Capital Program Oversight Committee Meeting

July 2014

Committee Members
T. Prendergast, Chair
F. Ferrer
A. Albert
R. Bickford
A. Cappelli
M. Lebow
S. Metzger
J. Molloy
M. Page
M. Pally
A. Saul
J. Sedore
V. Tessitore
C. Wortendyke
Capital Program Oversight Committee Meeting
347 Madison Avenue
Fifth Floor Board Room
New York, NY
Monday, 7/28/2014
12:00 - 4:00 PM ET

1. PUBLIC COMMENTS PERIOD

2. APPROVAL OF MINUTES JUNE 23, 2014
   Minutes from June '14 - Page 3

3. COMMITTEE WORK PLAN
   CPOC Work Plan - Page 6

4. LONG ISLAND RAIL ROAD/METRO-NORTH RAILROAD ROLLING STOCK
   LIRR/MNR Rolling Stock - Page 7
      IEC LIRR M-9 Presentation - Page 19
   b. Independent Engineering Consultant Project Review on M-8 Cars
      IEC M-8 Car Procurement Presentation - Page 23

5. NEW YORK CITY TRANSIT
   a. Subway Car Procurement Report
      NYCT Railcar Presentation - Page 25
   b. Independent Engineering Consultant Project Review
      IEC NYCT Subway Presentation - Page 32
   c. Bus Procurement Report
      Bus CPOC Presentation - Page 35
   d. Independent Engineering Consultant Project Review
      IEC NYCT Bus Presentation - Page 47

6. Update on MTA Small Business Development Programs and Minority, Women and Disadvantaged Business Participation
   SBDP CPOC Presentation - Page 51
   MWDBE Participation - Page 68

7. BRIDGES AND TUNNELS (no oral presentation: mtls. in book only)
   a. Risk Assessment Update (RK-65A & BB-28/54)
      B&T CPOC Presentation - Page 69
   b. Independent Engineering Consultant Project Review
      IEC RFK Bronx Plaza + HCL Presentation - Page 77

8. CAPITAL PROGRAM STATUS
   Comm_Compl & Funding Report - Page 81

Date of next meeting: Monday, September 22, 2014 at 1:45 PM
Chairman Prendergast called the June 23, 2014 meeting of the Capital Program Oversight Committee to order at 1:50 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 May 19, 2014.

Committee Work Plan

Mr. Stewart stated that there are no changes to the CPOC Work Plan at this time.

MTACC Report on Fulton Center

Mr. Durg reported that the project is to be opened within the next 60-90 days and that the cost continues to trend below the current budget of $1.4 billion. In its Project Review, the IEC reported that testing and commissioning of key systems, which are critical to opening the facility, is still not complete. The IEC then recommended that MTACC conduct a coordinated review of Fulton Center, 7-Line Extension, Second Avenue Subway, as well as other NYCT projects to ensure that resources can support the current project schedules. Further details of the presentations, and Committee Members’ comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA’s records.

MTACC Report on 7-Line Extension

Mr. Horodniceanu reported that the project is forecast to be completed under budget. In addition, he stated that MTACC is working with the contractor and NYCT to develop mitigation/acceleration measures to achieve a forecasted revenue service by fall 2014/first quarter 2015. In its Project Review, the IEC confirmed that the overall project budget remains $2.4 billion, and cited a forecast revenue service date of February 2015. The IEC then recommended that MTACC conduct a coordinated review of Fulton Center, 7-Line Extension, Second Avenue Subway, as well as other NYCT projects to ensure that resources can support the proposed acceleration schedule. Further details of the presentations, and Committee Members’ comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA’s records.

MTACC Report on Second Avenue Subway

Mr. Parikh reported that the project continues to be on schedule to meet the December 2016 revenue service date, and that the project is on budget. In its Project Review, the IEC stated that it is unable to verify the project’s reported 102 days of schedule contingency, given incomplete revisions to the project’s schedule logic. The IEC then recommended that MTACC complete mitigation plans for major program-level schedule risks. Finally, the IEC cited an outstanding recommendation from December 2012 regarding unresolved E/O issues. Further details of the presentations, and Committee Members’ comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA’s records.

MTACC Report on East Side Access

Citing the preliminary project budget and schedule range that was presented to CPOC in January 2014, Mr. Goodrich then stated that MTACC, the IEC and the Supplemental Independent Review Consultant have since refined these preliminary figures and have agreed to a new project budget of $10.177B (including contingency and excluding rolling stock reserve) and a new forecast substantial completion date of December 2022. In its Project Review, the IEC confirmed that the new budget and schedule, which MTACC will manage to, are within the preliminary ranges presented in January 2014. The IEC then recommended the following: review of track and third
rail work into the GCT Caverns; independent estimates for remaining contracts; further re-sequencing of work in Harold; and consideration of the application of PTC in new ESA track territory for existing and upcoming signals contracts.

**LIRR Report on East Side Access Readiness**

Mr. Oakley reported on progress of those projects that comprise the $445M East Side Access Readiness Projects: Jamaica Capacity Improvements, Phase I (construction completion scheduled for October 2018); Massapequa Pocket Track (construction completion scheduled for December 2015); Great Neck Pocket Track and Colonial Road Bridge (construction completion scheduled for September 2016); Port Washington Yard Track Extensions (construction completion scheduled for fourth quarter 2018); and Mid-Suffolk Yard (construction completion scheduled for May 2018). In its Project Review, the IEC confirmed that the ESA Readiness projects are on schedule to be completed before the ESA project itself; additionally, the IEC finds that the East Side Access Readiness projects are on budget. Further details of the presentations, and Committee Members’ comments and questions with respect thereto are included in the video recording of the meeting maintained in MTA’s records.

**MTA Capital Program Commitments and Completions**

Mr. Stewart brought the Committee’s attention to the Capital Program Commitments and Completions Report and invited Committee Members’ questions, of which there was none.

**Quarterly Traffic Light Report**

Mr. Stewart brought the Committee’s attention to the Traffic Light Report for the 1st Quarter 2014, and pointed out that this report is the first to include Sandy-related projects. He then invited Committee Members’ questions, of which there was none.

**Adjournment**

Upon motion duly made and seconded, Chairman Prendergast adjourned the June 23, 2014 meeting of the MTA Capital Program Oversight Committee at 2:55 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

July 2014
Annual Update on MNR/LIRR Rolling Stock
Annual Update on NYCT Rolling Stock
B&T Risk Assessment Update
Semi-Annual Update on Minority, Women and Disadvantaged Business Participation

September 2014
Quarterly MTA Capital Construction Company Update
Quarterly Update on Positive Train Control
Semi-Annual Update on Capital Program Security Projects
Quarterly Traffic Light Report
Quarterly Capital Change Order Report

October 2014
Semi-Annual Update on MTA-wide Sandy-related Projects
Semi-Annual Update on NYCT, LIRR & MNR New Fare Payment Initiatives
Semi-Annual Update on NYCT Systems, Signals, Train Control and New Tech Initiatives
Update on MTA-wide Track Program

November 2014
Annual Update on B & T Capital Program
Annual Update on LIRR Main Line Double Track
Annual Update on LIRR Police Radio
Annual Update on MNR Customer Communications
Quarterly Capital Change Order Report
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 Traffic Light Report
LIRR/MNR
Rolling Stock Procurements

CPOC
July 2014

MTA Long Island Rail Road
MTA Metro-North Railroad
LIRR
M-9/M-9A Car Procurements

LIRR Needs: 416 M-9/M-9A Cars

- 180 M-9 Cars to replace the existing M-3 fleet.
- 236 Cars to provide LIRR East Side Access service
  - 76 M-9 Option Cars
  - 160 M-9A Cars (separate procurement)

M-9 Award to Kawasaki Rail Cars (KRC) – September 18, 2013

- Base Order – 92 LIRR Cars
- Options for LIRR/MNR
  - LIRR - 164 cars in married pair configuration (88 for M-3 replacement/76 for ESA)
  - MNR - Up to 188 cars in married pair configuration/27 single cars
LIRR M-9 Funding

- LIRR will use local funds under two MTA Capital Programs.
  - 2010-2014 Program: Funding in the amount of $355M for 92 LIRR M-9 cars.
  - 2015-2019 Program: Funding to be sought for 164 LIRR M-9 Option cars.

