



Metropolitan Transportation Authority

# May 2017

## MTA Board Action Items



# **MTA Board Meeting**

**2 Broadway, 20th Floor Board Room, New York, N.Y. 10004**

**Wednesday, 5/24/2017**

**10:00 AM - 12:00 PM ET**

## **1. PUBLIC COMMENT PERIOD**

## **2. APPROVAL OF MINUTES**

### **MTA Special Board Meeting Minutes - April 3, 2017**

*MTA Special Board Meeting Minutes - April 3, 2017 - Page 5*

### **NYCT/MaBSTOA/SIRTOA/Bus Company Special Board Meeting Minutes - April 3, 2017**

*NYCT Special Board Meeting Minutes - April 3, 2017 - Page 8*

### **MTA Metro-North Railroad Special Board Meeting Minutes - April 3, 2017**

*Metro-North Special Board Meeting Minutes - April 3, 2017 - Page 10*

### **MTA Long Island Rail Road Special Board Meeting Minutes - April 3, 2017**

*LIRR Special Board Meeting Minutes - April 3, 2017 - Page 12*

### **MTA Bridges & Tunnels Special Board Meeting Minutes - April 3, 2017**

*TBTA Special Board Meeting Minutes - April 3, 2017 - Page 14*

### **MTA Regular Board Minutes - April 26, 2017**

*MTA Regular Minutes - April 26, 2017 - Page 17*

### **NYCT/MaBSTOA/SIR/Bus Company Regular Board Minutes - April 26, 2017**

*NYCT Regular Minutes - April 26, 2017 - Page 21*

### **MTA Metro-North Railroad Regular Board Minutes - April 26, 2017**

*Metro-North Regular Minutes - April 26, 2017 - Page 24*

### **MTA Long Island Rail Road Regular Board Minutes - April 26, 2017**

*LIRR Regular Minutes - April 26, 2017 - Page 28*

### **MTA Bridges & Tunnels Regular Board Minutes - April 26, 2017**

*TBTA Regular Minutes - April 26, 2017 - Page 36*

### **MTA Capital Construction Regular Board Minutes - April 26, 2017**

*MTACC Regular Minutes - April 26, 2017 - Page 42*

## **3. COMMITTEE ON FINANCE**

### **Action Items**

#### **i. Payroll Mobility Tax Resolution**

*Payroll Mobility Tax Resolution - Page 44*

#### **ii. Approval of Outside Counsel**

*Approval of Outside Counsel - Page 215*

### **MTAHQ Procurements Report**

*MTAHQ Procurement Report - Page 220*

**i. Non-Competitive**

*MTAHQ Non-Competitive Procurement - Page 222*

**ii. Competitive**

*MTAHQ Competitive Procurements - Page 224*

**iii. Ratifications**

*MTAHQ Procurement Ratification - Page 229*

**Information Item**

**i. 2015-2016 Station Maintenance Billing**

*Station Maintenance Billings - Page 231*

**Real Estate Items**

**i. Real Estate Agenda and Staff Summaries**

*Real Estate Agenda and Staff Summaries - Page 236*

**4. COMMITTEE ON NYCT & BUS**

**Action Item**

**i. NYCT X28 Weekend Permanent Service**

*NYCT X28 Weekend Permanent Service - Page 245*

**NYCT Procurements**

*NYCT May Procurement Staff Summary and Resolution - Page 250*

**i. Non-Competitive**

*NYCT Non-Competitive Actions - Page 254*

**ii. Competitive**

*NYCT Competitive Actions - Page 256*

**iii. Ratifications (no items)**

**5. COMMITTEE ON METRO-NORTH RAILROAD**

**Metro-North Procurements**

*MNR Procurements - Page 263*

**i. Non-Competitive**

*MNR Non-Competitive Procurements - Page 267*

**ii. Competitive**

*MNR Competitive Procurements - Page 272*

**iii. Ratifications (no items)**

**6. COMMITTEE ON LONG ISLAND RAIL ROAD**

**LIRR Procurements**

*LIRR Procurements - Page 289*

**i. Non-Competitive**

*LIRR Non-Competitive - Page 293*

**ii. Competitive**

*LIRR Competitive - Page 295*

**iii. Ratifications**

*LIRR Ratification - Page 301*

**LIRR MTACC Procurements**

*MTA CC Procurements - Page 304*

**i. Non-Competitive (no items)**

**ii. Competitive**

*MTA CC Competitive - Page 307*

**iii. Ratifications**

*MTA CC Ratifications - Page 310*

**7. COMMITTEE ON MTA BRIDGES & TUNNELS OPERATIONS**

**BT Procurements**

*BT Procurements - Page 313*

**i. Non-Competitive (no items)**

**ii. Competitive**

*BT Competitive - Page 316*

**iii. Ratifications (no items)**

**8. COMMITTEE ON DIVERSITY**

**Action Item**

**i. MTA's Title VI Program**

*Staff Summary: 2017 Title VI Program - Page 329*

**9. OTHER MTA BUSINESS**

**Action Item**

**i. Capital Plan Amendment (Materials distributed separately)**

**10. FIRST MUTUAL TRANSPORTATION ASSURANCE CO (FMTAC)**

**FMTAC Annual Board Meeting (Meeting Book included in Exhibit Book)**

**Information Item**

**i. FMTAC Staff Summary**

*FMTAC Meeting Staff Summary - Page 331*

**11. EXECUTIVE SESSION**

Date of next Board meeting: June 21, 2017

**Metropolitan Transportation Authority  
Minutes of  
Special Board Meeting  
2 Broadway  
New York, NY 10004  
April 3, 2017  
10:00 a.m.**

**The following members were present:**

**Hon. Fernando Ferrer, Acting Chairman  
Hon. David Jones  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Andrew Saul  
Hon. Lawrence Schwartz  
Hon. Veronica Vanterpool  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman**

**The following members were absent:**

**Hon. Ira Greenberg  
Hon. Susan Metzger  
Hon. John Samuelson  
Hon. Polly Trottenberg  
Hon. James Vitiello  
Hon. Peter Ward**

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Catherine Rinaldi, Executive Vice President, Metro-North Railroad, Donald Spero, President, TBTA, Craig Cipriano, Executive Vice President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

Unless otherwise indicated, these minutes reflect items on the agenda of the Board of the Metropolitan Transportation Authority, the Metropolitan Suburban Bus Authority, and the First

Mutual Transportation Assurance Company. Refer to the other agencies' minutes of this date for items on the agendas of the Boards of the other agencies.

1. **PUBLIC SPEAKERS.** There were no public speakers.
2. **CHAIRMAN'S REMARKS.** Acting Chairman Ferrer announced that this is a Special Board meeting, notice of which was duly provided to Board Members as required by the By-Laws, and that under the By-Laws, the matters under consideration are limited to those matters stated in the notice to Board members. Mr. Ferrer further stated that the Board will hear from the Committees on the contracts requiring 2/3 Board vote that were postponed at the March Board meeting.
3. **COMMITTEE ON NEW YORK CITY TRANSIT.**

**Procurement Items.** Upon motion duly made and seconded, the Board approved the following procurement items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials, and in the NYCTA's minutes of the meeting of this date. Board member Veronica Vanterpool abstained from the vote on item #1 below.

Refer to the video recording of this meeting, produced by the MTA and maintained in the MTA records, and in the NYCT's minutes of the meeting of this date for the details of Board Members' discussion relating to Item # 1 below.

1. Judlau Construction Corp./TC Electric JV – Contract #P-36437. Approved the award of a competitive contract for the Canarsie Tunnel Rehabilitation and Core Capacity Improvement in the Boroughs of Manhattan and Brooklyn, a joint venture consisting of Judlau Contracting Inc. and TC Electric, LLC in the total amount of \$492M, for a duration of 43 months.
2. Skanska USA Civil Northeast, Inc. – Enhanced Station Initiative – Contract #A-36622B. Approved the award of a competitive contract for Package 2 of the Enhanced Station Initiative Program for the design and construction of improvements at 30<sup>th</sup> Avenue, Broadway, 36<sup>th</sup> Avenue, and 39<sup>th</sup> Avenue stations along the Astoria Line in the borough of Queens to Skanska USA Civil Northeast in the amount of \$149,680,000 and for a duration of 21 months.
3. Contractor to Be Determined – Contract # B-40669. Approved the issuance of a Request for Proposals ("RFP") pursuant to subdivision 4(g) of Section 1265-a of the Public Authorities Law in connection with the federally funded procurement of up to 53 low-floor 60-foot articulated diesel buses for MTA Bus Company.

4. **COMMITTEE ON METRO-NORTH RAILROAD.**

**Procurement Item.** Upon motion duly made and seconded, the Board voted to postpone the vote on the proposed contact with Ansaldo STS USA, Inc. until the regularly scheduled Board meeting held on April 26, 2017. Board member Lawrence Schwartz was absent for the vote.

The details of Board Members' discussion are contained in the video recording of this meeting, produced by the MTA and maintained in the MTA records, and in the Metro-North's minutes of the meeting of this date.

5. **COMMITTEE ON LONG ISLAND RAIL ROAD.**

**Procurement Item.** Upon motion duly made and seconded, the Board approved the following procurement item. The specifics are set forth in the staff summary and documentation filed with the meeting materials, and in the LIRR's minutes of the meeting of this date. Board member Lawrence Schwartz was absent for the vote.

1. Ansaldo STS USA, Inc. – Contract #6218. Approved the award of a Public Works contract to Ansaldo STS USA, Inc., in the amount of \$325,851, to design, furnish and deliver switch machine kits and equipment for LIRR's West-Side Yard, which is part of the MTA/LIRR Super-Storm Sandy recover program (Project PNZD, Western Rail Yards).

6. **COMMITTEE ON BRIDGE & TUNNELS.**

**Procurement Item.** Upon motion duly made and seconded, the Board approved the following procurement item. The specifics are set forth in the staff summary and documentation filed with the meeting materials, and in B&T's minutes of the meeting of this date. Board member Lawrence Schwartz was absent for the vote.

1. Tutor Perini Corp. – Contract # HH-89. Approved the award of a competitively solicited public work contract for Design/Build Services for the reconstruction of the Arch Span Skewbacks, Viaduct Span Pedestal supports and Lower Level North Abutment at the Henry Hudson Bridge to Tutor Perini Corp. for a period of 33 months at a cost of \$82,180,000.

7. **ADJOURNMENT.** Upon motion duly made and seconded, the Board voted to adjourn the meeting at 10:26 a.m.

Respectively submitted,

Victoria Clement  
Assistant Secretary

Special Board Meeting  
April 3, 2017

**Minutes of the  
Special Board Meeting  
for the New York City Transit Authority,  
Manhattan and Bronx Surface Transit Operating Authority,  
Staten Island Rapid Transit Operating Authority and  
MTA Bus Company**

**2 Broadway  
New York, NY 10004**

**Monday, April 3, 2017  
10:00 a.m.**

**The following members were present:**

**Hon. Fernando Ferrer, Acting Chairman  
Hon. David Jones  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Andrew Saul  
Hon. Lawrence Schwartz  
Hon. Veronica Vanterpool  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman**

**The following members were absent:**

**Hon. Ira Greenberg  
Hon. Susan Metzger  
Hon. John Samuelson  
Hon. Polly Trottenberg  
Hon. James Vitiello  
Hon. Peter Ward**

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Catherine Rinaldi, Executive Vice President, Metro-North Railroad, Donald Spero, President, TBTA, Craig Cipriano, Executive Vice President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

1. **ACTING CHAIRMAN FERRER CALLED THE MEETING TO ORDER**

2. **PUBLIC COMMENT PERIOD**

There were no public speakers.

3. **ACTING CHAIRMAN FERRER'S COMMENTS**

Acting Chairman Ferrer announced that this is a Special Board meeting, notice of which was duly provided to Board Members as required by the By-Laws, and that under the By-Laws, the matters under consideration are limited to those matters stated in the notice to Board members. Mr. Ferrer further stated that the Board will hear from the Committees on the contracts requiring 2/3 Board vote that were postponed at the March Board meeting.

4. **COMMITTEE ON TRANSIT & BUS OPERATIONS**  
**MTA NYC Transit & MTA Bus Company**

**Procurements:**

Competitive Procurements: Upon motion duly made and seconded, the Board approved the non-competitive procurements requiring a two-thirds vote (Schedule C in the Agenda) and a majority vote (Schedule B in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

Board Member Veronica Vanterpool abstained from the vote on Schedule C, Item #1 (listed on pages 7-11 of the Board book), relating to the proposed award of a competitive contract for the Canarsie Tunnel Rehabilitation and Core Capacity Improvement in the boroughs of Manhattan and Brooklyn to Judlau/TC Electric JV. Details of the Board Members' comments relating to this item are set forth in minutes recorded by the MTA, copies of which are on file with the records of the meeting of the Board of the MTA NYC Transit/Staten Island Rapid Transit Operating Authority/MTA Bus Company.

5. **ADJOURNMENT**

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 10:26 a.m.

Respectfully submitted,  
/s/Mariel A. Thompson  
Mariel A. Thompson  
Assistant Secretary

Minutes of the Special Board Meeting  
Metro-North Commuter Railroad Company  
2 Broadway – 20<sup>th</sup> Floor  
New York, NY 10004  
Wednesday, April 3, 2017  
10:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. David Jones  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Andrew Saul  
Hon. Lawrence Schwartz  
Hon. Veronica Vanterpool  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. Ira Greenberg  
Hon. Susan Metzger  
Hon. John Samuelson  
Hon. Polly Trottenberg  
Hon. James Vitiello  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Catherine Rinaldi, Executive Vice President, Metro-North Railroad, Donald Spero, President, TBTA, Craig Cipriano, Executive Vice President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Acting Chairman Ferrer called the meeting to order.

1. Public Speakers: There were no public speakers.
2. Chairman's Remarks:

Acting Chairman Ferrer announced that this is a Special Board meeting, notice of which was duly provided to Board Members as required by the By-Laws, and that under the By-Laws the matters under consideration today are limited to those matters stated in the notice to Board members. Mr. Ferrer further stated that the Board will hear from the Committees on the contracts requiring 2/3 Board vote that were postponed at the March Board meeting.

3. Committee on Metro-North Railroad:

The Board was presented with one competitive procurement requiring Two-Thirds Vote:

- A competitively solicited 56 month contract in the amount of \$24,500,200 to Ansaldo STS USA, Inc. to perform application engineering/design prior to fabricating and delivering new pre-wired communications and signal houses and cases. These houses and cases will be located in Connecticut from Greenwich to East Norwalk and will be installed by MNR forces.

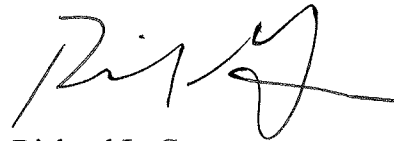
Upon motion duly made and seconded, the Board voted to table the vote on the proposed contact with Ansaldo STS USA, Inc., pending the provision of certain additional information concerning the proposal of the firm which was not selected to receive the award.

The details of the above item are contained in a staff summary filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA records, which recording contains discussion regarding the proposed contract with Ansaldo STS USA.

4. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 10:26 p.m.

Respectfully submitted,



Richard L. Gans  
Secretary

Minutes of the Special Board Meeting  
Long Island Rail Road Company  
2 Broadway  
New York, NY 10004  
Monday, April 3, 2017  
10:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. David Jones  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Andrew Saul  
Hon. Lawrence Schwartz  
Hon. Veronica Vanterpool  
Hon. Carl v. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. Ira Greenberg  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John Samuelson  
Hon. Polly Trottenberg  
Hon. James Vitiello  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Darryl Irrick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Catherine Rinaldi, Executive Vice President, Metro-North Railroad, Donald Spero, President, TBTA, Craig Cipriano, Executive Vice President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Acting Chairman Fernando Ferrer called the meeting to order. He stated that this was a Special Meeting of the Board, notice of which was given in accordance with the By-Laws, and that the agenda was restricted to matters set forth in such notice. The Special Meeting was being held to consider and vote on certain items requiring a Two-Thirds (2/3) Vote, which were postponed from the March regular meeting of the Board.

1. Public Speakers:

There were no public speakers.

2. Long Island Rail Road Committee:

The Board was presented with one (1) procurement item recommended to it by the Long Island Rail Road Committee:

Procurement Item

- Ansaldo STS USA, Inc. (ASTS) – Design/Furnish/Deliver Switch Machine Kits and Equipment- West Side Yard – Request MTA Board approval to award a Public Works contract to Ansaldo STS USA, Inc. in the amount of \$325,851 to design, Furnish, and Deliver Switch Machine Kits and Equipment for LIRR's West Side Yard. This work is part of the MTA/LIRR Super Storm Sandy recovery program (Project PNZD, Western Rail Yards).

Upon motion duly made and seconded, the Board approved the foregoing procurement item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes, and in the video recording of the meeting produced by the MTA and maintained in the MTA records.

3. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 10:26 a.m.

Respectfully submitted,



Mark D. Hoffer,  
Secretary

**TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY**

**BOARD MINUTES**

**April 3, 2017**

Minutes of the Special Meeting  
Triborough Bridge and Tunnel Authority  
April 3, 2017

Meeting Held at  
2 Broadway, 20<sup>th</sup> Floor  
New York, New York 10004

10:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. David Jones  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Andrew Saul  
Hon. Lawrence Schwartz  
Hon. Veronica Vanterpool  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. Ira Greenberg  
Hon. Susan Metzger  
Hon. John Samuels  
Hon. Polly Trottenberg  
Hon. James Vitiello  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Darryl Irick, Acting President, New York City Transit, Patrick Nowakowski, President, Long Island Rail Road, Catherine Rinaldi, Executive Vice President, Metro-North Railroad, Donald Spero, President, Triborough Bridge and Tunnel Authority, Craig Cipriano, Executive Vice President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road Company, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

1. **Acting Chairman Ferrer's Opening Remarks**

Acting Chairman Ferrer stated that this is a special Board meeting, notice of which was duly provided to Board Members as required by the by-laws. Under the by-laws, the matters under consideration are limited to those matters stated in the notice. The Committees will report on the contracts requiring a two-thirds Board vote that were postponed at our March Board meeting.

The details of Acting Chairman Ferrer's remarks are contained in the video recording of this meeting, produced by the MTA and maintained in MTA records, and the MTA's and other agencies' minutes of the meeting of this date.

2. **Public Speakers**

There were no public speakers.

3. **Committee on MTA Bridges and Tunnels Operations**

**Procurements**

Commissioner Moerdler stated that there is one (1) competitive procurement totaling \$82.2 million.

**Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)**

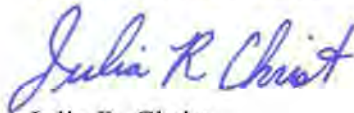
Tutor Perini Corp.	Contract HH-89 TBTA is seeking Board approval under the All Agency General Contract Procurement Guidelines to award a competitively solicited public work contract for Design-Build Services for the Rehabilitation of Skewbacks, Viaduct Piers and Lower Level North Abutment at the Henry Hudson Bridge to Tutor Perini Corp.	\$82,180,000
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Upon a motion duly made and seconded, the Board approved the procurement recommended to it by the Committee for MTA Bridges and Tunnels Operations.

4. **Adjournment**

Upon a motion duly made and seconded, the Board unanimously voted to adjourn the meeting at 10:26 a.m.

Respectfully submitted,



Julia R. Christ  
Secretary

**Metropolitan Transportation Authority  
Minutes of  
Regular Board Meeting  
2 Broadway  
New York, NY 10004  
April 26, 2017  
10:00 a.m.**

**The following members were present:**

**Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman**

**The following members were absent:**

**Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward**

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Tim Mulligan, Acting President, TBTA, Stephen Vidal, Acting President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Boards of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

Unless otherwise indicated, these minutes reflect items on the agenda of the Board of the Metropolitan Transportation Authority, the Metropolitan Suburban Bus Authority, and the First

Mutual Transportation Assurance Company. Refer to the other agencies' minutes of this date for items on the agendas of the Boards of the other agencies.

1. **PUBLIC SPEAKERS.** There were twelve (12) public speakers. The following speakers addressed items relative to the MTA agenda. Refer to the video recording of the meeting produced by the MTA and maintained in MTA records, and to the other agencies' minutes of this date, content of speakers' statements and the names of the other speakers.

Murray Bodin, private citizen

Paul Carr, private citizen

Sara Kim, Representative of the Korean Community Services/Member of Coalition of Building Alcohol Ad-Free Transit (BAAFT)

Adrienne Abbate, Executive Director, Staten Island Partnership for Community Wellness

Cedric McClester, Chair Person/Project Coordinator, Forward South Bronx Coalition

Robert Pezzolesi, NYC Alcohol Policy Alliance

Louis Bailey, Community Organizer, WE ACT

Jason Pineiro, private citizen

Edwin Frank, private citizen

Angelo Ortiz, Inwood Academy for Leadership Charter School

2. **CHAIRMAN'S REMARKS.**

Acting Chairman Ferrer recognized the heroic actions of MTA Police Officer Daniel McDade, who on March 16, 2017 interceded in an incident involving EMT employee Yadira Arroyo, a 44 year-old mother of five and 14-year veteran of the FDNY, who was tragically killed that morning.

Officer McDade, who is assigned as a K-9 Officer, was driving on White Plains Road in the Bronx when he saw an EMT exit an ambulance in front of him. The Officer then watch as the ambulance careened wildly out of control, running over the EMT and crashing into other cars before the driver stumbled out of the vehicle. Officer McDade sprang into action, jumped out of his car and, working with two good Samaritans, the Officer subdued the man and quickly attended to the critically injured EMT.

Acting Chairman Ferrer commended Officer McDade for his bravery, heroism and for putting his life on the line every day to protect New York. On behalf of the Board and the MTA, the Chairman presented Officer McDade with a token of appreciation.

Acting Chairman Ferrer announced the retirement of Dr. Michael Horodniceanu, President of MTA Capital Construction, who is retiring in May after nearly ten years of overseeing some of the most ambitious MTA projects in a generation, culminating in the on-time opening of the first phase of the Second Avenue Subway. Acting Chairman Ferrer stated that Dr. Horodniceanu has a well-deserved reputation as a leader who thinks creatively to solve some of the thorniest engineering challenges. Acting Chairman Ferrer, on behalf of the entire MTA organization, thanked Dr. Horodniceanu for his service and wished him well in his retirement.

Dr. Horodniceanu thanked Acting Chairman Ferrer and the Board, and he noted that his last day at MTA is May 24, 2017.

Acting Chairman Ferrer noted that Earth Day took place this weekend and he highlighted the release of the MTA's Climate Adaptation Task Force's First Annual Resiliency Report. The Chairman stated that the Report reminds us that climate change is an urgent reality that must be confronted head-on. Acting Chairman Ferrer stated that the Report provides an overview of some of the 40-plus resiliency projects that MTA recently completed or that are ongoing in preparation for the future. The Report is available at [www.MTA.info/sustainability](http://www.MTA.info/sustainability), and hard copies of the Report are also available.

3. **MINUTES.** Upon motion duly made and seconded, the Board approved the minutes of the regular Board meeting held on March 22, 2017.

4. **COMMITTEE ON FINANCE.**

A. **Action Items.** Upon motion duly made and seconded, the Board approved the following action items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials.

1. **Capital Markets-Based Reinsurance.** Approved a resolution authorizing placement of part of the First Mutual Transportation Assurance Company's ("FMTAC") property insurance program through a cat bond issuance and a capital markets-based online marketplace, as part of the continuing effort to reduce FMTAC's reinsurance portfolio costs and seek competitive solutions for its reinsurance needs.
2. **2016 Annual Investment Report and MTA All Agency Investment Guidelines.** Re-approved the Board adopted MTA All-Agency Investment Guidelines and MTA's submission of the 2016 Annual Investment Report, pursuant to Public Authorities Law Section 2925.

B. **Procurement Items.** Upon motion duly made and seconded, the Board approved the following procurement items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials. Board member Charles Moerdler abstained from the vote on item #1 below.

1. **PricewaterhouseCoopers LLC – Organizational Assessment Services – No. 900000000002029.** Approved the award of a competitively negotiated, personal services contract to PricewaterhouseCoopers LLC, riding NYS Contract No. C000422, for consulting services for a period of approximately six (6) months, from May 22, 2017 to November 30, 2017.
2. **Siemens Industry, Inc. – Comprehensive Energy Consulting Services – No. 16113-0100.** Approved the award of a competitively-negotiated, all-agency personal services contract to Siemens Industry, Inc. to provide energy consulting services for current and future energy projects.
3. **IBM - MTA Business Service Center PeopleSoft 9.2 Upgrade – No. 14049-0100, S/A #4.** Approved an amendment to a previously Board-approved, all-agency, competitively negotiated, personal services contract with IBM to provide for a

one-time PeopleSoft Upgrade Manager and People Tools update, which will overlap the move of the backup data center to Albany.

- C. **Real Estate Items.** Upon motion duly made and seconded, the Board approved the following real estate items. The specifics are set forth in the staff summaries and documentation filed with the meeting materials.

**Long Island Rail Road**

1. License agreement with Floral Park – Bellerose Union Free School District of surplus property located at Creedmore Branch right-of-way between Tyson and Plainfield Avenues, Floral Park, N.Y. for parking and green space.
  2. Sale of surplus property to Coland Realty LLC of property located at Redfern Avenue, between Beach 11 Street and Doughty Boulevard, Far Rockaway, Queens, N.Y. (Block 15503, Lot 5).
  3. Sale of property to Normandy Real Estate Partners of property located at Bushwick freight yard, p/o Block 3056, Lot 32, Brooklyn, N.Y.
5. **EXECUTIVE SESSION.** Upon motion duly made and seconded, the Board convened an executive session pursuant to Section 105(1)(e) of the New York State Public Officers Law, to discuss matters relating to collective bargaining.

Thereafter, upon motion duly made and seconded, the Board voted to resume proceedings in public session.

Acting Chairman Ferrer announced that the Board, upon motion duly made and seconded, approved an agreement between MTA Bridges and Tunnels and District Council 37, Local 1931, Triborough Bridge and Tunnel Maintainers.

6. **ADJOURNMENT.** Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:20 a.m.

Respectively submitted,

Victoria Clement  
Assistant Secretary

**Minutes of the  
Regular Board Meeting  
for the New York City Transit Authority,  
Manhattan and Bronx Surface Transit Operating Authority,  
Staten Island Rapid Transit Operating Authority and  
MTA Bus Company**

**2 Broadway  
New York, NY 10004**

**Wednesday, April 26, 2017  
10:00 a.m.**

**The following members were present:**

**Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman**

**The following members were absent:**

**Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward**

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Tim Mulligan, Acting President, TBTA, Stephen Vidal, Acting President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

**1. ACTING CHAIRMAN FERRER CALLED THE MEETING TO ORDER**

**2. PUBLIC COMMENT PERIOD**

There were ten (10) public speakers. The following speakers spoke on MTA NYC Transit/Staten Island Rapid Transit Operating Authority /MTA Bus Company matters. Please refer to the video recording of the meeting produced by the MTA and maintained in MTA records, and to the other agencies' minutes of this date, for the content of speakers' statements.

Murray Bodin, Private Citizen

Paul Carr, Private Citizen

Sara Kim, Representative of the Korean Community Services/Member of Coalition of Building Alcohol Ad-Free Transit (BAAFT)

Adrienne Abbate, Executive Director, Staten Island Partnership for Community Wellness

Cedric McClester, Chair Person/Project Coordinator, Forward South Bronx Coalition

Robert Pezzolesi, NYC Alcohol Policy Alliance

Louis Bailey, Community Organizer, WE ACT

Jason Pineiro, Private Citizen

Edwin Frank, Private Citizen

Angelo Ortiz, Inwood Academy for Leadership Charter School

**3. ACTING CHAIRMAN FERRER'S COMMENTS**

Details of Acting Chairman Ferrer's comments are set forth in minutes recorded by the MTA, copies of which are on file with the records of the meeting of the Board of the MTA NYC Transit/Staten Island Rapid Transit Operating Authority/MTA Bus Company.

**4. MINUTES**

Upon motion duly made and seconded, the Board unanimously approved the minutes of the regular board meeting of MTA NYC Transit, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, and MTA Bus Company held on March 22, 2017.

**5. COMMITTEE ON TRANSIT & BUS OPERATIONS  
MTA NYC Transit & MTA Bus Company**

**Procurements:**

Non-Competitive Procurements: Upon motion duly made and seconded, the Board approved the non-competitive procurements requiring a two-thirds vote (Schedule A in the Agenda) and a majority vote (Schedule J in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

Competitive Procurements: Upon motion duly made and seconded, the Board approved the competitive procurements requiring a two-thirds vote (Schedule B in the Agenda) and a majority vote (Schedule I in the Agenda). Details of the above items are set forth in staff summaries,

copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

Ratifications: Upon motion duly made and seconded, the Board approved the ratifications requiring a majority vote (Schedule K in the Agenda). Details of the above items are set forth in staff summaries, copies of which are on file with the records of the meeting of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

**6. EXECUTIVE SESSION.**

Upon motion duly made and seconded, the Board convened an executive session pursuant to Section 105(1)(e) of the New York State Public Officers Law, to discuss matters relating to collective bargaining.

Thereafter, upon motion duly made and seconded, the Board voted to resume proceedings in public session.

**7. ADJOURNMENT**

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:20 a.m.

Respectfully submitted,  
/s/Mariel A. Thompson  
Mariel A. Thompson  
Assistant Secretary

Minutes of the Regular Meeting  
Metro-North Commuter Railroad Company  
2 Broadway – 20<sup>th</sup> Floor  
New York, NY 10004  
Wednesday, April 26, 2017  
10:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Tim Mulligan, Acting President, TBTA, Stephen Vidal, Acting President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Acting Chairman Ferrer called the meeting to order.

1. Public Speakers:

There were 12 public speakers. Two speakers spoke on Metro-North matters.

Murray Bodin described Positive Train (PTC) control as an out-of-date technology, and spoke in favor of implementing a system similar to that which control driverless cars instead of PTC.

Edwin Frank discussed the affordable housing project in Chappaqua. He expressed his opinion that an additional safety study should be conducted to address the effect on the housing project should there be a train derailment.

Refer to the video recording of the meeting produced by the MTA and maintained in MTA records, and to the other agencies' minutes of this date, for the names of the speakers and the content of speakers' statements.

2. Acting Chairman Ferrer's Remarks:

Acting Chairman Ferrer discussed the events that took place on March 16, 2017. On that day MTA Police Officer McDade, who is assigned as a Canine Officer, was driving on White Plains Road when he saw an EMT exit an ambulance in front of him. He then saw the ambulance careen wildly out of control, running over the EMT and crashing into other cars before the driver stumbled out of the vehicle. Officer McDade jumped out of his car and confronted the man at gunpoint. Working with two good Samaritans, he subdued the man, preventing any further threat to public safety. Officer McDade then attended to the critically injured EMT, Yadira Arroyo, a 44 year old mother of five and 14 year veteran of the FDNY, who was tragically killed that morning. Acting Chairman Ferrer presented Officer Daniel McDade with an award for his bravery, and heroism and putting his life on the line daily to protect New Yorkers and for representing all of his MTAPD colleagues who do the same.

Acting Chairman Ferrer spoke of the upcoming retirement of Michael Horodniceanu, President, MTA Capital Construction who has been President for approximately 10 years and oversaw some of the most ambitious MTA projects in a generation, including the on-time opening of the Second Avenue subway. Acting Chairman Ferrer thanked President Horodniceanu for his service and extended best wishes to President Horodniceanu and his family.

Acting Chairman Ferrer noted that Earth Day took place over the past weekend. He stated that one of best things that can be done to combat climate change is to ride public transportation. Acting Chairman Ferrer discussed the First Annual Resiliency Report of the MTA Climate Adaptation Task Force which states that climate change is an urgent reality that must be confronted head on. The report provides an overview of approximately 40 MTA resiliency projects that have been completed or are ongoing. The report is available at [www.MTA.info/sustainability](http://www.MTA.info/sustainability).

The details of Acting Chairman Ferrer's comments are contained in the video recording of this meeting, produced by the MTA and maintained in the MTA records.

3. Approval of Minutes:

Upon motion duly made and seconded, the members of the Board present approved the minutes of the Regular Board Meeting of March 22, 2017.

4. Committee on Finance:

Action Items:

The Board was presented with the following action items recommended to it by the Committee on Finance that relate to Metro-North.

- Capital Markets-Based Reinsurance – Approval to allow First Mutual Transportation Assurance Company (“FMTAC”) to undertake a capital markets-based reinsurance program by expanding FMTAC's current traditional capital markets-based reinsurance program to include catastrophe bond-based reinsurance transactions and collateralized note reinsurance transactions placed through a capital markets-based online marketplace.
- 2016 Annual Investment Report and MTA All Agency Investment Guidelines – To provide the MTA Board information on the MTA portfolio investment performance for the period 01/01/2016 to 12/31/2016, obtain Board approval of the MTA 2016 Annual Investment Report and obtain Board approval of the MTA All Agency Investment Guidelines.

Upon motion duly made and seconded, the Board approved the foregoing action items, the details of which are contained in the minutes of the MTA Board meeting held this day, staff summaries and reports filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

MTAHQ Procurements:

The Board was presented with the following competitive procurements recommended to it by the Committee on Finance that relate to Metro-North.

- Approval to award of a competitively-negotiated, All-Agency personal services contract to Siemens Industry, Inc. to provide Energy Consulting Services for current and future energy projects. The contract will be for a period of thirty-six (36) months, with two (2) one-year options to be exercised at the Authority’s sole discretion, at a total cost not-to-exceed \$4,000,000.00.
- Approval of an amendment to a previously Board-approved, All-Agency, competitively negotiated, personal services contract with IBM in the not-to-exceed amount of \$1,200,000. The additional funds will provide for a one-time PeopleSoft Upgrade Manager (“PUM”) and People Tools update, which will overlap the move of the backup data center to Albany.

Upon motion duly made and seconded, the Board approved the foregoing procurement items, the details of which are contained in the minutes of the MTA Board meeting held this day, staff summaries and reports filed with those minutes and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

5. Committee on Metro-North Railroad:

The Board was presented with two competitive procurements requiring Two-Thirds Vote:

- Approval to award a 20-month competitively solicited and negotiated design-build contract to the firm, Halmar International LLC, in the not-to-exceed amount of \$9,445,500, for the design and construction of the Prospect Hill Road Bridge located over the Harlem Line in the Metro-North Brewster Yard south of the Southeast train station.
- Approval to award a competitively solicited 56 month contract to Ansaldo STS USA, Inc. to perform application engineering and to fabricate and deliver pre-wired communications and signal houses and cases to be located in Connecticut from Greenwich to East Norwalk, in the amount of \$24,500,200, funded by the State of Connecticut.

Upon motion duly made and seconded, the Board approved the foregoing procurement items, the details of which are contained in staff summaries and reports filed with the records of this meeting and in the video recording of the meeting produced by the MTA and maintained in the MTA records.

6. Executive Session:

Upon motion duly made and seconded, the Board convened an executive session pursuant to Section 105(1)(e) of the New York State Public Officers Law, to discuss matters relating to collective bargaining. Thereafter, upon motion duly made and seconded, the Board voted to reconvene in public session.

7. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:20 a.m.

Respectfully submitted,



Linda Montanino  
Assistant Secretary

**Minutes of the Regular Board Meeting  
Long Island Rail Road Company  
2 Broadway  
New York, NY 10004  
Wednesday, April 26, 2017  
10:00 a.m.**

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles Moerdler  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore, Darryl Irrick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Tim Mulligan, Acting President, TBTA, Stephen Vidal, Acting President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

Acting Chairman Fernando Ferrer called the meeting to order.

1. Public Speakers:

Stephen Morello, Counselor to the Chairman, stated that there were twelve (12) public speakers and he asked all speakers to keep to the two-minute time limit for comments, and to restrict their comments to matters on the meeting agenda.

