Prior Month
<b>GREEN</b> = Completions made/forecast within Goal	<b>20</b>	<b>51%</b>	↑ 1
<b>YELLOW</b> = Completions delayed beyond Goal (already achieved)	<b>3</b>	<b>8%</b>	↑ 2
<b>RED</b> = Completions delayed beyond Goal (not yet achieved)	<b>16</b>	<b>41%</b>	↑ 1
<b>Total</b>	<b>39</b>	<b>100%</b>	↑ 4

### Budget Analysis

2014 Annual Goal \$5,721 (\$ in millions)  
 2014 Annual Forecast 71% of Annual Goal  
 Left to Complete 18% (\$711)



### Year-to-Date Agency Breakdown

Agency	Prior month variance		
	GREEN	YELLOW	RED
<b>New York City Transit</b>	6	2	5
	+1 GREEN	+1 YELLOW	---
<b>Long Island Rail Road</b>	2	1	1
	---	---	+1 RED
<b>Metro-North Railroad</b>	3	1	1
	---	+1 YELLOW	-1 RED
<b>Bridges and Tunnels</b>	4	0	0
	---	---	---
<b>Capital Construction Company</b>	5	6	0
	---	---	+1 RED
<b>MTA Bus Company</b>	2	0	0
	---	---	---
<b>MTA Police Department</b>	1	0	0
	---	---	---

## Capital Projects – Major Completions – October 2014 – Schedule Variances

## Actual Results Shaded

Project	Completion	Goal	Forecast
<b>16 All-Agency Red Completions (3 new this month; net increase of 1)</b>			
<b>NYCT</b>			
<i>Track &amp; Switch</i>			
Track & Switch Program (9 Projects) - 1st QTR	Construction	Mar-14 \$58.5M	Nov-14 \$62.8M
All installations on the 6th Ave line have been completed except one, which requires a pre-final inspection and punch list work to be finished. General Orders for remaining work were not available until June 2014.			
Track & Switch Program (19 Projects)- 2nd QTR	Construction	Jun-14 \$193.3M	Mar-15 \$189.M
2nd Quarter completions were impacted by scheduling conflicts, particularly on the 7th Ave and Concourse Lines. In addition, coordination for piggybacking opportunities for remaining work on the Myrtle Ave Line has resulted in delays. The value of the delayed projects represents \$115M of the \$193M goal.			
Track & Switch Program (4 projects) 3rd Quarter	Construction	Sep-14 \$33.7M	Dec-14 \$36.5M
Completion of two track projects was delayed due to a general order for 7th Ave Line work being rescheduled.			
<i>Stations</i>			
Station Rehab: Smith-9th St & 4th Ave	Construction	Jul-14 \$40.7M	Mar-15 \$44.1M
Due to work coordination issues, completion of rehab work is forecasted for September, excluding manuals, As-built drawings and other deliverables. NYCT forecasts Substantial Completion for 1st Qtr 2015. Cost increase reflects extended project duration.			
<i>Line Structures</i>			
<b>Culver Viaduct Rehab Ph 3 - (New Item)</b>	Construction	Oct-14 \$49.8M	Oct-15 \$62.9M
Delay attributed to a number of factors including additional steel and concrete needed due to unforeseen site conditions. Cost increase reflects additional quantities and additional scaffolding necessary to protect the public from work through project duration.			

Project	Completion	Goal	Forecast
<b>LIRR</b>			
<i>Power</i>			
<b>F Circuit Breaker House - (New Item)</b>	Construction	Oct-14 \$7.2M	Oct-15 \$7.2M
Delay due to a re-evaluation of the project's need to be informed by a power load study.			
<b>MNR</b>			
<i>Track</i>			
West of Hudson Track Program	Construction	Jul-14 \$21.2M	Dec-14 \$19.8M
Work on this project has been delayed due to re-deployment of resources for other MNR priority projects. Budget decrease reflects revised cost to complete.			
<b>MTA Bus Company</b>			
<i>Depots</i>			
Upgrade Parking Lot: JFK and Baisley Park	Construction	Jul-14 \$9.2M	Dec-14 \$9.2M
Completion delayed due to requirement from Department of Environmental Protection to reconfigure the connection to the sewer main.			
Relocate Fuel Tanks at Eastchester Depot	Construction	Sep-14 \$12.9M	Dec-14 \$13.5M
Delay and cost increase attributed to additional scope, inclusive of demolition of bus washer due to unforeseen issue with depot wall.			
<b>MTACC</b>			
<i>East Side Access</i>			
44th Street Fan Plant and 245 Park Ave Entrance (CM004)	Construction	Feb-14 \$55.5M	Nov-14 \$55.5M
The completion of this contract has been delayed due to slower construction progress and coordination issues with ongoing utility work on the adjacent street. An additional one month delay was due to water intrusion mitigation and related work.			