M-9A Procurement - 160 LIRR Cars

- The RFP is scheduled to be issued in 2015.
  - The M-9A procurement was deferred until the 2015-2019 Capital Program.
  - The RFP will follow federal procurement guidelines, which include Buy America and prohibit local content, because the 160 cars were identified in the FTA/MTA Full Funding Grant Agreement.
  - The M-9A Cars will be required to be interoperable with M-9 cars, i.e., capable of operating in the same consist.
Metro-North Procurement Strategy

• Metro-North will pursue funding in the 2015-2019 Capital Program to purchase up to 188 M-9 Cars for the replacement of its M-3 fleet and cars for electric territory ridership growth.

• In addition, Metro-North will develop specifications for Dual Mode Locomotives and Multi-Level Coaches for diesel territory coach and locomotive replacement and ridership growth and potential use for Penn Station Access.
  – LIRR options for replacement of its locomotives would be discussed.
  – A Clearance Inventory study is underway to determine what areas of the terminal need to be modified in order for multi-level coaches to fit.
## LIRR and Metro-North
### M-9 and M-9A Delivery Schedules

<table>
<thead>
<tr>
<th>LIRR M-9</th>
<th>LIRR M-9A</th>
<th>MNR M-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2013: Award contract for 92 LIRR Base Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2016: Award Contract for 160 Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 2016: Start Pilot Car Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 2016: Execute Option</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 2017: Complete Pilot Testing (14 Cars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 2017: Start Delivery of Base Order Production Cars (12 Cars/month)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 2018: Complete Delivery of 92 Base Order Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2018: Start Delivery of 1st 88 LIRR Option Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November 2018: Complete Delivery of the 180th M-9 Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 2018: Start Delivery of up to 188 Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2019: Start Pilot/Interoperability Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 2020: Complete Delivery of 188 Option Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 2020: Commence Delivery of 76 LIRR M-9 Option Cars for ESA</td>
<td>Complete Pilot/ Interoperability Testing</td>
<td></td>
</tr>
<tr>
<td>August 2020: Complete delivery of 76 LIRR Option Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 2020: Start delivery of 146 M-9A Cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 2021: Complete delivery of M-9A Cars</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
M-9 Specification Improvements

• Reliability/Maintainability:
  – Car MDBF Increased
  – System MDBCFC Increased
  – Maintenance Intervals Standardized

• Specification Changes to Increase Safety and Security:
  – CCTV (outward facing plus prospective Change Orders for inward facing and passengers)
  – B-End Corner Post Strengthening – Under Review

• Customer Communications and Comfort:
  – Arm Rests – Designed to prevent the snagging of passenger trousers and coat pockets, coat linings and handbags
  – Multi-Media, WiFi, electrical outlets at each row, and electrically operated B-End door
Reduction of Sole Source Parts Aftermarket

• KRC required to make commercially reasonable efforts to design cars so that at least 40% of generally purchased parts are “Commercial-Off-the-Shelf” products or available from multiple sources.
  – Significant improvement over M-7 cars.
  – Consultant has been hired to oversee this effort including design reviews to minimize the number of proprietary parts.

• KRC to provide most favored customer prices with regard to sole source parts:
  – Cost disclosure (potential audits) and an 8% cap on profits.

• LIRR and MNR will more aggressively review designs to eliminate unnecessary customized parts.
Metro-North M-8 Car Procurement

- $1.1 billion contract with Kawasaki Rail Car.
- Funded by the State of Connecticut and Metro-North
- 405 M-8 cars; 380 in married pair configuration and 25 single cars
- Provides service on New Haven Line and Shore Line East
- Allows for retirement of M-2, M-4 and M-6 car fleets

MTA Long Island Rail Road
MTA Metro-North Railroad
Metro-North M-8 Car Procurement

- 356 M-8 Cars in service
  - Provides 77% of revenue service
- MDBF of 182,117 miles YTD through May, 2014
- Customer reaction has been extremely positive
- Customers have commented positively on the interior, the amount of space on the cars and the seats, outlets at every seat, etc.

MTA Long Island Rail Road
MTA Metro-North Railroad
M-8 Issues

• Car Performance:
  • As is common in new car procurements, especially with a car as complex as the M-8 car, a number of initial issues have to be resolved and are being addressed with the car builder. Some include:
    – Auxiliary Power Supply Cooling Fan
    – Automatic Train Control Relay Circuit Board
    – Pantograph Control Valves
    – Transducers and Speed Sensors

• KRC has been using the New Haven CSR Shop which has been leased to them for on-site field modifications as required.
## Appendix A

### LIRR Rolling Stock Summary

<table>
<thead>
<tr>
<th>Type of Car</th>
<th>Average Age as of July 2014</th>
<th># of Cars</th>
<th>Planned Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-3</td>
<td>29 years</td>
<td>170</td>
<td>2017-2018</td>
</tr>
<tr>
<td>M-7</td>
<td>9.5 years</td>
<td>836</td>
<td>2044-2047</td>
</tr>
<tr>
<td>C-3 Coaches</td>
<td>16.5 years</td>
<td>134</td>
<td>2034</td>
</tr>
<tr>
<td>DE Locos</td>
<td>16.5 years</td>
<td>24</td>
<td>2024</td>
</tr>
<tr>
<td>DM Locos</td>
<td>15.5 years</td>
<td>21</td>
<td>2024</td>
</tr>
</tbody>
</table>

M-7s are married pair configuration, they share:
- Air Supply Unit
- Storage Battery
- Event Recorder Equipment
- Low Voltage Distribution Network Equipment
- ADA Compliant Toilet
# Appendix B

## Metro-North Rolling Stock Summary

<table>
<thead>
<tr>
<th>Type of Car</th>
<th>Average Age as of July 2014</th>
<th># of Cars</th>
<th>Planned Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-2/4/6*</td>
<td>31</td>
<td>115</td>
<td>ongoing</td>
</tr>
<tr>
<td>M-3</td>
<td>30</td>
<td>142</td>
<td>2019</td>
</tr>
<tr>
<td>M-7</td>
<td>9</td>
<td>336</td>
<td>2047-2050</td>
</tr>
<tr>
<td>M-8</td>
<td>1</td>
<td>356</td>
<td>2050-2053</td>
</tr>
<tr>
<td>DM Locos</td>
<td>14</td>
<td>31</td>
<td>2025</td>
</tr>
<tr>
<td>DE Locos</td>
<td>13</td>
<td>27</td>
<td>2025</td>
</tr>
<tr>
<td>Coaches</td>
<td>18</td>
<td>278</td>
<td>2025-2030</td>
</tr>
</tbody>
</table>

* M-2/4/6 fleet will be removed from daily service as M-8 delivery is completed.
Schedule & Budget Review

• SCHEDULE:
  – The Initial Design Review phase has been delayed by approximately 3 months, the IEC will monitor and report on impact to the overall schedule.