Three (3) of the speakers commented on matters related to the Long Island Rail Road (LIRR).

Murray Bodin, a private citizen, stated that he attended the Safety Committee meeting and was impressed by the work that was being pursued. He also stated that Positive Train Control (PTC) was no longer useful and recommended that MTA look at the positive stopping technology now deployed in automobiles for application to trains.

Mary Parisen, Chair of Civics United for Railroad Environmental Solutions (CURES) stated that she would be speaking about two issues. First, she asked that the Long Island Rail Road freight concession lease be rebid. She questioned why LIRR would renew a lease with New York & Atlantic (NYA) in light of NYA's egregious performance with derailments at Hicksville, Jamaica and Maspeth. She added that NYA was the subject of a Federal Railroad Administration (FRA) safety review and owed LIRR thousands of dollars for clean-ups of the derailments. She stated that she had filed Freedom of Information Law (FOIL) requests to determine the amounts owed by NYA to LIRR, and how much had been paid, but was not successful in getting this information. Second, Ms. Parisen stated that CURES is advocating for legislative funding for a new LIRR freight locomotive, and she was pleased to see that it was included in this year's budget. She added that any Request for Proposals (RFP) for new freight locomotives should specify the cleanest Tier IV technology. She also stated that neither Anacostia Rail Holdings nor NYA should be given any role in a new RFP; that NYA, in handling the RFP for the original new locomotives, had announced the winner before the RFP was even issued; that the winning locomotive was a prototype and cost \$250,000 more than a competitor's product; that the new PR20B's are reputed to have problems with fumes in the cab; and that this \$4-5 Million procurement was never advertised in the New York State Contract Reporter. She urged that any new RFP be open, clean and transparent.

Jason Pineiro, a private citizen, stated that it was a disgrace that people who live on Long Island have to deal with massive delays in LIRR service due to Amtrak. He stated that it was time the MTA took over ownership of Penn Station.

David Kapell, Executive Director of The Right Track for Long Island Coalition, spoke in favor of the environmental review of the proposed Third Track Project. He noted that he spoke on behalf of a coalition of 5,000 members, representing nearly 2 million Long Islanders. He stated that the Coalition was formed to educate the public about the benefits of the project, and to encourage public participation in the environmental review. He further stated that nearly 200 members of the Coalition testified at 12 public hearings on the Project. He commended the MTA and LIRR on making good on their promise of an unprecedented public outreach campaign. He commended, in particular, John McCarthy and Shams Tarek of the MTA, and Lisa Black of the Governor's Office, for their on-the-ground work with affected communities. He stated that the environmental review was very thorough and a great job of addressing community concerns. He described the project as transforming LIRR's main line corridor, making it much better than it is, with the result that everyone is a winner.

The details of the speakers' comments are contained in the video recording of the meeting, produced by the MTA and maintained in MTA records, and in the minutes of the other agencies of this date.

2. Recognition of MTA Police Officer Daniel McDade:

Acting Chairman Ferrer recognized the bravery and devotion to duty exhibited by MTA Police Officer Daniel McDade. Officer McDade, whose birthday was on March 16, was driving to Grand Central Terminal that day, where he is assigned as a K-9 officer. Officer McDade was stuck in traffic on the Bruckner Expressway, so he decided to try an alternate route along White Plains Road. He came upon a terrible scene that was unfolding. He saw an Emergency Medical Technician (EMT) exiting from an ambulance and then saw the ambulance careen wildly out of control, running over the EMT and crashing into other vehicles before the driver stumbled out of the ambulance. Officer McDade jumped out of his car and confronted the driver at gunpoint. Working with two good Samaritans, he was able to subdue the man, and then he attended to the injured EMT, who was a 44 year old mother of five. The EMT, a 14-year Fire Department veteran, was tragically killed that morning. We should all be grateful that Officer McDade was able to intercede and prevent any further threat to public safety. Acting Chairman Ferrer asked Officer McDade, his bride, and his canine partner, to come forward and join him, Interim Executive Director Veronique Hakim, MTA Police Chief Owen Monaghan, LIRR and Metro North Committee Chairs Mitchell Pally and Susan Metzger, and Metro North and LIRR Presidents Joseph Giulietti and Patrick Nowakowski, to receive an award recognizing his bravery.

3. Acting Chairman's Remarks:

Acting Chairman Ferrer noted that Dr. Michael Horodniceanu was retiring next month, after heading MTA Capital Construction for 10 years and overseeing many key capital projects such as the recent opening of the Second Avenue Subway. He stated that Dr. Horodniceanu thinks creatively and solves the thorniest challenges. He thanked Dr. Horodniceanu for his service and wished him, his bride and his family all the best in the future.

Acting Chairman Ferrer also noted that Earth Day occurs this weekend, and that one of the best ways you can help the environment is to ride public transportation every day. Every day is Earth Day at MTA. In keeping this theme, Acting Chairman Ferrer highlighted a report by MTA's Climate Adaptation Task Force. This report, its first annual Resiliency Report, reminds us that climate change is an urgent reality that we must confront head-on, with things like rising sea levels and more powerful storms threatening our coastal infrastructure. The Report also provides an overview of some of the 40+ resiliency projects MTA has completed or that are ongoing to prepare for the future. The report is available at [mta.info/sustainability](http://mta.info/sustainability) or you can request a hard copy.

4. Approval of Minutes:

Acting Chairman Ferrer asked for a motion to approve the minutes of the Regular Board meeting of March 22, 2017. Upon motion duly made and seconded, the minutes of the Regular Board meeting of March 22, 2017 were approved.

5. Committee on Finance:

Action Items

The Board was presented with two (2) action items, recommended to it by the Committee on Finance, one of which related to Long Island Rail Road:

- Pursuant to the requirements of Public Authorities Law Section 2925, provide the MTA Board information on the MTA portfolio investment performance for the period 01/01/2016 to 12/31/2016, obtain Board approval of the MTA 2016 Annual Investment Report and obtain Board approval of the MTA All-Agency Investment Guidelines (“Investment Guidelines or Guidelines”).

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes, and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Procurement Items

The Board was presented with three (3) procurement items recommended to it by the Committee on Finance, two (2) of which related to Long Island Rail Road:

- **Siemens Industry, Inc. – Comprehensive Energy Consulting Services** – To recommend that the Board approve the award of a competitively-negotiated, All-Agency personal services contract to Siemens Industry, Inc. (Siemens) to provide Energy Consulting Services for current and future energy projects. The contract will be for a period of thirty-six (36) months, with two (2) one-year options to be exercised at the Authority’s sole discretion, at a total cost not-to-exceed \$4,000,000. Siemens is being sought for all-agency consulting services in the areas of electricity supply management support, fuel supply management support, energy sustainability support, and additional energy studies support.
- **IBM-MTA Business Service Center PeopleSoft 9.2 Upgrade** – To recommend the Board approve an amendment in the not-to-exceed amount of \$1,200,000 to a previously Board-approved, all-agency competitively negotiated personal services contract with IBM. The additional funds will provide for a one-time PeopleSoft Upgrade Manager (PUM) and People Tools update, which will overlap the move of the backup data center to Albany. The additional scope provides technical

support for a one time PUM and People Tools update and sets the framework for MTA to continuously update the application.

Upon motion duly made and seconded, the Board approved, with Board Member Moerdler abstaining, the foregoing procurement items, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summaries filed with those minutes, and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

#### Real Estate Items

The Board was presented with three (3) real estate items recommended to it by the Committee on Finance, all of which related to Long Island Rail Road:

- License to Floral Park – Bellerose Union Free School District to use approximately 35,400 square feet of real property along the Creedmoor Branch right-of-way between Tyson and Plainfield Avenues, Floral Park, for parking and green space. Term: 15 years, terminable on 60 days' notice. Compensation: \$1, payment waived.
- Sale to Coland Realty LLC of the fee interest in approximately 4,975 square feet of real property on Redfern Avenue between Beach 11 Street and Doughty Boulevard, Far Rockaway, Queens. Compensation: \$10,000 plus approximately \$400,000 in avoided costs relating to environmental remediation work.
- Sale to Normandy Real Estate Partners of the fee interest in approximately 2,816 square feet of unbuilt, paved land within the Bushwick Freight Yard, Brooklyn. Compensation: \$300,000.

Upon motion duly made and seconded, the Board approved the foregoing real estate items, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summaries filed with those minutes, and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

#### 6. Long Island Rail Road Committee:

##### Action Item:

The Board was presented with one (1) action item recommended to it by the Long Island Rail Road Committee:

- **Long Island Rail Road Expansion Project Environmental Findings** – The LIRR requests that the MTA Board adopt the SEQRA Findings Statement relating to the LIRR Expansion Project, included as Attachment 1 to the Action Item as set out in the Board Book. The Findings Statement has been prepared pursuant to the requirements of the State Environmental Quality Review Act (SEQRA), and

follows the release of a Final Environmental Impact Statement (FEIS) for the Project. The FEIS and the Findings Statement represent the culmination of a year-long environmental review to study the potential impacts of the Project and to incorporate environmental factors into the preliminary design and decision-making process.

Upon motion duly made and seconded, the Board approved the foregoing action item, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes, and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

Procurement Items:

The Board was presented with two (2) procurement items recommended to it by the Long Island Rail Road Committee:

- **Penn Station Critical Improvements – Design/Build** - LIRR requests Board approval to adopt a resolution that competitive bidding is impractical or inappropriate and that it is in the public's best interest to use the Request for Proposal ("RFP") procurement method pursuant to Section 1265-a of the Public Authorities Law to award a Design/Build construction contract for the Penn Station Improvements Project.
- **Request to use the RFP Process – Various Contracts** - LIRR requests Board approval to adopt a resolution declaring that competitive bidding is impractical or inappropriate and that it is in the public's best interest to use the RFP procurement method pursuant to Section 1265-a of the Public Authorities Law to award Design/Build construction contract packages for various station enhancement projects.

Upon motion duly made and seconded, the Board approved the foregoing procurement items, the details of which are contained in the minutes of the MTA Board meeting held this day, the staff summary filed with those minutes, and in the video recording of the meeting produced by the MTA and maintained in the MTA records.

7. Board Discussion:

Chair of the Long Island Rail Road Committee Mitchell Pally stated that the last few weeks haven't been easy for LIRR commuters and he requested the Interim Executive Director to update the Board on consultations with Amtrak. He stated that he was running out of words to describe the situation, which is intolerable and unacceptable.

Interim Executive Director Veronique Hakim stated that after the first week in April, where we suffered through a very bad week for LIRR and its customers, she and the Acting Chairman had sent a letter to Amtrak requesting an immediate explanation of and action on the circumstances. This was followed by a meeting two weeks ago, where she, the Acting Chairman, LIRR President Patrick Nowakowski and other senior management met with Amtrak,

and were advised that Amtrak was in the midst of an inspection of the tracks in Penn Station being undertaken by the Federal Railroad Administration (FRA).

Interim Executive Director Hakim stated that tomorrow, the Acting Chairman and I will be hearing a follow-up from Amtrak, and we expect Amtrak has committed to provide us with a review of what they found, what repairs they are making, what their plans are, and -- while it is still too early to anticipate service impacts -- what the service impacts of Amtrak's plans might be. She further stated that Amtrak has committed to coordinating with us, and this is what we called for and what we expect. Amtrak has heard loud and clear the frustration expressed by us and by the members of the Board. The current situation is unacceptable. The safety of our customers and our crews is the top priority, and we need to know that we are running over safe infrastructure at Penn Station. We look forward to hearing the details of Amtrak's plans, and then service planners will need to look at those details to determine how to accomplish the work with the least possible impact on our customers. The Acting Chair and I expect a constructive dialog with Amtrak to continue, but something must be done because we've run out of words to describe the current situation.

Board Member Veronica Vanterpool thanked members of the Building Alcohol Ad- Free Transit Coalition for educating the Board about the impact of ads for alcoholic beverages. She asked MTA staff to provide the Board information on placement of advertisements throughout the MTA system, and the categories of advertisements so placed. She stated that the revenue from advertisements for alcoholic beverages could not be significant in terms of the overall MTA budget. She further stated that drug abuse is a problem in our younger communities and alcohol is a drug, which is why she has asked for this analysis.

Board Member Lawrence Schwartz asked, as a follow-up to the comments by LIRR Committee Chair Pally, that the Interim Executive Director get an assurance from Amtrak that no decisions will be made on work going forward until we fully understand what they are proposing and until the Governor of the State of New York has been briefed and has the opportunity to weigh in on Amtrak's plans. Mr. Schwartz added that he knows Tony Coscia, the Chairman of Amtrak, to be a professional and wanting to do the right thing, but the potential impacts here are significant. The safety of our riders is paramount but the work going forward needs to be done in a way that does not unduly inconvenience LIRR's customers who use LIRR to get to work every day. We need to be thorough about this, but we also need to be smart in terms of developing a long-term strategy that does not inconvenience the ridership.

Board Member James Vitiello stated that he had asked a question at the Long Island Rail Road Committee meeting the response to which was taken in certain quarters as suggesting a legal action against Amtrak. He further stated that his question was not intended to suggest that MTA take certain action against Amtrak, and he expressed the hope that the issues at Penn Station would be worked out collaboratively with Amtrak. Acting Chairman Ferrer added that this was his hope and expectation as well.

Board Member Susan Metzger stated that Metro-North's West of Hudson riders also come through Penn Station, so they have a stake in this issue as well

8. Executive Session:

Acting Chairman Ferrer asked for a motion to move the Board meeting into executive session, pursuant to Section 105(1)(e) of the Public Officers Law, to discuss matters relating to collective bargaining agreements. Upon motion duly made and seconded, the Board moved into executive session.

9. Adjournment:

Upon coming out of executive session and resuming the public session of the meeting, the Acting Chairman asked for a motion to adjourn the meeting. Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:20 a.m.

Respectfully submitted,



Mark D. Hoffer,  
Secretary

**TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY**

**BOARD MINUTES**

**April 26, 2017**

Minutes of the Regular Meeting  
Triborough Bridge and Tunnel Authority  
April 26, 2017

Meeting Held at  
2 Broadway, 20<sup>th</sup> Floor  
New York, New York 10004

10:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward

Veronique Hakim, Interim Executive Director, Donna Evans, Chief of Staff, Helene Fromm, Acting General Counsel, Robert Foran, Chief Financial Officer, Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore, Darryl Irick, Acting President, New York City Transit, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giulietti, President, Metro-North Railroad, Tim Mulligan, Acting President, Triborough Bridge and Tunnel Authority, Stephen Vidal, Acting President, MTA Bus Company, Michael Horodniceanu, President, MTA Capital Construction, and Stephen Morello, Counselor to the Chairman, also attended the meeting.

The Board of the Metropolitan Transportation Authority also met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Metropolitan Suburban Bus Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road Company, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

**1. Public Speakers**

There were 12 public speakers. None of the speakers specifically commented on issues regarding the Triborough Bridge and Tunnel Authority.

Refer to the video recording of the meeting produced by the Metropolitan Transportation Authority and maintained in MTA records, and to the other agencies' minutes of this date, for the content of the speakers' statements.

**2. Acting Chairman Ferrer's Opening Remarks**

Acting Chairman Ferrer opened his remarks by commending the actions of MTA Police K-9 Officer Daniel McDade who watched an EMT exit an ambulance and then saw the ambulance careen wildly out of control after it ran over the EMT and crashed into other vehicles. Officer McDade confronted the driver at gunpoint, subdued him and then attended to the critically injured EMT. Acting Chairman Ferrer also announced that after 10 years of heading up Capital Construction, President Michel Horodniceanu is retiring. Finally, in light of Earth Day, Acting Chairman Ferrer mentioned a report released by the MTA's Climate Adaptation Task Force that discusses MTA resiliency projects and the urgent reality of climate change with the dangers of rising sea levels and more powerful storms threatening coastal infrastructure.

The details of Acting Chairman Ferrer's remarks are contained in the video recording of this meeting, produced by the MTA and maintained in MTA records, and the MTA's and other agencies' minutes of the meeting of this date.

**3. Approval of the Minutes of the Regular Meeting March 22, 2017**

Upon a motion duly made and seconded, the minutes of the Regular Board Meeting held on March 22, 2017 were approved.

**4. Committee on Finance**

Upon a motion duly made and seconded, the Board approved the following recommended to it by the Committee on Finance that pertained to the Triborough Bridge and Tunnel Authority:

(a) Action Item:

- Approval of the MTA 2016 Annual Investment Report and the MTA All Agency Investment Guidelines.

Refer to the video recording of the meeting produced by the Metropolitan Transportation Authority and maintained in MTA records, and to the other agencies' minutes of this date, for the content of the statements made regarding this matter.

**5. Committee on MTA Bridges and Tunnels Operations**

**Procurements**

Commissioner Moerdler stated that there are 10 procurements totaling \$190.7 million.

**Non-Competitive Procurements**

Commissioner Moerdler stated that there is one (1) non-competitive procurement.

**Modifications to Personal Service Contracts and Miscellaneous Service Contracts Awarded  
As Contracts for Services**

City of New York	Contract No. MOU-08-33 TBTA is seeking Board approval under the All Agency Service Contract Procurement Guidelines to increase funding under this non-competitive personal service agreement to provide Traffic Enforcement Agents (TEA's) to control traffic on City streets adjacent to construction projects for TBTA facilities on an as-needed basis.	\$7,000,000.00
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**Competitive Procurements**

Commissioner Moerdler stated that there are nine (9) competitive procurements totaling \$183.7 million.

**Personal Service Contracts**

Ammann & Whitney/ WSP Parsons Brinckerhoff JV	Contract No. PSC-16-2996 TBTA is seeking Board approval under the All Agency Service Contract Procurement Guidelines to award a personal service contract for Design and Construction Support Services for Project RK-19/RK-70 Wind Retrofits and Miscellaneous Structural Repairs at the Robert F. Kennedy Bridge.	\$3,439,915.00
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**Modifications to Personal Service Contracts and Miscellaneous Service Contracts  
Awarded as Contracts for Services**

Conduent State and Local Solutions, Inc.	Contract No. PSC-05-2741 TBTA is seeking Board Approval under the All Agency Service Contract Procurement Guidelines to amend Personal Service Contract No. PSC-05-2741 to support the implementation of cashless Open Road Tolling (ORT) at six (6) remaining TBTA Toll Facilities.	\$150,730,274.00
WSP Sells/HNTB JV	Contract No. PSC-11-2865 TBTA is seeking Board Approval under the All Agency Service Contract Procurement Guidelines to amend personal service Contract No. PSC-11-2865 in order to add funding for design and construction support services for Project RK-65A, Bronx Plaza Structure Rehabilitation.	\$2,690,499.31

Parsons/GPI	Contract No. PSC-14-2956 TBTA is seeking Board Approval under the All Agency Service Contract Procurement Guidelines to amend personal service Contract No. PSC-14-2956 in order to add funding for design and construction support services for Project RK-23A, Reconstruction and Rehabilitation of the 125th Street Manhattan Approach Ramps to the RFK Bridge.	\$824,042.78
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**Modifications to Purchase and Public Works Contracts**

Tutor Perini Corp.	Contract No. VN-80B TBTA is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend a public works contract for the necessary civil, structural and electrical infrastructure construction work for the second phase (Phase 2) of Open Road Tolling (ORT) for both Upper and Lower Levels within the Staten Island Plaza and Approach in the westbound direction at the Verrazano-Narrows Bridge.	\$13,725,000.00
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DeFoe Corp.	Contract No. RK-23A TBTA is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend a public works contract for the necessary civil, structural and electrical infrastructure for Open Road Tolling (ORT) at the Manhattan approach to the Robert F. Kennedy Bridge.	\$6,042,780.00
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Tully Construction Co., Inc.	Contract No. BB-28S TBTA is seeking Board Approval under the All Agency General Contract Procurement Guidelines to amend a public works contract, Contract BB-28S for: (i) revisions to Project BB-54, Rehabilitation of the Brooklyn Plaza to align with the implementation of Open Road Tolling (ORT) and the demolition of the toll booths; (ii) furnish and install structural foundations and anchors for the upcoming architectural enhancements of the plazas and ORT gantries; (iii) ratify the authorization for the procurement of fabricated long lead time materials associated with the architectural fabrications and structural steel for the Morris Street Pedestrian Overpass (MSPO) and (iv) perform tunnel transition zone	\$4,241,583.00
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waterproofing at the Manhattan Blower Building (MBB), Brooklyn Ventilation Building (BVB) and at Woodhull Street.

John P. Picone, Inc.

Contract No. CB-99S/MP-03S

\$1,184,000.00

TBTA is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend a public works Contract No. CB-99S/MP-03S, Design/Build Services for Replacement of Electrical and Mechanical Equipment at Marine Parkway Bridge (MPB) and Cross Bay Bridge (CBB) Facilities for necessary redesign and additional installation work.

El Sol Contracting and  
Construction Corp. / El Sol  
Ltd. Enterprises, JV

Contract No. VN-80C/VN-35

\$796,439.06

TBTA is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend a public works contract, Contract VN-80C/VN-35 for interim reconciliation of contract items and additional new items of work.

Upon a motion duly made and seconded, the Board approved the procurements recommended to it by the Committee for MTA Bridges and Tunnels Operations.

#### **Ratifications**

Commissioner Moerdler stated that there are no ratifications.

#### **6. Executive Session**

Upon a motion duly made and seconded, the Board unanimously voted to convene in Executive Session pursuant to Public Officers Law §105(1)(e) to discuss a matter related to collective bargaining.

#### **7. Adjournment**

Upon a motion duly made and seconded, the Board unanimously voted to adjourn the meeting at 11:20 a.m.

Respectfully submitted,



Julia R. Christ  
Secretary

**Regular Board Meeting  
MTA Capital Construction Company  
2 Broadway  
New York, NY 10004  
Wednesday, April 26, 2017  
10:00 AM**

The following members were present:

Hon. Fernando Ferrer, Acting Chairman  
Hon. Ira Greenberg  
Hon. David Jones  
Hon. Susan Metzger  
Hon. Charles G. Moerdler  
Hon. John J. Molloy  
Hon. Mitchell H. Pally  
Hon. Lawrence Schwartz  
Hon. Polly Trottenberg  
Hon. Veronica Vanterpool  
Hon. James Vitiello  
Hon. Carl V. Wortendyke  
Hon. Neal Zuckerman

The following members were absent:

Hon. John Samuelson  
Hon. Andrew Saul  
Hon. Peter Ward

Board Member Andrew Albert, Board Member Norman Brown, Board Member Vincent Tessitore and Michael Horodniceanu, President, MTA Capital Construction Company also attended the meeting as did various other agency presidents and staff including Veronique Hakim, Interim Executive Director, MTA, Donna Evans, Chief of Staff, MTA, Helene Fromm, Acting General Counsel, MTA, Robert Foran, Chief Financial Officer, MTA, Stephen Morello, Counselor to the Chairman, MTA, Darryl Irick, Acting President, NYCTA, Patrick Nowakowski, President, Long Island Rail Road, Joseph Giuliatti, President, Metro-North Railroad, Tim Mulligan, Acting President, TBTA, Stephen Vidal, Acting President, MTA Bus Company, Evan Eisland, Sr. Vice President, General Counsel and Secretary, MTA Capital Construction Company and, David Cannon, Chief Procurement Officer and Assistant Secretary, MTA Capital Construction Company.

The Board of the Metropolitan Transportation Authority met as the Board of the New York City Transit Authority, the Manhattan and Bronx Surface Transit Operating Authority, the Staten Island Rapid Transit Operating Authority, the Triborough Bridge and Tunnel Authority, the Long Island Rail Road, the Metro-North Commuter Railroad Company, the MTA Capital Construction Company, the MTA Bus Company, and the First Mutual Transportation Assurance Company.

Acting Chairman Ferrer called the meeting to order.

**Public Comment Period**

There were twelve public speakers. The names and remarks of the speakers are contained in the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority and in the minutes of the other agencies of this date.

**Acting Chairman's Remarks**

Acting Chairman Ferrer presented an award to MTA Police Officer Daniel McDade for his heroism and bravery. In addition, Acting Chairman Ferrer expressed his appreciation to Michael Horodniceanu, President of the MTA Capital Construction (who is retiring at the end of May) for his nearly ten years of dedicated service in overseeing some of the most ambitious MTA projects in a generation and cumulating in the on time opening of Phase I of the Second Avenue Subway Project.

## **Approval of Minutes**

Upon motion duly made and seconded, the Board approved the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority and the MTA Capital Construction Company held on March 22, 2017.

## **Committee on Finance**

### Procurement Item

Upon motion duly made and seconded, the Board approved the following competitive procurement item:

An Amendment to the all-agency Business Service Center PeopleSoft 9.2 Upgrade contract (14049-0100) for a one-time PeopleSoft Upgrade Manager and People Tools update in the amount not to exceed \$1,200,000.

A copy of the Resolution and Staff Summary for the above item is filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority of this date.

## **Committee on NYCT and Bus**

### Procurement Items

Upon motion duly made and seconded, the Board approved the following competitive procurement item:

A modification to the Fulton Street Transit Center Enclosure contract (A-36125) for the Fulton Center Project to resolve outstanding claims in the amount of \$3,400,000.

A copy of the Resolution and Staff Summary for the above item is filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority of this date.

Upon motion duly made and seconded, the Board approved the following ratification items:

A Modification to the 72nd Street Station Finishes, Mechanical, Electrical and Plumbing Systems, Ancillary Buildings and Entrances contract (C-26011) for the Second Avenue Subway Project to provide permanent and backup cooling for radio and communication rooms/closets in the amount of \$1,170,000.

A copy of the Resolution and Staff Summaries for the above item is filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority of this date.

## **Executive Session**


Upon motion duly made and seconded, the Board voted to convene into Executive Session pursuant to Section 105 (1) (e) of the New York State Public Officers Law to discuss matters relating to collective bargaining negotiations.

Thereafter, upon motion duly made and seconded, the Board voted to resume proceedings in public session.

## **Adjournment**

Upon motion duly made and seconded, the Board voted to adjourn the public meeting at 11:20 a.m.

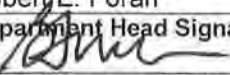

Respectfully submitted,



David K. Cannon  
Assistant Secretary



## Staff Summary

Page 1 of 3

<b>Subject</b> Payroll Mobility Tax Bond Resolution for Submission to the Capital Program Review Board
<b>Department</b> Finance
<b>Department Head Name</b> Robert E. Foran
<b>Department Head Signature</b> 
<b>Project Manager/Division Head</b> Patrick J. McCoy 

<b>Date</b> May 22, 2017
<b>Vendor Name</b>
<b>Contract Number</b>
<b>Contract Manager Name</b>
<b>Table of Contents Ref #</b>

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance	2/21			
2	Board	2/23			

Internal Approvals			
Order	Approval	Order	Approval
	Chairman		Civil Rights
2	Chief of Staff 	1	Legal 

### Purpose:

To obtain Finance Committee and MTA Board approval of the annexed resolution authorizing the submission of the DRAFT Payroll Mobility Tax Obligation Resolution, Standard Resolution Provisions and Supplemental Resolution Provisions to the Capital Program Review Board ("CPRB") for approval. Upon approval by the CPRB, the full set of credit documents will be resubmitted to the Finance Committee and the MTA Board for formal adoption.

### Discussion and Background:

On May 7, 2009, legislation was enacted in New York State providing additional sources of revenues in the form of taxes, fees and surcharges to address the financial needs of the MTA. The law (Chapter 25 of the Laws of 2009) among other things:

- imposed a payroll mobility tax (the "Regional Mobility Tax") of 0.34 percent on payroll expenses and net earnings from self-employment within the MTA Commuter Transportation District ("MCTD") (effective as of March 1, 2009, except school districts, effective September 1, 2009) (the "Payroll Mobility Tax Revenues");
- imposed a supplemental fee of one dollar for each six month period of validity of a learner's permit or a driver's license issued to a person residing in the MCTD (effective September 1, 2009);
- imposed a supplemental fee of twenty-five dollars per year on the registration and renewals of registrants of motor vehicles who reside within the MCTD (effective September 1, 2009);
- imposed on taxicab owners a tax of fifty cents per ride on taxicab rides originating in New York City and terminating within the MCTD (effective November 1, 2009);
- imposed a supplemental tax of five percent of the cost of rentals of automobiles rented within the MCTD (effective June 1, 2009).

The other new revenues described in bullets 2-5 above comprised of the supplemental fee on learners permits and drivers licenses, supplemental fees on the registration and renewal of motor vehicles, the taxicab surcharge, and the supplemental tax on auto rentals are collectively referred to as the "Aid Trust Account Revenues".

Chapter 25 of the Laws of 2009 provided that the revenues from the Regional Mobility Tax can be: (i) pledged by MTA to secure and be applied to the payment of bonds to be issued in the future to fund capital projects of MTA, its subsidiaries, and MTA New York City Transit and its subsidiary and (ii) used by MTA to pay capital costs, including debt service, of MTA, its subsidiaries and MTA New York City Transit and its subsidiary. Subject to the provisions of any such pledge, or in the event there is no such pledge, the Regional Mobility Tax Revenues can be used by MTA to pay for costs, including operating costs, of MTA, its subsidiaries and MTA New York City Transit and its subsidiary.

Chapter 25 of the Laws of 2009 further provided that the Aid Trust Account monies may be pledged by MTA or pledged to MTA Bridges and Tunnels to secure debt of MTA or MTA Bridges and Tunnels. Subject to the provisions of such pledge, or in the event there is no such pledge, such new revenues can be used by MTA for the payment of operating and capital costs of MTA, its subsidiaries and MTA New York City Transit and its subsidiary as MTA shall determine.

On December 9, 2011, Governor Cuomo signed into law legislation (the “December Legislation”) that made changes to the payroll mobility tax. The provisions eliminated or reduced the payroll mobility tax imposed within the MCTD for certain taxpayers. The December Legislation further expressly provided that any reductions in transit aid attributable to these reductions in the payroll mobility tax “shall be offset through alternative sources that will be included in the state budget” (the “PMT Revenue Offset”).

Since the December Legislation, there have been some additional amendments to the payroll mobility tax. As a result of the December Legislation and the subsequent amendments, the 2016-2017 State Enacted Budget included an appropriation of \$309.25 million to MTA for the PMT Revenue Offset while the 2017-2018 State Enacted Budget appropriates \$244 million for the PMT Revenue Offset.

Several actions by five counties and a number of towns and villages, a public school district, and certain private plaintiffs challenging the constitutionality of the legislation that enacted the payroll mobility tax (Chapter 25 of the Laws of 2009) have been conclusively resolved as of January 14, 2014, either by withdrawal or judicial dismissal.

MTA staff, working with external Bond Counsel and its Financial Advisors, has drafted the annexed Payroll Mobility Tax Obligation Resolution, the Standard Resolution Provisions, and the Supplemental Standard Resolution Provisions which comprise the fundamental legal documents of the new Payroll Mobility Tax Credit pledging all of the above described revenues. MTA is required by Public Authorities Law §1269-b(9) to submit such documentation to the Capital Program Review Board for review and approval prior to formal adoption by the MTA Board.

### **Payroll Mobility Tax (PMT) Obligation Highlights:**

- Senior and Subordinate Liens Revenue Pledge: Payroll Mobility Tax Revenues, PMT Revenue Offset, Aid Trust Account Revenues.
- Debt Service Set-Aside: Monthly 1/5<sup>th</sup> interest and 1/10<sup>th</sup> principal.
- Additional Bonds Test: 2.5X Senior Maximum Annual Debt Service and 1.75X aggregate Maximum Annual Debt Service.
- Resolution authorizes bonds solely for approved Capital Program transit and commuter projects.
- Payroll Mobility Tax Revenues are segregated and held by the State Comptroller in a special trust account solely for MTA (revenues are not available for any other use).

- Legislatively provides for monthly distribution of Payroll Mobility Tax Revenues to MTA.
- Legislatively provides for direction for the transfer of Payroll Mobility Tax Revenues to MTA, which is currently a wet/dry appropriation of Payroll Mobility Tax Revenues to MTA.
- Exceptionally strong Payroll Mobility Tax Revenue base of approximately \$400 billion in 2015 (64% of the wage base in the MTCD with compound annual growth of 5.6% from 1969 through 2015).
- Payroll Mobility Tax revenues flow from State Comptroller directly to the pledged account for bondholders.
- Aid Trust Account Revenues are diversified between activity and type (transactional and non-transactional).
- Aid Trust Account Revenues have no sunset and flow daily to the State Comptroller.
- State Comptroller remits revenue on the 12<sup>th</sup> of every month to the MTA Aid Trust Account in the MTA Financial Assistance Fund.
- Aid Trust Account Revenues remitted at least quarterly to MTA and deposited into the Corporate Transportation Account of the MTA Special Assistance Fund which is currently subject to appropriation.
- After monthly set aside, excess pledged revenues are available for debt service on Transportation Revenue Bonds and then transit and commuter operating expenses.
- Non-impairment covenant of State in MTA Act.
- Statutory MTA bankruptcy prohibition in MTA Act.

### **Recommendation:**

It is recommended that the Board approve the annexed resolution authorizing the Payroll Mobility Tax Credit DRAFT documents be submitted to the CPRB for review and approval. Upon approval by the CPRB, staff will seek final MTA Board adoption of the PMT credit documents, incorporating any requested changes from the CPRB.

## **RESOLUTION PAYROLL MOBILITY TAX RESOLUTION**

**WHEREAS**, on May 7, 2009, Chapter 25 of the Laws of 2009 was enacted in New York State to provide additional sources of revenues in the form of taxes, fees and surcharges to address the financial needs of the MTA, which new law among other things:

1. imposes a regional payroll mobility tax (“PMT”) of 0.34 percent on payroll expenses and net earnings from self-employment within the MTA Commuter Transportation District (“MCTD”) (effective as of March 1, 2009, except school districts, effective September 1, 2009);
2. imposes a supplemental fee of one dollar for each six month period of validity of a learner’s permit or a driver’s license issued to a person residing in the MCTD (effective September 1, 2009);
3. imposes a supplemental fee of twenty-five dollars per year on the registration and renewals of registrants of motor vehicles who reside within the MCTD (effective September 1, 2009);
4. imposes on taxicab owners a tax of fifty cents per ride on taxicab rides originating in New York City and terminating within the MCTD (effective November 1, 2009); and
5. imposes a supplemental tax of five percent of the cost of rentals of automobiles rented within the MCTD (effective June 1, 2009); and

**WHEREAS**, those taxes and fees described in items #2-5 above collectively are known as the “Aid Trust Account Revenues”; and

**WHEREAS**, on December 9, 2011, Governor Cuomo signed into law legislation (the “December Legislation”) that made changes to the PMT, including elimination or reduction of the PMT imposed within the MCTD for certain taxpayers and expressly provided that any reductions in transit aid attributable to these reductions in the PMT “shall be offset through alternative sources that will be included in the state budget (“PMT Revenue Offset”); and

**WHEREAS**, the December Legislation changes and some additional amendments to the PMT have been provided to MTA through the PMT Revenue Offset and were included in New York State budgets since the New York State’s 2012-13 budget; and

**WHEREAS**, several actions by five counties and a number of towns and villages, a public school district, and certain private plaintiffs challenging the constitutionality of the legislation that enacted the payroll mobility tax (Chapter 25 of the Laws of 2009) have been conclusively resolved as of January 14, 2014, either by withdrawal or judicial dismissal; and

**WHEREAS**, MTA desires to access the capital markets to provide low cost bond financing for existing approved, and future, MTA Capital Programs; and

**WHEREAS**, approval of the PMT Resolution will permit MTA to reduce its borrowing needs under the Transportation Revenue Bond Resolution and achieve an expected lower borrowing cost for the Capital Program, and

**WHEREAS**, the PMT, the PMT Revenue Offset monies, together with Aid Trust Account Revenues, constitute a stable and diverse revenue stream that can be used to secure the issuance of notes, bonds and other indebtedness in support of MTA Capital Programs; and

**WHEREAS**, MTA Finance and Legal staff, together with outside Bond Counsel and Financial Advisors, have drafted the annexed Payroll Mobility Tax Obligation Resolution, Standard Resolution Provisions and Supplemental Resolution Provisions (collectively, the “Payroll Mobility Tax Obligation Resolution Documents” ; and

**WHEREAS**, MTA is statutorily required to submit the Payroll Mobility Tax Obligation Resolution Documents to the Capital Program Review Board (“CPRB”) prior to adoption by the MTA Board;

**NOW, THEREFORE, BE IT RESOLVED** that the Board hereby authorizes the submission of the Payroll Mobility Tax Obligation Resolution Documents to the CPRB.