**Capital Projects – Major Completions – October 2014 – Schedule Variances**
**Actual Results Shaded**

Project	Completion	Goal	Forecast
<b>16 All-Agency Red Completions (3 new this month) (cont'd)</b>			
<b>MTACC (cont'd)</b>			
<b>East Side Access (cont'd)</b>			
GCT Concourse Finishes Early Work, CM014A	Construction	Apr-14 \$56.7M	Mar-15 \$56.7M
Delay is due to the need to re-design the Supervisory Control and Data Acquisition (SCADA) system and delays in delivery of medium voltage switchgear. Additional one month delay due to mitigation work for leak in facility control room that recently developed.			
Harold Structures Part 2A (CH054A)	Construction	Jun-14 \$80.0M	Apr-15 \$67.4M
Delay due to re-design of the 12 kV feeder duct bank and change order work for storm sewer construction. Budget reduced to reflect final approval of outstanding change orders.			
Harold Structures - Part 1(CH053)	Construction	Aug-14 \$326.1M	May-15 \$316.5M
Delays resulting from the cutover of the new duct bank and resource issues have impacted contract and have pushed substantial completion out of the year. Cost decrease due to final approved value of previously outstanding change order.			
<b>Fulton Center</b>			
Transit Center Building (4F)	Construction	Jun-14 \$241.7M	Jun-15 \$241.7M
Substantial completion of this contract has been delayed due to extended testing and commissioning and subsequent punchlist items.			
<b>#7 Extension</b>			
<b>Systems, Finishes, and Core &amp; Shell of Site A (Vent Building) - (New Item)</b>	Construction	Oct-14 \$580.1M	Feb-15 \$580.1M
Contract completion will be delayed due to testing and commissioning of vent fans, inclined elevators and escalators.			

Project	Completion	Goal	Forecast
<b>MTA Police Department</b>			
<b>Facilities</b>			
K-9 Training Facility	Construction	Jul-14 \$15.0M	Feb-15 \$11.6M
Delay due to unforeseen field conditions at the construction site.			
<b>3 All-Agency Yellow Completions (2 new this month)</b>			
<b>NYCT</b>			
<b>Service Vehicles</b>			
Purchase 28 Diesel-Electric Locomotives	Purchase	May-14 \$109.3M	Jul-14 (A) \$109.3M
All 28 units have been tested and released for service. Delay was caused by late delivery and acceptance testing of several units.			
<b>Depots</b>			
<b>Clara Hale Depot Reconstruction - (New Item)</b>	Construction	Aug-14 \$246.4M	Oct-14 (A) \$251.2M
Delay due to scope modifications, as well as late delivery of Con Edison equipment, postponing initiation of electrical service. Cost increase can be attributed to additional scope and increased support costs due to extended project duration.			
<b>MNR</b>			
<b>Structures</b>			
<b>Moodna/Woodbury Viaducts Priority Repairs - (New Item)</b>	Construction	Jun-14 \$9.0M	Oct-14 (A) \$9.0M
Delay due to additional rehabilitation work needed to address significant cracking discovered in areas of the concrete foundation on the Woodbury Viaduct.			

**Capital Projects – Major Completions – October 2014 – Budget\* Variances**
*Actual Results Shaded*
*\*for variances of more than \$5 million or 10%*

<b>Project</b>	<b>Completion</b>	<b>Goal</b>	<b>Forecast</b>
----------------	-------------------	-------------	-----------------

**1 All-Agency Budget Only Completions (0 new this month)**
**MTACC**
*East Side Access*

Queens Bored Tunnel and Structures (CQ031)	Construction	Apr-14 \$801.6M	Apr-14 (A) \$777.0M
--	--------------	--------------------	------------------------