• BUDGET:
  – The approved 2010-2014 Capital Program budget is $355M. LIRR current budget is $366M for base order.
Issues

- Carbody Structure
  - Carbuilder investigating stronger B-End configurations

- Weight – current estimated weight per pair is 2% above specification and has been trending upward.
Recommendations

• Car Design Reviews – LIRR and MNR should have a mechanism in place to facilitate the review of car design submittals and other documentation in a timely manner to prevent any effect on the project schedule.

• MNR cars, M-9 vs. Coaches – expedite decision on fleet requirements in order to inform the decision on M-9 Option.

• M-9A Delivery – to ensure required availability, all M-9A cars should be delivered no later than one year prior to ESA opening date.
July 2014 CPOC IEC Project Review

MTA Metro-North Railroad M-8 Procurement

July 28, 2014
M-8 Car Procurement

- **SCHEDULE:** The last car delivery will be the single car order currently forecast for 3rd quarter 2015.
- **BUDGET:** Project is on budget.
- **OTHER CRITICAL ISSUES:** The IEC agrees with the M-8 issues and performance numbers noted in the presentation.
- The IEC notes the major outstanding commercial issues relate to car weight and late deliveries. These should be addressed as soon as feasible due to the length of time that has passed.
NYCT Subway Car Program
Progress Update to CPOC

Joseph Bromfield
Vice President and Chief Mechanical Officer
Department of Subways

July 28, 2014
In May 2014, NYCT Subway cars traveled over 28 million miles, enough to circle Earth over 1,100 times.
## R188 Project Overview

### Overall Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Scope                 | 126 new ‘A’ Division cars + 380 converted R142A cars  
  – Base Order: 23 new + 10 converted cars  
  – Option Order: 103 new + 370 converted cars  
  – Provide (46) 11-car trains for Flushing CBTC / Line Extension service |
| Contractual Schedule  | Base Awarded: 5/28/2010  
  Option Awarded: 12/30/2011  
  Delivery & Acceptance Completion: 2/28/2016 (delay forecasted) |
| Budget                | Base: $116.5 M  
  Option: $497.2 M  
  Total: $613.7 M |

### Highlights

**R188 Project Overview**

**Progress**
- Base Order deliveries completed in January 2013.
- As of July 21, 2014:
  - 12 trains conditionally accepted (8 new + 4 converted)
- Car Qualification Tests completed

**180 Day Look Ahead**
- New Single Car Production & Delivery ongoing
- Car Conversions ongoing
R188 Delivery Schedule

R188 Deliveries (Cumulative)
Contractual, Actual/Forecasted

- January 2013: Completed Base Order
- December 2013: Began Option Order Deliveries & CBTC Testing
- January 2016: Contractual Final Delivery Date
- July 2016: Forecasted Final Delivery Date

New & Converted Cars

- June 2012: 0
- December 2012: 100
- June 2013: 200
- December 2013: 300
- June 2014: 400
- December 2014: 500
- June 2015: 600
- July 2016: Forecasted Final Delivery Date

Legend:
- Blue: Contractual Delivery Schedule
- Green: Predicted Delivery
- Pink: Actual Delivery

Master Page # 28 of 91 - Capital Program Oversight Committee Meeting 7/28/2014
R188 Production Photos

Conversion Work Ongoing

#7265 Cab Wiring - Conversion Work

Option Conv. 7th unit (#7251-#7255), through Option Conv. 9th unit (#7261-#7265)

Delivery of Single C cars
R179 Project Overview

Overall Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Scope            | 300 60-foot ‘B’ Division cars (design based on R160 cars)  
– Will provide 36½ trains  
– No. of 4-car units: 65  
– No. of 5-car units: 8                                                                                                                                                                                                 |
| Contractual      | Awarded: 6/04/2012  
Delivery of test train: 12/22/2014  -- delay forecasted  
Delivery of 1st Production unit: 7/27/2015  
Delivery Completion: 1/30/2017                                                                                                                                                                                   |
| Schedule         | Budget $735.6 M                                                                                                                                                                                                                                                          |

Highlights

Progress
– Critical Design Reviews Completed  
– Qualification and First Article Phase of Contract  
– Welding issues (hot cracking) discovered by Bombardier (forecast 6 – 11 months delivery delay).

180 Day Look Ahead
– Welding process review, quality testing, mitigation of delay
## R211 Future Project Overview

### Overall Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Scope</td>
<td>New R211 ‘B’ Division cars to replace 752 R46 cars</td>
</tr>
<tr>
<td></td>
<td>– Additional fleet growth cars (current forecast approx. 11% increase)</td>
</tr>
<tr>
<td>Description</td>
<td>Next Generation design to address NYCT’s goals</td>
</tr>
<tr>
<td>Schedule</td>
<td>Design Phase ongoing with support from consultant CH2M-Hill</td>
</tr>
<tr>
<td></td>
<td>Car Purchase Award proposed for the 2015 – 2019 Capital Program</td>
</tr>
</tbody>
</table>
July 2014 CPOC IEC Project Review

Subway Car Procurements

July 28, 2014
Schedule & Budget Review

- **SCHEDULE:**
  - R188 – the IEC forecasts the schedule as being 6 months late.
  - R179 – the IEC agrees with the progress of the schedule as reported by NYCT.

- **BUDGET**
  - There are no budget issues for either the R188 or the R179 car procurements.
Issues

- **R188:**
  - Delivery delays caused by Super Storm Sandy and car conversion ramp-up has impacted the CBTC car installation schedule.

- **R179:**
  - Welding issues with pilot cars has delayed the schedule. The carbuilder has developed a mitigation plan. The IEC will monitor the effectiveness of the plan.
Bus Procurement Update

Capital Program Oversight Committee
July 2014

John Higgins
Chief Maintenance Officer
Bus Operations
Agenda

• Bus Buy Goals
• Bus Fleet Purchase Plan and Mix
• Buses Delivered
• Upcoming Bus Awards
## Current Bus Fleet

Based on Spring 2014 fleet assignment

<table>
<thead>
<tr>
<th></th>
<th>NYCT DOB</th>
<th>MTA Bus</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard 40’</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel</td>
<td>1,341</td>
<td>127</td>
<td>1,468</td>
</tr>
<tr>
<td>CNG</td>
<td>534</td>
<td>213</td>
<td>747</td>
</tr>
<tr>
<td>Hybrid</td>
<td>1,287</td>
<td>388</td>
<td>1,675</td>
</tr>
<tr>
<td><strong>Std Subtotal</strong></td>
<td>3,162</td>
<td>728</td>
<td>3,890</td>
</tr>
<tr>
<td><strong>Articulated 60’</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>764</td>
<td>33</td>
<td>797</td>
</tr>
<tr>
<td><strong>Express 45’</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>505</td>
<td>1,005</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4,426</td>
<td>1,266</td>
<td>5,692</td>
</tr>
</tbody>
</table>

**Fun Fact**

Parked bumper-to-bumper, the bus fleet is 47 miles long. This line of buses would encircle Manhattan Island 1-and-a-half times.
Goals of our Procurement Program

- Replace buses after 12-year useful life.
- Procure the most reliable and cost effective bus to meet service needs and customer standards.
- Increase competition among bus manufacturers for future bus procurements.
- Continually make improvements on environmental impact emissions.
## 2010-2014 Capital Program
### Bus Procurements Summary *