Dated: \_\_\_\_\_

**NP DRAFT DATED: 02/13/2017**

**METROPOLITAN TRANSPORTATION AUTHORITY**

**REGIONAL PAYROLL MOBILITY TAX  
OBLIGATION RESOLUTION**

Adopted \_\_\_\_\_, 2017  
As Approved By The  
Metropolitan Transportation Authority  
Capital Program Review Board  
on \_\_\_\_\_, 2017

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**Annex A** – Standard Resolution Provisions

**Annex B** – Supplemental Standard Resolution Provisions for Regional Payroll Mobility Tax Second Lien Obligations and Second Lien Parity Debt

**Exhibit One** – Form of Obligations

**Exhibit Two** – Form of Second Lien Obligations

## **REGIONAL PAYROLL MOBILITY TAX OBLIGATION RESOLUTION**

BE IT RESOLVED by the Members of the Metropolitan Transportation Authority as follows:

### **ARTICLE I STANDARD RESOLUTION PROVISIONS; DEFINITIONS**

**Section 101. Standard Resolution Provisions.** Except as otherwise specifically provided herein, by Supplemental Resolution or by Section A-102 of the Standard Resolution Provisions appended hereto as Annex A and the Supplemental Standard Resolution Provisions for Regional Payroll Mobility Tax Second Lien Obligations and Second Lien Parity Debt appended hereto as Annex B constitute an integral part of the Resolution and have the same force and effect as if set forth in the forepart of the Resolution.

**Section 102. Definitions.** Except as the context shall otherwise require, capitalized terms used but not otherwise defined herein shall have the respective meanings set forth in the Standard Resolution Provisions or Supplemental Standard Resolution Provisions. In the event any such term is defined in both the Standard Resolution Provisions and the Supplemental Standard Resolution Provisions, the definition contained in the Standard Resolution Provisions shall control in respect of Obligations and Parity Debt and the definition contained in the Supplemental Standard Resolution Provisions shall control in respect of Second Lien Obligations and Second Lien Parity Debt. In addition, to the extent that the State, by law and consistent with Section 603, changes any funds and accounts defined herein, such definitions shall be deemed to include any successor provisions. The following terms shall, for all purposes of the Resolution, have the following meanings:

**Aid Trust Account** shall mean the metropolitan transportation authority aid trust account established in the Financial Assistance Fund pursuant to Section 92-ff of the State Finance Law, as amended, or any successor fund or account provided by law.

**Aggregate Calculated Debt Service** shall mean Calculated Debt Service plus Calculated Second Lien Debt Service.

**ATA Funds** shall mean amounts on deposit in the Corporate Transportation Account in the MTA Special Assistance Fund pursuant to paragraphs (b-1) and (c-3) of subdivision 2 of Section 503 and Sections 499, 499-a, 499-b, 499-c and 499-d of the Vehicle and Traffic Law, as amended, and Section 1288 and Section 1165 of the Tax Law, as amended, or any successor provisions of law, which amounts represent amounts deposited in the Corporate Transportation Account from amounts deposited in the Aid Trust Account pursuant to Section 92-ff of the State Finance Law, as amended, or any other provision of law directing or permitting the deposit of money into the Aid Trust Account in the MTA Finance Fund from such Account.

**ATA Receipts** shall mean all ATA Funds deposited into the Pledged Amounts Account in the MTA Finance Fund, or any successor fund or account provided by law.

**ATA Receipts Subaccount** shall mean the Account by that name established in the Pledged Amounts Account in the MTA Finance Fund by the Issuer as authorized by Section 505.

**Capital Cost Obligations** shall mean Obligations authenticated and delivered on original issuance pursuant to Section 203.

**Capital Cost Second Lien Obligations** shall mean Second Lien Obligations authenticated and delivered on original issuance pursuant to Section 208.

**Capital Costs** shall mean (i) the costs of the Issuer or any other Related Entity for the planning, design, acquisition, construction, reconstruction, rehabilitation or improvement of all or any part of the RPMT Transit and Commuter Project, including costs of acquisition of real or personal property or any interests therein, legal, administrative, engineering, planning, design, studies, insurance, financing costs (including Costs of Issuance), and initial working capital required for the commencement of operation of any such project and any capital contributions, whether or not represented by equity or debt securities or other evidences of indebtedness made by the Issuer or any other Related Entity to any Person participating in a RPMT Transit and Commuter Project for the purpose of funding any costs described in this clause (i); (ii) amounts paid into any Fund or Account upon the issuance of any Obligations or Second Lien Obligations; and (iii) payment when due (whether at the maturity of principal or on the due date of interest or upon redemption or when otherwise due, including by purchase or through tender or exchange) on any indebtedness or obligation of the Issuer or any other Related Entity which was issued or incurred to finance costs that could at the time of such payment be funded directly hereunder, including Obligations, Obligation Anticipation Notes, Parity Debt, Second Lien Obligations, Second Lien Obligation Anticipation Notes, Second Lien Parity Debt, Other Subordinated Obligations, any termination or other payments for financial, fuel or other hedging arrangements, or any such indebtedness or obligation issued or incurred by any Related Entity in connection with the RPMT Transit and Commuter Project.

**Corporate Transportation Account** shall mean the account bearing such name established by the Issuer in the Metropolitan Transportation Authority Special Assistance Fund pursuant to Section 1270-a of the Issuer Act, or any successor fund or account provided by law.

**Debt Service Year** shall mean the calendar year, except that the first Debt Service Year shall begin on the date specified in the Supplemental Resolution authorizing the first Series of Obligations or Second Lien Obligations to be issued hereunder.

**Financial Assistance Fund** shall mean the fund established pursuant to Section 92-ff of the State Finance Law, as amended, and entitled the "Metropolitan Transportation Authority Financial Assistance Fund" and consisting of a Mobility Tax Trust Account and an Aid Trust Account, or any successor fund or account provided by law.

**Issuer** shall mean the MTA.

**Mobility Tax Receipts** shall mean all amounts deposited into the Pledged Amounts Account in the MTA Finance Fund from amounts on deposit in the Mobility Tax Trust Account in the Financial Assistance Fund pursuant to Section 805 of the Tax Law, as amended, and any other provision of law directing or permitting the deposit of money on deposit in the Mobility

Tax Trust Account in the Financial Assistance Fund into the MTA Finance Fund including, without limitation, amounts constituting Mobility Tax Replacement Receipts.

**Mobility Tax Receipts Subaccount** shall mean the Account by that name established in the Pledged Amounts Account in the MTA Finance Fund by the Issuer as authorized by Section 505.

**Mobility Tax Replacement Receipts** shall mean all amounts deposited into the Pledged Amounts Account in the MTA Finance Fund from amounts on deposit in the Mobility Tax Trust Account in the Financial Assistance Fund (i) provided from alternate sources included in an adopted State budget, (ii) constituting amounts provided to the Issuer as an offset to the elimination, reduction or other modification of amounts previously provided to the Issuer as Mobility Tax Receipts and directed or permitted to be deposited in the Mobility Tax Trust Account in the Financial Assistance Fund into the MTA Finance Fund pursuant to provision of law.

**Mobility Tax Second Lien Debt Service Fund Requirement** shall mean, with respect to each Series of Second Lien Obligations, an amount equal to the sum of (a) all interest and Principal Installments due and unpaid on any Second Lien Obligations of such Series and on any Second Lien Parity Debt as of such date and (b) an amount, calculated as of the last day of the month in which such calculation is made, equal to the sum of (i) the product of (A) the interest portion of Debt Service due on or in respect of all Outstanding Second Lien Obligations of such Series and any Second Lien Parity Debt as of the next succeeding interest payment date for such Series of Second Lien Obligations and (B) a fraction, the denominator of which is never less than 1, but otherwise is 1 less than the number of months from the preceding interest payment date for the Second Lien Obligations of such Series to the next interest payment date for such Second Lien Obligations (or the date from which interest began to accrue on such Second Lien Obligations if there is no preceding interest payment date for such Second Lien Obligations), and the numerator of which is the number of months which will have elapsed as of the last day of the month in which such calculation is made from such preceding interest payment date for such Second Lien Obligations (or the date from which interest began to accrue on such Second Lien Obligations if there is no preceding interest payment date for such Second Lien Obligations), and (ii) 10% of the Principal Installment (including in each case for purposes of this definition, principal components of Second Lien Parity Debt) due on or in respect of such Second Lien Obligations and Second Lien Parity Debt on the next succeeding Principal Installment due date (20% for Principal Installments payable 6 months after the preceding Principal Installment) times the number of months which have elapsed since the preceding Principal Installment due date (or, if there shall be no such preceding Principal Installment due date or such preceding Principal Installment due date is more than 1 year prior to the due date of such Principal Installment, then, from *the later of* a date 1 year preceding the due date of such Principal Installment and the date of, as appropriate, issuance or incurrence of the Second Lien Obligations of such Series or of such Second Lien Parity Debt); *provided, however, that* the amount calculated pursuant to clause (b)(i) above for any Series of Second Lien Obligations shall never exceed the interest due and payable on such next succeeding interest payment date (including additional interest pursuant to any related Second Lien Parity Debt) and the amount calculated pursuant to clause (b)(ii) shall never exceed the Principal Installment due on the next succeeding Principal Installment due date; and *provided further that*, with respect to each Series of Second Lien Obligations, commencing

on the fifteenth day of the month preceding the month in which each interest payment date occurs, the Mobility Tax Second Lien Debt Service Requirement shall be no less than the interest and Principal Installments, if any, payable on such interest payment date with respect to such Series. In addition, notwithstanding any other provision of the Resolution, including the Standard Resolution Provisions and the Supplemental Standard Resolution Provisions, for purposes of calculating the Mobility Tax Second Lien Debt Service Fund Requirement as of any date and determining the amount of any required deposits into the Second Lien Debt Service Fund in respect of any Second Lien Put Obligations which are subject to mandatory tender other than at the election of the Issuer or any Related Entity or any other Second Lien Obligations described in clause (iii) of the definition of Calculated Second Lien Debt Service, deposits into the Second Lien Debt Service Fund relating to Second Lien Obligation Principal Installments shall be required to be made in six equal monthly installments beginning on the date which is six months prior to such mandatory tender date in the case of Second Lien Put Obligations or six months prior to the stated maturity date of such other Second Lien Obligations. For purposes of computing the Mobility Tax Second Lien Debt Service Fund Requirement, the Second Lien Obligations of a Series and any Second Lien Parity Debt payable on each different interest payment date shall be treated as a separate Series, and if Second Lien Obligations of any Series or any Second Lien Parity Debt have different interest payment dates, such computation shall be done separately in respect of each such interest payment date.

**Mobility Tax Senior Debt Service Fund Requirement** shall mean, with respect to each Series of Obligations and as of any date, an amount equal to the sum of (a) all interest and Principal Installments due and unpaid on any Obligations of such Series and on any Parity Debt as of such date and (b) an amount, calculated as of the last day of the month in which such calculation is made, equal to the sum of (i) the product of (A) the interest portion of Debt Service due on or in respect of all Outstanding Obligations of such Series and any Parity Debt as of the next succeeding interest payment date for such Series of Obligations and (B) a fraction, the denominator of which is never less than 1, but otherwise is 1 less than the number of months from the preceding interest payment date for the Obligations of such Series to the next interest payment date for such Obligations (or the date from which interest began to accrue on such Obligations if there is no preceding interest payment date for such Obligations), and the numerator of which is the number of months which will have elapsed as of the last day of the month in which such calculation is made from such preceding interest payment date for such Obligations (or the date from which interest began to accrue on such Obligations if there is no preceding interest payment date for such Obligations), and (ii) 10% of the Principal Installment (including in each case for purposes of this definition, principal components of Parity Debt) due on or in respect of such Obligations and Parity Debt on the next succeeding Principal Installment due date (20% for Principal Installments payable 6 months after the preceding Principal Installment) times the number of months which have elapsed since the preceding Principal Installment due date (or, if there shall be no such preceding Principal Installment due date or such preceding Principal Installment due date is more than 1 year prior to the due date of such Principal Installment, then, from *the later of* a date 1 year preceding the due date of such Principal Installment and the date of, as appropriate, issuance or incurrence of the Obligations of such Series or of such Parity Debt); *provided, however, that* the amount calculated pursuant to clause (b)(i) above for any Series of Obligations shall never exceed the interest due and payable on such next succeeding interest payment date (including additional interest pursuant to any related Parity Debt) and the amount calculated pursuant to clause (b)(ii) shall never exceed the

Principal Installment due on the next succeeding Principal Installment due date; and *provided further that*, with respect to each Series of Obligations, commencing on the fifteenth day of the month preceding the month in which each interest payment date occurs, the Mobility Tax Senior Debt Service Fund Requirement shall be no less than the interest and Principal Installments, if any, payable on such interest payment date with respect to such Series. In addition, notwithstanding any other provision of the Resolution, including the Standard Resolution Provisions and the Supplemental Standard Resolution Provisions, for purposes of calculating the Mobility Tax Senior Debt Service Fund Requirement as of any date and determining the amount of any required deposits into the Senior Debt Service Fund in respect of any Put Obligations which are subject to mandatory tender other than at the election of the Issuer or any Related Entity or any other Obligations described in clause (iii) of the definition of Calculated Debt Service, deposits into the Senior Debt Service Fund relating to Principal Installments shall be required to be made in six equal monthly installments beginning on the date which is six month prior to such mandatory tender date in the case of Put Obligations or six months prior to the stated maturity date of such other Obligations. For purposes of computing the Mobility Tax Senior Debt Service Fund Requirement, the Obligations of a Series and any Parity Debt payable on each different interest payment date shall be treated as a separate Series, and if Obligations of any Series or any Parity Debt have different interest payment dates, such computation shall be done separately in respect of each such interest payment date.

**Mobility Tax Trust Account** shall mean the mobility tax trust account established in the Financial Assistance Fund pursuant to Section 92-ff of the State Finance Law, as amended, or any successor fund or account provided by law.

**MTA Finance Fund** shall mean the Metropolitan Transportation Authority Finance Fund established by the Issuer pursuant to Section 1270-h of the Issuer Act and consisting of a Pledged Amounts Account and an Operating and Capital Costs Account, or any successor fund or account provided by law.

**Obligations** shall mean any bonds, notes, commercial paper or other form of indebtedness of the Issuer payable from the Senior Debt Service Fund, authorized by Section 201 and delivered pursuant to Section 202 or authorized pursuant to Section A-203, but *excluding* Obligation Anticipation Notes to the extent not payable from the Senior Debt Service Fund.

**Obligations COI Subaccount** shall mean the applicable Subaccount by that name established in the Obligations Proceeds Fund for a Series of Obligations pursuant to Section 503.

**Obligations Event of Default** shall mean the events defined as such in Section 701.

**Obligations Proceeds Account** shall have the meaning given such term in Section 503.

**Obligations Proceeds Fund** shall mean the Fund by that name established in Section 502.

**Obligations Trust Estate** shall mean, collectively, but subject to the terms and provisions of Section 501, all right, title and interest of the Issuer in:

- (i) the proceeds of the sale of the Obligations,

(ii) the Pledged Amounts Account in the MTA Finance Fund, any money on deposit therein and any money received and held by the Issuer which is required to be deposited therein, and

(iii) all Funds, Accounts and Subaccounts established by the Resolution (other than (a) the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund, and any accounts and subaccounts therein and (b) funds and any accounts and subaccounts therein established pursuant to a Supplemental Resolution in connection with Variable Interest Rate Obligations, Put Obligations or Parity Debt; provided, however, that, in the case of funds described in clause (b) hereof, such funds, accounts and subaccounts are specifically excepted from the Trust Estate by the Supplemental Resolution authorizing such Variable Interest Rate Obligations, Put Obligations or Parity Debt), including the investments, if any, thereof.

**Operating and Capital Costs Account** shall mean the account by that name previously established by the Issuer in the MTA Finance Fund as described in Section 505.

**Other Subordinated Obligations** shall mean any payment obligation (other than a payment obligation constituting Parity Debt or Second Lien Parity Debt) arising under any other contract, agreement or other obligation of the Issuer designated as “Other Subordinated Obligations” in a certificate of an Authorized Officer of the Issuer payable from amounts available to be transferred pursuant to clause third of subsection 4 of Section 505 of the Resolution and shall include, without limitation, swap termination or other fees, expenses, indemnification or other such obligations, Reimbursement Obligations not constituting Parity Reimbursement Obligations, and Reimbursement Second Lien Obligations not constituting Parity Reimbursement Second Lien Obligations.

**Pledged Amounts Account** shall mean the account by that name previously established by the Issuer in the MTA Finance Fund as described in Section 505.

**Refunding Obligations** shall mean all Obligations authenticated and delivered on original issuance pursuant to Section 205.

**Refunding Second Lien Obligations** shall mean all Second Lien Obligations authenticated and delivered upon original issuance pursuant to Section 209.

**Resolution** shall mean this Regional Payroll Mobility Tax Obligation Resolution (including the Standard Resolution Provisions set forth in Annex A and the Supplemental Standard Resolution Provisions set forth in Annex B), as from time to time amended or supplemented by Supplemental Resolutions in accordance with the terms hereof.

**RPMT Transit and Commuter Project** shall mean any Transportation District Project that may be financed with obligations the payment of which may be secured by and paid from amounts in the MTA Finance Fund in accordance with Section 1270-h of the Issuer Act.

**Second Lien Debt Service Fund** shall mean the Fund by that name established in Section 502.

**Second Lien Obligations** shall mean any bonds, notes, commercial paper or other forms of indebtedness of the Issuer, payable from the Second Lien Debt Service Fund, authorized by Section 206 and delivered pursuant to Section 207 or authorized pursuant to Section B-203, but excluding Second Lien Obligation Anticipation Notes to the extent not payable from the Second Lien Debt Service Fund. All Second Lien Obligations shall be payable and secured in the manner permitted by Article V, and any lien on and pledge of any portion of the Second Lien Obligations Trust Estate securing Second Lien Obligations shall be junior and inferior to the lien on and a pledge of the Obligations Trust Estate herein created for the payment of the Obligations and Parity Debt.

**Second Lien Obligations COI Subaccount** shall mean the applicable Subaccount by that name established in the Second Lien Obligations Proceeds Fund for a Series of Second Lien Obligations pursuant to Section 504.

**Second Lien Obligations Event of Default** shall mean the events defined as such in Section 704.

**Second Lien Obligations Proceeds Fund** shall mean the Fund by that name established in Section 502.

**Second Lien Obligations Trust Estate** shall mean, collectively, but subject to the terms and provisions of Article V, all right, title and interest of the Issuer in:

- (i) the proceeds of the sale of the Second Lien Obligations,
- (ii) the Pledged Amounts Account in the MTA Finance Fund, any money on deposit therein and any money received and held by the Issuer which is required to be deposited therein, subject to the subordination provisions set forth in Article V of the Resolution, and
- (iii) the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund (other than funds, accounts and subaccounts therein established pursuant to a Supplemental Resolution in connection with Variable Interest Rate Second Lien Obligations, Second Lien Put Obligations or Second Lien Parity Debt, provided that such funds, accounts and subaccounts are specifically excepted from the Second Lien Obligations Trust Estate by the Supplemental Resolution authorizing such Variable Interest Rate Second Lien Obligations, Second Lien Put Obligations or Second Lien Parity Debt), and any accounts and subaccounts therein including the investments, if any, thereof.

**Second Lien Trustee** shall mean the Trustee or, if so provided in the Supplemental Resolution creating any Second Lien Obligations or Second Lien Parity Debt, the entity meeting the requirements of subdivision 3 of Section B-710 of the Supplemental Standard Resolution Provisions and designated as Second Lien Trustee in a Supplemental Resolution.

**Senior Debt Service Fund** shall mean the Fund by that name established in Section 502.

**Standard Resolution Provisions** shall mean the Standard Resolution Provisions appended hereto as Annex A.

**Subaccount** or **Subaccounts** shall mean each subaccount or all of the subaccounts established in Article V, as the case may be.

**Supplemental Standard Resolution Provisions** shall mean the Supplemental Standard Resolution Provisions for Regional Payroll Mobility Tax Second Lien Obligations and Second Lien Parity Debt appended hereto as Annex B.

**Section 103. Interpretation; Amendments to Certain Standard Resolution Provisions.**

1. Second Lien Obligations shall constitute Subordinated Indebtedness and Second Lien Parity Debt shall constitute Subordinated Contract Obligations for purposes of the Standard Resolution Provisions.

2. Clause (3) of the definition of “Calculated Debt Service” in Section A-101 is hereby amended by deleting “twenty-five per centum (25%)” and inserting “fifteen per centum (15%)” in replacement thereof.

3. Subsection 4 of Section A-202 is hereby amended to delete all references therein to “Subordinated Contract Obligations and inserting “Other Subordinated Obligations” in replacement thereof.

4. The reference in clause (iii) of Section A-203 is hereby amended by deleting the reference to “Subordinated Indebtedness” and inserting “Other Subordinated Obligations” in replacement thereof.

5. The first sentence of the second paragraph of Section A-402 is hereby amended by deleting the words “To the extent provided by Supplemental Resolution, the” and inserting the word “The” in replacement thereof.

6. Subsection 3 of Section A-710 is hereby amended by deleting such subsection in its entirety and inserting the following in replacement thereof:

“3. Any Trustee appointed under the provisions of this Section A-710 in succession to the Trustee shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.”

7. Section A-712 is hereby amended by deleting the “provided” clause thereof and inserting in lieu thereof the following:

“provided such Person shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution, and shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.”

8. Subsection 1 of Section A-713 is hereby amended by deleting the third sentence thereof in its entirety and substituting in replacement thereof the following:

“Any successor Paying Agent or Registrar shall be appointed by the Issuer, with the approval of the Trustee, and (subject to the requirements of Section A-603) shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.”

9. Sections A-801, A-802 and A-803 of Article A-VIII are hereby amended by deleting each of such Sections in its entirety and inserting “Reserved.” in replacement thereof.

10. Section A-902 is hereby amended by deleting the last sentence in its entirety and inserting the following in replacement thereof:

“Notwithstanding anything in this Section or the Resolution to the contrary, the consent of Owners of any Series of additional Obligations to be issued hereunder to any modification or amendment of the Resolution, which modification or amendment, as well as such consent, is disclosed in the official statement or other offering document prepared in connection with the primary offering of such Series of additional Obligations, shall be deemed given and irrevocable and no other evidence of such consent shall be required.”

11. Section A-903 is hereby amended by deleting the fourth sentence in its entirety and inserting in replacement thereof the following:

“Any such consent, including any consent provided pursuant to the last sentence of Section A-902, shall be irrevocable and binding upon the Owner of the Obligations giving such consent and, anything in Section A-1102 to the contrary notwithstanding, upon any subsequent Owner of such Obligations and of any Obligations issued in exchange therefor (whether or not such subsequent Owner thereof has notice thereof).”

12. Notwithstanding any other provisions of the Resolution, including the Standard Resolution Provisions and the Supplemental Standard Resolution Provisions, to the extent the consent of Owners of Obligations and Second Lien Owners is at any time required, the existence of the consent of the required percentages of Owners of Obligations and of Second Lien Owners shall be determined separately for Obligations and for Second Lien Obligations.

## **ARTICLE II AUTHORIZATION AND ISSUANCE OF THE OBLIGATIONS AND SECOND LIEN OBLIGATIONS**

### **Section 201. Authorization of the Obligations.**

1. The Resolution hereby authorizes Obligations of the Issuer designated as “Regional Payroll Mobility Tax Obligations”, which Obligations, if and when authorized by the Issuer pursuant to one or more Supplemental Resolutions, may be issued in one or more Series or subseries. Obligations may be issued as Tax-Exempt Obligations, as Taxable Obligations, as obligations which convert on a particular date or dates from Taxable Obligations to Tax-Exempt Obligations, or as Taxable Obligations which are mandatorily exchangeable on a particular date or dates for Tax-Exempt Obligations, or otherwise as determined by Supplemental Resolution and not contrary to the Resolution as then in effect. The Obligations shall be *special obligations* of the Issuer payable solely from the Obligations Trust Estate pledged to the payment thereof pursuant to Section 501.1. The aggregate principal amount of the Obligations which may be executed, authenticated and delivered under the Resolution is not limited except as provided in the Resolution or as may from time to time be limited by law.

2. The Obligations may, if and when authorized by the Issuer pursuant to one or more Supplemental Resolutions, be issued in one or more Series or subseries, and the designations thereof, in addition to the name “Regional Payroll Mobility Tax Obligations”, shall include such further or different designations in such title for the Obligations of any particular Series or subseries as the Issuer may determine. Each Obligation shall bear upon its face the designation so determined for the Series or subseries to which it belongs.

3. Nothing in the Resolution shall be deemed to prevent the consolidation into a single Series or subseries for purposes of issuance and sale of Obligations otherwise permitted by the Resolution to be issued at the same time in two or more separate Series or subseries. In the event that separate Series or subseries are combined for purposes of issuance and sale, they may be issued under a single Supplemental Resolution notwithstanding any other provision of the

Resolution. Nothing in the Resolution (except to the extent required by Supplemental Resolution) shall be deemed to prevent the separation into separate Series or subseries for purposes of issuance and sale Obligations otherwise permitted by the Resolution to be issued in one Series or subseries.

4. Obligations may be issued for any of the purposes set forth in Sections 203 or 205.

**Section 202. General Provisions for Issuance of Obligations.** Obligations may be issued pursuant to a Supplemental Resolution upon satisfaction of the provisions of Section A-201, except that the Opinion of Bond Counsel required by Section A-201.2(a)(iii) shall be to the effect that the Obligations are valid and binding special obligations of the Issuer, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Issuer Act and the Resolution, each as amended to the date of such Opinion of Bond Counsel.

**Section 203. Special Provisions for Capital Cost Obligations.**

1. The Obligations of one or more Series may at any time, or from time to time, be authenticated and delivered upon original issuance pursuant to this Section 203 to pay, or to provide for the payment of, all or part of the Capital Costs included in a Capital Program Plan (within the meaning of Section 1269-b of the Issuer Act or any successor provision) if a Capital Program Plan is then required.

2. The Obligations of each such Series shall be authenticated and delivered by the Trustee only upon receipt by the Trustee (in addition to the documents required by Section 202) of:

(a) A certificate of an Authorized Officer to the effect that the Issuer then is, and, upon the authentication and delivery of the Obligations of such Series, shall be, in compliance with all applicable provisions of the Issuer Act relating to the issuance, sale and delivery of such Obligations;

(b) A certificate of an Authorized Officer

(A) setting forth for any 12 consecutive calendar months ended not more than 6 months prior to the date of such certificate: (i) Mobility Tax Receipts and (ii) ATA Receipts;

(B) setting forth the greatest amount for the then current or any future Debt Service Year of the sum of (x) Calculated Debt Service on all Outstanding Obligations, *including* the proposed Capital Cost Obligations and any proposed Refunding Obligations being treated as Capital Cost Obligations for purposes of clause (ii) of paragraph (e) of Section 205.1 hereof but *excluding* any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Obligations being treated as Capital Cost Obligations, plus (y) additional amounts, if any, payable with respect to Parity Debt;

(C) stating that the sum of the Mobility Tax Receipts and ATA Receipts set forth in clause (A) hereof is not less than 2.5 times the amount set forth in clause (B) hereof;

(D) setting forth the greatest amount for the then current or any future Debt Service Year of the sum of (x) Calculated Debt Service on all Outstanding Obligations, *including* the proposed Capital Cost Obligations and any proposed Refunding Obligations being treated as Capital Cost Obligations for purposes of clause (ii) of paragraph (e) of Section 205.1 hereof but *excluding* any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Obligations being treated as Capital Cost Obligations, (y) Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations, *excluding* any Obligations, Parity Debt, Second Lien Obligations or Second Lien Parity Debt to be refunded with the proceeds of such Refunding Obligations being issued as Capital Cost Obligations for purposes of clause (ii) of paragraph (e) of Section 205.1, plus (z) additional amounts, if any, payable with respect to Parity Debt or Second Lien Parity Debt; and

(E) stating that the sum of the Mobility Tax Receipts and ATA Receipts set forth in clause (A) hereof is not less than 1.75 times the amount set forth in clause (D) hereof;

*provided, however, that if on the date of delivery of such certificate, there is then and thereafter required to be deposited into the MTA Finance Fund so as to constitute Mobility Tax Receipts or into the Corporate Transportation Account so as to constitute ATA Receipts or into the Pledged Amounts Account any other receipts, in each such case, which were not required to be deposited therein during the entire 12 month period to which such certificate relates, the Issuer may include in such certificate the amount which an Authorized Officer estimates would have been deposited in the MTA Finance Fund or the Corporate Transportation Account or the Pledged Amounts Account during such period if such amounts had been required to be so deposited for such entire 12 month period.*

#### **Section 204. Special Provisions for Other Subordinated Obligations.**

Other Subordinated Obligations may be issued upon the terms and conditions set forth in a Supplemental Resolution of the Issuer adopted at the time of issuance of such Other Subordinated Obligations with such terms and conditions as shall be established by the Issuer in such Supplemental Resolution.

#### **Section 205. Special Provisions for Refunding Obligations.**

1. In addition to refinancings permitted under Section 203, one or more Series of Refunding Obligations (in an aggregate principal amount which will provide funds, together with other money available therefore, to accomplish such refunding) may be authenticated and

delivered upon original issuance to refund (including by redemption, payment at maturity or in connection with exchanges or tenders) all or any portion of any Outstanding Obligations or Parity Debt. The Refunding Obligations of such Series shall be authenticated and delivered by the Trustee only upon receipt by the Trustee, in addition to the documents required by Section 202, of

(a) If the Obligations or Parity Debt to be refunded are to be redeemed, instructions to the Trustee and/or the trustee for the Parity Debt, satisfactory to it, to give due notice of redemption of all the Obligations or Parity Debt so to be refunded on a redemption date specified in such instructions;

(b) If the Obligations or Parity Debt to be refunded are to be deemed paid within the meaning of the second sentence of Section A-1101.2 or similar provision with respect to Parity Debt, instructions to the Trustee and/or the trustee for the Parity Debt, satisfactory to it, to give due notice in the manner provided in the second sentence of Section A-1101.2 or similar provision with respect to Parity Debt with respect to the payment of the said Obligations or Parity Debt pursuant to said Section or provision;

(c) If the Obligations or Parity Debt to be refunded are to be deemed paid within the meaning of the second sentence of Section A-1101.2 or similar provision with respect to Parity Debt, (i) money and/or (ii) Defeasance Securities as shall be necessary to comply with the provisions of the second sentence of Section A-1101.2 or defeasance securities as shall be necessary to comply with any similar provision with respect to Parity Debt, which Defeasance Securities or defeasance securities and/or money shall be held in trust and used only as provided in Section A-1101 or similar provision with respect to Parity Debt;

(d) If the proceeds of such Series of Refunding Obligations are to be utilized by the Issuer to purchase (in connection with a tender for or redemption of Obligations or Parity Debt, or otherwise) Obligations or Parity Debt to be delivered to the Trustee and/or the trustee for the Parity Debt in satisfaction of a Sinking Fund Installment in accordance with Section A-502.3 or similar provision with respect to Parity Debt, a certificate of an Authorized Officer specifying the matters required thereby; and

(e) Either (i) a certificate of an Authorized Officer (w) setting forth (A) the greatest amount of Calculated Debt Service on all Outstanding Obligations and Parity Debt for any future Debt Service Year during the term of the Obligations (including the Refunding Obligations then proposed to be issued but excluding the Obligations or Parity Debt to be refunded or purchased) and (B) the greatest amount of Calculated Debt Service on all Outstanding Obligations and Parity Debt for any future Debt Service Year during the term of the Obligations as calculated immediately prior to the issuance of the Refunding Obligations (including the Obligations or Parity Debt to be refunded or purchased but excluding the Refunding Obligations), (x) stating that the greatest amount of Calculated Debt Service on all Outstanding Obligations and Parity Debt for any

future Debt Service Year during the term of the Obligations set forth pursuant to (A) above is not greater than the greatest amount of Calculated Debt Service on all Outstanding Obligations and Parity Debt for any future Debt Service Year during the term of the Obligations set forth pursuant to (B) above, (y) setting forth (C) the greatest amount of Calculated Debt Service on all Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt for any future Debt Service Year (including the Refunding Obligations then proposed to be issued but excluding the Obligations or Parity Debt to be refunded or purchased) and (D) the greatest amount of aggregate Calculated Debt Service on all Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt for any future Debt Service Year as calculated immediately prior to the issuance of the Refunding Obligations (including the Obligations or Parity Debt to be refunded or purchased but excluding the Refunding Obligations) and (z) stating that the greatest amount of aggregate Calculated Debt Service on all Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt for any future Debt Service Year set forth pursuant to (C) is not greater than the greatest amount of aggregate Calculated Debt Service on all Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt set forth pursuant to (D) above; or (ii) the certificate provided for in clause (b) of Section 203.2 with respect to such Series of Refunding Obligations, considering for all purposes of such certificate that such Series of Refunding Obligations is a Series of Capital Cost Obligations and that the Refunding Obligations then proposed to be issued will be Outstanding but the Obligations or Parity Debt to be refunded will no longer be Outstanding.

2. The proceeds, including accrued interest, of the Refunding Obligations of each such Series shall be applied simultaneously with the delivery of such Obligations in the manner provided in the Supplemental Resolution authorizing such Obligations.

#### **Section 206. Authorization of Second Lien Obligations.**

1. The Resolution hereby authorizes Second Lien Obligations of the Issuer designated as “Regional Payroll Mobility Tax Second Lien Obligations”, which Second Lien Obligations, if and when authorized by the Issuer pursuant to one or more Supplemental Resolutions, may be issued in one or more Series or subseries. Second Lien Obligations may be issued as Tax-Exempt Second Lien Obligations, as Taxable Second Lien Obligations, as obligations which convert on a particular date or dates from Taxable Second Lien Obligations to Tax-Exempt Second Lien Obligations, or as Taxable Second Lien Obligations which are mandatorily exchangeable on a particular date or dates for Tax-Exempt Second Lien Obligations, or otherwise as determined by Supplemental Resolution and not contrary to the Resolution as then in effect. The Second Lien Obligations shall be *special obligations* of the Issuer payable solely from the Second Lien Obligations Trust Estate pledged to the payment thereof pursuant to Section 501.5. The aggregate principal amount of the Second Lien Obligations which may be

executed, authenticated and delivered under the Resolution is not limited except as provided in the Resolution or as may from time to time be limited by law.

2. The Second Lien Obligations may, if and when authorized by the Issuer pursuant to one or more Supplemental Resolutions, be issued in one or more Series or subseries, and the designations thereof, in addition to the name “Regional Payroll Mobility Tax Second Lien Obligations”, shall include such further or different designations in such title for the Second Lien Obligations of any particular Series or subseries as the Issuer may determine. Each Second Lien Obligation shall bear upon its face the designation so determined for the Series or subseries to which it belongs.