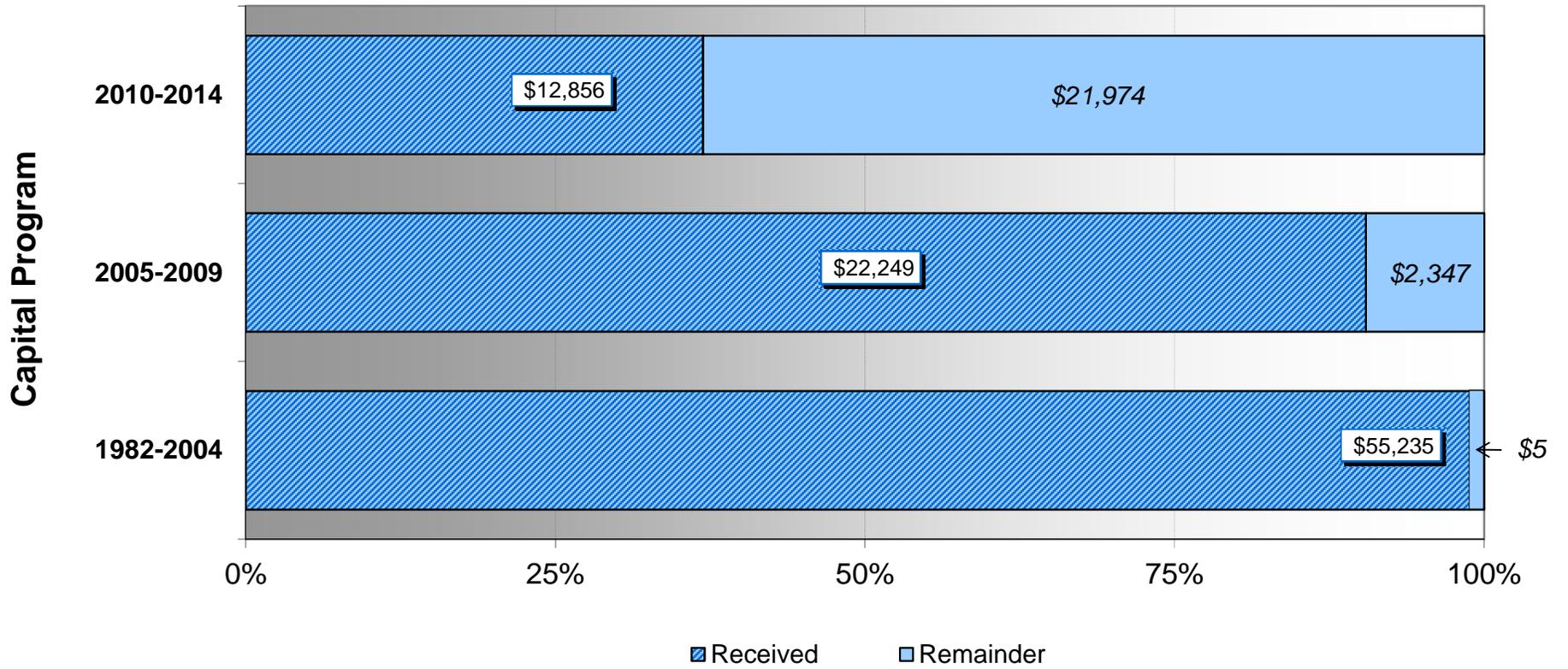
Budget decrease reflects the final contract value, including all approved change orders and scope transfers.

---

## Status of MTA Capital Program Funding

# Capital Funding (October 31, 2014)

\$ in millions



## Capital Funding Detail (October 31, 2014)

\$ in millions

	Funding Plan		Receipts	
	Current	Thru Sep	This month	Received to date
<b>2005-2009 Program</b>				
Federal Formula and Flexible Funds	\$5,186	\$5,186	\$ -	\$5,186
Federal New Start	2,810	1,832	-	1,832
Federal Security	325	258	4	262
Federal Other	11	11	-	11
Federal ARRA - Stimulus	654	654	-	654
City of New York	418	409	-	409
City #7 Line Extension Funds	2,367	2,080	16	2,096
MTA Bus Federal and City Match	149	142	-	142
Asset Sales and Program Income	1,207	595	(7)	587
State Transportation Bond Act	1,450	1,064	-	1,064
MTA Bonds (Including LGA)	3,039	3,039	-	3,039
B&T Bonds	1,221	1,221	-	1,221
Bonds from New Sources	5,624	5,624	-	5,624
Other (Including Operating to Capital)	135	122	-	122
<b>Total</b>	<b>24,596</b>	<b>22,237</b>	<b>12</b>	<b>22,249</b>

	Funding Plan		Receipts	
	Current	Thru Sep	This month	Received to date
<b>2010-2014 Program</b>				
Federal Formula, Flexible, Misc	\$5,835	\$4,029	\$ -	\$4,029
Federal High Speed Rail	295	295	-	295
Federal Security	206	100	0	100
Federal RIFF Loan	-	-	-	-
City Capital Funds	778	350	-	350
State Assistance	770	150	-	150
MTA Bus Federal and City Match	132	51	-	51
MTA Bonds (Payroll Mobility Tax)	12,703	5,232	-	5,232
Other (Including Operating to Capital)	1,507	410	7	418
B&T Bonds	2,079	634	-	634
Hurricane Sandy Recovery				
<i>Insurance Proceeds/Federal Reimbursement</i>	9,431	1,596	-	1,596
PAYGO	160	-	-	-
<i>Sandy Recovery MTA Bonds</i>	758	-	-	-
<i>Sandy Recovery B&amp;T Bonds</i>	175	-	-	-
<b>Total</b>	<b>34,830</b>	<b>12,848</b>	<b>8</b>	<b>12,856</b>