<table>
<thead>
<tr>
<th>Fleet</th>
<th>Type</th>
<th>Agency</th>
<th>Total Order</th>
<th># Delivered (as of 5/31/14)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nova 40-ft Diesel</td>
<td>Standard</td>
<td>DOB</td>
<td>90</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>Orion 40-ft Diesel</td>
<td>Standard</td>
<td>DOB</td>
<td>90</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>New Flyer 40-ft Diesel</td>
<td>Standard</td>
<td>DOB</td>
<td>90</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>New Flyer 40-ft CNG</td>
<td>Standard</td>
<td>DOB</td>
<td>171</td>
<td>171</td>
<td>Complete</td>
</tr>
<tr>
<td>40-ft Standard Diesel *</td>
<td>Standard</td>
<td>DOB</td>
<td>690</td>
<td>-</td>
<td>In Construction</td>
</tr>
<tr>
<td>New Flyer 40-ft CNG</td>
<td>Standard</td>
<td>MTA</td>
<td>89</td>
<td>89</td>
<td>Complete</td>
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<td>New Flyer 40-ft CNG</td>
<td>Standard</td>
<td>MTA</td>
<td>79</td>
<td>79</td>
<td>Complete</td>
</tr>
<tr>
<td>40-ft Standard Diesel</td>
<td>Standard</td>
<td>MTA</td>
<td>45</td>
<td>-</td>
<td>In Procurement</td>
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<tr>
<td></td>
<td><strong>Standard Total</strong></td>
<td></td>
<td><strong>1,344</strong></td>
<td><strong>609</strong></td>
<td></td>
</tr>
<tr>
<td>Prevost 45-ft Coach</td>
<td>Express</td>
<td>DOB</td>
<td>90</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>MCI 45-ft Coach*</td>
<td>Express</td>
<td>DOB</td>
<td>54</td>
<td>54</td>
<td>Complete</td>
</tr>
<tr>
<td>Prevost 45-ft Coach</td>
<td>Express</td>
<td>DOB</td>
<td>300</td>
<td>1</td>
<td>In Construction</td>
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<tr>
<td></td>
<td><strong>Express Total</strong></td>
<td></td>
<td><strong>444</strong></td>
<td><strong>145</strong></td>
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<tr>
<td>New Flyer 60-ft Artic</td>
<td>Artic</td>
<td>DOB</td>
<td>90</td>
<td>90</td>
<td>Complete</td>
</tr>
<tr>
<td>Nova 60-ft Artic</td>
<td>Artic</td>
<td>DOB</td>
<td>328</td>
<td>328</td>
<td>Complete</td>
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<tr>
<td>60-ft Artics</td>
<td>Artic</td>
<td>DOB</td>
<td>256</td>
<td>-</td>
<td>To be Solicited</td>
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<tr>
<td>60-ft Artics</td>
<td>Artic</td>
<td>MTA</td>
<td>75</td>
<td>-</td>
<td>In Procurement</td>
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<tr>
<td></td>
<td><strong>Artic Total</strong></td>
<td></td>
<td><strong>749</strong></td>
<td><strong>418</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>2,537</strong></td>
<td><strong>1,172</strong></td>
<td></td>
</tr>
</tbody>
</table>

* 90 of 690 standards and all 54 express funded from the 2005-2009 Capital Program.
2010-2014 Capital Program
Bus Procurement Challenges

- A large number of buses were procured in the 1997-2001 period of rapid ridership increase.
- Spikes in bus procurements cause operational and fiscal challenges.
- A level buying plan for our fleet of 5,692 buses would require approximately 474 buses annually.
- After all buses approved under the 2010-2014 Capital Program are delivered, we will still have almost 900 over-age buses.
2010-2014 Capital Program New Buses

- Nova 60-ft Artic
- New Flyer 60-ft Artic
- MCI 45-ft Coach
- Prevost 45-ft Coach
2010-2014 Capital Program New Buses (cont’d)

- Orion 40-ft Diesel
- New Flyer 40-ft Diesel
- Nova 40-ft Diesel
- New Flyer 40-ft CNG
- New Flyer 40-ft CNG
Recent Bus Awards

300 Express (NYCT-DOB)

Overall Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>300 Express Coaches from Prevost</td>
</tr>
<tr>
<td>Schedule</td>
<td>Awarded November, 2013</td>
</tr>
<tr>
<td></td>
<td>Pilot bus arrived in NYC in March</td>
</tr>
<tr>
<td></td>
<td>Production buses expected in 2015/16</td>
</tr>
<tr>
<td>Budget</td>
<td>$188.9 Million</td>
</tr>
</tbody>
</table>

Highlights

- Final assembly takes place at Prevost facility in Plattsburg, NY
- Allows retirement of most of Transit's 1999-2002 coaches (up to 15 years old)
## Recent Bus Awards

### 690 Standard buses (NYCT-DOB)

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **Scope** | 414 buses from Nova  
276 buses from New Flyer |
| **Schedule** | Awarded December 2013 (Nova) and January 2014 (New Flyer)  
Bus deliveries expected in 2015/16 |
| **Budget**  | $368.2 Million |

### Overall Status

- Dual award to 2 vendors allows for an accelerated delivery timeline
- Timely award of 700 option buses in 2015 will improve over-age bus situation
Remaining 2010-2014 Bus Awards

• 45 Standard Clean Diesel Buses (MTA-Bus)
  – To be awarded in 4th Qtr. 2014
  – To replace buses that have exceeded their useful life

• 75 Artics (MTA-Bus)
  – To be awarded in 4th Qtr. 2014
  – For converting high volume standard bus routes to artics; replaces associated over-age standards

• 256 Artics (NYCT-DOB)
  – Expected to award in 2nd Qtr. 2015
  – Replaces the existing fleet at the end of their useful life
2015-2019 Overview

• We have made advances qualifying additional builders and now have multiple bidders for each type of bus we utilize, but the industry still faces challenges.

• We look forward to updating you in the future regarding our program with diesel, CNG, and hybrid / diesel propulsion systems, as well as, exploring the electric vehicle technology.
July 2014 CPOC
IEC Project Review

Bus Procurements

July 28, 2014
Schedule & Budget Review

- **SCHEDULE:**

  Current Procurements:
  - 300 Express buses – on schedule
  - 690 Standard Clean Diesel buses – on schedule

  Upcoming Procurements:
  - 45 Standard + 75 Artics (combined) + 256 Artics – the IEC agrees with the status reported by NYCT.
Schedule & Budget Review

- **BUDGET:**
  - 300 Express buses – project on budget with no significant issues.
  - 690 Standard Diesel buses – project on budget with no significant issues.
Issues & Recommendations

• Continue efforts to drive down average age of buses

• Continue efforts to qualify new bus manufacturers
Annual Update of MTA Small Business Development Programs

Small Business Mentoring Program (SBMP) & Small Business Federal Program (SBFP)

July 28, 2014 CPOC Meeting

Brian P. Murphy
Deputy Director
Office of Construction Oversight

Nadir A. Jones
Manager
Small Business Development Programs
Department of Diversity and Civil Rights
Small Business Mentoring Program (SBMP) Status

- SBMP Tier 1 Launched in July 2010 (Fiscal Year – July to July)
  - New York State and local funding
  - Prime Contracts up to $1 million
  - 129 Prequalified Firms
  - Stair replacements, station improvements, masonry, roofing, HVAC and electrical upgrades, elevators, installation of bus chassis lift and wash equipment, bridge and parking structure painting projects, asphalt, concrete paving, site work, elevator projects, and Help Point intercom systems
  - Contractors participate for a maximum of 4 years