3. Nothing in the Resolution shall be deemed to prevent the consolidation into a single Series or subseries for purposes of issuance and sale of Second Lien Obligations otherwise permitted by the Resolution to be issued at the same time in two or more separate Series or subseries. In the event that separate Series or subseries are combined for purposes of issuance and sale, they may be issued under a single Supplemental Resolution notwithstanding any other provision of the Resolution. Nothing in the Resolution (except to the extent required by Supplemental Resolution) shall be deemed to prevent the separation into separate Series or subseries for purposes of issuance and sale of Second Lien Obligations otherwise permitted by the Resolution to be issued in one Series or subseries.

4. Second Lien Obligations may be issued for any of the purposes set forth in Sections 208 or 209.

**Section 207. General Provisions for Issuance of Second Lien Obligations.** Second Lien Obligations may be issued pursuant to a Supplemental Resolution upon satisfaction of the provisions of Section B-201, except that the Opinion of Bond Counsel required by Section B-201.2(a)(iii) shall be to the effect that the Second Lien Obligations are valid and binding special obligations of the Issuer, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Issuer Act and the Resolution, each as amended to the date of such Opinion of Bond Counsel.

**Section 208. Special Provisions for Capital Cost Second Lien Obligations.**

1. The Second Lien Obligations of one or more Series may at any time, or from time to time, be authenticated and delivered upon original issuance pursuant to this Section 208 to pay, or to provide for the payment of, all or part of the Capital Costs included in a Capital Program Plan (within the meaning of Section 1269-b of the Issuer Act or any successor provision) if a Capital Program Plan is then required.

2. The Second Lien Obligations of each such Series shall be authenticated and delivered by the Second Lien Trustee only upon receipt by the Second Lien Trustee (in addition to the documents required by Section 207) of:

- (a) A certificate of an Authorized Officer to the effect that the Issuer then is, and, upon the authentication and delivery of the Second Lien Obligations of such Series, shall be, in compliance with all applicable provisions of the

Issuer Act relating to the issuance, sale and delivery of such Second Lien Obligations;

- (b) A certificate of an Authorized Officer
  - (A) setting forth for any 12 consecutive calendar months ended not more than 6 months prior to the date of such certificate: (i) Mobility Tax Receipts and (ii) ATA Receipts;
  - (B) setting forth the greatest amount for the then current or any future Debt Service Year of the sum of (x) Calculated Debt Service on all Outstanding Obligations, *excluding* any Obligations or Parity Debt to be refunded with the proceeds of such Refunding Second Lien Obligations, (y) Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations, *including* the proposed Capital Cost Second Lien Obligations and any proposed Refunding Second Lien Obligations being treated as Capital Cost Second Lien Obligations for purposes of clause (ii) of paragraph (e) of Section 209.2 hereof but *excluding* any Obligations, Parity Debt, Second Lien Obligations or Second Lien Parity Debt to be refunded with the proceeds of such Refunding Second Lien Obligations being treated as Capital Cost Second Lien Obligations, plus (z) additional amounts, if any, payable with respect to Parity Debt or Second Lien Parity Debt; and
  - (C) stating that the sum of the Mobility Tax Receipts and ATA Receipts set forth in clause (A) hereof is not less than 1.75 times the amount set forth in clause (B) hereof;

*provided, however, that* if on the date of delivery of such certificate, there is then and thereafter required to be deposited into the MTA Finance Fund so as to constitute Mobility Tax Receipts or into the Corporate Transportation Account so as to constitute ATA Receipts or into the Pledged Amounts Account any other receipts, in each such case, which were not required to be deposited therein during the entire 12 month period to which such certificate relates, the Issuer may include in such certificate the amount which an Authorized Officer estimates would have been deposited in the MTA Finance Fund or the Corporate Transportation Account or the Pledged Amounts Account during such period if such amounts had been required to be so deposited for such entire 12 month period.

#### **Section 209. Special Provisions for Refunding Second Lien Obligations.**

1. In addition to refinancings permitted under Section 208, one or more Series of Refunding Second Lien Obligations (in an aggregate principal amount which will provide funds, together with other money available therefore, to accomplish such refunding) may be authenticated and delivered upon original issuance to refund (including by redemption, payment at maturity or in connection with exchanges or tenders) all or any portion of any Outstanding Obligations, Parity Debt, Second Lien Obligations or Second Lien Parity Debt.

2. The Refunding Second Lien Obligations of such Series shall be authenticated and delivered by the Second Lien Trustee only upon receipt by the Second Lien Trustee, in addition to the documents required by Section B-201, of:

- (a) If the Obligations or Parity Debt to be refunded are to be redeemed, deemed paid within the meaning of the second sentence of Section A-1101.2 or similar provision with respect to Parity Debt, or purchased in satisfaction of a Sinking Fund Installment in accordance with Section A-502.3 or similar provision with respect to Parity Debt, the items set forth in clauses (a) – (d) of Section 205.1, as applicable;
- (b) If the Second Lien Obligations or Second Lien Parity Debt to be refunded are to be redeemed, instructions to the Second Lien Trustee and/or the trustee for the Second Lien Parity Debt, satisfactory to it, to give due notice of redemption of all the Second Lien Obligations or Second Lien Parity Debt so to be refunded on a redemption date specified in such instructions;
- (c) If the Second Lien Obligations or Second Lien Parity Debt to be refunded are to be deemed paid within the meaning of the second sentence of Section B-1001.2 or similar provision with respect to Second Lien Parity Debt, (i) money and/or (ii) Defeasance Securities as shall be necessary to comply with the provisions of the second sentence of Section B-1001.2 or defeasance securities as shall be necessary to comply with any similar provision with respect to Second Lien Parity Debt, which Defeasance Securities or defeasance securities and/or money shall be held in trust and used only as provided in Section B-1001 or similar provision with respect to Second Lien Parity Debt;
- (d) If the proceeds of such Series of Refunding Second Lien Obligations are to be utilized by the Issuer to purchase (in connection with a tender for or redemption of Second Lien Obligations or Second Lien Parity Debt, or otherwise) Second Lien Obligations or Second Lien Parity Debt to be delivered to the Second Lien Trustee in satisfaction of a Second Lien Sinking Fund Installment in accordance with Section B-502.3 or similar provision with respect to Second Lien Parity Debt, a certificate of an Authorized Officer specifying the matters required thereby; and
- (e) Either (i) a certificate of an Authorized Officer (a) setting forth (A) the greatest amount of aggregate Calculated Debt Service on all Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt for any future Debt Service Year during the term of the Second Lien Obligations (including the Refunding Second Lien Obligations then proposed to be issued but excluding the Obligations, Parity Debt, Second Lien Obligations or Second Lien Parity Debt to be refunded or purchased) and (B) the greatest amount of aggregate Calculated Debt Service on all

Outstanding Obligations and Parity Debt and Calculated Second Lien Debt Service on all Outstanding Second Lien Obligations and Second Lien Parity Debt for any future Debt Service Year during the term of the Second Lien Obligations as calculated immediately prior to the issuance of the Refunding Second Lien Obligations (including the Obligations, Parity Debt, Second Lien Obligations or Second Lien Parity Debt to be refunded or purchased but excluding the Refunding Second Lien Obligations and Second Lien Parity Debt) and (b) stating that the greatest amount of aggregate Calculated Debt Service and Calculated Second Lien Debt Service set forth pursuant to (A) above is not greater than the greatest amount of aggregate Calculated Debt Service and Calculated Second Lien Debt Service set forth pursuant to (B) above; or (ii) the certificate provided for in clause (b) of Section 208.2 with respect to such Series of Refunding Second Lien Obligations, considering for all purposes of such certificate that such Series of Second Lien Refunding Obligations is a Series of Capital Cost Second Lien Obligations and that the Refunding Second Lien Obligations then proposed to be issued will be Outstanding, but the Obligation, Parity Debt, Second Lien Obligation or Second Lien Parity Debt to be refunded will no longer be Outstanding.

3. The proceeds, including accrued interest, of the Refunding Second Lien Obligations of each such Series shall be applied simultaneously with the delivery of such Second Lien Obligations in the manner provided in the Supplemental Resolution authorizing such Second Lien Obligations.

### **ARTICLE III**

#### **FORM OF OBLIGATIONS AND SECOND LIEN OBLIGATIONS**

**Section 301. Form of Obligations.** Subject to the provisions of the Resolution and except as otherwise provided pursuant to a Supplemental Resolution, each Series of Obligations shall be issued as fully registered securities in substantially the form provided in Exhibit One appended hereto. Any Authorized Officer executing and delivering any such Obligations may make such changes in the form thereof as deemed necessary or convenient by such Authorized Officer, including changes to conform with (i) the terms of sale, (ii) the provisions of the related Supplemental Resolution, (iii) the requirements of the related Securities Depository, provider of a Credit Facility or Rating Agency, (iv) industry practice or (v) federal, State or City regulatory requirements, and the execution (whether manual or by facsimile) and delivery of any such obligations shall be conclusive evidence of the approval of all terms thereof by such Authorized Officer.

**Section 302. Form of Second Lien Obligations.** Subject to the provisions of the Resolution and except as otherwise provided pursuant to a Supplemental Resolution, each Series of Second Lien Obligations shall be issued as fully registered securities in substantially the form provided in Exhibit Two appended hereto. Any Authorized Officer executing and delivering any such Second Lien Obligations may make such changes in the form thereof as deemed necessary

or convenient by such Authorized Officer, including changes to conform with (i) the terms of sale, (ii) the provisions of the related Supplemental Resolution, (iii) the requirements of the related Securities Depository, provider of a Second Lien Obligation Credit Facility or Rating Agency, (iv) industry practice or (v) federal, State or City regulatory requirements, and the execution (whether manual or by facsimile) and delivery of any such obligations shall be conclusive evidence of the approval of all terms thereof by such Authorized Officer.

#### **ARTICLE IV REDEMPTION AT DEMAND OF THE STATE OR THE CITY**

**Section 401. Redemption at Demand of the State or the City.** Except as otherwise provided pursuant to a Supplemental Resolution, either the State or the City may, upon furnishing sufficient funds therefore, require the Issuer to redeem all or any portion of the Obligations or Second Lien Obligations as provided in the Issuer Act as in effect on the date any such Obligations or Second Lien Obligations were issued.

#### **ARTICLE V PLEDGE; MAINTENANCE AND ESTABLISHMENT OF FUNDS AND ACCOUNTS AND APPLICATION THEREOF**

**Section 501. The Pledge Effected by the Resolution.**

1. There are hereby pledged for the payment of the principal and Redemption Price of, interest on, and Sinking Fund Installments for, the Obligations and, on a parity basis, Parity Debt, in accordance with their terms and the provisions of the Resolution, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution, all right, title and interest of the Issuer in the Obligations Trust Estate.

2. The pledge created by subsection 1 of this Section 501 shall in all respects secure on a *pari passu* basis all of the Obligations and Parity Debt and, except as expressly so provided, nothing contained in the Resolution shall be deemed to confer on the Owners of any Obligations or Parity Debt any rights in the Obligations Trust Estate superior or inferior to the Owners of any other Obligations or Parity Debt.

3. The pledge created by subsection 1 of this Section 501 shall be valid and binding from and after the date of issuance and delivery of the first Obligations, and the Obligations Trust Estate shall immediately be subject to the lien of such pledge without any physical delivery thereof or further act, and the lien of such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Issuer irrespective of whether such parties have notice thereof.

4. Subject to the provisions of subsection 1 of this Section 501, the Obligations Trust Estate and the Mobility Tax Receipts and ATA Receipts are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the Resolution, and all corporate action on the part of the Issuer to that end has been duly and validly taken.

5. The Second Lien Obligations and Second Lien Parity Debt constitute Subordinated Indebtedness (as defined in the Standard Resolution Provisions) and the rights of Second Lien Owners to payment of principal of and interest on the Second Lien Obligations and Second Lien Parity Debt are subordinated to the rights of Owners of Obligations and Parity Debt to the extent and in the manner provided in this Article V. There are hereby pledged for the payment of the principal and Redemption Price of, interest on, and Second Lien Sinking Fund Installments for, the Second Lien Obligations and, on a parity basis, Second Lien Parity Debt, in accordance with their terms and the provisions of the Resolution, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution, all right, title and interest of the Issuer in the Second Lien Obligations Trust Estate and subordinate in all respects to the pledge of the Obligations Trust Estate securing Obligations and Parity Debt created pursuant to subsection 1 of this Section 501.

6. The Second Lien Obligations and Second Lien Parity Debt are payable solely from the Second Lien Obligations Trust Estate subject and subordinate to the payments to be made with respect to Obligations and Parity Debt from the Obligations Trust Estate as provided in Sections 504 and 601 of the Resolution, and shall be secured by a lien on and pledge of the funds in the Second Lien Obligations Trust Estate junior and inferior to the lien on and pledge of the Obligations Trust Estate created by the Resolution for the payment of the Obligations and Parity Debt. The Second Lien Obligations and Second Lien Parity Debt shall be payable from such amounts as shall from time to time be available for transfer pursuant to Section 505.4 – second of the Resolution and any amounts so transferred shall thereafter be free and clear of the lien of the Obligations Trust Estate. The pledge created by subsection 5 of this Section 501 shall in all respects secure on a *pari passu* basis all of the Second Lien Obligations and Second Lien Parity Debt and, except as expressly so provided, nothing contained in the Resolution shall be deemed to confer on the Second Lien Owners and the holders of any Second Lien Parity Debt any rights in the Second Lien Obligations Trust Estate superior or inferior to the Second Lien Owners of any other Second Lien Obligations and the holders of any Second Lien Parity Debt.

7. The pledge created by subsection 5 of this Section 501 shall be valid and binding from and after the date of issuance and delivery of the first Second Lien Obligations, and the Second Lien Obligations Trust Estate shall immediately be subject to the lien of such pledge without any physical delivery thereof or further act, and the lien of such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Issuer irrespective of whether such parties have notice thereof.

8. Subject to the provisions of subsections 1 and 5 of this Section 501, the Second Lien Obligations Trust Estate and the Mobility Tax Receipts and ATA Receipts are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the Resolution, and all corporate action on the part of the Issuer to that end has been duly and validly taken.

9. Nothing contained in this Section 501 shall be construed as limiting any authority granted to the Issuer elsewhere in the Resolution to issue or incur Obligation Anticipation Notes or Second Lien Obligation Anticipation Notes or shall be deemed a limitation upon the authority of the Issuer to issue any other bonds, notes or other obligations under the

Issuer Act secured by any income and funds other than the Obligations Trust Estate or the Second Lien Obligations Trust Estate.

**Section 502. Establishment of Funds, Accounts and Subaccounts.**

1. The Obligations Proceeds Fund, which shall be held and administered by the Issuer, is hereby established.

2. The Second Lien Obligations Proceeds Fund, which shall be held and administered by the Issuer, is hereby established.

3. The Senior Debt Service Fund, which shall be held and administered by the Trustee, is hereby established.

4. The Second Lien Debt Service Fund, which shall be held and administered by the Trustee or, if so provided in a Supplemental Resolution, the Second Lien Trustee, is hereby established.

5. Amounts held at any time by the Issuer, the Trustee or the Second Lien Trustee in any of the Funds or Accounts established pursuant to this Section shall be held in trust separate and apart from all other funds. Additional funds, accounts or subaccounts may be established by the Issuer in its discretion pursuant to this Section upon the delivery of a certificate to the Trustee or Second Lien Trustee, as applicable, or by Supplemental Resolution.

6. Except as otherwise provided herein or in a Supplemental Resolution, all investment income earned on amounts on deposit in the Funds, Accounts or Subaccounts established under the Resolution shall remain on deposit in such Funds, Accounts or Subaccounts and applied in accordance with the provisions applicable to such Funds, Accounts or Subaccounts.

**Section 503. Obligations Proceeds Fund and Application Thereof.**

1. There shall be established within the Obligations Proceeds Fund a separate account ("Obligations Proceeds Account") for each Series of Obligations and within each such Account a separate Obligations COI Subaccount. Additional Subaccounts may be established by certificate of an Authorized Officer within each such Obligations Proceeds Account.

2. The Issuer shall pay into the Obligations Proceeds Fund and each Obligations Proceeds Account, if any, and each Subaccount, if any, such amounts as shall be provided for by Supplemental Resolution or in the resolution authorizing Obligation Anticipation Notes. The portion of any such amount determined by Supplemental Resolution to be used for the payment of Costs of Issuance shall be paid into and disbursed from the related Obligations COI Subaccount. Excess amounts on any Obligation COI Subaccount may be transferred by the Issuer to the related Obligations Proceeds Account and applied to the payment of Capital Costs or transferred by the Issuer to the Senior Lien Debt Service Fund and applied to the payment of interest on the related Obligations.

3. Unless otherwise provided for in a Supplemental Resolution or in the resolution authorizing Obligation Anticipation Notes, amounts in each Obligations Proceeds Account and each Subaccount shall be applied solely to the payment of Capital Costs in the manner and upon such conditions, if any, as the Issuer may provide in such Supplemental Resolution or in the resolution authorizing Obligation Anticipation Notes; *provided, however, that*, subject to any priority for Obligation Anticipation Notes, if on any interest payment date or Principal Installment due date the amounts in the Senior Debt Service Fund shall be less than Debt Service payable on such date, the Issuer shall apply amounts from the Obligations Proceeds Fund to the extent necessary to make up the deficiency.

#### **Section 504. Second Lien Obligations Proceeds Fund and Application Thereof.**

1. There shall be established within the Second Lien Obligations Proceeds Fund a separate account (“Second Lien Obligations Proceeds Account”) for each Series of Second Lien Obligations and within each such Account a separate Second Lien Obligations COI Subaccount. Additional Subaccounts may be established by certificate of an Authorized Officer within each such Second Lien Proceeds Account.

2. The Issuer shall pay into the Second Lien Obligations Proceeds Fund and each Second Lien Proceeds Account and each Second Lien Obligations COI Subaccount, such amounts as shall be provided for by Supplemental Resolution or in the resolution authorizing Second Lien Obligation Anticipation Notes. The portion of any such amount determined by Supplemental Resolution to be used for the payment of Second Lien Costs of Issuance shall be paid into and disbursed from the related Second Lien Obligations COI Subaccount. Excess amounts in any Second Lien Obligations COI Subaccount may be transferred by the Issuer to the related Second Lien Obligation Proceeds Account and applied to the payment of Capital Costs or transferred by the Issuer to the Second Lien Debt Service fund and applied to the payment of interest on the related Second Lien Obligations.

3. Unless otherwise provided for in a Supplemental Resolution or in the resolution authorizing Second Lien Obligation Anticipation Notes, amounts in each Second Lien Proceeds Account, if any, and each Subaccount, if any, shall be applied solely to the payment of Capital Costs in the manner and upon such conditions, if any, as the Issuer may provide in such Supplemental Resolution or in the resolution authorizing Second Lien Obligation Anticipation Notes; *provided, however, that*, subject to any priority for Second Lien Obligation Anticipation Notes, if on any interest payment date or Second Lien Obligations Principal Installment due date the amounts in the Second Lien Debt Service Fund shall be less than Second Lien Debt Service payable on such date, the Issuer shall apply amounts from the Second Lien Obligations Proceeds Fund to the extent necessary to make up the deficiency.

#### **Section 505. MTA Finance Fund; Application Thereof.**

1. The Issuer has previously established the MTA Finance Fund held by the Issuer in accordance with Section 1270-h of the Issuer Act consisting of a Pledged Amounts Account and an Operating and Capital Costs Account.

2. So long as any Obligations, Parity Debt, Second Lien Obligations, Second Lien Parity Debt and Other Subordinated Obligations are Outstanding hereunder, the Issuer shall establish and maintain in the Pledged Amounts Account a Mobility Tax Receipts Subaccount and an ATA Receipts Subaccount. All Mobility Tax Receipts shall be immediately deposited into the Mobility Tax Receipts Subaccount and all ATA Receipts shall be immediately deposited into the ATA Receipts Subaccount. Amounts held at any time by the Issuer in the Pledged Amounts Account or any Subaccount therein shall be held in trust separate and apart from all other funds.

3. The Issuer shall immediately transfer any ATA Funds deposited to the Corporate Transportation Account to the ATA Receipts Subaccount in the Pledged Amounts Account in the MTA Finance Fund.

4. Amounts deposited in any Subaccount in the Pledged Amounts Account shall be immediately applied by the Issuer as follows:

*first*, transfer to the Trustee for deposit in the Senior Debt Service Fund the amount necessary so that the amount on deposit therein shall equal the Mobility Tax Senior Debt Service Fund Requirement;

*second*, transfer, free and clear of any lien, pledge or claim of the Resolution securing Obligations or Parity Debt, to the Second Lien Trustee for deposit in the Second Lien Debt Service Fund, the amount necessary so that the amount on deposit in the Second Lien Debt Service Fund shall equal the Mobility Tax Second Lien Debt Service Fund Requirement;

*third*, transfer to another Person in accordance with the provisions of any Supplemental Resolution or other authorizing document for the payment of Obligation Anticipation Notes, Other Subordinated Obligations and Second Lien Obligation Anticipation Notes; and

*fourth*, transfer, in the discretion of the Issuer, free and clear of any lien, pledge or claim of the Resolution, any remaining amounts, including investment income, if any, remaining on deposit in the Pledged Amounts Account into the Operating and Capital Costs Account or as otherwise required or permitted by law.

5. Amounts deposited into the Operating and Capital Costs Account shall be applied by the Issuer as provided in the Issuer Act.

#### **Section 506. Senior Debt Service Fund.**

1. The Trustee shall deposit, upon receipt thereof, all amounts transferred to the Trustee by the Issuer for deposit in the Senior Debt Service Fund in accordance with Section 505.4.

2. The Trustee shall pay out of the Senior Debt Service Fund to the respective Paying Agents (i) on or before each interest payment date for any of the Obligations and any related Parity Debt, the amount required for the interest payable on such date; (ii) on or

before each Principal Installment due date, the amount required for the Principal Installment (including the portion thereof payable in respect of Parity Debt) payable on such due date; and (iii) on or before any redemption date for the Obligations or Parity Debt which occurs on any date other than an interest payment date, the amount required for the payment of interest on the Obligations or Parity Debt then to be redeemed. Such amounts shall be applied by the Paying Agents to such payments on and after the due dates thereof.

3. If on any date the sum of the amounts on deposit in the Senior Debt Service Fund exceeds the Mobility Tax Senior Debt Service Fund Requirement calculated as of such date, the Trustee shall, unless directed by the Issuer not to make such application or transfer, first apply or transfer to the Trustee to apply any or all of such excess to cure or reduce any deficiency then existing in any Fund or Account under the Resolution and then transfer any and all of the remaining amount of such excess to the Issuer for deposit, in the discretion of the Issuer, into the Operating and Capital Costs Account or as otherwise required or permitted by law free and clear of any lien, pledge and claim under the Resolution.

4. In the event of the refunding (including in connection with any payment at maturity, redemption, purchase, tender or exchange) of any Obligations, the Trustee shall, upon the direction of the Issuer, (a) withdraw from the Senior Debt Service Fund all or any portion of the amounts accumulated therein with respect to the Debt Service on the Obligations being refunded and deposit such amounts, free and clear of any lien, pledge or claim of the Resolution, with itself as Trustee or with an escrow agent to be held in trust solely for the purchase, exchange or payment of the principal or Redemption Price, if applicable, of and interest on the Obligations being refunded, (b) apply such amounts to pay the Costs of Issuance of the Refunding Obligations, (c) deposit or transfer to the Trustee to deposit such amounts in any Fund or Account established hereunder, or (d) pay such amounts over to the Issuer free and clear of any lien, pledge or claim under the Resolution for deposit, in the discretion of the Issuer, into the Operating and Capital Costs Account or as otherwise required or permitted by law; *provided, however,* that no such withdrawal or deposit shall be made unless (i) upon such refunding, the Obligations being refunded shall be deemed to have been paid within the meaning and with the effect provided in Section A-1101, and (ii) at the time of and giving effect to such withdrawal and refunding, there shall exist no deficiency in any Fund or Account established under the Resolution.

#### **Section 507. Second Lien Debt Service Fund.**

1. The Second Lien Trustee shall deposit, upon receipt thereof, all amounts transferred to the Second Lien Trustee by the Issuer for deposit in the Second Lien Debt Service Fund in accordance with Section 505.4.

2. The Second Lien Trustee shall pay out of the Second Lien Debt Service Fund to the respective Paying Agents (i) on or before each interest payment date for any of the Second Lien Obligations and any related Second Lien Parity Debt, the amount required for the interest payable on such date; (ii) on or before each Second Lien Principal Installment due date, the amount required for the Second Lien Principal Installment (including the portion thereof payable in respect of a Second Lien Parity Debt) payable on such due date; and (iii) on or before any redemption date for the Second Lien Obligations or Second Lien Parity Debt which occurs

on any interest payment date, the amount required for the payment of interest on the Second Lien Obligations or Second Lien Parity Debt then to be redeemed. Such amounts shall be applied by the Paying Agents to such payments on and after the due dates thereof.

3. If on any date the sum of the amounts on deposit in the Second Lien Debt Service Fund exceeds the Mobility Tax Second Lien Debt Service Fund Requirement calculated as of such date, the Second Lien Trustee shall, unless directed by the Issuer not to make such application or transfer, first apply or transfer to the Trustee or the Second Lien Trustee, as appropriate, to apply any or all of such excess to cure or reduce any deficiency then existing in any Fund or Account under the Resolution and then transfer any and all of the remaining amount of such excess to the Issuer for deposit, in the discretion of the Issuer, into the Operating and Capital Costs Account or as otherwise required or permitted by law free and clear of any lien, pledge and claim under the Resolution.

4. In the event of the refunding (including in connection with any payment at maturity, redemption, purchase, tender or exchange) of any Second Lien Obligations, the Second Lien Trustee shall, upon the direction of the Issuer, (a) withdraw from the Second Lien Debt Service Fund all or any portion of the amounts accumulated therein with respect to the Debt Service on the Second Lien Obligations being refunded and deposit such amounts, free and clear of any lien, pledge or claim of the Resolution, with itself as Second Lien Trustee or with an escrow agent to be held in trust solely for the purchase, exchange or payment of the principal or Redemption Price, if applicable, of and interest on the Second Lien Obligations being refunded, (b) apply such amounts to pay the Costs of Issuance of the Refunding Second Lien Obligations, (c) deposit or transfer to the Second Lien Trustee to deposit such amounts in any Fund or Account established hereunder, or (d) pay such amounts over to the Issuer free and clear of any lien, pledge or claim under the Resolution for deposit, in the discretion of the Issuer, into the Operations and Capital Costs Account or as otherwise required or permitted by law; *provided, however, that* no such withdrawal or deposit shall be made unless (i) upon such refunding, the Second Lien Obligations being refunded shall be deemed to have been paid within the meaning and with the effect provided in Section A-1101, and (ii) at the time of and giving effect to such withdrawal and refunding, there shall exist no deficiency in any Fund or Account established under the Resolution.

5. The Issuer shall have the right to covenant with Persons to whom Second Lien Obligations and Second Lien Parity Debt run and with the Second Lien Owners or holders from time to time of Second Lien Obligations and Second Lien Parity Debt in order to add to the conditions, limitations and restrictions under which any additional Capital Cost Obligations or Refunding Obligations may be issued or Parity Debt may be incurred; *provided, however, that* the Supplemental Resolution or indenture or other agreement providing for the issuance of such Second Lien Obligations and Second Lien Parity Debt or the incurrence of such Second Lien Obligations and Second Lien Parity Debt shall not permit the holders of such obligations to declare the same, nor to instruct such holders' trustee to declare the same, to be immediately due and payable prior to any time that all Obligations and Parity Debt have become due and payable.

6. The Issuer shall have the right to covenant with Persons to whom Other Subordinated Obligations run and with the holders from time to time of Other Subordinated Obligations in order to add to the conditions, limitations and restrictions under which any

additional Capital Cost Obligations, Refunding Obligations, Second Lien Capital Cost Obligations or Second Lien Refunding Obligations may be issued or Parity Debt or Second Lien Parity Debt may be incurred; *provided, however, that* the Supplemental Resolution or indenture or other agreement providing for the issuance of such Other Subordinated Obligations or the incurrence of such Other Subordinated Obligations shall not permit the holders of such obligations to declare the same, nor to instruct such holders' trustee to declare the same, to be immediately due and payable prior to any time that all Obligations, Second Lien Obligations, Parity Debt and Second Lien Parity Debt have become due and payable.

## **ARTICLE VI PARTICULAR COVENANTS OF THE ISSUER**

The Issuer covenants and agrees with the Trustee, the Second Lien Trustee and the Owners of all Obligations as follows:

### **Section 601. Power to Issue Obligations and Effect Pledge of Obligations Trust Estate.**

1. The Issuer is duly authorized under all applicable laws to create and issue the Obligations, adopt the Resolution and pledge the Obligations Trust Estate in the manner and to the extent provided in the Resolution. The Obligations Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the Resolution, and all corporate action on the part of the Issuer to that end has been duly and validly taken. The Obligations and the provisions of the Resolution are and will be the legally valid and binding special obligations of the Issuer enforceable in accordance with their terms and the terms of the Resolution. The Issuer shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the Obligations Trust Estate and all the rights of the Owners of Obligations under the Resolution against all claims and demands of all Persons whomsoever.

2. Until the pledge created in subsection 1 of Section 501 of the Resolution shall be discharged and satisfied as provided in Section A-1001, the Issuer shall not issue any bonds or other evidences of indebtedness, other than the Obligations and Parity Debt, secured by an equal or prior pledge of the Obligations Trust Estate or the Mobility Tax Receipts or the ATA Receipts, nor create or cause to be created any equal or prior pledge of, or lien, charge or encumbrance on, any of the items comprising the Obligations Trust Estate or the Mobility Tax Receipts or the ATA Receipts; *provided, however, that* nothing contained in the Resolution shall prevent the Issuer from at any time incurring any Parity Debt in accordance with Section A-201 or issuing Obligation Anticipation Notes secured as provided in Section A-203, Second Lien Obligations, in accordance with Section 206, Second Lien Parity Debt in accordance with Section B-202, or Second Lien Obligation Anticipation Notes secured as provided in Section B-203.

**Section 602. Compliance with Laws Relating to Appropriation and Related Matters.** The Issuer covenants and agrees to take all actions on its part and to comply with all laws required for the Issuer to receive any amounts appropriated or deposited to the MTA Finance Fund, including Section 92-ff of the State Finance Law.

**Section 603. Agreement of the State; No Bankruptcy.** In accordance with Section 1271 of the Issuer Act, the Issuer does hereby include the pledge and agreement of the State with the Owners of the Obligations and Second Lien Owners of Second Lien Obligations that the State will not limit or alter the denial of authority under subdivision 9 of Section 1269 of the Issuer Act, or the rights vested in the Issuer by the Issuer Act to fulfill the terms of any agreement made with such Owners and Second Lien Owners, or in any way impair the rights and remedies of such Owners and Second Lien Owners until such agreements, bonds, notes and obligations with such Owners and Second Lien Owners, together with the interest thereon, with interest on any unpaid installments of interest, and all costs and expenses for which the Issuer is liable in connection with any action or proceeding by or on behalf of such Owners and Second Lien Owners, are fully met and discharged; provided, however, nothing contained in this Section or elsewhere in the Resolution shall be deemed to restrict the right of the State to amend, repeal, modify or otherwise alter statutes imposing or relating to the taxes producing revenues for deposit in the Financial Assistance Fund, or the appropriations relating thereto.

**Section 604. Power to Issue Second Lien Obligations and Effect Pledge of Second Lien Obligations Trust Estate.**

1. The Issuer is duly authorized under all applicable laws to create and issue the Second Lien Obligations, adopt the Resolution and pledge the Second Lien Obligations Trust Estate in the manner and to the extent provided in the Resolution. Except for the lien on the Obligations Trust Estate securing Obligations, the Second Lien Obligations Trust Estate is and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created by the Resolution, and all corporate action on the part of the Issuer to that end has been duly and validly taken. The Second Lien Obligations and the provisions of the Resolution are and will be the legally valid and binding special obligations of the Issuer enforceable in accordance with their terms and the terms of the Resolution. The Issuer shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the Second Lien Obligations Trust Estate and all the rights of the Second Lien Owners under the Resolution against all claims and demands of all Persons whomsoever.

2. Until the pledge created in subsection 5 of Section 501 of the Resolution shall be discharged and satisfied as provided in Section B-1001, the Issuer shall not issue any bonds or other evidences of indebtedness, other than the Obligations, Parity Debt, Second Lien Obligations and Second Lien Parity Debt secured by an equal or prior pledge of the Second Lien Obligations Trust Estate or the Mobility Tax Receipts or the ATA Receipts, nor create or cause to be created any equal or prior pledge of, or lien, charge or encumbrance on, any of the items comprising the Second Lien Obligations Trust Estate or the Mobility Tax Receipts or the ATA Receipts; *provided, however, that* nothing contained in the Resolution shall prevent the Issuer from at any time incurring any Obligations or Parity Debt in accordance with Section A-201, issuing Obligation Anticipation Notes secured as provided in Section A-203, issuing Second Lien Obligations in accordance with Sections 206, Second Lien Parity Debt in accordance with Section B-202, or issuing Second Lien Obligation Anticipation Notes in accordance with Section B-203.

## ARTICLE VII

### EVENTS OF DEFAULT AND REMEDIES

**Section 701. Obligations Event of Default.** Each of the following events is defined as and shall constitute an “Obligations Event of Default” in respect of Obligations or Parity Debt under the Resolution:

1. There shall occur a default in the payment of principal, Sinking Fund Installment, interest or premium on any Obligation or, if so provided in the Supplemental Resolution, a default in the payment of a mandatory tender for purchase after the same shall have become due, whether at maturity or upon call for redemption or otherwise which default shall continue for a period of 30 days.

2. There shall occur a failure to observe, or a refusal to comply with, the terms of the Resolution or the Obligations, other than a failure or refusal constituting an event specified in any other subsection of this Section 701 and other than a failure to make all or any portion of any required deposit into any Fund or Account which failure is the result of the fact that the Issuer has not received sufficient Mobility Tax Receipts or ATA Receipts, as appropriate, to make such deposit; *provided, however, that* such failure or refusal shall have continued for a period of 30 days after written notice, specifying such failure and requesting that it be remedied, is given to the Issuer by the Trustee, unless the Trustee shall agree in writing to an extension of such time prior to its expiration, and *provided further that* if the failure stated in the notice cannot be remedied within the applicable period, the Trustee shall not unreasonably withhold its consent to an extension of such time if corrective action has been instituted by the Issuer within such period and is being diligently pursued.

3. The State or any Final Judgment shall limit or alter the denial of authority under subdivision 9 of Section 1269 of the Issuer Act to the Issuer or, subject to the proviso contained in Section 603, shall limit or alter the rights and powers vested in the Issuer by the Issuer Act to fulfill the terms of any agreements made by it with the holders of any notes, bonds, or lease or other obligations, or in any way impair the rights and remedies of such holders until such agreements and all such obligations, together with the interest thereon, with interest on any unpaid installments of interest, and all costs and expenses for which the Issuer is liable in connection with any action or proceeding by or on behalf of such holders, are fully met and discharged.

4. The pledge created in subsection 1 of Section 501 of the Resolution shall, at any time and for any reason, cease to be in full force and effect or a Final Judgment shall be rendered which shall declare the pledge to be null and void, or shall declare that the pledge does not establish in any material respect the lien it purports to establish, or that the pledge is not for the benefit of the Owners of the Obligations and Parity Debt, subject to the rights of no other parties (other than holders of Obligation Anticipation Notes and, to the extent provided in Section 206, Second Lien Obligations and Second Lien Parity Debt and Second Lien Obligation Anticipation Notes.