- Years 1 - 4 Awards Goal was $70 Million

- Years 1, 2, 3 & 4 Actual
  - Awarded to 88 firms
    - # Projects: 131
    - $ Amount: $82 Million
  - Substantially Completed/Closed Out
    - # Projects: 77 (59%)
    - $ Amount: $43 Million

- Year 5 Award Goal is $22 Million through 7/14/15
## SBMP Status

<table>
<thead>
<tr>
<th>Process Metrics (4 Years)</th>
<th>Goal (Days)</th>
<th>Actual (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Awards*</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Close Outs*</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Change Orders *</td>
<td>15</td>
<td>18</td>
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<tr>
<td>Submittals</td>
<td>10</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>RFI’s</td>
<td>5</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>

* Discussions for Improvement Ongoing
SBDP Goals

- Develop firms with skills to bid on MTA projects
- Growth of these firms will increase the bidding pool for larger projects
- Program participants are receiving MTA awards outside of the program as well
SBMP Accomplishments

- Results for MWBE awards over 4 years is $60.8 million or 74% of prime contract awards versus the goal of 20%
- Result for DBE awards is 27.5% ($22.5 million)
- Of the 88 firms that were awarded projects since program inception, 37 firms were awarded 2 or more projects
SBMP Project

- Project awarded to NYS certified MDBE firm PSP Construction Inc. for $1,520,350.11.
- Replacement of manhole covers for existing diesel fuel tanks at Fresh Pond Bus Depot.
# SBMP Competitive Bidding

<table>
<thead>
<tr>
<th>PROGRAM YEAR</th>
<th># PROJECTS</th>
<th>ENGINEER'S ESTIMATE</th>
<th>CONTRACT AWARDED VALUE</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>$15,032,371</td>
<td>$13,537,937</td>
<td>$1,494,434</td>
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<tr>
<td>2</td>
<td>30</td>
<td>$18,338,369</td>
<td>$16,245,560</td>
<td>$2,092,809</td>
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<tr>
<td>3</td>
<td>35</td>
<td>$23,132,406</td>
<td>$22,033,869</td>
<td>$1,098,537</td>
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<tr>
<td>4</td>
<td>41</td>
<td>$28,675,864</td>
<td>$27,693,172</td>
<td>$982,693</td>
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<tr>
<td>TOTAL</td>
<td>131</td>
<td>$85,179,011</td>
<td>$79,510,538</td>
<td>$5,668,472</td>
</tr>
</tbody>
</table>
Small Business Federal Program (SBFP) Status

- Program launched in August 2012 (Fiscal Year – July to July)
  - Federal funded prime contracts up to $3 million
  - Participation for a maximum of 3 years
  - Established MTA Assisted Bond Program
  - 22 Prequalified Firms
  - 13 Firms ‘graduated’ from SBMP into the SBFP

- Years 1 - 2 Cumulative Awards Goal was $15.0 Million

- Year 1 & 2 Actual
  - Awarded to 11 firms 16 $30 Million
  - Substantially Completed/Closed Out 2 (13%) $3 Million

- Year 3 Award Goal is $15 million through 7/14/15
SBFP Accomplishments

 Results for DBE awards for 2 years are $10 million or 33% of all prime contract awards

 Of the firms awarded projects since program inception, several firms were awarded more than one project
SBFP Project

- Project awarded to NYS certified MBE firm Kunj Construction Corp. for $1,398,000.
- Installation of new chassis wash lifts for buses at JFK Bus Depot.
## SBFP Competitive Bidding

<table>
<thead>
<tr>
<th>PROGRAM YEAR</th>
<th># PROJECTS</th>
<th>ENGINEER'S ESTIMATE</th>
<th>CONTRACT AWARDED VALUE</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>$9,299,929</td>
<td>$9,233,143</td>
<td>$66,786</td>
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<tr>
<td>2</td>
<td>10</td>
<td>$21,461,646</td>
<td>$20,906,466</td>
<td>$555,180</td>
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<td>TOTAL</td>
<td>16</td>
<td>$30,761,575</td>
<td>$30,139,609</td>
<td>$621,966</td>
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</table>
Outreach and Development
SBMP Outreach
129 Prequalified Firms

<table>
<thead>
<tr>
<th>Certification</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBE</td>
<td>67</td>
</tr>
<tr>
<td>WBE</td>
<td>9</td>
</tr>
<tr>
<td>DBE</td>
<td>34</td>
</tr>
</tbody>
</table>

* firms may have multiple certifications
SBDP Loan Program

- Carver Bank Small Business Loan Program
  - 38 Loans Approved Since Program Inception
  - Total Approved Loan Amounts: $4,040,000
  - Current Outstanding Loan Balances: $643,500
  - Maximum Loan Available:
    - SBMP up to $150,000
    - SBFP up to $900,000
SBDP Training Program

- Classroom Training
  - 158 firms completed the training program as of Spring 2014
  - 11-Week Technical & Business Development Program:
    - Estimating and Bidding Strategies at the MTA; Project Scheduling at the MTA; Safety & Quality Planning at the MTA; Requisition and Change Order Process
    - Doing Business with the MTA; Construction Law and Contract Review; Marketing Your Business to the NY Construction Industry; Cash Flow and Financial Management; Developing a Profitable Business in the MTA Region; How to Acquire Surety Bonding and Access to Capital; How to be a Prime Contractor
  - Training courses offered two times a year: Spring and Fall
  - Next session starts September 2014
Looking Ahead ...

- SBMP - Tier 2 to rollout in July 2014
  - Projects up to $3 million
  - Establish MTA Assisted Bond Program
  - Participation for a maximum of 4 years
  - Qualified Tier 1 firms can ‘graduate’ to Tier 2
  - Tier 2 firms can also participate in Small Business Federal Program (SBFP)
  - Union Labor Transition Program in development
  - Back Office Support
  - Business Plan
Thanks to All Agency Personnel Who Worked Hard to Continue the Success of the SBMP and SBFP!
# MWBE Awards on MTA Capital Projects with Goals

**January - June 2014**

### Federally Funded

<table>
<thead>
<tr>
<th>DBE Participation Goal: 17%</th>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$639.0</td>
<td>$141.0</td>
<td>22%</td>
<td>$98.4</td>
<td>$13.1</td>
<td>13%</td>
<td>$737.4</td>
<td>$154.1</td>
<td>21%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$639.0</td>
<td>$141.0</td>
<td>22%</td>
<td>$98.4</td>
<td>$13.1</td>
<td>13%</td>
<td>$737.4</td>
<td>$154.1</td>
<td>21%</td>
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</table>

### Additional MWBE Participation:

<table>
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<th>Total Awards</th>
<th>Total MWBE Awards</th>
<th>MWBE Participation (%)</th>
<th>Total Awards</th>
<th>Total MWBE Awards</th>
<th>MWBE Participation (%)</th>
<th>Total Awards</th>
<th>Total MWBE Awards</th>
<th>MWBE Participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$639.0</td>
<td>$134.0</td>
<td>98.4%</td>
<td>$11.4</td>
<td>12.3%</td>
<td>$737.4</td>
<td>$145.4</td>
<td>16%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$639.0</td>
<td>$134.0</td>
<td>98.4%</td>
<td>$11.4</td>
<td>12.3%</td>
<td>$737.4</td>
<td>$145.4</td>
<td>16%</td>
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### State Funded