**Section 702. Powers of Trustee in Respect of an Obligations Event of Default.**

1. In the event that any Obligations Event of Default specified in Section 701 shall occur and be continuing, the Trustee may, and, upon written request of the Owners of a majority in aggregate principal amount of the Obligations then Outstanding, shall, in its name:

- (a) by suit, action or proceeding in accordance with the civil practice law and rules enforce all rights of the Owners of Obligations;
- (b) bring suit upon the Obligations against the Issuer;
- (c) by action or suit, require the Issuer to account as if it were the trustee of an express trust for the Owners of the Obligations; or
- (d) by action or suit, enjoin any acts or things which may be unlawful or in violation of the rights of the Owners of the Obligations.

2. Subject to the provisions of Sections 701 and A-1001 and the foregoing provisions of this Section 702, the remedies conferred upon or reserved to the Trustee in respect of any Obligations Event of Default are not intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Resolution or now or hereafter existing at law or in equity or by statute; provided, however, that the Trustee or the Owners of the Obligations shall not have the right to declare all Obligations to be immediately due and payable. No delay or omission to exercise any right or power accruing upon any Obligations Event of Default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the Trustee to exercise any remedy reserved to it in this Article, it shall not be necessary to give any notice, other than notice as may be expressly required herein.

3. The Trustee shall, in addition to the foregoing powers, have and possess all of the powers necessary or appropriate for the exercise of any functions specifically set forth herein or incidental to the general representation of Owners of Obligations in the enforcement and protection of their rights.

4. The Issuer covenants that if an Obligations Event of Default shall have happened and shall not have been remedied, the books of record and account of the Issuer and all other records relating to the Obligations Trust Estate shall at all times be subject to the inspection and use of the Trustee and of its agents and attorneys and, upon demand of the Trustee, the Issuer will account, as if it were the trustee of an express trust, for the Obligations Trust Estate for such period as shall be stated in such demand.

### **Section 703. Priority of Payments After Default on Obligations.**

1. In the event that the funds held by the Fiduciaries shall be insufficient for the payment of interest and principal or Redemption Price then due on the Obligations and for payments then due with respect to Parity Debt, such funds (excluding funds held for the payment or redemption of particular Obligations which have theretofore become due at maturity or by call for redemption and funds which at the time of their deposit into any Fund or Account under the Resolution have been designated to be applied solely to the payment of the principal of and premium, if any, and interest on any series of Obligation Anticipation Notes) and any other money received or collected by the Fiduciaries, or the Trustee, after making provision for the payment of any expenses necessary in the opinion of the Trustee to preserve the continuity of the

amounts to be received under the Resolution or otherwise to protect the interest of the Owners of the Obligations, and for the payment of the charges and expenses and liabilities incurred and advances made by the Fiduciaries in the performance of their duties under the Resolution, shall be applied as follows:

(a) Unless the principal of all of the Obligations shall have become due and payable,

First: To the payment to the Persons entitled thereto of all installments of interest then due with respect to Obligations and the interest components of Parity Debt in the order of the maturity of such installments and interest components, and, if the amount available shall not be sufficient to pay in full any installments and interest components due on the same date, then to the payment thereof ratably, according to the amounts due on such installments and interest components, to the Persons entitled thereto, without any discrimination or preference, except as to the difference in the respective rates of interest specified in such Obligations and Parity Debt; and

Second: To the payment to the Persons entitled thereto of the unpaid principal or Redemption Price of any Obligations and the principal component of Parity Debt which shall have become due, whether at maturity or by call for redemption, in the order of their due dates and, if the amount available shall not be sufficient to pay in full all the Obligations and Parity Debt due on any date, then to the payment thereof ratably, according to the amounts of principal and Redemption Price and principal component due on such date, to the Persons entitled thereto, without any discrimination or preference.

(b) If the principal of all of the Obligations and the principal component of Parity Debt shall have become due and payable, to the payment of the principal and interest then due and unpaid upon the Obligations and Parity Debt without preference or priority of principal or principal component over interest or interest component or of interest or interest component over principal or principal component, or of any installment of interest or interest component over any other installment of interest or interest component, or of any Obligation or Parity Debt over any other Obligation or Parity Debt, ratably, according to the amounts due respectively for principal and interest, to the Persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Obligations and Parity Debt.

2. The provisions of this Section 703 are in all respects subject to the provisions of Section A-602.

**Section 704. Second Lien Obligations Event of Default.** Each of the following events is defined as and shall constitute a “Second Lien Obligations Event of Default” in respect of Second Lien Obligations and Second Lien Parity Debt under the Resolution:

1. There shall occur a default in the payment of principal, Second Lien Sinking Fund Installment, interest or premium on any Second Lien Obligation or, if so provided in the Supplemental Resolution, a default in the payment of a mandatory tender for purchase after the same shall have become due, whether at maturity or upon call for redemption or otherwise which default shall continue for a period of 30 days.

2. There shall occur a failure to observe, or a refusal to comply with, the terms of the Resolution or the Second Lien Obligations, other than a failure or refusal constituting an event specified in any other subsection of this Section 704 and other than a failure to make all or any portion of any required deposit into any Fund or Account which failure is the result of the fact that the Issuer has not received sufficient Mobility Tax Receipts or ATA Receipts, as appropriate, to make such deposit; *provided, however, that* such failure or refusal shall have continued for a period of 30 days after written notice, specifying such failure and requesting that it be remedied, is given to the Issuer by the Second Lien Trustee, unless the Second Lien Trustee shall agree in writing to an extension of such time prior to its expiration, and *provided further that* if the failure stated in the notice cannot be remedied within the applicable period, the Second Lien Trustee shall not unreasonably withhold its consent to an extension of such time if corrective action has been instituted by the Issuer within such period and is being diligently pursued.

3. The State or any Final Judgment shall limit or alter the denial of authority under subdivision 9 of Section 1269 of the Issuer Act to the Issuer or, subject to the proviso contained in Section 603, shall limit or alter the rights and powers vested in the Issuer by the Issuer Act to fulfill the terms of any agreements made by it with the holders of any notes, bonds, or lease or other obligations, or in any way impair the rights and remedies of such holders until such agreements and all such obligations, together with the interest thereon, with interest on any unpaid installments of interest, and all costs and expenses for which the Issuer is liable in connection with any action or proceeding by or on behalf of such holders, are fully met and discharged.

4. The pledge created in subsection 5 of Section 501 of the Resolution shall, at any time and for any reason, cease to be in full force and effect or a Final Judgment shall be rendered which shall declare the pledge to be null and void, or shall declare that the pledge does not establish in any material respect the lien it purports to establish, or that the pledge is not for the benefit of the Second Lien Owners of the Second Lien Obligations and Second Lien Parity Debt, subject to the rights of no other parties (other than holders of Obligation Anticipation Notes, Obligations, Parity Debt and Second Lien Obligation Anticipation Notes).

**Section 705. Powers of Second Lien Trustee in Respect of a Second Lien Obligations Event of Default.**

1. In the event that any Second Lien Obligations Event of Default specified in Section 704 shall occur and be continuing, the Second Lien Trustee may, and, upon written request of the Second Lien Owners of a majority in aggregate principal amount of the Second Lien Obligations then Outstanding, shall, in its name,

(a) by suit, action or proceeding in accordance with the civil practice law and rules enforce all rights of the Second Lien Owners;

- (b) bring suit upon the Second Lien Obligations against the Issuer;
- (c) by action or suit, require the Issuer to account as if it were the trustee of an express trust for the Second Lien Owners; or
- (d) by action or suit, enjoin any acts or things which may be unlawful or in violation of the rights of the Second Lien Owners.

Such rights shall be subordinate, and subject to in all respects, the pledge of the Obligations Trust Estate securing Obligations and Parity Debt created pursuant to subsection 1 of Section 501.

2. Subject to the provisions of Sections 704 and B-1001 and the foregoing provisions of this Section 705, the remedies conferred upon or reserved to the Second Lien Trustee in respect of any Second Lien Obligations Event of Default are not intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Resolution or now or hereafter existing at law or in equity or by statute; *provided, however*, that the Second Lien Trustee or the Second Lien Owners shall not have the right to declare all Second Lien Obligations to be immediately due and payable. No delay or omission to exercise any right or power accruing upon any Second Lien Obligations Event of Default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order to entitle the Second Lien Trustee to exercise any remedy reserved to it in this Article, it shall not be necessary to give any notice, other than notice as may be expressly required herein.

3. The Second Lien Trustee shall in addition to the foregoing powers, have and possess all of the powers necessary or appropriate for the exercise of any functions specifically set forth herein or incidental to the general representation of Second Lien Owners in the enforcement and protection of their rights.

4. The Issuer covenants that if a Second Lien Obligations Event of Default shall have happened and shall not have been remedied, the books of record and account of the Issuer and all other records relating to the Second Lien Obligations Trust Estate shall at all times be subject to the inspection and use of the Second Lien Trustee and of its agents and attorneys and, upon demand of the Second Lien Trustee, the Issuer will account, as if it were the trustee of an express trust, for the Second Lien Obligations Trust Estate for such period as shall be stated in such demand.

#### **Section 706. Priority of Payments After Default on Second Lien Obligations.**

1. In the event that the funds held by the Fiduciaries shall be insufficient for the payment of interest and principal or Second Lien Redemption Price then due on the Second Lien Obligations and for payments then due with respect to Second Lien Parity Debt, such funds (excluding funds held for the payment or redemption of particular Second Lien Obligations which have theretofore become due at maturity or by call for redemption and funds which at the time of their deposit into any Fund or Account under the Resolution have been designated to be applied solely to the payment of the principal of and premium, if any and interest on any series of Second Lien Obligation Anticipation Notes) and any other money received or collected by the Fiduciaries, or the Second Lien Trustee, after making provision for the payment of any expenses necessary in the opinion of the Second Lien Trustee to preserve the continuity of the amounts to

be received under the Resolution or otherwise to protect the interest of the Second Lien Owners, and for the payment of the charges and expenses and liabilities incurred and advances made by the Fiduciaries in the performance of their duties under the Resolution, shall be applied as follows:

(a) Unless the principal of all of the Second Lien Obligations shall have become due and payable,

First: To the payment to the Persons entitled thereto of all installments of interest then due with respect to Second Lien Obligations and the interest components of Second Lien Parity Debt in the order of the maturity of such installments and interest components, and, if the amount available shall not be sufficient to pay in full any installments and interest components due on the same date, then to the payment thereof ratably, according to the amounts due on such installments and interest components, to the Persons entitled thereto, without any discrimination or preference, except as to the difference in the respective rates of interest specified in such Second Lien Obligations and Second Lien Parity Debt; and

Second: To the payment to the Persons entitled thereto of the unpaid principal or Redemption Price of any Second Lien Obligations and the principal component of Second Lien Parity Debt which shall have become due, whether at maturity or by call for redemption, in the order of their due dates and, if the amount available shall not be sufficient to pay in full all the Second Lien Obligations and Second Lien Parity Debt due on any date, then to the payment thereof ratably, according to the amounts of principal and Second Lien Redemption Price and principal component due on such date, to the Persons entitled thereto, without any discrimination or preference.

(b) If the principal of all of the Second Lien Obligations and the principal component of Second Lien Parity Debt shall have become due and payable, to the payment of the principal and interest then due and unpaid upon the Second Lien Obligations and Second Lien Parity Debt without preference or priority of principal or principal component over interest or interest component or of interest or interest component over principal or principal component, or of any installment of interest or interest component over any other installment of interest or interest component, or of any Second Lien Obligations and Second Lien Parity Debt over any other Second Lien Obligations and Second Lien Parity Debt, ratably, according to the amounts due respectively for principal and interest, to the Persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Second Lien Obligations and Second Lien Parity Debt.

2. Such rights set forth in this Section 706 shall be subordinate, and subject in all respects, to the prior pledge of the Obligations Trust Estate securing Obligations and Parity Debt created pursuant to subsection 1 of Section 501.

3. The provisions of this Section 706 are in all respects subject to the provisions of Section B-602.

## ARTICLE VIII

### SUPPLEMENTAL RESOLUTIONS

**Section 801. Supplemental Resolutions Effective Upon Filing With the Trustee and Second Lien Trustee.** For any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution may be adopted, without the consent of or notice to any Owner or Second Lien Owner which, upon the filing with the Trustee and the Second Lien Trustee of a copy thereof certified by an Authorized Officer, or, if adopted prior to the appointment of a Trustee pursuant to Section A-701 or Second Lien Trustee pursuant to Section B-701, upon its adoption, shall be fully effective in accordance with its terms:

1. To add to the covenants and agreements of the Issuer in the Resolution, other covenants and agreements to be observed by the Issuer which are not contrary to or inconsistent with the Resolution as theretofore in effect;

2. To surrender any right, power or privilege reserved to or conferred upon the Issuer by the Resolution;

3. To confirm, as further assurance, any pledge under, and the subjection to any lien or pledge created or to be created by, the Resolution of any additional security other than that granted or pledged under the Resolution;

4. To add to the Resolution any provisions required to preserve the exclusion from gross income for Federal income tax purposes of interest received on Tax-Exempt Obligations or Tax-Exempt Second Lien Obligations then Outstanding or to be issued or the exemption of interest received on any Obligations or Second Lien Obligations from State income taxation or the right to receive subsidies relating to Taxable Obligations or Taxable Second Lien Obligations then Outstanding or to be issued;

5. To modify, amend or supplement the Resolution in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar Federal statute hereafter in effect or to permit the qualification of the Obligations or Second Lien Obligations for sale under the securities laws of any of the states of the United States of America, and, if the Issuer so determines, to add hereto such other terms, conditions and provisions as may be required by said Trust Indenture Act of 1939 or similar Federal statute;

6. At any time prior to the first authentication and delivery of any Obligations under the Resolution or at any other time when no Obligations, Second Lien Obligations or Other

Subordinated Obligations are Outstanding under the Resolution, to modify the provisions of the Resolution in such manner as the Issuer deems necessary or appropriate;

7. To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Resolution;

8. To insert such provisions clarifying matters or questions arising under the Resolution as are necessary or desirable and are not contrary to or inconsistent with the Resolution as theretofore in effect, including, in the event the Issuer Act is amended or other legislation is enacted to so provide, the substitution of an alternate or different legal name for the current name of the Issuer or any other Related Entity in the Resolution or the form of Obligations, Second Lien Obligations or Other Subordinated Obligations;

9. To make any other modification or amendment of the Resolution which the Issuer shall in its sole discretion determine will not have a material adverse effect on the interests of the Owners of Outstanding Obligations, Second Lien Owners of Outstanding Second Lien Obligations and owners of Other Subordinated Obligations;

10. To authorize Obligations of a Series and, in connection therewith, (a) specify and determine the matters and things referred to in the provisions of the Resolution authorizing issuance of Obligations, and also any other matters and things relative to such Obligations which are not contrary to or inconsistent with the Resolution as theretofore in effect, (b) in the case of Variable Interest Rate Obligations or Put Obligations, as applicable, set forth provisions specifying the manner in which interest on Variable Interest Rate Obligations or Put Obligations, as applicable, is to be calculated for the purposes of various definitions and provisions of the Resolution, provisions providing for changes in interest rates, interest rate periods or interest payment dates for any Variable Interest Rate Obligation of a Series or Put Obligations, as applicable, provisions regarding an Owner's right or obligation to tender Put Obligations for redemption or purchase in lieu of redemption, and provisions governing the manner in which Variable Interest Rate Obligations or Put Obligations, as applicable, which the Owner thereof has the right to, or has exercised a right to, tender for redemption or purchase in lieu of redemption shall be treated for purposes of various definitions and provisions of the Resolution, (c) set forth provisions governing the administration of any Qualified Swap or Credit Facility, and provisions providing for the issuance of Reimbursement Obligations or the conversion of other Obligations to Reimbursement Obligations (and in connection with such conversion to change the interest rates, sinking fund provisions or maturity date on such Obligations) to secure or reimburse the provider of such Credit Facility, (d) in the case of either Taxable Obligations or Tax-Exempt Obligations, set forth defeasance provisions with respect thereto (including the manner of attaining such defeasance and the effect thereof), and (e) make such additional changes herein, not materially adverse to the rights of the Owners of the Obligations previously issued, as are necessary or appropriate; or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance and delivery of such Obligations;

11. To authorize Second Lien Obligations of a Series and, in connection therewith, (a) specify and determine the matters and things referred to in the provisions of the Resolution authorizing issuance of Second Lien Obligations, and also any other matters and things relative

to such Obligations which are not contrary to or inconsistent with the Resolution as theretofore in effect, (b) in the case of Variable Interest Rate Second Lien Obligations or Second Lien Put Obligations, as applicable, set forth provisions specifying the manner in which interest on Variable Interest Rate Second Lien Obligations or Second Lien Put Obligations, as applicable, is to be calculated for the purposes of various definitions and provisions of the Resolution, provisions providing for changes in interest rates, interest rate periods or interest payment dates for any Variable Interest Rate Second Lien Obligation of a Series or Second Lien Put Obligations, as applicable, provisions regarding a Second Lien Owner's right or obligation to tender Second Lien Put Obligations for redemption or purchase in lieu of redemption, and provisions governing the manner in which Variable Interest Rate Second Lien Obligations or Second Lien Put Obligations, as applicable, which the Second Lien Owner thereof has the right to, or has exercised a right to, tender for redemption or purchase in lieu of redemption shall be treated for purposes of various definitions and provisions of the Resolution, (c) set forth provisions governing the administration of any Qualified Second Lien Swap or Second Lien Obligation Credit Facility, and provisions providing for the issuance of Second Lien Reimbursement Obligations or the conversion of other Second Lien Obligations to Second Lien Reimbursement Obligations (and in connection with such conversion to change the interest rates, sinking fund provisions or maturity date on such Second Lien Obligations) to secure or reimburse the provider of such Second Lien Obligation Credit Facility, (d) in the case of either Taxable Second Lien Obligations or Tax-Exempt Second Lien Obligations, set forth defeasance provisions with respect thereto (including the manner of attaining such defeasance and the effect thereof), and (e) make such additional changes herein, not materially adverse to the rights of the Second Lien Owners of the Second Lien Obligations previously issued, as are necessary or appropriate; or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance and delivery of such Second Lien Obligations;

12. To authorize Obligation Anticipation Notes in accordance with Section A-203 and Second Lien Obligation Anticipation Notes in accordance with Section B-203 and, in connection therewith, specify and determine the matters and things referred to in Section A-203 or Section B-203, as applicable, and also any other matters and things relative to such Obligation Anticipation Notes or Second Lien Anticipation Notes, as applicable, which are not contrary to or inconsistent with the Resolution as theretofore in effect;

13. To (a) establish for any one or more Series of Obligations or Second Lien Obligations a separate debt service reserve fund which shall be permitted to be applied solely to the payment of specified Obligations or Second Lien Obligations, provided that (i) the specified Obligations or Second Lien Obligations shall have no claim or lien on nor be payable from any amounts in any other such debt service reserve fund, (ii) the specified Obligations or Second Lien Obligations shall be excluded from the calculation of any applicable debt service reserve fund requirement for any other Outstanding Obligations or Second Lien Obligations, and (iii) the amount required to be on deposit in such debt service reserve funds shall be specified in the Supplemental Resolutions authorizing the specified Obligations or Second Lien Obligations, but in no event shall such amount, after giving effect to any surety bond, insurance policy, letter of credit or similar obligation deposited in any such separate debt service reserve fund pursuant to the Resolution, be in excess of the amount that would otherwise be the debt service reserve fund requirement for such specified Obligations or Second Lien Obligations assuming that such

Obligations or Second Lien Obligations were the only Obligations or Second Lien Obligations Outstanding under the Resolution; and (b) make such other amendments, changes or modifications to the Resolution as may be deemed necessary or desirable by the Issuer to insure that such debt service reserve funds function in the manner contemplated in this subsection;

14. To authorize Parity Debt and, in connection therewith, specify and determine (or provide procedures for an Authorized Officer to specify or determine) the matters and things referred to in paragraphs (4) and (6) of Section A-202, and also any other matters and things relative to such Parity Debt which are not contrary to or inconsistent with the Resolution as then in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance or entering into of such Parity Debt, and at any time to rescind or limit any authorization for any such Parity Debt theretofore authorized but not issued or entered into; in connection with the authorization of Parity Swap Obligations and Parity Reimbursement Obligations, any such Supplemental Resolution may include provisions for the availability, transferability, use or application of the Funds, Accounts and subaccounts established pursuant to Section 502 of the Resolution for the benefit of such Parity Swap Obligations and Parity Reimbursement Obligations; and may grant to the Owners of such Parity Debt the same rights granted to Owners of Obligations in Section 802 and Article A-IX herein;

15. To authorize Second Lien Parity Debt and, in connection therewith, specify and determine (or provide procedures for an Authorized Officer to specify or determine) the matters and things referred to in paragraphs (4) and (6) of Section B-202 of the Resolution, and also any other matters and things relative to such Second Lien Parity Debt which are not contrary to or inconsistent with the Resolution as then in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance or entering into of such Second Lien Parity Debt, and at any time to rescind or limit any authorization for any such Second Lien Parity Debt theretofore authorized but not issued or entered into; in connection with the authorization of Second Lien Parity Swap Obligations and Second Lien Parity Reimbursement Obligations, any such Supplemental Resolution may include provisions for the availability, transferability, use or application of the Funds, Accounts and subaccounts established pursuant to Section 502 of the Resolution for the benefit of such Second Lien Parity Swap Obligations and Second Lien Parity Reimbursement Obligations; and may grant to the Second Lien Owners of such Second Lien Parity Debt the same rights granted to Second Lien Owners of Second Lien Obligations in Section 802 and Article B-VIII herein;

16. To authorize Other Subordinated Obligations and, in connection therewith, specify and determine (or provide procedures for an Authorized Officer to specify or determine) the matters and things required or permitted by Article V of the Resolution in connection therewith, and also any other matters and things relative to such Other Subordinated Obligations which are not contrary to or inconsistent with the Resolution as then in effect, or at any time to amend, rescind or limit any authorization for any such Other Subordinated Obligations thereto be authorized but not issued or entered into; and in connection with the authorization of Other Subordinated Obligations, any such Supplemental Resolution may include provisions for the availability, transferability, use or application of amounts available to pay Other Subordinated Obligations and any other funds, accounts or subaccounts created for the benefit of such Other Subordinated Obligations;

17. To modify any of the provisions of the Resolution in any respect whatsoever, *provided that* (i) such modification shall be, and be expressed to be, effective only after all Obligations and/or Second Lien Obligations affected thereby and Outstanding at the date of the adoption of such Supplemental Resolution shall cease to be Outstanding and (ii) such Supplemental Resolution shall be specifically referred to in the text of all Obligations and/or Second Lien Obligations, as applicable, delivered on original issuance after the date of the adoption of such Supplemental Resolution and of the Obligations and Second Lien Obligations issued in exchange therefor or in place thereof;

18. To modify, amend or supplement the Resolution in any manner, not already provided for in or pursuant to the Supplemental Resolution authorizing the related Series of Obligations in order to provide for a Credit Facility, Qualified Swap, or other similar arrangement with respect to any Series of Obligations, under the Resolution, so long as the Issuer determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Owners of Outstanding Obligations;

19. To modify, amend or supplement the Resolution in any manner, not already provided for in or pursuant to the Supplemental Resolution authorizing the related Series of Second Lien Obligations in order to provide for a Second Lien Obligation Credit Facility, Qualified Second Lien Swap, or other similar arrangement with respect to any Series of Second Lien Obligations, under the Resolution, so long as the Issuer determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Second Lien Owners of Outstanding Second Lien Obligations;

20. To amend or modify any Supplemental Resolution authorizing Obligations of a Series or Second Lien Obligations of a Series to reflect the substitution of a new Credit Facility for the Credit Facility then in effect or a new Second Lien Obligation Credit Facility for the Second Lien Obligation Credit Facility then in effect, as applicable; and

21. To close the Resolution against, or provide limitations and restrictions in addition to the limitations and restrictions contained in the Resolution on, the issuance and delivery of the Obligations or Second Lien Obligations, or the issuance or entering into of other evidences of indebtedness.

22. To modify, amend or supplement the Resolution, consistent with the agreement of the State set forth in Section 603 of this Resolution, to reflect or change the nature and/or manner in which the State transfers or deposits amounts to the MTA Finance Fund, whether or not such transfers or deposits are subject to appropriation.

In making any determination under paragraph (9) of this Section 801, the Issuer may conclusively rely upon an Opinion of Counsel or opinions of other experts or professionals.

**Section 802. Supplemental Resolutions Effective With Consent of Owners of Obligations and Second Lien Owners of Second Lien Obligations.** At any time or from time to time, a Supplemental Resolution may be adopted subject to consent by Owners of Obligations and Second Lien Owners of Second Lien Obligations in accordance with and subject to the provisions of Article A-IX or Article B-VIII, which Supplemental Resolution, upon the filing

with the Trustee and Second Lien Trustee of a copy thereof certified by an Authorized Officer of the Issuer and upon compliance with the provisions of said Article A-IX or Article B-VIII, shall become fully effective in accordance with its terms as provided in said Article A-IX or Article B-VIII.

### **Section 803. General Provisions.**

1. The Resolution shall not be modified or amended in any respect except as provided in and in accordance with and subject to the provisions of this Article VIII and Article A-IX and B-VIII hereof. Nothing contained in this Article VIII or in Article A-IX or B-IX shall affect or limit the right or obligation of the Issuer to execute and deliver to any Fiduciary any instrument which elsewhere in the Resolution it is provided shall be delivered to said Fiduciary.

2. Any Supplemental Resolution referred to and permitted or authorized by Section 801 may be adopted by the Issuer without the consent of any of the Owners or Second Lien Owners, but shall become effective only on the conditions, to the extent and at the time provided in said Section. The copy of every Supplemental Resolution when filed with each of the Trustee and Second Lien Trustee shall be accompanied by a Counsel's Opinion stating that such Supplemental Resolution has been duly and lawfully adopted in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon the Issuer and enforceable in accordance with its terms; *provided, however*, that the concurrent delivery of an Opinion of Bond Counsel required by Section A-201.2(a) or Section B-201.2(a), as applicable, shall satisfy this requirement.

No Supplemental Resolution shall change or modify any of the rights or obligations of any Fiduciary without its written consent.

**ANNEX A**  
**STANDARD RESOLUTION PROVISIONS**

**ANNEX B**

**SUPPLEMENTAL STANDARD RESOLUTION PROVISIONS**

**EXHIBIT ONE**

**FORM OF OBLIGATIONS**

**THE BONDS SHALL NOT BE A DEBT OF THE STATE OF NEW YORK OR THE CITY OF NEW YORK AND NEITHER THE STATE NOR THE CITY SHALL BE LIABLE THEREON.**

*Unless this certificate is presented by an authorized representative of The Depository Trust Company, a New York corporation ("DTC"), to the issuer or its agent for registration of transfer, exchange or payment, and any certificate issued is registered in the name of Cede & Co. or such other name as requested by an authorized representative of DTC (and any payment is made to Cede & Co. or to such other entity as is requested by an authorized representative of DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL inasmuch as the registered owner hereof, Cede & Co., has an interest herein.*

*As provided in the Resolution referred to herein, until the termination of the system of book-entry-only transfers through DTC and notwithstanding any other provision of the Resolution to the contrary, a portion of the principal amount of this Bond may be paid or redeemed without surrender hereof to the Paying Agent. DTC or a nominee, transferee or assignee of DTC of this Bond may not rely upon the principal amount indicated hereon as the principal amount hereof outstanding and unpaid. The principal amount hereof outstanding and unpaid shall for all purposes be the amount determined in the manner provided in the Resolution.*

**METROPOLITAN TRANSPORTATION AUTHORITY  
REGIONAL PAYROLL MOBILITY TAX BOND,  
SERIES \_\_\_\_\_**

No. \_\_\_\_\_

\$

**Interest Rate**

**Maturity Date**

**Dated Date**

**CUSIP**

Registered Owner: Cede & Co.

Principal Amount: \_\_\_\_\_ Dollars

METROPOLITAN TRANSPORTATION AUTHORITY (herein called the "MTA"), a body corporate and politic constituting a public benefit corporation, organized and existing under and by virtue of the laws of the State of New York, acknowledges itself indebted to, and for value received hereby promises to pay to the Registered Owner stated above, or registered

assigns, on the Maturity Date set forth above, but solely from the Obligations Trust Estate defined below, upon presentation and surrender of this Bond at the office or agency of MTA designated for such payment in the Borough of Manhattan, City and State of New York, or, at the option of the Registered Owner hereof, at any other office or agency of MTA designated by the MTA for such payment, the Principal Amount set forth above in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and to pay to the Registered Owner hereof interest on such Principal Amount, such payment to be made by \_\_\_\_\_, as Paying Agent, from the Dated Date set forth above or such later date to which interest has been paid, at the Interest Rate per annum set forth above, payable on \_\_\_\_\_ and semi-annually thereafter on the \_\_\_\_\_ day of \_\_\_\_\_ and \_\_\_\_\_ in each year, until the MTA's obligation with respect to the payment of such Principal Amount shall be discharged. Interest on the Series \_\_\_\_\_ Bonds shall be computed on the basis of a 360-day year consisting of 12 30-day months. Interest will be paid by check mailed on the interest payment date by the Paying Agent to the Registered Owner at his address as it appears on the registration records or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series \_\_\_\_\_ Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner, provided such Owner has notified the Trustee (as hereinafter defined) in writing of such Owner's wire transfer address (which shall be in the continental United States) at least 15 days prior to the relevant payment date. *In the event that any payment date is not a business day, payment will be made on the next business day with the same force and effect as if made on the nominal date provided in the Resolution and no interest shall accrue during the intervening period with respect to any payment so deferred.*

This bond is one of a duly authorized issue of obligations of the MTA designated as its "Regional Payroll Mobility Tax Obligations" (herein called the "Bonds") issued under and pursuant to the Metropolitan Transportation Authority Act, Title 11 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended (herein called the "MTA Act"), and under and pursuant to a resolution of the MTA adopted on \_\_\_\_\_, 2017, entitled "Regional Payroll Mobility Tax Obligation Resolution", as supplemented. Said resolution, as supplemented and amended, is herein called the "Resolution". This Bond is one of a series of Bonds designated as "Regional Payroll Mobility Tax Bonds, Series \_\_\_\_\_" (herein called the "Series \_\_\_\_\_ Bonds"), issued in the aggregate principal amount of \$\_\_\_\_\_ under said Resolution. All capitalized terms used but not otherwise defined have the respective meanings ascribed by the Resolution.

*Copies of the Resolution are on file at the office of the MTA and at the principal corporate trust office of \_\_\_\_\_, New York, New York, as Trustee under the Resolution, or its successor as Trustee (herein called the "Trustee"), in the Borough of Manhattan, City and State of New York, and reference to the Resolution and any and all supplements thereto and modifications and amendments thereof and to the MTA Act is hereby made for a complete description of the pledge and covenants securing the Series \_\_\_\_\_ Bonds, the nature, extent and manner of enforcement of, and limitations with respect to, such pledge, the rights and remedies of the registered owners of the Series \_\_\_\_\_ Bonds with respect thereto, and the terms and conditions upon which the Bonds are issued and Bonds may be issued thereunder.*

This Series \_\_\_\_ Bond is a special obligation of the MTA, secured by a pledge, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution, of all right, title and interest of the MTA in the "Obligations Trust Estate", being (i) the proceeds of the sale of the Obligations, (ii) the Pledged Amounts Account in the MTA Finance Fund, any money on deposit therein and any money received and held by the MTA which are required to be deposited therein and (iii) all Funds, Accounts and Subaccounts established by the Resolution (other than the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund and subject to specified provisions of the Resolution) including the investments, if any, thereof.

To the extent provided in the Resolution, Bonds may be issued from time to time pursuant to Supplemental Resolutions in one or more series, or subseries, in various principal amounts, may mature at different times, may bear interest at different rates and may otherwise vary as provided in the Resolution. The aggregate principal amount of Bonds which may be issued under the Resolution is not limited except as provided in the Resolution and the MTA Act, and all Bonds issued and to be issued under the Resolution are and will be equally secured by the pledge and covenants made therein, except as otherwise expressly provided or permitted in the Resolution.

The events specified in the Resolution as such shall constitute Obligations Events of Default and the Trustee and the Owners shall have the rights and remedies provided by the Resolution. Neither the Trustee nor the Owners of the Series \_\_ Bonds shall have the right to declare all of the Bonds to be immediately due and payable in the event of a default with respect to the Resolution or any of the Bonds.

To the extent provided in the Resolution, Parity Debt, secured on a parity with the Bonds with respect to all right, title and interest of the MTA in the Obligations Trust Estate may be issued or entered into by the MTA. The aggregate principal amount of Parity Debt which may be issued or entered into under the Resolution is not limited except as provided in the Resolution and the MTA Act.

To the extent and in the manner permitted by the terms of the Resolution, modification or amendment of the Resolution and of the rights and obligations of the MTA and of the Owners of the Bonds may be made by a Supplemental Resolution, in certain instances without the written consent of the Owners of the Bonds. Reference is made to the Resolution for the terms and provisions thereof relating to amendments and supplements.

The registration of this Bond is transferable, as provided in the Resolution, only upon the books of the MTA kept for that purpose at the above mentioned office of the Trustee by the Registered Owner hereof in person, or by his attorney duly authorized in writing, upon surrender of this Bond together with a written instrument of transfer satisfactory to the Trustee, duly executed by the Registered Owner or his duly authorized attorney, and thereupon a new registered Series \_\_\_\_ Bond or Series \_\_\_\_ Bonds in the same aggregate principal amount, interest rate and maturity shall be issued to the transferee in exchange therefor as provided in the Resolution, and upon payment of the charges therein prescribed. The MTA and each Fiduciary, including the Trustee and any Paying Agent, may deem and treat the person in whose name this Bond is registered as the absolute owner hereof for the purpose of receiving payment of, or on

account of, the principal or Redemption Price hereof and interest due hereon and for all other purposes.

The Series \_\_\_\_\_ Bonds are issued by means of a book-entry-only system, with no physical distribution of bond certificates to be made except as provided in the Resolution. One or more bond certificates for each maturity, registered in the name of the Securities Depository Nominee, is being issued for deposit with the Securities Depository and immobilized in its custody. The book-entry-only system will evidence positions held in the Series \_\_\_\_\_ Bonds by the Securities Depository's participants; beneficial ownership of the Series \_\_\_\_\_ Bonds, in the principal amount of \$5,000 or any integral multiple thereof, shall be evidenced in the records of such participants. Transfers of ownership shall be effected on the records of the Securities Depository and its participants pursuant to rules and procedures established by the Securities Depository and its participants. The MTA and the Trustee will recognize the Securities Depository Nominee, while the Registered Owner of this Bond, as the owner of this Bond for all purposes, including payments of principal of and Redemption Price and interest on this Bond, notices and voting. Transfers of principal, interest and any Redemption Price payments to participants of the Securities Depository will be the responsibility of the Securities Depository, and transfers of principal, interest and any Redemption Price payments to beneficial owners of the Series \_\_\_\_\_ Bonds by participants of the Securities Depository will be the responsibility of such participants and other nominees of such beneficial owners. Neither the MTA nor the Trustee will be responsible or liable for such transfers of payments or for maintaining, supervising or reviewing the records maintained by the Securities Depository, the Securities Depository Nominee, its participants or persons acting through such participants. While the Securities Depository Nominee is the owner of this Bond, notwithstanding any provisions herein contained to the contrary, payments of principal of and Redemption Price and interest on this Bond shall be made in accordance with existing arrangements among the Trustee, the MTA and the Securities Depository. In the event the Series \_\_\_\_\_ Bonds are no longer held in book-entry-only form, the Series \_\_\_\_\_ Bonds would be issuable in the form of fully registered Bonds without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Series \_\_\_\_\_ Bonds maturing on \_\_\_\_\_ are subject to redemption, in part (in accordance with procedures of DTC, so long as DTC is the Owner, and otherwise by lot in such manner as the Trustee in its discretion deems fair and appropriate) on any \_\_\_\_\_ on and after \_\_\_\_\_ at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments that are required to be made in amounts sufficient to redeem on \_\_\_\_\_ of each year the principal amount of such Series \_\_\_\_\_ Bonds shown below:

<u>Year</u>	<u>Sinking Fund Installment</u>
first payment	
final maturity	

The Series \_\_\_\_\_ Bonds maturing on or after \_\_\_\_\_ are subject to redemption prior to maturity on any date on or after \_\_\_\_\_, at the option of MTA, in whole or in part on any date (in accordance with procedures of DTC, so long as DTC is the sole registered owner, and otherwise by lot in such manner as the Trustee in its discretion deems proper) at 100% of the principal amount thereof, together with accrued interest thereon up to but not including the redemption date.

Either the State of New York or The City of New York may, upon furnishing sufficient funds therefor, require the MTA to redeem all or any portion of the Series \_\_\_\_\_ Bonds as provided in the MTA Act and the Resolution.

This Bond is payable upon redemption at the above mentioned office or agency of the MTA. So long as DTC is the securities depository for the Series \_\_\_\_\_ Bonds, the Trustee must mail redemption notices to DTC at least 20 days before the redemption date. If the Series \_\_\_\_\_ Bonds are not held in book-entry-only form, then the Trustee must mail redemption notices directly to bondholders within the same time frame. Any redemption of the Series \_\_\_\_\_ Bonds is valid and effective even if DTC's procedures for notice should fail. Any notice of optional redemption may state that it is conditional upon receipt by the Trustee of money sufficient to pay the Redemption Price or upon the satisfaction of any other condition, or that it may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before the payment of the Redemption Price if any such condition so specified is not satisfied or if any such other event occurs. All redemptions are final - even if beneficial owners did not receive their notice, and even if that notice had a defect.

If the Trustee gives an unconditional notice of redemption, then on the redemption date the Series \_\_\_\_\_ Bonds called for redemption will become due and payable. If the Trustee gives a conditional notice of redemption and holds money to pay the redemption price of the affected Series \_\_\_\_\_ Bonds, then on the redemption date the Series \_\_\_\_\_ Bonds called for redemption will become due and payable. In either case, if on the redemption date the Trustee holds money to pay the Series \_\_\_\_\_ Bonds called for redemption, thereafter, no interest will accrue on those Series \_\_\_\_\_ Bonds, and a bondholder's only right will be to receive payment of the redemption price upon surrender of those Series \_\_\_\_\_ Bonds.

The MTA Act provides that neither the members of the MTA nor any person executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof.

It is hereby certified and recited that all conditions, acts and things required by law and the Resolution to exist, to have happened and to have been performed precedent to and in the issuance of this Bond, exist, have happened and have been performed and that the issue of the Series \_\_\_\_\_ Bonds, together with all other indebtedness of the MTA, is within every debt and other limit prescribed by the laws of the State of New York.

This Bond shall not be entitled to any benefit under the Resolution or be valid or become obligatory for any purpose until this Bond shall have been authenticated by the execution by the Trustee of the Trustee's Certificate of Authentication hereon.

**IN WITNESS WHEREOF, METROPOLITAN TRANSPORTATION AUTHORITY**  
has caused this Bond to be signed in its name and on its behalf by the manual or facsimile  
signature of its Authorized Officer as of the Dated Date.

**METROPOLITAN TRANSPORTATION  
AUTHORITY**

By: \_\_\_\_\_  
Director, Finance and an Authorized  
Officer

## **TRUSTEE'S CERTIFICATE OF AUTHENTICATION**

This Bond is one of the Bonds described in the within-mentioned Resolution.

Date of Authentication: \_\_\_\_\_

\_\_\_\_\_, as Trustee

By: \_\_\_\_\_  
Authorized Signatory

## ASSIGNMENT

FOR VALUE RECEIVED the undersigned hereby sells, assigns and transfers unto

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(Please print or typewrite name of undersigned transferor)

---

PLEASE INSERT SOCIAL SECURITY OR OTHER TAX IDENTIFYING NUMBER OF TRANSFEREE

---

(Please print or typewrite name and address, including zip code, of transferee)

the within mentioned Bond and hereby irrevocably constitutes and appoints

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attorney-in-fact, to transfer the within Bond on the books kept for registration thereof, with full power of substitution in the premises.

Dated: \_\_

**NOTICE:** The signature must be guaranteed by an officer of a commercial bank, trust company, or a member of the New York Stock Exchange or other national securities exchange. Notarized or witnessed signatures not acceptable.

**NOTICE:** The signature to this assignment must correspond with the name as it appears upon the face of the within bond in every particular, without alteration or enlargement, or any change whatsoever.

Signature Guaranteed:

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**EXHIBIT TWO**

**FORM OF SECOND LIEN OBLIGATIONS**

**THE BONDS SHALL NOT BE A DEBT OF THE STATE OF NEW YORK OR THE CITY OF NEW YORK AND NEITHER THE STATE NOR THE CITY SHALL BE LIABLE THEREON.**

*Unless this certificate is presented by an authorized representative of The Depository Trust Company, a New York corporation ("DTC"), to the issuer or its agent for registration of transfer, exchange or payment, and any certificate issued is registered in the name of Cede & Co. or such other name as requested by an authorized representative of DTC (and any payment is made to Cede & Co. or to such other entity as is requested by an authorized representative of DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL inasmuch as the registered owner hereof, Cede & Co., has an interest herein.*

*As provided in the Resolution referred to herein, until the termination of the system of book-entry-only transfers through DTC and notwithstanding any other provision of the Resolution to the contrary, a portion of the principal amount of this Bond may be paid or redeemed without surrender hereof to the Paying Agent. DTC or a nominee, transferee or assignee of DTC of this Bond may not rely upon the principal amount indicated hereon as the principal amount hereof outstanding and unpaid. The principal amount hereof outstanding and unpaid shall for all purposes be the amount determined in the manner provided in the Resolution.*

**METROPOLITAN TRANSPORTATION AUTHORITY  
REGIONAL PAYROLL MOBILITY TAX SECOND LIEN BOND,  
SERIES \_\_\_\_\_**

No. \_\_\_\_\_

\$

**Interest Rate**

**Maturity Date**

**Dated Date**

**CUSIP**

Registered Owner: Cede & Co.

Principal Amount: \_\_\_\_\_ Dollars

METROPOLITAN TRANSPORTATION AUTHORITY (herein called the "MTA"), a body corporate and politic constituting a public benefit corporation, organized and existing under and by virtue of the laws of the State of New York, acknowledges itself indebted to, and for value received hereby promises to pay to the Registered Owner stated above, or registered

assigns, on the Maturity Date set forth above, but solely from the Second Lien Obligations Trust Estate defined below, upon presentation and surrender of this Bond at the office or agency of MTA designated for such payment in the Borough of Manhattan, City and State of New York, or, at the option of the Registered Owner hereof, at any other office or agency of MTA designated by the MTA for such payment, the Principal Amount set forth above in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and to pay to the Registered Owner hereof interest on such Principal Amount, such payment to be made by \_\_\_\_\_, as Paying Agent, from the Dated Date set forth above or such later date to which interest has been paid, at the Interest Rate per annum set forth above, payable on \_\_\_\_\_ and semi-annually thereafter on the \_\_\_\_\_ day of \_\_\_\_\_ and \_\_\_\_\_ in each year, until the MTA's obligation with respect to the payment of such Principal Amount shall be discharged. Interest on the Series \_\_\_\_\_ Bonds shall be computed on the basis of a 360-day year consisting of 12 30-day months. Interest will be paid by check mailed on the interest payment date by the Second Lien Paying Agent to the Registered Owner at his address as it appears on the registration records or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series \_\_\_\_\_ Bonds, by wire transfer in immediately available funds on each interest payment date to such Second Lien Owner, provided such Second Lien Owner has notified the Second Lien Trustee (as hereinafter defined) in writing of such Second Lien Owner's wire transfer address (which shall be in the continental United States) at least 15 days prior to the relevant payment date. *In the event that any payment date is not a business day, payment will be made on the next business day with the same force and effect as if made on the nominal date provided in the Resolution and no interest shall accrue during the intervening period with respect to any payment so deferred.*

This bond is one of a duly authorized issue of obligations of the MTA designated as its "Regional Payroll Mobility Tax Second Lien Obligations" (herein called the "Bonds") issued under and pursuant to the Metropolitan Transportation Authority Act, Title 11 of Article 5 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York, as amended (herein called the "MTA Act"), and under and pursuant to a resolution of the MTA adopted on \_\_\_\_\_, 2017, entitled "Regional Payroll Mobility Tax Obligation Resolution", as supplemented. Said resolution, as supplemented and amended, is herein called the "Resolution". This Bond is one of a series of Bonds designated as "Regional Payroll Mobility Tax Second Lien Bonds, Series \_\_\_\_\_" (herein called the "Series \_\_\_\_\_ Bonds"), issued in the aggregate principal amount of \$\_\_\_\_\_ under said Resolution. All capitalized terms used but not otherwise defined have the respective meanings ascribed by the Resolution.

*Copies of the Resolution are on file at the office of the MTA and at the principal corporate trust office of \_\_\_\_\_, New York, New York, as Second Lien Trustee under the Resolution, or its successor as Trustee (herein called the "Second Lien Trustee"), in the Borough of Manhattan, City and State of New York, and reference to the Resolution and any and all supplements thereto and modifications and amendments thereof and to the MTA Act is hereby made for a complete description of the pledge and covenants securing the Series \_\_\_\_\_ Bonds, the nature, extent and manner of enforcement of, and limitations with respect to, such pledge, the rights and remedies of the registered owners of the Series \_\_\_\_\_ Bonds with respect thereto, and the terms and conditions upon which Second Lien Bonds are issued and Second Lien Bonds may be issued thereunder.*

This Bond is a special obligation of the MTA, secured by a pledge, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution, of all right, title and interest of the MTA in the “Second Lien Obligations Trust Estate”, being (i) the proceeds of the sale of the Second Lien Obligations, (ii) the Pledged Amounts Account in the MTA Finance Fund, any money on deposit therein and any money received and held by the MTA which is required to be deposited therein and (iii) the Second Lien Obligations Proceeds Fund and the Second Lien Debt Service Fund established by the Resolution (subject to specified provisions of the Resolution) including the investments, if any, thereof. *Any lien on and pledge of any portion of the Second Lien Obligations Trust Estate securing Second Lien Obligations is, and is hereby expressly declared to be, junior and inferior to the lien on and pledge of the Obligations Trust Estate created in the Resolution for the payment of the Obligations and Parity Debt.*

To the extent provided in the Resolution, the Second Lien Bonds may be issued from time to time pursuant to Supplemental Resolutions in one or more series, or subseries, in various principal amounts, may mature at different times, may bear interest at different rates and may otherwise vary as provided in the Resolution. The aggregate principal amount of Second Lien Bonds which may be issued under the Resolution is not limited except as provided in the Resolution and the MTA Act, and all Second Lien Bonds issued and to be issued under the Resolution are and will be equally secured by the pledge and covenants made therein, except as otherwise expressly provided or permitted in the Resolution.

The events specified in the Resolution as such shall constitute Second Lien Obligations Events of Default and the Second Lien Trustee and the Second Lien Owners shall have the rights and remedies provided by the Resolution. Neither the Second Lien Trustee nor the Second Lien Owners of the Bonds shall have the right to declare all of the Bonds to be immediately due and payable in the event of a default with respect to the Resolution or any of the Bonds.

To the extent and in the manner permitted by the terms of the Resolution, modification or amendment of the Resolution and of the rights and obligations of the MTA and of the Second Lien Owners of the Bonds may be made by a Supplemental Resolution, in certain instances without the written consent of the Second Lien Owners of the Bonds. Reference is made to the Resolution for the terms and provisions thereof relating to amendments and supplements.

The registration of this Bond is transferable, as provided in the Resolution, only upon the books of the MTA kept for that purpose at the above mentioned office of the Second Lien Trustee by the Registered Owner hereof in person, or by his attorney duly authorized in writing, upon surrender of this Bond together with a written instrument of transfer satisfactory to the Second Lien Trustee, duly executed by the Registered Owner or his duly authorized attorney, and thereupon a new registered Series \_\_\_\_ Bond or Series \_\_\_\_ Bonds in the same aggregate principal amount, interest rate and maturity shall be issued to the transferee in exchange therefor as provided in the Resolution, and upon payment of the charges therein prescribed. The MTA and each Fiduciary, including the Second Lien Trustee and any Second Lien Paying Agent, may deem and treat the person in whose name this Bond is registered as the absolute owner hereof for the purpose of receiving payment of, or on account of, the principal or Second Lien Redemption Price hereof and interest due hereon and for all other purposes.

The Series \_\_\_\_\_ Bonds are issued by means of a book-entry-only system, with no physical distribution of bond certificates to be made except as provided in the Resolution. One or more bond certificates for each maturity, registered in the name of the Securities Depository Nominee, is being issued for deposit with the Securities Depository and immobilized in its custody. The book-entry-only system will evidence positions held in the Series \_\_\_\_\_ Bonds by the Securities Depository's participants; beneficial ownership of the Series \_\_\_\_\_ Bonds, in the principal amount of \$5,000 or any integral multiple thereof, shall be evidenced in the records of such participants. Transfers of ownership shall be effected on the records of the Securities Depository and its participants pursuant to rules and procedures established by the Securities Depository and its participants. The MTA and the Second Lien Trustee will recognize the Securities Depository Nominee, while the Registered Owner of this Bond, as the Second Lien Owner of this Bond for all purposes, including payments of principal of and Second Lien Redemption Price and interest on this Bond, notices and voting. Transfers of principal, interest and any Second Lien Redemption Price payments to participants of the Securities Depository will be the responsibility of the Securities Depository, and transfers of principal, interest and any Second Lien Redemption Price payments to beneficial owners of the Series \_\_\_\_\_ Bonds by participants of the Securities Depository will be the responsibility of such participants and other nominees of such beneficial owners. Neither the MTA nor the Second Lien Trustee will be responsible or liable for such transfers of payments or for maintaining, supervising or reviewing the records maintained by the Securities Depository, the Securities Depository Nominee, its participants or persons acting through such participants. While the Securities Depository Nominee is the Second Lien Owner of this Bond, notwithstanding any provisions herein contained to the contrary, payments of principal of and Second Lien Redemption Price and interest on this Bond shall be made in accordance with existing arrangements among the Second Lien Trustee, the MTA and the Securities Depository. In the event the Series \_\_\_\_\_ Bonds are no longer held in book-entry-only form, the Series \_\_\_\_\_ Bonds would be issuable in the form of fully registered Bonds without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Series \_\_\_\_\_ Bonds maturing on \_\_\_\_\_ are subject to redemption, in part (in accordance with procedures of DTC, so long as DTC is the Second Lien Owner, and otherwise by lot in such manner as the Second Lien Trustee in its discretion deems fair and appropriate) on any \_\_\_\_\_ on and after \_\_\_\_\_ at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Second Lien Sinking Fund Installments that are required to be made in amounts sufficient to redeem on \_\_\_\_\_ of each year the principal amount of such Series \_\_\_\_\_ Bonds shown below:

<u>Year</u>	<u>Second Lien Sinking Fund Installment</u>
first payment	
final maturity	

The Series \_\_\_\_\_ Bonds maturing on or after \_\_\_\_\_ are subject to redemption prior to maturity on any date on or after \_\_\_\_\_, at the option of MTA, in whole or in part on any date (in accordance with procedures of DTC, so long as DTC is the sole registered owner, and otherwise by lot in such manner as the Second Lien Trustee in its discretion deems proper) at 100% of the principal amount thereof, together with accrued interest thereon up to but not including the redemption date.

Either the State of New York or The City of New York may, upon furnishing sufficient funds therefor, require the MTA to redeem all or any portion of the Series \_\_\_\_\_ Bonds as provided in the MTA Act and the Resolution.

This Bond is payable upon redemption at the above mentioned office or agency of the MTA. So long as DTC is the securities depository for the Series \_\_\_\_\_ Bonds, the Trustee must mail redemption notices to DTC at least 20 days before the redemption date. If the Series \_\_\_\_\_ Bonds are not held in book-entry-only form, then the Trustee must mail redemption notices directly to bondholders within the same time frame. Any redemption of the Series \_\_\_\_\_ Bonds is valid and effective even if DTC's procedures for notice should fail. Any notice of optional redemption may state that it is conditional upon receipt by the Trustee of money sufficient to pay the Redemption Price or upon the satisfaction of any other condition, or that it may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before the payment of the Redemption Price if any such condition so specified is not satisfied or if any such other event occurs. All redemptions are final - even if beneficial owners did not receive their notice, and even if that notice had a defect.

If the Trustee gives an unconditional notice of redemption, then on the redemption date the Series \_\_\_\_\_ Bonds called for redemption will become due and payable. If the Trustee gives a conditional notice of redemption and holds money to pay the redemption price of the affected Series \_\_\_\_\_ Bonds, then on the redemption date the Series \_\_\_\_\_ Bonds called for redemption will become due and payable. In either case, if on the redemption date the Trustee holds money to pay the Series \_\_\_\_\_ Bonds called for redemption, thereafter, no interest will accrue on those Series \_\_\_\_\_ Bonds, and a bondholder's only right will be to receive payment of the redemption price upon surrender of those Series \_\_\_\_\_ Bonds.

The MTA Act provides that neither the members of the MTA nor any person executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof.

It is hereby certified and recited that all conditions, acts and things required by law and the Resolution to exist, to have happened and to have been performed precedent to and in the issuance of this Bond, exist, have happened and have been performed and that the issue of the Series \_\_\_\_\_ Bonds, together with all other indebtedness of the MTA, is within every debt and other limit prescribed by the laws of the State of New York.

This Bond shall not be entitled to any benefit under the Resolution or be valid or become obligatory for any purpose until this Bond shall have been authenticated by the execution by the Second Lien Trustee of the Second Lien Trustee's Certificate of Authentication hereon.

**IN WITNESS WHEREOF, METROPOLITAN TRANSPORTATION  
AUTHORITY** has caused this Bond to be signed in its name and on its behalf by the manual or  
facsimile signature of its Authorized Officer as of the Dated Date.

**METROPOLITAN TRANSPORTATION  
AUTHORITY**

By: \_\_\_\_\_  
Director, Finance and an Authorized  
Officer

SECOND LIEN TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This Bond is one of the Bonds described in the within mentioned Resolution.

Date of Authentication: \_\_\_\_\_

\_\_\_\_\_,  
as Second Lien Trustee

By: \_\_\_\_\_  
Authorized Signatory

## ASSIGNMENT

FOR VALUE RECEIVED the undersigned hereby sells, assigns and transfers unto

---

(Please print or typewrite name of undersigned transferor)

---

PLEASE INSERT SOCIAL SECURITY OR OTHER TAX IDENTIFYING NUMBER OF  
TRANSFeree

---

(Please print or typewrite name and address, including zip code, of transferee)

the within-mentioned Bond and hereby irrevocably constitutes and appoints

---

attorney-in-fact, to transfer the within Bond on the books kept for registration thereof, with full  
power of substitution in the premises.

Dated: \_\_

**NOTICE:** The signature must be guaranteed  
by an officer of a commercial bank, trust  
company, or a member of the New York  
Stock Exchange or other national securities  
exchange. Notarized or witnessed signatures  
not acceptable.

**NOTICE:** The signature to this assignment  
must correspond with the name as it appears  
upon the face of the within bond in every  
particular, without alteration or enlargement,  
or any change whatsoever.

Signature Guaranteed:

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**ANNEX A**

**STANDARD RESOLUTION PROVISIONS  
FOR  
REGIONAL PAYROLL MOBILITY TAX OBLIGATION RESOLUTION**

Adopted \_\_\_\_\_, 2017  
As Approved By The  
Metropolitan Transportation Authority  
Capital Program Review Board  
on \_\_\_\_\_, 2017

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## STANDARD RESOLUTION PROVISIONS

### ARTICLE A-I

#### DEFINITIONS AND STATUTORY AUTHORITY

**Section A-101. Definitions.** Capitalized terms used but not otherwise defined in this Annex A shall have the meanings set forth in the Resolution to which this Annex A is appended. The following terms shall, for all purposes herein and (except as the context may otherwise require) in the Resolution to which this Annex A is appended, have the following meanings:

**Account** or **Accounts** shall mean each account or all of the accounts established in Article V of the Resolution.

**Accreted Value** shall mean with respect to any Capital Appreciation Obligations (i) as of any Valuation Date, the amount set forth for such date in the Supplemental Resolution authorizing such Capital Appreciation Obligations and (ii) as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accreted Values for such Valuation Dates. For purposes of this definition, the number of days having elapsed from the preceding Valuation Date and the number of days from the preceding Valuation Date to the next succeeding Valuation Date shall be calculated on the basis of a 360-day year of 12 30-day months, unless otherwise provided pursuant to a Supplemental Resolution.

**Accrued Debt Service** shall mean, as of any date of calculation, an amount equal to the sum of the amounts of accrued and unpaid Debt Service with respect to all Obligations and Parity Debt, calculating the accrued Debt Service with respect to each obligation at an amount equal to the sum of (i) as estimated by an Authorized Officer, interest on the Obligations and interest components of Parity Debt accrued and unpaid and to accrue to the end of the then current calendar month, and (ii) Principal Installments due and unpaid and that portion of the Principal Installment for such Obligations and Parity Debt next due which would have accrued (if deemed to accrue in the manner set forth in the definition of “Debt Service”) to the end of such calendar month. For purposes of calculating Debt Service Fund deposits, Principal Installments shall not include amounts that an Authorized Officer has notified the Trustee are to be paid from sources other than Revenues, nor shall Accrued Debt Service include any amounts that, as certified by an Authorized Officer, have been set aside hereunder or otherwise in trust for the payment thereof.

**Amortized Value**, when used with respect to Authorized Investments purchased at a premium above or a discount below par, shall mean the value of such Authorized Investments computed by using an industry standard constant yield method selected by an Authorized Officer of the Issuer.

**Appreciated Value** shall mean with respect to any Deferred Income Obligations (i) as of any Valuation Date, the amount set forth for such date in the Supplemental Resolution authorizing such Deferred Income Obligations, (ii) as of any date prior to the Interest Commencement Date other than a Valuation Date, the sum of (a) the Appreciated Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Appreciated Values for such Valuation Dates, and (iii) as of any date on and after the Interest Commencement Date, the Appreciated Value on the Interest Commencement Date. For purposes of this definition, the number of days having elapsed from the preceding Valuation Date and the number of days from the preceding Valuation Date to the next succeeding Valuation Date shall be calculated on the basis of a 360-day year of 12 30-day months, unless otherwise provided pursuant to a Supplemental Resolution.

**Authorized Investments** shall mean and include any of the following, to the extent the same are legal for investment of the Issuer's funds:

- (i) obligations of the State or the United States government;
- (ii) obligations the timely payment of the principal and interest on which are unconditionally guaranteed by the State or the United States government;
- (iii) certificates of deposit of banks or trust companies in the State, secured, if the Issuer shall so require, by obligations of the United States or of the State of a market value equal at all times to the amount of the deposit;
- (iv) banker's acceptances with a maturity of 90 days or less which are eligible for purchase by the federal reserve banks and whose rating at the time of purchase is in the highest Rating Category of each of the Rating Agencies that then rates such banker's acceptances;
- (v) obligations of any bank or corporation created under the laws of either the United States or any state of the United States maturing within 270 days, provided that such obligations are rated in the highest Rating Category of each of the Rating Agencies that then rates such obligations;
- (vi) notes, bonds, debentures, mortgages and other evidences of indebtedness, issued or guaranteed at the time of the investment by the United States Postal Service, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Student Loan Marketing Association, the Federal Farm Credit System, or any other United States government sponsored agency, provided that at the time of the investment such agency or its obligations are rated and the agency receives, or its obligations receive, ratings in the highest Rating Category of each of the Rating Agencies that then rates such agency or its obligations;
- (vii) (A) general obligation bonds and notes of any state other than the State, provided that such bonds and notes are rated in the highest Rating Category of each of the Rating Agencies that then rates such bonds and notes, and (B) bonds and notes of

any county, town, city, village, fire district or school district of the State, provided that such bonds and notes are rated in either of the 2 highest Rating Categories of each of the Rating Agencies that then rates such bonds and notes;

- (viii) mutual funds registered with the United States Securities and Exchange Commission, whose investments are limited to obligations of the State described in clause (i) above, obligations the principal and interest of which are guaranteed by the State as described in clause (ii) above, and those securities described in clause (vii) above, and that are rated in the highest Rating Category of each of the Rating Agencies that then rates such funds;
- (ix) repurchase agreements with any dealer or bank, which agreement is secured by any one or more of the securities described in clauses (i), (ii) or (vi) above, which securities shall (A) at all times have a market value of not less than the full amount held or invested pursuant to the agreement and (B) be delivered to a Bank as defined in clause (i) or (ii) of the definition thereof, as custodian, that is independent from the dealer or bank with whom the repurchase agreement is executed; and
- (x) any other investment in which the Issuer is authorized from time to time to invest under applicable law with respect to which an Authorized Officer has, on or before the date thereof, delivered to the Trustee (A) a certificate to the Trustee designating the additional investment as an Authorized Investment and (B) Rating Confirmation.

In addition to the foregoing, in the case of any money held in reserve and sinking funds “Authorized Investments” shall include any other securities in which the trustee or trustees of any public retirement system or pension fund has the power to invest the money thereof pursuant to Article four-a of the Retirement and Social Security Law of the State. each such reserve and sinking fund being treated as a separate fund for the purposes of Article four-a of the Retirement and Social Security Law of the State.

Any investment in any of the foregoing obligations may be made in the form of an entry made on the records of the issuer of the particular obligations or of a recognized securities depository.

**Authorized Officer** shall mean (i) the Chairman and the Vice Chairman, (ii) the Executive Director, the Comptroller, the Chief Financial Officer, the Secretary and any Assistant Secretary of the Issuer, (iii) the Chief Financial Officer, the Director of Finance, and the Director of Budget and Financial Management of the MTA, and (iv) any other Person authorized by the Issuer to perform the act or sign the document in question.

**Bank** shall mean any (i) bank or trust company organized under the laws of any A: to of the United States of America, (ii) national banking association, (iii) savings bank or savings and loan association chartered or organized under the laws of any state of the United States of America, or (iv) federal branch or agency pursuant to the International Banking Act of 1978 or any successor provisions of law, or domestic branch or agency of a foreign bank which branch or

agency is duly licensed or authorized to do business under the laws of any state or territory of the United States of America.

**Business Day** shall mean any day of the year other than (i) Saturday or Sunday, (ii) any day on which Banks located in New York, New York or the city in which the Principal Office of the Trustee is located are required or authorized by law to remain closed, or (iii) any day on which the New York Stock Exchange is closed.

**Calculated Debt Service** for any period shall mean, as of any date of calculation and with respect to any Series of Obligations or any Parity Debt, the sum of Debt Service for such period determined by the Issuer based on the following adjustments:

- (1) Interest on Variable Interest Rate Obligations shall be based on the Estimated Average Interest Rate applicable thereto.
- (2) Interest on any **Obligation or Parity Debt** in respect of which the Issuer has entered into a **Qualified Swap** shall be based on:
  - (a) the fixed rate or rates of the Qualified Swap if the Issuer has entered into what is generally referred to as a **“floating-to-fixed”** Qualified Swap (where the Issuer pays a fixed rate and receives a floating rate); or
  - (b) the lower of (i) the Estimated Average Interest Rate and (ii) the effective capped rate of any Obligation or Parity Debt if the Issuer has entered into a Qualified Swap that is generally referred to as an **“interest rate cap”** (where the Issuer receives a payment if a variable rate exceeds a certain amount); or
  - (c) the Estimated Average Interest Rate of the Qualified Swap if the Issuer has entered into either what is generally referred to as a **“fixed-to-floating”** Qualified Swap (where the Issuer pays a variable rate and receives a fixed rate) or a **“floating-to-floating”** Qualified Swap (where the Issuer pays a variable rate and receives a different variable rate).
- (3) With respect to **Put Obligations** and any Obligations of a Series the interest on which is payable periodically and at least twenty-five per centum (25%) of the original principal amount of which is stated to mature at one time and for which maturing principal amount amortization requirements have not been designated, (i) Principal Installments shall be deemed to amortize over a 30-year period from their date of issuance (or any shorter period provided by Supplemental Resolution) based on substantially level debt service as estimated by the Issuer, and (ii) interest shall be based on the actual interest rate or the Estimated Average Interest Rate, as applicable.
- (4) If the Issuer has **irrevocably deposited Authorized Investments or money** with the Trustee (or otherwise in trust) for the payment of any portion of Debt Service, the expected future cash flow from such Authorized Investments and money shall be deducted from Debt Service.
- (5) If the Issuer has, at any time, **irrevocably called for redemption** one or more Series of Obligations, including pursuant to a covenant to apply any portion of the

Trust Estate to redeem Obligations or Parity Debt (which particular Obligations or Parity Debt need not be specifically identified in advance, except as to interest rate and maturity), the Issuer shall take into account such redemption for purposes of determining Calculated Debt Service.

(6) With respect to **Parity Reimbursement Obligations**, accelerated payments of principal shall only be taken into account if, at the time of calculation, such amounts are payable due to a draw under a credit or liquidity facility.

**Capital Appreciation Obligations** shall mean any Obligations denominated as such and issued as to which interest is payable only at the maturity or prior redemption of such Obligations. Except as otherwise provided by Supplemental Resolution, for the purposes of (i) receiving payment of the Redemption Price if a Capital Appreciation Obligation is redeemed prior to maturity, (ii) computing the principal amount of Obligations held by the registered owner of a Capital Appreciation Obligation in giving to the Issuer or the Trustee any notice, consent, request, or demand pursuant to the Resolution for any purpose whatsoever or (iii) computing Debt Service, the principal amount of a Capital Appreciation Obligation shall be deemed to be its Accreted Value (which in the case of clause (ii) may be the Accreted Value as of the immediately preceding Valuation Date).

**Certificate of Determination** shall mean a certificate of an Authorized Officer of the Issuer fixing terms, conditions and other details of Obligations, Parity Debt, Credit Facilities, Subordinated Indebtedness or Subordinated Contract Obligations in accordance with the delegation of power to do so under a Supplemental Resolution.

**City** shall mean The City of New York.

**Costs of Issuance** shall mean the costs of the authorization, sale and issuance of a Series of Obligations, Obligation Anticipation Notes, Subordinated Indebtedness, Parity Debt, Subordinated Contract Obligations or other obligations authorized under the Resolution, including with respect to any party to a transaction State bond issuance charges, document printing and reproduction costs, filing and recording fees, costs of credit ratings, fees and charges of the Trustee and other Fiduciaries and agents, legal fees and charges, professional consultants' fees, underwriting fees, fees and charges for execution, transportation and safekeeping of Obligations, premiums, fees and charges in order to obtain, renew, extend or terminate Credit Facilities and Qualified Swaps and other financial arrangements, costs and expenses of refunding such Obligations, Obligation Anticipation Notes, Subordinated Indebtedness, Parity Debt, Subordinated Contract Obligations or other obligations authorized under this Resolution, and other costs, charges and fees, including those of the Issuer and any other Related Entities, in connection with the foregoing.

**Counsel's Opinion** or **Opinion of Counsel** or **Opinion** shall mean an opinion :signed by an attorney or firm of attorneys of recognized standing (who may be counsel to the Issuer) selected by the Issuer.

**Credit Facility** shall mean any letter of credit, standby bond purchase agreement, line of credit, policy of bond insurance, surety bond, guarantee or similar instrument, or any agreement

relating to the reimbursement of any payment thereunder (or any combination of the foregoing), which is obtained by the Issuer and is issued by a financial institution, insurance provider or other Person and which provides security or liquidity in respect of any Outstanding Obligations, Parity Debt or Obligation Anticipation Notes.

**Debt Service** for any period shall mean, as of any date of calculation and with respect to any Series of Obligations or any Parity Debt outstanding, the sum of: (i) interest on the Obligations of such Series and the interest components of Parity Debt accruing during such period and (ii) that portion of each Principal Installment for such Obligations and Parity Debt that would accrue during such period if such Principal Installment were deemed to accrue daily in equal amounts from the preceding Principal Installment payment date on Outstanding Obligations and Parity Debt; provided, however, that, unless otherwise set forth in a Supplemental Resolution, no Principal Installment shall be deemed to begin accruing until the later of one year prior to such Principal Installment's due date and the date of issuance or incurrence of the related Obligation or Parity Debt.

**Debt Service Payment Date** shall mean, with respect to any portion of Debt Service, the date on which the Debt Service shall be payable.

**Defeasance Security** shall mean

(a) an Authorized Investment as specified in clause (i) of the definition thereof (other than an obligation of the State), which is not redeemable at the option of the issuer thereof,

(b) an Authorized Investment as specified in clause (i) (which is an obligation of the State), (ii), (iii), (vi) or (vii) of the definition thereof, which is not redeemable at the option of the issuer thereof and which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency,

(c) any depositary receipt issued by a Bank as custodian with respect to any Defeasance Security which is specified in clause (a) above and held by such Bank for the account of the holder of such depositary receipt. or with respect to any specific payment of principal of or interest on any such Defeasance Security which is so specified and held.

provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Defeasance Security or the specific payment of principal or interest evidenced by such depositary receipt,

(d) any certificate of deposit specified in clause (iii) of the definition of Authorized Investments in Section A-101, including certificates of deposit issued by the Trustee or by a Paying Agent, secured by obligations specified in clause (a) above of a market value equal at all times to the amount of the deposit, which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency, or

(e) any other Authorized Investment designated in a Supplemental Resolution as a Defeasance Security for purposes of defeasing the Obligations authorized by such Supplemental

Resolution, which is not redeemable at the option of the issuer thereof and which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency.

**Deferred Income Obligation** shall mean any Obligation (A) as to which interest accruing thereon prior to the Interest Commencement Date of such Obligation is (i) compounded on each Valuation Date for such Deferred Income Obligation and (ii) payable only at the maturity or prior redemption of such Obligations and (B) as to which interest accruing after the Interest Commencement Date is payable on the first interest payment date succeeding the Interest Commencement Date and periodically thereafter on the dates specified in or determined by Supplemental Resolution. Except as otherwise provided by Supplemental Resolution, for the purposes of (i) receiving payment of the Redemption Price if a Deferred Income Obligation is redeemed prior to maturity, (ii) computing the principal amount of Obligations held by the registered owner of a Deferred Income Obligation in giving to the Issuer or the Trustee any notice, consent, request, or demand pursuant to the Resolution for any purpose whatsoever or (iii) computing Debt Service, the principal amount of a Deferred Income Obligation shall be deemed to be its Appreciated Value (which in the case of clause (ii) may be the Appreciated Value as of the immediately preceding Valuation Date).

**Estimated Average Interest Rate** shall mean, as to any Variable Interest Rate Obligations or Qualified Swap and as of any date of calculation, the average interest rate or rates anticipated to be borne by such Obligations or Qualified Swap, or by the combination of such arrangements, over the period or periods for which such rate or rates are anticipated to be in effect, all as estimated by an Authorized Officer.

**Fiduciary or Fiduciaries** shall mean the Trustee, any Registrar, any Paying Agent, any tender agent or any or all of them, as may be appropriate, or any Person appointed to act as a Fiduciary as provided in the Resolution.

**Final Judgment** shall mean any judgment or order of any court of competent jurisdiction, or of any arbitrator or panel of arbitrators, as to which all appeals have been exhausted.

**Fund or Funds** shall mean each fund or all of the funds established in or pursuant to Article V of the Resolution.

**Interest Commencement Date** shall mean, with respect to any particular Deferred Income Obligation, the date determined by Supplemental Resolution after which interest accruing on such Obligation shall be payable on the first interest payment date succeeding such Interest Commencement Date and periodically thereafter on the dates determined pursuant to such Supplemental Resolution.