<table>
<thead>
<tr>
<th>MBE Participation Goal: 10%</th>
<th>Total Awards</th>
<th>Total MBE Awards</th>
<th>MBE Participation (%)</th>
<th>Total Awards</th>
<th>Total MBE Awards</th>
<th>MBE Participation (%)</th>
<th>Total Awards</th>
<th>Total MBE Awards</th>
<th>MBE Participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$21.2</td>
<td>$3.8</td>
<td>17.9%</td>
<td>$93.3</td>
<td>$11.5</td>
<td>12.3%</td>
<td>$114.5</td>
<td>$15.3</td>
<td>13.4%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>$3.4</td>
<td>$0.1</td>
<td>2.9%</td>
<td>$4.7</td>
<td>$0.6</td>
<td>12.8%</td>
<td>$8.1</td>
<td>$0.7</td>
<td>8.6%</td>
</tr>
<tr>
<td>Other</td>
<td>$2.3</td>
<td>$0.3</td>
<td>13.0%</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
<td>$2.3</td>
<td>$0.3</td>
<td>13.0%</td>
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<tr>
<td><strong>MBE Participation on FTA-funded projects</strong></td>
<td>$26.9</td>
<td>$4.2</td>
<td>16%</td>
<td>$98.0</td>
<td>$12.1</td>
<td>12%</td>
<td>$124.9</td>
<td>$16.3</td>
<td>13%</td>
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</table>

### WBE Participation Goal: 10%:

<table>
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<th>Total Awards</th>
<th>Total WBE Awards</th>
<th>WBE Participation (%)</th>
<th>Total Awards</th>
<th>Total WBE Awards</th>
<th>WBE Participation (%)</th>
<th>Total Awards</th>
<th>Total WBE Awards</th>
<th>WBE Participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>$21.2</td>
<td>$2.8</td>
<td>13.2%</td>
<td>$93.3</td>
<td>$10.9</td>
<td>11.7%</td>
<td>$114.5</td>
<td>$13.7</td>
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<tr>
<td>Professional Services</td>
<td>$3.4</td>
<td>$1.6</td>
<td>47.1%</td>
<td>$4.7</td>
<td>$0.5</td>
<td>10.6%</td>
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<td>$2.1</td>
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<td>Other</td>
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<td>$2.3</td>
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<td>$2.3</td>
<td>$0.2</td>
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<tr>
<td><strong>WBE Participation on FTA-funded projects</strong></td>
<td>$26.9</td>
<td>$4.6</td>
<td>17%</td>
<td>$98.0</td>
<td>$11.4</td>
<td>12%</td>
<td>$124.9</td>
<td>$16.0</td>
</tr>
</tbody>
</table>

### Additional DBE Participation:

<table>
<thead>
<tr>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
<th>Total Awards</th>
<th>Total DBE Awards</th>
<th>DBE Participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
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<td>$5.2</td>
<td></td>
<td>$92.4</td>
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<td>Professional Services</td>
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<tr>
<td>Other</td>
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<tr>
<td><strong>Additional DBE Participation Total</strong></td>
<td>$26.9</td>
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<td></td>
<td>$95.0</td>
<td>$13.5</td>
<td>$121.9</td>
<td>$20.9</td>
<td></td>
</tr>
</tbody>
</table>
Semi-Annual CPOC Capital Program Update

Cost and Schedule Risk Assessment

Robert F. Kennedy Bridge (Project RK-65A) and Hugh L. Carey Tunnel (Project BB-28/54)

July 28, 2014
RK-65A BRONX PLAZA REHABILITATION LIMITS OF WORK

Scope of Work:
- Complete replacement of Reinforced Concrete Deck
- Complete Replacement of Toll Plaza Equipment
- Substructure Rehabilitation
- Electrical Upgrades

Schedule and Budget
- Contract Duration: 54 months
- Roadway Construction Duration: 36 months
- Total Project Budget: $274m
### RK-65A Risk Assessment Results - Project Risk Summary

#### Cost - Risk Assessment Summary

<table>
<thead>
<tr>
<th>Total Project Budget (millions)</th>
<th>80&lt;sup&gt;th&lt;/sup&gt; Percentile Risk-Based Cost, Mitigated (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$274</td>
<td>$257.3 - $281.4</td>
</tr>
</tbody>
</table>

- Unmitigated 80<sup>th</sup> percentile risk is $281.4M at 70% design
- Risk mitigation reached to date is approximately $7M
- Additional opportunities for risk reduction identified: $17M

#### Schedule - Risk Assessment Summary

- 80<sup>th</sup> percentile Risk Based Duration had a 17.5 month schedule risk
- 12.5 months of schedule risk has been mitigated
- 5 months have been added to the overall project schedule

*Risk Assessment was performed on the 70% Design*
## RK-65A RISK ASSESSMENT
### Major Cost/Schedule Risks & Mitigations

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation measure</th>
</tr>
</thead>
</table>
| Major claims and Change orders    | • Value Engineering review  
• Multiple independent constructability reviews performed  
• Independent quantity verification  
• Partnering with project stakeholders |
| Weather delays                    | • Specifications allow for cold weather work  
• Contract allows for extended work hours to mitigate delays  
• Contract Incentive/disincentive clause included |
| Escalation Rate & cost uncertainties | • Current prices and Escalation built into final construction estimate  
• Allow for payment of materials at time of purchase  
• Material escalation clause is included in contract |
HLC Contract BB-28/54

Scope of Work:
- Replacement of interior finishes
- Rehabilitation/upgrade of Electrical, Communication and Mechanical Systems
- Rehabilitation of plaza structural slab

Project Schedule & Budget:
- Contract Duration: 48 months
- Total Project Budget - $420.5M
Typical Cross Section – Bored Tunnel

LANE USAGE SIGNALS

EXHAUST AIR DUCT

EXHAUST AIR PORT

VEEGER CEILING PANELS AND GASKETS

HIGH PRESSURE SODIUM TUNNEL LIGHTING

CCTV CAMERAS

TILED ROADWAY WALLS

VARIABLE MESSAGE SIGNS

HIGH TENSION DUCT BANK

E-BOXES

ENCASED FIRELINE

CATWALKS AND RAILING

FIRELINE VALVE NICHEs

LOW TENSION DUCT BANK

STEEL FACED CURBS AND GUTTERS

PRECAST POLYMER CONCRETE PANELS

FRESH AIR FLUES

FRESH AIR DUCT LIGHTING AND POWER

ROADWAY
### HLC Risk Assessment Results

#### Project Risk Summary

<table>
<thead>
<tr>
<th>Total Project Budget (millions)</th>
<th>80th Percentile Risk-Based Cost, Mitigated (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$420.5M</td>
<td>$412.7M</td>
</tr>
</tbody>
</table>

#### Schedule - Risk Assessment Summary

- 80<sup>th</sup> percentile Risk Based Duration had a 6.5 month schedule risk
- 1.5 months of schedule risk has been mitigated
- 5 months have been added to the overall project schedule

*Risk Assessment was performed on the 95% Design*
## HLC RISK ASSESSMENT

### Major Cost/Schedule Risks & Mitigations

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Conditions/Profit</td>
<td>• Value Engineering review&lt;br&gt;• Independent constructability review&lt;br&gt;• Independent cost estimate and schedule review&lt;br&gt;• Contractor Outreach - General Contractors Association</td>
</tr>
<tr>
<td>Work delays/Productivity</td>
<td>• Coordination with B&amp;T Operations&lt;br&gt;• Performed various prototypes&lt;br&gt;• Flexibility of providing additional weekend tube closures</td>
</tr>
<tr>
<td>Coordination with other projects in the area</td>
<td>• Public outreach – Community Boards presentations&lt;br&gt;• Regional coordination – NYC/NYS DOT</td>
</tr>
</tbody>
</table>
JULY 2014 CPOC IEC Project Review