**Issuer Act** shall mean the MTA Act in the event that the MTA is defined in the Resolution as the Issuer or the TBTA Act in the event that the TBTA is defined in the Resolution as the Issuer, together with any other applicable law of the State authorizing the issuance of the related Obligations by the Issuer or expressly limiting the issuance thereof or governing the security therefor.

**LIRR** shall mean The Long Island Rail Road Company and any successor thereto.

**MaBSTOA** shall mean the Manhattan and Bronx Surface Transit Operating Authority and any successor thereto.

**MNCRC** shall mean the Metro-North Commuter Railroad Company and any successor thereto.

**MSBA** shall mean the Metropolitan Suburban Bus Authority and any successor thereto.

**MTA** shall mean the Metropolitan Transportation Authority, the corporation organized and existing under the MTA Act, and any successor thereto.

**MTA Act** shall mean the Metropolitan Transportation Authority Act, being Title 11 of Article 5 of the New York Public Authorities Law, as from time to time amended.

**Obligation Anticipation Notes** shall mean any such notes issued and delivered pursuant to Section A-203, except to the extent (but only to the extent) that all or any portion of such notes either are not payable, or are anticipated by the Issuer not to be paid, from the proceeds of the Obligations in anticipation of which such notes are being issued.

**Opinion of Bond Counsel** shall mean an opinion signed by Hawkins, Delafield & Wood or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of obligations by state and municipal entities, selected by the Issuer.

**Outstanding**, when used with reference to Obligations or Obligations of a Series, shall mean, as of any date, Obligations or Obligations of such Series theretofore or thereupon to be delivered under the Resolution except:

- (i) Any Obligations canceled at or prior to such date;
- (ii) Obligations the principal and Redemption Price, if any, of and interest on which have been paid in accordance with the terms thereof;
- (iii) Obligations in lieu of or in substitution for which other Obligations shall have been delivered pursuant to Article A-III or Section A-406 or Section A-905;
- (iv) Obligations deemed to have been paid as provided in subsection 2 of Section A-1101;
- (v) Put Obligations tendered or deemed tendered in accordance with the provisions of the Supplemental Resolution authorizing such Obligations on the applicable tender date, if the Purchase Price thereof and interest thereon shall have been paid or amounts are available and set aside for such payment as provided in such Supplemental Resolution, except to the extent such tendered Put Obligations thereafter may be resold pursuant to the terms thereof and of such Supplemental Resolution; and

- (vi) For the purpose of any consent to be given or other action to be taken by or upon the direction of Owners of a specified portion of Obligations Outstanding, Obligations excluded pursuant to Section A-1111.

The principal component of any Parity Debt shall be deemed to be Outstanding in a principal amount equal to the principal amount of the obligation then owed by the Issuer thereunder in lieu of the related Obligation, regardless of the authorized amount of the principal component of such Parity Debt or the related Obligation and provided that, unless otherwise required pursuant to the related Supplemental Resolution, the principal component of such Parity Debt shall not by itself increase the Outstanding principal amount of Obligations.

**Owner**, or any similar terms, shall mean the registered owner of any Obligation as shown on the books for the registration and transfer of Obligations maintained in accordance with Section A-305.

**Parity Debt** shall mean any Parity Reimbursement Obligation, any Parity Swap Obligation or any other contract, agreement or other obligation of the Issuer designated as constituting "Parity Debt" in a certificate of an Authorized Officer delivered to the Trustee; provided, however, that any such Parity Reimbursement Obligation, Parity Swap Obligation, or other contract, agreement or other obligation shall not constitute Parity Debt solely to the extent of any obligations to pay termination or other fees, expenses, indemnification or other similar payments to the counterparty to such arrangement; provided further that Parity Reimbursement Obligations may include accelerated principal amortization provisions to the extent permitted by subsection 4 of Section A-202.

**Parity Reimbursement Obligation** has the meaning provided in subsection 4 of Section A-202.

**Parity Swap Obligation** has the meaning provided in subsection 6 of Section A-202.

**Paying Agent** shall mean any paying agent for the Obligations of any Series and its successor or successors and any other Person which may at any time be substituted in its place pursuant to the Resolution.

**Person** shall mean any individual, corporation, firm, partnership, joint venture, association, joint-stock company, trust, unincorporated association, limited liability company or other legal entity or group of entities, including any public benefit corporation, public instrumentality, quasi-governmental or governmental entity or any agency or subdivision thereof.

**Pre-existing Indebtedness** shall mean any bonds, notes or other obligations of the Issuer or any Related Entity that are issued or incurred under an authorizing resolution or other document in effect prior to the date of issuance of the initial Series of Obligations under the Resolution, including any Prior Lien Obligations.

**Principal Installments** shall mean, as of any date of calculation and with respect to any Series of Obligations or any Parity Debt, as applicable, (a) the principal amount of Outstanding Obligations of such Series, due on the dates and in the amounts specified by Supplemental

Resolution, reduced by the principal amount of such Obligations which would be retired by reason of the payment when due and application in accordance with the Resolution of Sinking Fund Installments payable before such dates, plus the unsatisfied balance (determined as provided in Section A-502 of the Resolution) of any Sinking Fund Installments due on any certain future date for Obligations of such Series, together with such redemption premiums, if any, applicable on any such future date, and (b) with respect to any Parity Debt, the amount due thereunder on the dates and in the amounts established in accordance with Section A-202 as a principal component of such Parity Debt payable on a parity with the Obligations.

**Principal Office of the Trustee** shall mean the designated corporate trust office of the Trustee.

**Purchase Price** shall mean, with respect to any Obligation, 100% of the principal amount thereof plus accrued interest, if any, plus in the case of an Obligation subject to mandatory tender for purchase on a date when such Obligation is also subject to optional redemption at a premium, an amount equal to the premium that would be payable on such Obligation if redeemed on such date.

**Put Obligations** shall mean Obligations which by their terms may be tendered at the option of the Owner thereof, or are subject to a mandatory tender other than at the election of the Issuer or a Related Entity, for payment or purchase prior to the stated maturity or redemption date thereof.

**Qualified Swap** shall mean, to the extent from time to time permitted by law, with respect to Obligations, any financial arrangement (i) which is entered into by the Issuer with an entity that is a Qualified Swap Provider at the time the arrangement is entered into. (ii) which is a cap, floor or collar; forward rate; future rate; swap (such swap may be based on an amount equal either to the principal amount of such Obligations of the Issuer as may be designated or a notional principal amount relating to all or a portion of the principal amount of such Obligations); asset, index, price or market-linked transaction or agreement; other exchange or rate protection transaction agreement; other similar transaction (however designated); or any combination thereof; or any option with respect thereto, in each case executed by the Issuer for the purpose of moderating interest rate fluctuations, reducing debt service costs or creating either fixed interest rate Obligations or Variable Interest Rate Obligations on a synthetic basis or otherwise, and (iii) which has been designated in writing to the Trustee by an Authorized Officer as a Qualified Swap with respect to such Obligations.

**Qualified Swap Provider** shall mean an entity whose senior long term obligations, other senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under an interest rate exchange agreement are guaranteed by an entity whose senior long term debt obligations, other senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either at least as high as (i) the third highest Rating Category of each Rating Agency then maintaining a rating for the Qualified Swap Provider or (ii) any such lower Rating Categories which each such Rating Agency indicates in writing to the Issuer and the Trustee will not, by itself, result in a reduction or withdrawal of its rating on the Outstanding Obligations subject to such Qualified Swap that is in effect prior to entering into such Qualified Swap.

**Rating Agency** shall mean each nationally recognized statistical rating organization then maintaining a rating on the Obligations at the request of the Issuer.

**Rating Category** shall mean one of the generic rating categories of any Rating Agency without regard to any refinement or gradation of such rating by a numerical modifier or otherwise.

**Rating Confirmation** shall mean evidence that no rating then in effect from a Rating Agency will be withdrawn or reduced solely as the result of an action to be taken hereunder; provided, however, that no action requiring Rating Confirmation shall be undertaken unless at least one Rating Agency at that time maintains a rating on Obligations.

**Record Date**, except as otherwise provided by Supplemental Resolution or a certificate of an Authorized Officer, shall mean the last Business Day preceding a payment date or other date on which an action is to be taken.

**Redemption Price** shall mean, with respect to any Obligation, 100% of the principal amount thereof plus the applicable premium, if any, payable upon the redemption thereof pursuant to the Resolution.

**Registrar** shall mean any registrar for the Obligations of any Series and its successor or successors and any other Person which may at any time be substituted in its place pursuant to the Resolution.

**Reimbursement Obligation** has the meaning provided in subsection 4 of Section A-202.

**Related Entity** shall mean any of the MTA, TBTA, MaBSTOA, the Transit Authority, MNCRC, LIRR, SIRTOA, MSBA and any affiliate or subsidiary of any of the foregoing now or hereafter established and designated as a Related Entity by an Authorized Officer.

**Responsible Officer** shall mean any officer assigned to the corporate trust office of the Trustee, or any other officer of the Trustee customarily performing functions similar to those performed by any of such officers and who has direct responsibility for the administration of the Resolution, and also, with respect to a particular matter, any other officer, to whom such matter is referred because of such officer's knowledge of and familiarity with the particular subject.

**Securities Depository** shall mean a recognized securities depository selected by the Issuer to maintain a book-entry system in respect to all or any portion of a Series of Obligations (including, as appropriate, any nominee thereof), and shall include any substitute for 'r successor to the Securities Depository initially acting as Securities Depository.

**Series** shall mean all of the Obligations delivered on original issuance pursuant to a single Supplemental Resolution and denominated therein a single series, and any Obligations thereafter delivered in lieu of or in substitution therefor pursuant to Article A-III or Section A-406 or Section A-906, regardless of variations in maturity, interest rate, or other provisions.

**Sinking Fund Installment** shall mean, as of a particular date, any Sinking Fund Installment established pursuant to paragraph (m) of subsection 1 of Section A-201.

**SIRTOA** shall mean the Staten Island Rapid Transit Operating Authority and any successor thereto.

**State** shall mean the State of New York.

**Subordinated Contract Obligation** shall mean any payment obligation (other than a payment obligation constituting Parity Debt or Subordinated Indebtedness) arising under (a) any Credit Facility which has been designated as constituting a “Subordinated Contract Obligation” in a certificate of an Authorized Officer delivered to the Trustee, (h) any Qualified Swap or portion thereof which has been designated as constituting a “Subordinated Contract Obligation” in a certificate of an Authorized Officer delivered to the Trustee, and (c) any other contract, agreement or other obligation of the Issuer designated as constituting a “Subordinated Contract Obligation” in a certificate of an Authorized Officer delivered to the Trustee. Each Subordinated Contract Obligation shall be payable and secured in a manner permitted by Article V, and any lien on and pledge of any portion of the Trust Estate securing Subordinated Contract Obligations shall be junior and inferior to the lien on and pledge of the Trust Estate herein created for the payment of the Obligations and Parity Debt.

**Subordinated Indebtedness** shall mean any bond, note or other indebtedness authorized by Supplemental Resolution or other resolution of the Issuer and dissipated as constituting “Subordinated Indebtedness” in a certificate of an Authorized Officer delivered to the Trustee, which shall be payable and secured in a manner permitted by Article V of the Resolution, and any lien on and pledge of any portion of the Trust Estate securing Subordinated Indebtedness shall be junior and inferior to the lien on and pledge of the Trust Estate herein created for the payment of the Obligations and Parity Debt.

**Supplemental Resolution** shall mean any resolution supplemental to or amendatory of the Resolution adopted by the Issuer in accordance with the Resolution and, except as the context may otherwise require, including any related Certificate of Determination.

**TA Act** shall mean the New York City Transit Authority Act being Title 9 of Article 5 of the New York Public Authorities law, as amended from time to time.

**Taxable Obligations** shall mean any Obligations which are not Tax-Exempt Obligations.

**Tax-Exempt Obligations** shall mean any Obligations the interest on which is intended by the Issuer to be generally excluded from gross income for federal income tax purposes and which are designated as Tax-Exempt Obligations in the Supplemental Resolution authorizing such obligations.

**TBTA** shall mean the Triborough Bridge and Tunnel Authority, the corporation organized and existing under the TBTA Act, and any successor thereto.

**TBTA Act** shall mean the Triborough Bridge and Tunnel Authority Act, being Title 3 of Article 3 of the New York Public Authorities Law, as amended from time to time.

**Transit Authority** shall mean the New York City Transit Authority, the corporation organized and existing under the TA Act, and any successor thereto.

**Transportation District** shall mean the Metropolitan Commuter Transportation District created by Section 1262 of the MTA Act.

**Transportation District Project** shall mean any project, program or facility that the Issuer or any other Related Entity (in either case, by itself or with any other Person) is authorized from time to time by law to plan, design, acquire, establish, construct, effectuate, operate, maintain, renovate, improve, extend, rehabilitate or repair within, or for the benefit of, the Transportation District.

**Trustee** shall mean the trustee appointed by the Issuer pursuant to Section A-701, and its successor or successors and any other Person which may at any time be substituted in its place pursuant to the Resolution.

**Valuation Date** shall mean (i) with respect to any Capital Appreciation Obligations the date or dates set forth in the Supplemental Resolution authorizing such Obligations on which specific Accreted Values are assigned to the Capital Appreciation Obligations and (ii) with respect to any Deferred Income Obligations, the date or dates on or prior to the Interest Commencement Date set forth in the Supplemental Resolution authorizing such Obligations on which specific Appreciated Values are assigned to the Deferred Income Obligations.MTA

**Variable Interest Rate** shall mean a variable interest rate to be borne by any Obligation. The method of computing such variable interest rate shall be specified in the Supplemental Resolution authorizing such Series of Obligations.

**Variable Interest Rate Obligations** shall mean Obligations which bear a Variable Interest Rate.

#### **Section A-102. Rules of Construction.**

1. Words of one gender shall be deemed and construed to include correlative words of any other gender. Except where the context otherwise requires, words importing the singular number shall include the plural number and vice versa, and words importing persons shall include firms, associations and corporations.

2. Except as otherwise specified herein, all references in the Resolution (including this Annex A) to Articles, Sections, and other subdivisions are to the corresponding Articles, Sections or subdivisions of the Resolution (including this Annex A), and the words herein, hereof, hereunder and other words of similar import refer to the Resolution as a whole (including this Annex A) and not to any particular Article, Section or subdivision of the Resolution or of this Annex A. References in the Resolution to Articles or Sections with "A-" preceding the number of an Article or Section are to such Article or Section of this Annex A.

3. This Annex A constitutes an integral part of the Resolution and, except to the extent provided in the next 2 sentences, has the same force and effect as if set forth in the forepart of the Resolution. To the extent expressly provided in the Resolution (not including this Annex A), the Issuer may negate, amend or modify any provision of this Annex A. In the event of any conflict between this Annex A and the forepart of the Resolution, the forepart of the Resolution shall control.

4. The headings or titles of the several Articles and Sections hereof, and any table of contents appended to copies hereof (including any table of contents in the Resolution), shall be solely for convenience of reference and shall not limit or otherwise affect the meaning, construction or effect of the Resolution (including this Annex A) or describe the scope or intent of any provisions hereof.

5. All accounting terms not otherwise defined herein have the meanings assigned to them in accordance with applicable generally accepted accounting principles as in effect from time to time.

6. All references herein to resolutions, contracts or other agreements shall be deemed to include any amendments to such documents that are approved in accordance with the terms thereof and hereof

7. Every “request,” “order,” “demand,” “application,” “appointment,” “notice,” “statement,” “certificate,” “consent,” or similar action hereunder by any party shall, unless the form thereof is specifically provided, be in writing signed by a duly authorized representative of such party with a duly authorized signature, which may be delivered and “signed” pursuant to facsimile or other electronic-mail transmission in accordance with applicable law and practice.

8. The word “or” is not exclusive.

9. The word “including” means including without limitation.

**Section A-103. Authority for the Resolution.** The Resolution is adopted pursuant to the Issuer Act.

**Section A-104. Resolution to Constitute Contract.** In consideration of the purchase and acceptance of any and all of the Obligations and Parity Debt authorized to be issued hereunder by those who are Owners of the Obligations and Parity Debt from time to time, the Resolution shall be deemed to be and shall constitute a contract between the Issuer and the Owners from time to time of the Obligations and Parity Debt; and the pledge made in the Resolution and the covenants and agreements therein set forth to be performed on behalf of the Issuer shall be for the equal benefit, protection and security of the Owners of any and all of the Obligations and Parity Debt, all of which, regardless of the time or times of their authentication, issuance and delivery, or maturity, shall be of equal rank without preference, priority or distinction of any of the Obligations or Parity Debt over any other Obligations or Parity Debt, except as expressly provided in or permitted by the Resolution.

## ARTICLE A-II

### GENERAL PROVISIONS FOR ISSUANCE OR INCURRENCE OF OBLIGATIONS, PARITY DEBT AND OBLIGATION ANTICIPATION NOTES

#### Section A-201. General Provisions for Issuance of Obligations.

1. Obligations may be issued pursuant to a Supplemental Resolution in such principal amount or amounts for each Series or subseries as may be specified in such Supplemental Resolution. Obligations of any Series or subseries shall be authorized by a Supplemental Resolution which shall specify, among other things, the following matters (or the manner of determining such matters):

(a) The authorized principal amount, designation and Series of such Obligations;

(b) The purpose or purposes for which such Obligations are being issued which shall be one or more of the purposes set forth in Section 201;

(c) The dates and the maturity dates of the Obligations of such Series;

(d) If the Obligations of such Series are interest bearing Obligations, the interest rates of the Obligations of such Series and the interest payment dates therefor;

(e) If Obligations of such Series are Capital Appreciation Obligations, the Valuation Dates for such Obligations and the Accreted Value on each such Valuation Date;

(f) If Obligations of such Series are Deferred Income Obligations, the Interest Commencement Date for such Obligations, the Valuation Dates prior to the Interest Commencement Date for such Obligations and the Appreciated Value on each such Valuation Date;

(g) If Obligations of such Series are Capital Appreciation Obligations or Deferred Income Obligations, the manner in which and the period during which principal and interest shall be deemed to accrue on such Obligations;

(h) If Obligations of such Series are Variable Interest Rate Obligations, the maximum interest rate, if any, or the method of calculating such maximum rate for such Obligations, and the provisions, if any, as to the calculation or change of Variable Interest Rates;

(i) If Obligations of such Series are Put Obligations, provisions regarding tender for purchase or redemption thereof and payment of the purchase or Redemption Price thereof;

(j) The denominations of, and the manner of dating, numbering and lettering, the Obligations of such Series;

(k) The Paying Agents, if any, and the places of payment of the principal and Redemption Price, if any, of, and interest on, the Obligations of such Series;

(l) The Redemption Prices, if any, and the redemption terms, if any, for the Obligations of such Series, provided that Obligations of any maturity for which Sinking Fund Installments shall be established pursuant to paragraph (m) of this subsection I shall in any event be redeemable, or payable at maturity, by application of the Sinking Fund Installments for such Obligations on the due dates of such Sinking Fund Installments;

(m) The amount and due date of each Sinking Fund Installment, if any, for Obligations of like maturity of such Series;

(n) Provisions necessary to authorize, in compliance with all applicable law, Obligations of such Series to be issued in the form of Obligations issued and held in book-entry form on the books of the Issuer or any Fiduciary appointed for that purpose by the Issuer and, in connection therewith, make such additional changes in the Resolution, not adverse to the rights of the Owners of the Obligations, as are necessary or appropriate to accomplish or recognize such book-entry form Obligations and specify and determine the matters and things relative to the issuance of such book-entry form Obligations as are appropriate or necessary;

(o) To the extent applicable, the provisions relating to (a) any Credit Facility, Qualified Swap or other financial arrangement entered into in connection with the issuance of the Obligations of such Series and (b) the obligations payable thereunder;

(p) The amount, if any, to be deposited in the Proceeds Fund or any Account therein;

(q) If so determined by the Issuer, provisions for the application of any money available therefor to the purchase, exchange or redemption of Obligations of such Series and for the order of purchase, exchange or redemption of such Obligations;

(r) If so determined by the Issuer, provisions for the sale of the Obligations of such Series;

(s) The forms of the Obligations of such Series and of the Trustee's certificate of authentication if other than as provided in Section 301; and

(t) Such other matters, not contrary to or inconsistent with the Resolution, as the Issuer may deem advisable or necessary in connection with the authorization, issuance, sale, or delivery of such Series of Obligations.

An Authorized Officer to whom a Supplemental Resolution has delegated the power to determine any of the foregoing shall execute a Certificate of Determination evidencing such determinations or other actions taken pursuant to the delegation under such Supplemental Resolution, and such Certificate of Determination shall be conclusive evidence of the terminations or actions of such Authorized Officer as to the matters stated therein. The matters set forth in any such Certificate of Determination shall have the same effect as if set forth in the related Supplemental Resolution.

2. The Obligations may be sold in one or more Series or subseries (each of which shall contain a designation distinguishing it from other Series or subseries), and shall be delivered by the Issuer under the Resolution but only upon receipt by the Trustee of

(a) An Opinion of Bond Counsel in customary form to the effect that (i) the Issuer has the right and power under the Issuer Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Issuer, is in full force and effect, and is valid and binding upon the Issuer, and enforceable in accordance with its terms, and no other authorization for the Resolution is required as of the date thereof; (ii) the Resolution creates the valid pledge which it purports to create of the Trust Estate in the manner and to the extent provided in Section 501; and (iii) the Obligations are valid and binding obligations of the Issuer, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Issuer Act as amended to the date of such Opinion of Bond Counsel, and (iv) such Obligations have been duly and validly authorized and issued in accordance with law and the Resolution;

(b) A copy of the Supplemental Resolution authorizing such Obligations, certified by an Authorized Officer;

(c) A written order of the Issuer as to the delivery of the Obligations, signed by an Authorized Officer;

(d) A certificate of an Authorized Officer to the effect that, upon the delivery of the Obligations of such Series (i) no event which constitutes a default under the Resolution or any of the Obligations shall have occurred and be continuing or, if such an event is continuing, upon issuance of the Obligations such default shall be cured, and (ii) no such event would result from the authentication and delivery of the Obligations of such Series;

(e) If any Obligations are Variable Interest Rate Obligations or a Qualified Swap is being entered into that will result in a variable interest rate obligation of the Issuer, a determination by an Authorized Officer of the Estimated Average Interest Rate;

(f) If any Obligations of such Series are Put Obligations, a determination by an Authorized Officer of the method or methods to be employed to provide for the purchase or redemption of all Put Obligations of such Series if the Owners thereof elected to tender for purchase or redemption the entire aggregate Outstanding principal amount of the Put Obligations of such Series; and

(g) Such further documents and money as are required by the provisions of Article II, this Article A-II or Article A-VIII.

3. If Obligations are to be listed on a domestic or foreign stock exchange, the Authorized Officers are hereby authorized to take all such actions as they deem necessary or appropriate to comply with the listing requirements of such exchange, including the appointment of a member of such exchange as listing agent, the publication where required by such exchange of all redemption notices, the appointment of a special clearing agent and paying agent, and the execution of an undertaking letter with such exchange.

4. The Obligations shall not be a debt of the State or the City and neither the State nor the City shall be liable thereon, nor shall Obligations be payable out of any funds other than those of the Issuer as provided in the Resolution.

**Section A-202. Credit Facilities; Qualified Swaps and Other Similar Arrangements; Parity Debt.**

1. The Issuer may include such provisions in a Supplemental Resolution authorizing the issuance of a Series of Obligations secured by a Credit Facility as the Issuer deems appropriate, and no such provisions shall be deemed to constitute an amendment to the Resolution requiring action under Article or Article A-IX, including:

(a) So long as the Credit Facility is in full force and effect and payment on the Credit Facility is not in default, then (i) the issuer of the Credit Facility shall be deemed to be the sole Owner of the Outstanding Obligations the payment of which such Credit Facility secures or (ii) in the alternative or with respect to particular matters, the approval, consent or action of the issuer of the Credit Facility shall be required in addition to the approval, consent or action of the applicable percentage of the Owners of the Outstanding Obligations, in either case when the approval, consent or action of the Owners for such Obligations is required or may be exercised under the Resolution including Section A-802 hereof and following an Event of Default hereunder; provided, however, that no issuer of a Credit Facility shall be deemed to be the sole Owner of Outstanding Obligations pursuant to this provision in the event that the Credit Facility or Credit Facilities securing such Obligations provide only liquidity support.

(b) In the event that the principal, Sinking Fund Installments, if any, and Redemption Price, if applicable, and interest due on any Outstanding Obligations (or Purchase Price of any Outstanding Obligations to the extent the issuer of the Credit Facility has not been reimbursed) shall be paid under the provisions of the Credit Facility, all covenants, agreements and other obligations of the Issuer to the Owners of such Obligations shall continue to exist and such issuer of the Credit Facility shall be subrogated to the rights of such Owners in accordance with the terms of such Credit Facility.

2. In addition, such Supplemental Resolution may establish such provisions as are necessary (i) to comply with the provisions of each such Credit Facility, (ii) to provide relevant information to the issuer of the Credit Facility, (iii) to provide a mechanism for paying Principal Installments and interest on Obligations secured by the Credit Facility, and (iv) to make provision for any events of default or for additional or improved security required by the issuer of a Credit Facility.

3. The Issuer may enter into such agreements with the issuer of such Credit Facility providing for, *inter alia*: (i) the payment of fees and expenses to such issuer for the issuance of such Credit Facility, (ii) the terms and conditions of such Credit Facility and the -Obligations affected thereby, and (iii) the security, if any, to be provided for the issuance of such Credit Facility.

4. The Issuer may secure such Credit Facility by an agreement providing for the purchase of the Obligations secured thereby with such adjustments to the rate of interest, method

of determining interest, maturity, or redemption provisions as specified by the Issuer in the applicable Supplemental Resolution. The Issuer may also in an agreement with the issuer of such Credit Facility agree to directly reimburse such issuer for amounts paid under the terms of such Credit Facility (together with interest thereon, the “**Reimbursement Obligation**”); *provided, however*, that no amounts shall be payable by the Issuer under a Reimbursement Obligation for purposes of the Resolution, until amounts are paid under such Credit Facility by the issuer thereof. As determined by Supplemental Resolution, any such Reimbursement Obligation, which may include interest calculated at a rate higher than the interest rate on the related Obligation and accelerated principal amortization, (1) may be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by Section 501 of the Resolution to secure the Obligations (a “**Parity Reimbursement Obligation**”), but only to the extent that (prior to any acceleration of all Obligations, if permitted) any principal amortization requirements are *either* (A) commensurate with the amortization requirements for such related Obligations, without acceleration or (B) accelerated to no greater extent than to require repayment in equal principal installments over 5 or more years, or (ii) may constitute a Subordinated Contract Obligation, as determined by the Issuer. Parity Reimbursement Obligations shall not include any payments (other than interest calculated at a higher rate pursuant to a Credit Facility) (i) of any fees or expenses, (ii) pursuant to any indemnification provisions or (iii) pursuant to term-loan or other principal amortization requirements in reimbursement of any such advance that are more accelerated than permitted by clauses (A) and (B) of the preceding sentence, and any such payments of the items specified in clauses (1), (ii) or (iii) shall constitute Subordinated Contract Obligations.

5. Any such Credit Facility shall be for the benefit of and secure such Obligations or portion thereof as specified in any applicable Supplemental Resolution.

6. In connection with the issuance of any Obligations or at any time thereafter so long as Obligations remain Outstanding, the Issuer may, to the extent permitted pursuant to law, from time to time enter into Qualified Swaps. The Issuer’s obligation to pay any amount under any Qualified Swap may be secured by a pledge of, and a lien on, the Trust Estate on a parity with the lien created by Section 501 of the Resolution to secure the Obligations (a “**Parity Swap Obligation**”), or may constitute a Subordinated Contract Obligation, as determined by the Issuer. Parity Swap Obligations shall not include any payments of any termination or other fees, expenses, indemnification or other obligations to a counterparty to a Qualified Swap, which payments shall be Subordinated Contract Obligations.

7. Parity Debt shall not be a debt of the State or the City and neither the State nor the City shall be liable thereon, nor shall Parity Debt be payable out of any funds other than those of the Issuer pledged therefor pursuant to the Resolution.

8. Except to the extent that an Authorized Officer directs that such amounts be deposited in any other Fund or Account pledged to the payment of Obligations, any amounts paid to the Issuer under a Qualified Swap shall be deposited in the Debt Service Fund.

9. To the extent applicable and not readily apparent with respect any Parity Debt, either the terms of such Parity Debt shall specify (or an Authorized Officer shall specify in

writing) the interest and principal components of or the scheduled payments corresponding to principal and interest under, such Parity Debt or the manner of determining the foregoing.

**Section A-203. Obligation Anticipation Notes.** Whenever the Issuer shall have, by Supplemental Resolution, authorized the issuance of a Series of Obligations, the Issuer may by resolution authorize the issuance of Obligation Anticipation Notes in anticipation of the issuance of such authorized Series of Obligations, in a principal amount not exceeding the Principal amount of the Obligations of such Series so authorized. The principal of and premium, of any, and interest on such Obligation Anticipation Notes and any renewals of such Obligation Anticipation Notes shall be payable only from any or all of the following items designated by the Issuer at or prior to issuance of any such series of Obligation Anticipation Notes (i) the proceeds of any renewals of such Obligation Anticipation Notes issued to repay such Obligation Anticipation Notes, (ii) the proceeds of the sale of the Series of Obligations in anticipation of which such Obligation Anticipation Notes are issued, (iii) amounts available to pay Subordinated Indebtedness, or (iv) any other money available therefor and not pledged under the Resolution. Such proceeds and other amounts set forth in clauses (i), (ii), (iii) and (iv) may be pledged for the payment of the principal of and premium, if any, and interest on such Obligation Anticipation Notes, and any such pledge of the items set forth in clauses (i) and (ii) shall have priority over any other pledge created by the Resolution, including Section 501. In any case, such Obligation Anticipation Notes shall be retired or provision shall be made for their retirement not later than the date of authentication and delivery of the Series of Obligations in anticipation of which they are issued. The proceeds of the sale of Obligation Anticipation Notes other than renewals thereof shall be applied to the purposes for which the Obligations in anticipation of which such Obligation Anticipation Notes are authorized and shall be deposited in the appropriate Fund or Account established by the Resolution for such purposes or, if so provided in the resolution authorizing renewals of Obligation Anticipation Notes issued to pay outstanding Obligation Anticipation Notes, applied directly to such payment. Investment earnings from any amounts on deposit in any Fund or Account under the Resolution representing the proceeds of any Obligation Anticipation Notes shall be applied in the manner set forth in the resolution authorizing such Obligation Anticipation Notes.

## **ARTICLE A-III**

### **GENERAL TERMS AND PROVISIONS OF OBLIGATIONS**

Except as otherwise provided by Supplemental Resolution, the Obligations shall be subject to the terms and provisions of these Standard Resolution Provisions.

#### **Section A-301. Medium of Payment; Form and Date.**

1. The Obligations and Parity Debt shall be payable, with respect to interest, principal and Redemption Price, in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts (or to the extent permitted by law, in any other coin or currency authorized pursuant to a Supplemental Resolution for related Obligations and Parity Debt).

2. Obligations shall be issued in the form of fully registered Obligations without coupons. Obligations, the certificate of authentication, if any, and the form of assignment shall be in substantially the form provided for in Exhibit One with such appropriate variations, omissions, substitutions and insertions as are permitted or required hereby or thereby or are required by law, and may have such letters, numbers or other marks of identification and such legends and endorsements placed thereon as may be required to comply with any applicable laws or rules or regulations, or as may, consistent herewith, be determined by the officers executing such Obligations, as evidenced by their execution of the Obligations. Any portion of the text of any Obligation may be set forth on the reverse thereof, with an appropriate reference thereto on the face of such Obligation, or as multiple pages (with or without such a reference). Obligations may be typewritten, printed, engraved, lithographed or otherwise produced.

3. Obligations shall be dated, and shall bear or not bear interest, as provided in the Supplemental Resolution authorizing such Obligations.

**Section A-302. Legends.** Obligations may contain or have endorsed thereon such provisions, specifications and descriptive words not inconsistent with the provisions of the Resolution as may be necessary or desirable to comply with custom, the rules of any securities exchange or commission or brokerage board, or otherwise, as may be determined by the Issuer.

**Section A-303. Execution and Authentication.**

1. The Obligations shall be executed in the name of the Issuer by the manual or facsimile signature of an Authorized Officer or in such other manner as may be required by law or specified in a Supplemental Resolution. In case any of the officers who shall have signed any of the Obligations shall cease to be such officer before the Obligations so signed shall have been actually delivered, such Obligations may, nevertheless, be delivered as herein provided, and may be issued as if the Persons who signed such Obligations had not ceased to hold such offices. Any Obligation may be signed on behalf of the Issuer by such Persons as at the actual time of the execution of such Obligation shall be duly authorized or hold the proper office in the Issuer, although at the date of the Obligations such Persons may not have been so authorized or have held such office.

2. Obligations of each Series shall bear thereon a certificate of authentication, executed manually by the Trustee. Only such Obligations as shall bear thereon such certificate of authentication shall be entitled to any right or benefit under the Resolution and no Obligation shall be valid or obligatory for any purpose until such certificate of authentication shall have been duly executed by the Trustee. Such certificate of the Trustee upon any Obligation executed on behalf of the Issuer shall be conclusive evidence that the Obligation so authenticated has been duly authenticated and delivered under the Resolution and that the Owner thereof is entitled to the benefits of the Resolution.

**Section A-304. Interchangeability of Obligations.** Obligations, upon surrender thereof at the office of the Registrar with a written instrument of transfer satisfactory to the Registrar, duly executed by the Owner or his duly authorized attorney, may, at the option of such Owner, be exchanged for an equal aggregate principal amount of Obligations of the same Series, maturity and interest rate of any other authorized denomination.

**Section A-305. Negotiability, Transfer and Registry.** All the Obligations issued under the Resolution shall be negotiable, subject to the provisions for registration and registration of transfer contained in the Resolution and in the Obligations. So long as any of the Obligations shall remain Outstanding, the Issuer shall maintain and keep, at the office of the Registrar, books for the registration and registration of transfer of Obligations; and, upon presentation thereof for such purpose at said office and under such reasonable regulations as it or the Registrar may prescribe, the Issuer shall register or cause to be registered therein, and permit to be transferred thereon, the registration of any Obligation entitled to registration or registration of transfer. So long as any of the Obligations remain Outstanding, the Issuer shall make all necessary provision to permit the exchange of Obligations at the office of the Registrar.

**Section A-306. Transfer of Obligations.**

1. The transfer of each Obligation shall be registerable only upon the books of the Issuer, which shall be kept by the Registrar, by the Owner thereof in person or by his attorney authorized in writing, upon surrender thereof together with a written instrument of transfer satisfactory to the Registrar executed by the Owner or his authorized attorney. Upon the registration of transfer of any such Obligation, the Issuer shall issue in the name of the transferee a new Obligation of the same aggregate principal amount, Series, maturity and interest rate as the surrendered Obligation.

2. The Issuer and each Fiduciary may deem and treat the Person in whose name any Outstanding Obligation shall be registered upon the books of the Issuer as the absolute owner of such Obligation, whether such Obligation shall be overdue or not, for the purpose of receiving payment of; or on account of the principal and Redemption Price, if any, of and interest on such Obligation and for all other purposes, and all such payments so made to any such registered owner or upon his order shall be valid and effectual to satisfy and discharge the liability upon such Obligation to the extent of the sum or sums so paid, and neither the Issuer nor any Fiduciary shall be affected by any notice to the contrary. The Issuer agrees to indemnify and save each Fiduciary harmless from and against any and all loss, cost, charge, expense, judgment or liability incurred by it, unless acting in bad faith or with negligence under the Resolution, in so treating such registered owner.