RK-65A
RFK Bridge Bronx Plaza Deck Reconstruction
&
BB-28/28S, BB-54
Hugh Carey Tunnel Restoration

July 28, 2014
IEC Findings

• Bronx Toll Plaza (RFK-65A)
  – B&T made the following adjustments based on the 80 percentile results:
    • **Schedule**: 5 months of unallocated contingency was added to the overall project schedule.
    • **Budget**: Mitigations were identified to bring the project in line with the 80\textsuperscript{th} percentile results.
  – The IEC believes that mitigation strategies proposed by B&T will reduce significant schedule and cost risks identified in the RFK-65A risk assessment.
IEC Findings

• Hugh Carey Tunnel Restoration (BB-28/28s, BB-54)
  – B&T performed several mitigation measures prior to the HCL risk assessment workshop to minimize construction risks.
  – Based on the 80th percentile results, the IEC finds the following:
    • Schedule Risk: 5 months of unallocated contingency was added to the overall project schedule.
    • Cost risk: The project cost is within the project’s budget.
IEC Observations

- **Bronx Toll Plaza RFK-65A**: The IEC concurs with B&T conducting a one-day post award risk workshop to rerun the risk assessment model to include the current cost and schedule risks and assess correlated mitigations.

- **Hugh L Carey**: The IEC concurs with B&T adding 5.0 months of unallocated project contingency to the overall project schedule based on the risk assessment results.
MTA Capital Program
Commitments & Completions

through
June 30, 2014
55 major commitments are planned for 2014; 22 reported through June. There are 15 slips through June, of which seven commitments are late, and eight others were late, but have now been achieved. All slips are discussed on the following pages.

Agencies have committed a total of $2.3 billion through June, versus a $3.2 billion goal. The YTD commitment shortfall is primarily due to delays in the W. 4th St. Interlocking project, Cranberry & Rutgers tubes Sandy restoration, and 256 Articulated Buses procurement. Despite a $850M YTD shortfall, the MTA forecasts meeting its goal in part because of $379 million in unplanned MTACC commitments.

For YTD commitments, 32% are on time and 86% are within budget. By year-end, 45% of major commitments are forecasted to be achieved on time and 76% are forecasted to be on budget. While a large number of projects are currently experiencing delays, most are still forecast to be committed within 2014.
### Project Commitment Goal Forecast

**7 All-Agency Red Commitments (5 new this month; net increase of 4)**

**NYCT**

- **Track & Switch**
  - Track & Switch Program (4 Projects) - Construction Start: May 14, Goal: Aug 14, Forecast: $39.8M
  
  Delay was due to track access issues on the Concourse line segment.

- **Signals & Communications**
  - PA/CIS: Furnish & Install Cabinets, 89 Stations (New Item) - Construction Award: Jun 14, Goal: Aug 14, Forecast: $44.8M
  
  Award delayed by two months due to additional time required to repackage scope for separate PA and CIS contracts.

- **Stations**
  - Station Renewal: Culver Line, 7 Stations - (New Item) - Construction Award: Jun 14, Goal: Aug 14, Forecast: $106.1M
  
  Delay and cost increase reflects additional scope, including component work at two other locations.

- **Bus Replacement**
  - Purchase 256 Articulated Buses - (New Item) - Purchase Award: Jun 14, Goal: Dec 14, Forecast: $245.5M
  
  Delay due to extended negotiations with vendors and an allowance for possible State review prior to award. Cost decrease reflects latest market conditions.

- **Sandy Restoration**
  - Rutgers and Cranberry Tubes - (New Item) - Construction Award: Jun 14, Goal: Feb 16, Forecast: $148.5M

  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. The Rutgers tube award has been moved to February, 2016 in order to minimize the impact to the public.

### Actual Results Shaded

**LIRR**

- **Stations**
  - Escalator Program - Construction Award: Apr 14, Goal: Jul 14, Forecast: $11.2M

  Delays being experienced in finalizing procurement as the Vendor is experiencing difficulty in satisfying its MWDBE requirement.

**NYCT**

- **Stations**
  - 34th Street Interlocking/6th Ave - (A) - Construction Award: Feb 14, Goal: Apr 14 (A), Forecast: $226.9M
  
  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, Goal: May 14 (A), Forecast: $28.1M
  
  Project award was delayed 2 months as a result of bid period extension to address proposers’ questions. The forecast cost has decreased reflecting a low bid.

- **Signals & Communications**
  - Ozone Park - Lefferts Blvd Station Renewal and ADA Liberty - Construction Award: Apr 14, Goal: May 14 (A), Forecast: $28.0M
  
  Award delayed due to a review of a supplier which was required due to prior adverse finding. The supplier was cleared. The forecast cost has decreased due to good bid savings.

- **Track & Switch**
  - Track & Switch Program (18 Projects) - Construction Start: Mar 14, Goal: May 14 (A), Forecast: $174.1M

  All but one of the 18 projects was awarded in the first quarter. Track work on White Plains Road ($20M) was rescheduled to May, 2014. Construction was delayed due to General Orders availability and issues related to track access.
# Capital Projects – Major Commitments – June 2014 – Schedule Variances

**Actual Results Shaded**

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8 All-Agency Yellow Commitments (1 new this month) (cont’d)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIRR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Track</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014 Annual Track Program</td>
<td>Construction Award</td>
<td>Apr-14</td>
<td>May-14 (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50.9M</td>
<td>$50.6M</td>
</tr>
<tr>
<td>The overall award slipped one month as a result of delays in processing the final track program commitments.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jamaica Capacity Improvements - Johnson Yard</td>
<td>Design-Build Award</td>
<td>Feb-14</td>
<td>May-14 (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$56.6M</td>
<td>$46.6M</td>
</tr>
<tr>
<td>Delay was due to contract addenda, requests for extensions from vendors, evaluation of Means and Methods and Value Engineering opportunities. Forecast reflects good bid savings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MTACC</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>East Side Access</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Package 1(CS179)</td>
<td>Construction Award</td>
<td>Feb-14</td>
<td>Mar-14 (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$366.9M</td>
<td>$366.9M</td>
</tr>
<tr>
<td>Delay was due to additional time needed to finalize contract award documentation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Package 3 (VS086) - (New Item)</td>
<td>Construction Award</td>
<td>Feb-14</td>
<td>Jun-14 (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$21.8M</td>
<td>$21.8M</td>
</tr>
<tr>
<td>Delay was due to additional time needed to finalize contract award documentation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2 All-Agency Budget only variance (1 new this month)

**Bridges & Tunnels**

<table>
<thead>
<tr>
<th>Project</th>
<th>Commitment</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deck Replacement - Bronx</strong></td>
<td>Jun-14</td>
<td>$11.7M</td>
<td>$13.1M</td>
</tr>
<tr>
<td><strong>Toll Plaza - Training Facility,</strong></td>
<td>Jun-14 (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Design/Build (New Item)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Increase in actual value reflects additional scope and bid at award.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hugh Carey Tunnel - Structural</strong></td>
<td>May-14</td>
<td>$11.7M</td>
<td>$8.5M</td>
</tr>
<tr>
<td><strong>Construction Administration</strong></td>
<td>May-14 (A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Decrease in actual value reflects good bid savings.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
46 major completions are planned for 2014; 20 reported on through June. Eleven completions were on time, eight are forecast as late and one additional project was completed early. These variances are explained on the following pages.

Agencies have completed $2.4 billion through June versus a $3.3 billion year-to-date goal. The shortfall is due partly to the above-mentioned slips, which collectively represent $804 million. The MTA forecasts a 99% overall result versus goal because nearly all delays are expected to be completed within the year.

For YTD completions, 60% are on time and 85% are on budget. By year-end, currently 70% of major completions are forecasted to be on time and 83% are forecasted to be on budget.
# Capital Projects – Major Completions – June 2014 – Schedule Variances

## Actual Results Shaded

### 8 All-Agency Red Commitments (4 new this month)

#### NYCT

**Track & Switch**

- **Track & Switch Program (9 Projects) - 1st QTR**
  - Completion: Mar-14
  - Goal: Aug-14
  - Forecast: $58.5M
  - Actual: $61.1M

  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 (New Item)**
  - Completion: Jun-14
  - Goal: Mar-15
  - Forecast: $193.3M
  - Actual: $198.6M

  2nd quarter completions were impacted by scheduling conflicts on the 7th Avenue Line and the Concourse Line. In addition, coordination for piggybacking opportunities for the remaining work on the Myrtle Avenue Line has resulted in delays. The value of the three delayed projects represents $22 million of the $193 million goal.

#### Service Vehicles

- **Purchase 28 Diesel-Electric Locomotives**
  - Purchase: May-14
  - Goal: Sep-14
  - Forecast: $109.3M
  - Actual: $109.3M

  Majority of units have been accepted and released for service. Final unit is scheduled for delivery in July, after which it must undergo acceptance testing.

### MTA CC (cont’d)

#### East Side Access (cont’d)

- **GCT Concourse Finishes Early Work, CM014A**
  - Completion: Apr-14
  - Goal: Dec-14
  - Forecast: $56.7M
  - Actual: $56.7M

  Delay is due to the need to re-design the Supervisory Control and Data Acquisition (SCADA) system.

- **Harold Structures Part 2A (CH054A) - (New Item)**
  - Completion: Jun-14
  - Goal: Dec-14
  - Forecast: $80.0M
  - Actual: $67.4M

  Delay due to re-design of the 12 kV feeder duct bank and on-going resolution of change order work for storm sewer construction. Budget decrease reflects final approval of previously outstanding change order.

### Fulton Center

- **Transit Center Building (4F) - (New Item)**
  - Completion: Jun-14
  - Goal: Dec-14
  - Forecast: $241.7M
  - Actual: $241.7M

  Substantial completion of this contract is now forecasted for December due to extended time needed for testing and commissioning critical systems including the fire alarm, public address and CCTV.

### MNR

#### Structures

- **Moodna/Woodbury Viaducts Priority Repairs - (New Item)**
  - Completion: Jun-14
  - Goal: Oct-14
  - Forecast: $9.0M
  - Actual: $9.0M

  Delay due to additional rehabilitation work necessitated by significant cracking discovered in concrete foundation of Woodbury Viaduct.

### MTACC

#### East Side Access

- **44th Street Fan Plant and 245 Park Ave Entrance (CM004)**
  - Completion: Feb-14
  - Goal: Jul-14
  - Forecast: $55.5M
  - Actual: $55.5M

  The completion of this contract has been delayed due to slower construction progress resulting from winter weather impacts and coordination issues with ongoing utility work on adjacent street.
Capital Projects – Major Completions – June 2014 – Budget* Variances

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

<table>
<thead>
<tr>
<th>Project</th>
<th>Completion</th>
<th>Goal</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 All-Agency Budget Only Commitments (0 new this month)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTACC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queens Bored Tunnel and Structures (CQ031)</td>
<td>Construction Award</td>
<td>Apr-14</td>
<td>Apr-14 (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$801.6M</td>
<td>$777.0M</td>
</tr>
</tbody>
</table>

Budget decrease reflects the final contract value, including all approved change orders and scope transfers.
Status of MTA Capital Program Funding
### Capital Funding Detail (June 30, 2014)

$ in millions

#### 2005-2009 Program

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Thru May</th>
<th>This month</th>
<th>Received to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Formula and Flexible Funds</td>
<td>$5,186</td>
<td>$5,186</td>
<td>$5,186</td>
</tr>
<tr>
<td>Federal New Start</td>
<td>2,810</td>
<td>1,832</td>
<td>1,832</td>
</tr>
<tr>
<td>Federal Security</td>
<td>322</td>
<td>242</td>
<td>242</td>
</tr>
<tr>
<td>Federal Other</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Federal ARRA - Stimulus</td>
<td>654</td>
<td>654</td>
<td>654</td>
</tr>
<tr>
<td>City of New York</td>
<td>418</td>
<td>409</td>
<td>409</td>
</tr>
<tr>
<td>City #7 Line Extension Funds</td>
<td>2,367</td>
<td>2,038</td>
<td>2,038</td>
</tr>
<tr>
<td>MTA Bus Federal and City Match</td>
<td>149</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>Asset Sales and Program Income</td>
<td>1,213</td>
<td>594</td>
<td>594</td>
</tr>
<tr>
<td>State Transportation Bond Act</td>
<td>1,450</td>
<td>1,064</td>
<td>1,064</td>
</tr>
<tr>
<td>MTA Bonds (Including LGA)</td>
<td>3,039</td>
<td>3,039</td>
<td>3,039</td>
</tr>
<tr>
<td>B&amp;T Bonds</td>
<td>1,221</td>
<td>1,221</td>
<td>1,221</td>
</tr>
<tr>
<td>Bonds from New Sources</td>
<td>5,624</td>
<td>5,624</td>
<td>5,624</td>
</tr>
<tr>
<td>Other (Including Operating to Capital)</td>
<td>138</td>
<td>122</td>
<td>122</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24,603</strong></td>
<td><strong>22,177</strong></td>
<td><strong>22,177</strong></td>
</tr>
</tbody>
</table>

#### 2010-2014 Program

<table>
<thead>
<tr>
<th>Funding Plan</th>
<th>Thru May</th>
<th>This month</th>
<th>Received to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Formula, Flexible, Misc</td>
<td>$5,836</td>
<td>$4,029</td>
<td>$4,029</td>
</tr>
<tr>
<td>Federal High Speed Rail</td>
<td>295</td>
<td>295</td>
<td>295</td>
</tr>
<tr>
<td>Federal Security</td>
<td>206</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Federal RIFF Loan</td>
<td>2,200</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>City Capital Funds</td>
<td>778</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>State Assistance</td>
<td>770</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>MTA Bus Federal and City Match</td>
<td>132</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>MTA Bonds (Payroll Mobility Tax)</td>
<td>10,503</td>
<td>4,665</td>
<td>4,665</td>
</tr>
<tr>
<td>Other (Including Operating to Capital)</td>
<td>1,497</td>
<td>409</td>
<td>409</td>
</tr>
<tr>
<td>B&amp;T Bonds</td>
<td>2,079</td>
<td>634</td>
<td>634</td>
</tr>
<tr>
<td>Hurricane Sandy Recovery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance Proceeds/Federal Reimbursement</td>
<td>9,431</td>
<td>912</td>
<td>912</td>
</tr>
<tr>
<td>PAYGO</td>
<td>160</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sandy Recovery MTA Bonds</td>
<td>758</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sandy Recovery B&amp;T Bonds</td>
<td>175</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34,821</strong></td>
<td><strong>11,564</strong></td>
<td><strong>11,564</strong></td>
</tr>
</tbody>
</table>