**Section A-307. Regulations With Respect to Exchanges and Transfers.** In all cases in which the privilege of exchanging Obligations or registering the transfer of Obligations is exercised, the Issuer shall execute and the Registrar shall deliver Obligations in accordance with the provisions of the Resolution. All Obligations surrendered in any such exchanges or registrations of transfer shall forthwith be canceled by the Registrar. For every such exchange or registration of transfer of Obligations, whether temporary or definitive, the Issuer or the Registrar may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer.

**Section A-308. Obligations Mutilated, Destroyed, Stolen or Lost.** In case any Obligation shall become mutilated or be destroyed, stolen or lost, the Issuer shall execute, and thereupon the Trustee and Registrar shall deliver, a new Obligation of like tenor, Series, maturity, interest rate and principal amount as the Obligation so mutilated, destroyed, stolen or lost, in exchange and substitution for such mutilated Obligation, upon surrender and cancellation

of such mutilated Obligation, or in lieu of and substitution for the Obligation destroyed, stolen or lost, upon filing with the Trustee and Registrar evidence satisfactory to the Issuer and the Trustee and Registrar that such Obligation has been destroyed, stolen or lost and proof of ownership thereof, and upon furnishing the Issuer and the Trustee and Registrar with indemnity satisfactory to them and complying with such other reasonable regulations as the Issuer and the Trustee and Registrar may prescribe and paying such expenses as the Issuer and Trustee and Registrar may incur. All Obligations so surrendered to the Registrar shall be canceled by it. If any such Obligation shall have matured, or if such Obligation shall have been called for redemption or a redemption date pertaining thereto shall have passed, instead of issuing a new Obligation the Issuer may cause the same to be paid without surrender thereof upon indemnity satisfactory to the Issuer and the Trustee. Any such new Obligations issued pursuant to this Section in substitution for Obligations alleged to be destroyed, stolen or lost shall constitute original additional contractual obligations on the part of the Issuer, whether or not the Obligations so alleged to be destroyed, stolen or lost be at any time enforceable by anyone, and shall be equally secured by and entitled to equal and proportionate benefits with all other Obligations issued under the Resolution, in any money or securities held by the Issuer or the Fiduciary for the benefit of the Owners of Obligations.

**Section A-309. Book-Entry-Only System.** The Issuer may employ a book-entry-only system of registration with respect to any Obligations and may utilize the procedures regarding such registration set forth in this Section A-309, as such procedures may be modified or superseded pursuant to the Supplemental Resolution authorizing such Obligations. Any provisions of the Resolution inconsistent with book-entry-only Obligations shall not be applicable to such book-entry-only Obligations.

Any Authorized Officer is hereby authorized to take all actions required for each Series of Obligations to be eligible under the rules and regulations of The Depository Trust Company ("DTC"), 55 Water Street, New York, New York, for investment and trading as uncertificated securities. DTC is hereby appointed as the initial Securities Depository for the obligations, with Cede & Co., a nominee thereof, being the initial registered owner of the Obligations. In the event that any Securities Depository resigns or is removed, any Authorized Officer may select a substitute Securities Depository. The Issuer and any Fiduciary, and any agent of the Issuer or any Fiduciary, may treat any Securities Depository in whose name any Obligations is registered as the owner of such Obligation for all purposes under the Resolution. For so long as the Securities Depository is the registered owner of the Obligations, procedures with respect to the transmission of notices and the transfer of ownership of, redemption of and payment of principal or Redemption Price, if any, of and interest on such Obligations so held shall be in accordance with arrangements among the Trustee, the Issuer and the Securities Depository.

So long as the Obligations are registered in the name of the Securities Depository, the Issuer and the Trustee shall have no responsibility or obligation to any Securities Depository participant, indirect participant or beneficial owner of the Obligations. Without limiting the immediately preceding sentence, the Issuer and the Trustee shall have no responsibility or obligation with respect to (i) the accuracy of the records of any Securities Depository or any Securities Depository participant or indirect participant with respect to any beneficial ownership interest in the Obligations, (ii) the delivery to any Securities Depository participant, indirect participant, beneficial owner or any other person, other than the Securities Depository, of any

notice with respect to the Obligations, including any notice of redemption or tender, or (iii) the payment to any Securities Depository participant, indirect participant, beneficial owner or any other person, other than the Securities Depository, of any amount with respect to the principal of or Redemption Price or interest on the Obligations.

The Issuer, in its sole discretion and without the consent of any other person, may terminate the services of any Securities Depository with respect to any Series of Obligations. Notice of such termination shall be given by the Issuer to the Trustee prior to or simultaneously with such termination. In the event the book-entry only system is discontinued with respect to the Obligations, principal and Redemption Price of and interest on the Obligations shall be paid as provided in the Resolution.

Consistent with DTC book-entry provisions, one or more typewritten certificates shall be prepared for each maturity of the Obligations of a Series and registered in the name of the Securities Depository. There shall be no physical distribution of bond or other certificates to beneficial owners of such Obligations. In the event that the Obligations do not qualify to be held by the Securities Depository or that either the Issuer determines to discontinue the book-entry only system or DTC determines to discontinue providing its service with respect to the Obligations and there is no successor Securities Depository, the bond or other certificates shall be delivered in the form required by the Resolution.

Unless otherwise directed by an Authorized Officer, "CUSIP" identification numbers will be imprinted on the Obligations, but such numbers shall not constitute a part of the contract evidenced by the Obligations and any error or omission with respect thereto shall not constitute cause for refusal of any purchaser to accept delivery of and pay for the Obligations. As a convenience to the Owners of the Obligations, the Issuer and the Trustee may use such CUSIP numbers in any notices to the Owners of the Obligations, including any notices of redemption of the Obligations. Failure on the part of the Issuer or the Trustee to use such CUSIP numbers in any notice to Owners of the Obligations shall not constitute an Event of Default or any similar violation of the Issuer's contract with such Owners. The Issuer will promptly notify the Trustee of any change in the CUSIP numbers.

## ARTICLE A-IV

### REDEMPTION AND TENDER OF OBLIGATIONS

**Section A-401. Privilege of Redemption and Redemption Price.** Except as otherwise provided in the Resolution or a Supplemental Resolution, Obligations subject to redemption pursuant to a Supplemental Resolution shall be subject to redemption only in accordance with this Article A-IV.

Obligations subject to redemption prior to maturity pursuant to a Supplemental Resolution shall be redeemable, upon written notice as provided in this Article A-IV, at such times, at such Redemption Prices and upon such terms as may be specified in the Supplemental Resolution authorizing such Obligations.

**Section A-402. Redemption at the Election of the Issuer; Tender to Related Entities.** In the case of any redemption of Obligations at the election of the Issuer, the Issuer shall give written notice to the Trustee of its election so to redeem, of the redemption date, of the Series, of the principal amounts of the Obligations of each maturity and interest rate of such Series to be redeemed (which Series, maturities, interest rates and principal amounts thereof to be redeemed shall be determined by the Issuer in its sole discretion, subject to any limitations with respect thereto contained in any Supplemental Resolution). Such notice shall be given at least 45 days prior to the redemption date or such shorter period as may be provided in the Supplemental Resolution or as shall be acceptable to the Trustee. In the event notice of redemption shall have been given as in Section A-405 provided but subject to the second paragraph of Section A-405, the Issuer shall on or prior to the redemption date cause to be paid out to the appropriate Paying Agent or Paying Agents out of money available therefor an amount in cash which, in addition to other money, if any, available therefor held by such Paying Agent or Paying Agents, will be sufficient to redeem on the redemption date at the Redemption Price thereof, all of the Obligations to be redeemed.

To the extent provided by Supplemental Resolution the Issuer may, in its sole discretion, purchase or grant to any Related Entity the option to purchase, at any time and from time to time, any Obligations which are redeemable at the election of the Issuer at a purchase price equal to the redemption price therefor. To exercise any such option, the Issuer or the Related Entity shall give the Trustee a written request exercising such option within the time periods specified in the related Supplemental Resolution as though such written request were a written request of the related Issuer for redemption, and the Trustee shall thereupon give the Owners of the Obligations to be purchased notice of such purchase in the manner specified in the related Supplemental Resolution as though such purchase were a redemption. On the date fixed for purchase pursuant to any exercise of such an option, the Issuer or the Related Entity shall pay the purchase price of the Obligations then being purchased to the Trustee in immediately available funds, and the Trustee shall pay the same to the sellers of such Obligations against delivery thereof. Following such purchase, the Trustee shall cause such Obligations to be registered in the name of the Issuer or the Related Entity or its nominee and shall deliver them to the Issuer, the Related Entity or its nominee. Except to the extent otherwise directed by an Authorized Officer, no purchase of Obligations pursuant to such an option shall operate to extinguish the indebtedness of the Issuer evidenced thereby. Any such option to purchase by a Related Entity either shall be conditioned

on the provision of sufficient money therefor by the Related Entity or shall be an obligation of the Issuer in the event that the Related Entity does not provide sufficient money therefor.

**Section A-403. Redemption Otherwise Than at the Issuer's Election.** Whenever by the terms of the Resolution. Obligations are required to be redeemed otherwise than at the election of the Issuer, the Trustee shall select the Obligations to be redeemed, give the notice of redemption and pay out of money available therefor the Redemption Price to the appropriate Paying Agents in accordance with the terms of this Article A-IV. The Trustee shall have no liability in making such selection.

**Section A-404. Selection of Obligations to Be Redeemed.** In the event of redemption of less than all the Outstanding Obligations of like tenor, Series, maturity and interest rate, the Trustee shall select, as directed by the Issuer (as to the timing of such selection, manner of such selection or otherwise) or otherwise in such manner as the Trustee in its discretion shall deem appropriate and fair, the numbers of the Obligations to be redeemed and portions of any thereof to be redeemed in part. Obligations of denominations equal or less than the minimum authorized denomination thereof may be redeemed only as a whole. Obligations of denominations of more than the minimum authorized denomination thereof may be redeemed either as a whole or in part (which, if redeemed in part, must assure that the portion of the Obligation which is not redeemed is an authorized denomination). For the purposes of this action A-404, Obligations, or portions thereof, which have theretofore been selected for redemption shall not be deemed Outstanding.

**Section A-405. Notice of Redemption.** When the Trustee shall receive notice from the Issuer of its election to redeem Obligations pursuant to Section A-402, and when redemption of Obligations is required by the Resolution pursuant to Section A-403, the Trustee shall give notice, in the name of the Issuer, of the redemption of such Obligations, which notice shall specify the Series (including CUSIP numbers), maturities and, if any maturity shall include Obligations bearing different interest rates and all Obligations of such maturity are not being redeemed, the interest rate of the Obligations to be redeemed, the redemption date and the place or places where amounts due upon such redemption will be payable and, if less than all of the Obligations of any like tenor, Series, maturity and interest rate are to be redeemed, the letters and numbers or other distinguishing marks of such Obligations so to be redeemed, and, in the case of Obligations to be redeemed in part only, such notice shall also specify the respective portions of the principal amount thereof to be redeemed, and, if applicable, that such notice is conditional and the conditions that must be satisfied. Such notice shall further state that on such date there shall become due and payable upon each Obligation to be redeemed the Redemption Price thereof, or the Redemption Price of the specified portions of the principal thereof in the case of Obligations to be redeemed in part only, together with interest accrued to the redemption date. and that from and after such date interest thereon shall cease to accrue and be payable. Such notice shall be given not less than 30 days nor more than 45 days, or for such other period as may be specified in a Supplemental Resolution authorizing a particular Series, before the redemption date, to the Owners of any Obligations or portions of Obligations which are to be redeemed. Failure so to give any such notice to any particular Owner shall not affect the validity of the proceedings for the redemption of Obligations not owned by such Owner and failure of any Owner to receive such notice shall not affect the validity of the proposed redemption of

Obligations. The Issuer may provide notices of redemption at such additional times as it may determine necessary or appropriate.

Any notice of optional redemption given pursuant to this Section may state that it is conditional upon receipt by the Trustee of money sufficient to pay the Redemption Price of such Obligations or upon the satisfaction of any other condition, or that it may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before payment of such Redemption Price if any such condition so specified is not satisfied or if any such other event occurs. Notice of such rescission shall be given by the Trustee to affected Owners of Obligations as promptly as practicable upon the failure of such condition or the occurrence of such other event.

Unless otherwise provided by Supplemental Resolution, notices of redemption shall be sent by first class mail, postage prepaid.

Notice of redemption of any Series of Obligations shall also be sent by the Trustee to such additional Persons as may be specified in the Supplemental Resolution authorizing such Series.

**Section A-406. Payment of Redeemed Obligations.** Notice having been given in the manner provided in Section A-405, the Obligations or portions thereof so called for redemption shall, subject to the second paragraph of Section A-405, become due and payable on the redemption date so designated at the Redemption Price, plus interest accrued and unpaid to the redemption date, and, upon presentation and surrender thereof at the office specified in such notice, such Obligations, or portions thereof, shall be paid at the Redemption Price plus interest accrued and unpaid to the redemption date. If there shall be called for redemption less than all of an Obligation, the Issuer shall execute and cause to be delivered, upon the surrender of such Obligation, without charge to the owner thereof, for the unredeemed balance of the principal amount of the Obligation so surrendered, at the option of the owner thereof, Obligations of like tenor, Series, maturity and interest rate in any of the authorized denominations. If, on the redemption date, money for the redemption of all the Obligations or portions thereof of any like tenor, Series, maturity and interest rate to be redeemed, together with interest to the redemption date, shall be held by the Paying Agents so as to be available therefor on said date and if notice of redemption shall have been given as aforesaid, then, from and after the redemption date interest on the Obligations or portions thereof of such Series, maturity and interest rate so called for redemption shall cease to accrue. If said money shall not be so available on the redemption date, such Obligations or portions thereof shall continue to bear interest until paid at the same rate as they would have borne had they not been called for redemption.

## **ARTICLE A-V**

### **INVESTMENT OF FUNDS; SINKING FUND INSTALLMENTS; CANCELLATION AND DISPOSITION OF OBLIGATIONS**

#### **Section A-501. Investment of Funds.**

1. Subject to the provisions of Section A-1104, amounts in the Funds and Accounts established by Section 502 of the Resolution may be invested only in Authorized Investments and only when and as specifically directed in writing by an Authorized Officer.

2. The Trustee or the Issuer shall sell any Authorized Investments held in any Fund, Account or subaccount to the extent required for payments from such Fund, Account or subaccount. The proceeds of such sales, and of all payments at maturity or upon redemption of such investments, shall be held in the applicable Fund, Account or subaccount to the extent required to meet the requirements of such Fund, Account or subaccount. Except as provided by Supplemental Resolution, in computing the amount of such Funds, Accounts and subaccounts, investments shall be valued at par, or if purchased at other than par, shall be valued at Amortized Value. Accrued interest received upon the sale of any Authorized Investment to the extent such amount exceeds any accrued interest paid on the purchase of such Authorized Investment shall be treated as interest earned on such Authorized Investment for purposes of this Section.

3. Nothing in the Resolution shall prevent any Authorized Investments required as investments of or security for any Fund, Account or subaccount held under the Resolution from being held in book-entry form.

4. In making any investment in any Authorized Investments with money in any Fund or Account established under the Resolution, the Trustee or the Issuer may combine such money with money in any other Fund or Account held by it, but solely for purposes of making such investment in such Authorized Investments.

#### **Section A-502. Satisfaction of Sinking Fund Installments.**

1. Any amount accumulated in the Debt Service Fund in respect of and up to the unsatisfied balance of each Sinking Fund Installment shall be applied by the Trustee to either (a) or (b) below as directed by the Issuer (together with amounts accumulated in the Debt Service Fund with respect to interest on the Series of Obligations for which such Sinking Fund Installment was established) if so directed by an Authorized Officer prior to the 45th day preceding the due date of such Sinking Fund Installment as follows:

(a) to the purchase of Obligations for which such Sinking Fund Installment was established, at prices (including any brokerage and other charges) not exceeding the principal amount of such Obligations plus unpaid interest accrued to the date of purchase, such purchases to be made in such manner as the Issuer shall direct; or

(b) to the redemption of Obligations for which such Sinking Fund Installment was established, if then redeemable by their terms at the prices referred to in clause (a) of this subsection 1 of this Section A-502.

All Obligations so purchased or redeemed shall be canceled by the Trustee prior to the 45th day preceding the due date of such Sinking Fund Installment.

2. Upon the purchase or redemption of any Obligation pursuant to subsection 1 of this Section, an amount equal to the principal amount of the Obligations so purchased or redeemed shall be credited toward the next Sinking Fund Installment thereafter to become due with respect to the Obligations of such maturity and the amount of any excess of the amounts so credited over the amount of such Sinking Fund Installment shall be credited by the Trustee against future Sinking Fund Installments for such Series as specified by an Authorized Officer. Prior to the purchase or redemption of such Obligations, the Issuer shall deliver to the Paying Agent and to the Trustee a certificate of an Authorized Officer specifying (i) the principal amount, Series, maturity, interest rate and numbers of the Obligations so to be purchased or redeemed, (ii) the date and Series of the Sinking Fund Installment in satisfaction of which such Obligations are so to be purchased or redeemed, (iii) the aggregate principal amount of the Obligations so to be purchased or redeemed, and (iv) the unsatisfied balance of each such Sinking Fund Installment after giving effect to the delivery of such Obligations.

3. In satisfaction, in whole or in part, of any Sinking Fund Installment, the Issuer may deliver to the Trustee at least 45 days prior to the date of such Sinking Fund Installment, for cancellation, Obligations acquired by purchase or redemption, except Obligations acquired by purchase or redemption pursuant to the provisions of subsection 1 of this Section, of the maturity and interest rate entitled to such Sinking Fund Installment. All Obligations so delivered to the Trustee in satisfaction of a Sinking Fund Installment shall reduce the amount thereof by the amount of the aggregate principal amount of such Obligations. Concurrently with such delivery of such Obligations the Issuer shall deliver to the Paying Agent and to the Trustee a certificate of an Authorized Officer, specifying (i) the principal amount, Series, maturity, interest rate and numbers of the Obligations so delivered, (ii) the date and Series of the Sinking Fund Installment in satisfaction of which such Obligations are so delivered, (iii) the aggregate principal amount of the Obligations so delivered, and (iv) the unsatisfied balance of each such Sinking Fund Installment after giving effect to the delivery of such Obligations.

4. The Trustee shall, upon receipt of the notice and in the manner required by the Resolution, call for redemption, on the date of each Sinking Fund Installment falling due prior to maturity, such principal amount of Obligations of the Series, interest rate and maturity entitled to such Sinking Fund Installment as is required to exhaust the unsatisfied balance of such Sinking Fund Installment.

**Section A-503. Cancellation and Disposition of Obligations.** All Obligations that have been paid (whether at maturity or by acceleration, call for redemption, purchase by the Issuer and presentation for cancellation, or otherwise) or delivered to the Trustee for cancellation shall be canceled and not reissued, except as otherwise provided in a Supplemental Resolution with respect to Put Obligations. Unless otherwise directed by the Issuer, the Trustee shall treat canceled Obligations in accordance with its document retention policies. Notwithstanding any

other provision of the Resolution, the Issuer may in its sole discretion purchase any obligations of the Issuer or any Related Entity for investment purposes and any such obligations shall remain outstanding unless and until presented for cancellation.

## ARTICLE A-VI

### PARTICULAR COVENANTS OF THE ISSUER

The Issuer covenants and agrees with the Trustee and the Owners of Obligations as follows:

**Section A-601. Payment of Obligations and Parity Debt.** The Issuer shall duly and punctually pay or cause to be paid from the Trust Estate as provided in the Resolution the principal or Redemption Price, if any, of every Obligation and the interest thereon and all Parity Debt, at the dates and places, and in the manner provided in the Obligations and Parity Debt, according to the true intent and meaning thereof.

**Section A-602. Extension of Payment of Obligations.** The Issuer shall not directly or indirectly extend or assent to the extension of the maturity of any of the Obligations or the time of payments of any claims for interest by the purchase or funding of such Obligations or claims for interest or by any other arrangement and in case the maturity of any of the Obligations or the time for payment of such claims for interest shall be extended, such Obligations or claims for interest shall not be entitled, in case of any Event of Default, to the benefit of the Resolution or to any payment out of the Trust Estate, except subject to the prior payment of the principal of all Obligations Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Obligations as shall not be represented by such extended claims for interest. Nothing herein shall be deemed to limit the right of the Issuer (i) to issue refunding obligations as provided in the Resolution and such issuance shall not be deemed to constitute an extension of maturity of the Obligations, (ii) to issue Put Obligations and neither such issuance nor the operation of the provisions of such Put Obligations shall be deemed to constitute an extension of maturity of the Obligations, (iii) to apply any amount in any Fund held under the Resolution for such purpose to the purchase or redemption of Obligations or (iv) to issue securities having a maturity date, including any extension of maturity contemplated at the time of issuance, of no more than 270 days from the issue date.

**Section A-603. Offices for Servicing Obligations.** Except as otherwise provided in the Resolution, the Issuer shall at all times maintain one or more offices or agencies in the City and State of New York where Obligations may be presented for payment, registration, transfer or exchange, and where notices, demands and other documents may be served upon the Issuer in respect of the Obligations or of the Resolution. The Issuer may appoint the Trustee or any other Fiduciary as its agent to maintain such office or agency for the payment, redemption, registration, transfer or exchange of Obligations and for the service upon the Issuer of such notices, demands and other documents. The Issuer may also maintain one or more offices or agencies outside of the City or State for the same purposes.

**Section A-604. Further Assurance.** To the extent permitted by law, the Issuer from time to time shall make, do, execute, adopt, acknowledge and deliver, and take all and every such further acts, deeds, conveyances, assignments, resolutions, transfers and assurances as may be necessary or desirable for the better assuring, conveying, granting, assigning and

confirming all and singular the rights and interests in the Trust Estate or assigned, or intended so to be, or which the Issuer may become bound to pledge or assign.

**Section A-605. Accounts and Reports.**

1. The Issuer shall keep proper books of record and account of its operations. Such books of account are to be audited at least annually by independent certified public accountants experienced in governmental accounting selected by the Issuer. A copy of each audit report, annual balance sheet and income and expense statement shall be filed with the Trustee and sent to any Owner filing with the Issuer a written request therefor.

2. The Issuer shall annually, within 6 months after the close of each fiscal year or at such other time required under applicable law or a subsequent contract with all or certain Owners (or, if not available by such date, when and if available), file with the Trustee, and otherwise as provided by law, a copy of an annual report for such year, accompanied by the opinion of the accountants specified in subsection 1 of this Section.

**Section A-606. General.**

1. The Issuer shall do and perform or cause to be done and performed all acts and things required to be done or performed by or on behalf of the Issuer under the provisions of the Resolution and, to the extent material to the interests of Owners, the Issuer Act.

2. Upon the date of authentication and delivery of any of the Obligations, all conditions, acts and things required by law and the Resolution to exist, to have happened and to have been performed precedent to and in connection with the issuance of such Obligations (and any related Parity Debt then being incurred) shall exist, shall have happened and shall have been performed and the issuance of such Obligations (and any related Parity Debt then being incurred), together with all other indebtedness of the Issuer, shall be within every debt and other limit prescribed by the laws of the State, as applicable.

## ARTICLE A-VII

### CONCERNING THE TRUSTEE, PAYING AGENTS AND THE REGISTRAR

**Section A-701. Trustee; Appointment and Acceptance of Duties.** On or prior to the delivery of any Obligations, the Issuer shall appoint a Trustee. The Trustee shall signify its acceptance of the duties and obligations imposed upon it by the Resolution by executing and delivering to the Issuer a written acceptance thereof

**Section A-702. Section A-702. Duties, Liabilities and Rights of the Trustee.**

(a) Prior to the occurrence of an Event of Default of which a Responsible Officer of the Trustee has written notice or actual knowledge, and after the curing or waiver of any Event of Default which may have occurred:

(1) the Trustee undertakes to perform such duties and only such duties as are specifically set forth in the Resolution, and no implied covenants or obligations shall be read into the Resolution against the Trustee; and

(2) in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and conforming to the requirements of the Resolution; but in the case of any such certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee is under a duty to examine same to determine whether or not they conform to the requirements of the Resolution.

(b) In case an Event of Default of which a Responsible Officer of the Trustee has written notice or actual knowledge has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by the Resolution, and use the same degree of care and skill in their exercise, as a prudent Person would exercise or use in the conduct of such Person's own affairs.

(c) No provision of the Resolution shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

1. this subsection (c) shall not be construed to limit the effect of subsection (a) of this Section A-702;

2. the Trustee is not and shall not be liable for any error of judgment made in good faith by a Responsible Officer of the Trustee, unless it is proven that the Trustee was negligent in ascertaining the pertinent facts;

3. the Trustee is not and shall not be liable with respect to any action taken or omitted to be taken by it in good faith (i) in accordance with the direction of the Owners of the applicable percentage of Obligations then Outstanding relating to the time, method and

place of conducting any proceeding for any remedy available to the Trustee, or (ii) which it believes to be authorized or within its rights or powers under the Resolution;

4. no provision of the Resolution shall require the Trustee to expend or risk its own funds or otherwise incur any personal or financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, for which it has not received a satisfactory indemnity;

5. the Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper Person and shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit;

6. the Trustee shall not be charged with knowledge of an Event of Default unless a Responsible Officer of the Trustee shall have received written notice from an Owner or the Issuer or have actual knowledge; provided that the Trustee shall be deemed to have actual knowledge of any failure to pay principal or Redemption Price of or interest on Obligations when due;

7. the Trustee shall not be under any obligation, to take any action that is discretionary hereunder;

8. neither the Trustee nor any of its directors, officers, employees or agents shall be personally liable for any action taken, suffered or omitted by the Trustee in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon the Trustee by the Resolution;

9. the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents, attorneys, custodians, or nominees and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent, attorney, custodians or nominees appointed with due care by it hereunder; and

10. the Trustee may request that the Issuer deliver a certificate of an Authorized Officer setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant hereto, which certificate may be signed by any Person authorized to sign such a certificate, including any Person specified as so authorized in any such certificate previously delivered and not superseded.

(d) Whether or not expressly so provided, every provision of the Resolution relating to the conduct or affecting the liability of or affording protection to the Trustee is subject to the provisions of this Section A-702.

(e) In the event that the Trustee is also acting as Paying Agent or Registrar hereunder, the rights and protections afforded to the Trustee pursuant to this Article A-V II shall also be afforded to the Paying Agent and Registrar.

**Section A-703.           Paying Agents and Registrars; Appointment and Acceptance of Duties.**

1.       The Trustee is hereby appointed the Registrar and a Paying Agent with respect to the Obligations. The Issuer may at any time or from time to time appoint one or more other Paying Agents and Registrars in the manner and subject to the conditions set forth in Section A-713 for the appointment of a successor Paying Agent or Registrar. The Issuer may be appointed a Paying Agent or Registrar.

2.       Each Paying Agent and Registrar other than the Trustee shall signify its acceptance of the duties and obligations imposed upon it by the Resolution by executing and delivering to the Issuer and to the Trustee a written acceptance thereof.

**Section A-704.           Responsibilities of Fiduciaries.** The recitals of fact contained in the Resolution and in the Obligations shall be taken as the statements of the Issuer and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of the Resolution or of any Obligations issued thereunder or in respect of the security afforded by the Resolution, and no Fiduciary shall incur any liability in respect thereof. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Obligations for value or the application of the proceeds thereof or the application of any money paid to the Issuer. No Fiduciary shall be under any responsibility or duty with respect to the application of any money paid to any other Fiduciary. No Fiduciary shall be liable in connection with the performance of its duties under the Resolution, or for any losses, fees, taxes or other charges incurred upon the purchase or sale or redemption of any securities purchased for or held in any Fund under the Resolution, including any losses incurred by reason of having to sell securities prior to their maturity date, except in each case for its own willful misconduct, negligent action or negligent failure to act.

**Section A-705.           Evidence on Which Fiduciaries May Act.**

1.       Each Fiduciary shall be protected in acting or refraining from acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond, or other paper or document believed by it to be genuine, and to have been signed or presented by the proper party or parties. Each Fiduciary may consult with counsel of its selection, who may or may not be counsel to the Issuer, and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken, omitted to be taken or suffered by it under the Resolution in good faith and in accordance therewith.

2.       Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under the Resolution, such matter (unless other evidence in respect thereof be therein specifically prescribed) may be deemed to be conclusively proved and established by a certificate of an Authorized Officer, and such certificate shall be full warrant for any action taken or suffered in good faith under the provisions of the Resolution; but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or may require such further or additional evidence as to it may seem reasonable.

3. Except as otherwise expressly provided in the Resolution, any request, order, notice or other direction required or permitted to be furnished pursuant to any provision thereof by the Issuer to any Fiduciary shall be sufficiently executed if executed in the name of the Issuer by an Authorized Officer.

**Section A-706. Compensation.** The Issuer shall pay to each Fiduciary from time to time such compensation as shall be agreed to in writing between the Fiduciary and the Issuer for all services rendered under the Resolution (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust), and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents, and employees, incurred in and about the performance of their powers and duties under the Resolution. To the extent permitted by law, the Issuer further agrees to indemnify and save each Fiduciary and its officers, directors, agents, and employees harmless against any and all liabilities, losses, damages, claims or expenses which it may incur in the acceptance, exercise and performance of its powers and duties hereunder and which are not due to its willful misconduct, negligence or bad faith. The obligations of this Section A-706 shall survive the discharge of the Resolution. No obligation of the Issuer to make any payment to any fiduciary shall have the benefit of any lien on or pledge or assignment of the Trust Estate.

A Fiduciary shall notify the Issuer promptly of any claim for which it may seek indemnity. The Issuer shall defend the claim and the Trustee shall cooperate in the defense. The Fiduciary may have separate counsel and the Issuer shall pay the reasonable fees and expenses of such counsel.

**Section A-707. Certain Permitted Acts.** Any Fiduciary may become the owner of any Obligations or any other obligations of the Issuer, with the same rights it would have if it were not a Fiduciary. To the extent permitted by law and pursuant to the Resolution, any Fiduciary may act as depository for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Owners of Obligations or the holders of any other obligations of the Issuer or to effect or aid in any reorganization growing out of the enforcement of the Obligations or any other obligations the Issuer or the Resolution, whether or not any such committee shall represent the Owners of a majority in principal amount of the Obligations then Outstanding.

**Section A-708. Resignation of Trustee.** The Trustee may at any time resign and be discharged of the duties and obligations created by the Resolution by giving not less than 60 days' written notice to the Issuer and mailing notice thereof to the Owners of the Obligations, specifying the date when such resignation shall take effect, at least 45 days prior to the effective date, provided that such resignation shall take effect upon *the later of* (i) the day specified in such notice and (ii) the day a successor shall have been appointed by the Issuer or the Owners of Obligations as provided in Section A-710 and shall have qualified therefor.

**Section A-709. Removal of Trustee.** The Trustee may be removed at any time by an instrument or concurrent instruments in writing, filed with the Trustee, and signed by the Owners of a majority in principal amount of the Obligations then Outstanding or their attorneys-in-fact duly authorized, excluding any Obligations held by or for the account of the Issuer or any Related Entity. In addition, so long as no Event of Default shall have occurred and be continuing

hereunder and the Trustee is not pursuing any right or remedy available to it pursuant to the Resolution, the Trustee may be removed by the Issuer at any time for failure to provide reasonably acceptable services, failure to charge reasonably acceptable fees or any other reasonable cause, all as determined by a certificate of an Authorized Officer filed with the Trustee. Any such removal shall not be effective until a successor shall have been appointed by the Issuer or the Owners of Obligations as provided in Section A-710 and shall have qualified therefor.

**Section A-710. Appointment of Successor Trustee.**

1. In case at any time the Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Trustee, or of its property or affairs, a successor may be appointed by the Owners of a majority in principal amount of the Obligations then Outstanding, excluding any Obligations held by or for the account of the Issuer, by an instrument or concurrent instruments in writing signed and acknowledged by such Owners of Obligations or by their attorneys-in-fact duly authorized and delivered to such successor Trustee, notification thereof being given to the Issuer and the predecessor Trustee; provided, nevertheless, that unless a successor Trustee shall have been appointed by the Owners of Obligations as aforesaid, the Issuer by a duly executed written instrument signed by an Authorized Officer of the Issuer shall therewith appoint a Trustee to fill such vacancy until a successor Trustee shall be appointed by the Owners of Obligations as authorized in this Section A-710. The Issuer shall mail notice of any such appointment made by it to all Owners within 20 days after such appointment. Any successor Trustee appointed by the Issuer shall, immediately and without further act, be superseded by a Trustee appointed by the Owners of Obligations.

2. If in a proper case no appointment of a successor Trustee shall be made pursuant to the foregoing provisions of this Section within 45 days after the Trustee shall have given to the Issuer written notice as provided in Section A-708 or after a vacancy in the office of the Trustee shall have occurred by reason of its inability to act, the Trustee or the Owner of any Obligation may, at the expense of the Issuer, apply to any court of competent jurisdiction to appoint a successor Trustee. Said court may thereupon, after such notice, if any, as such court may deem proper and prescribe, appoint a successor Trustee.

3. Any Trustee appointed under the provisions of this Section A-710 in succession to the Trustee shall be a Bank that is organized under the laws of the State or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and having a capital and surplus aggregating at least \$100 million, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.

**Section A-711. Transfer of Rights and Property to Successor Trustee.** Any successor Trustee appointed under the resolution shall execute, acknowledge and deliver to its predecessor Trustee, and also to the Issuer, an instrument accepting such appointment, and thereupon such successor Trustee, without any further act, deed or conveyance, shall become

fully vested with all money, estates, properties, rights, powers, duties and obligations of such predecessor Trustee, with like effect as if originally named as Trustee; but the Trustee ceasing to act shall nevertheless, on the written request of the Issuer, or of the successor Trustee, and, upon the payment of all of its charges hereunder, execute, acknowledge and deliver such instruments of conveyance and further assurance and do such other things as may reasonably be required for more fully and certainly vesting and confirming in such successor Trustee all the right, title and interest of the predecessor Trustee in and to any property held by it under the Resolution, and shall pay over, assign and deliver to the successor Trustee any money or other property subject to the trusts and conditions herein set forth. Should any deed, conveyance or instrument in writing from the Issuer be required by such successor Trustee for more fully and certainly vesting in and confirming to such successor Trustee any such estates, rights, powers and duties, any and all such deeds, conveyances and instruments in writing shall, on request, and so far as may be authorized by law, be executed, acknowledged and delivered by the Issuer. Any successor Trustee shall promptly notify the Registrar and the Paying Agents of its appointment as Trustee.

**Section A-712. Merger or Consolidation.** Any Person into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a party or any company to which any Fiduciary may sell or transfer all or substantially all of its municipal corporate trust business, provided such Person shall be a Bank that is organized under the laws of the State or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and having a capital and surplus aggregating at least \$100 million, and shall be authorized by law to perform all the duties imposed upon it by the Resolution, shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.

**Section A-713. Resignation or Removal of Paying Agent or Registrar and Appointment of Successor.**

1. Any Paying Agent or Registrar may at any time resign and be discharged of the duties and obligations created by the Resolution by giving at least 60 days' written notice to the Issuer, the Trustee, and the other Paying Agents or Registrar, as the case may be. Any Paying Agent or Registrar may be removed at any time by an instrument filed with such Paying Agent or Registrar and the Trustee and signed by the Issuer. Any successor Paying Agent or Registrar shall be appointed by the Issuer, with the approval of the Trustee, and (subject to the requirements of Section A-603) shall be a Bank that is organized under the laws of the State or is a national banking association organized under the laws of the United States of America doing business and having a corporate trust office in The City of New York and having a capital and surplus aggregating at least \$100 million, which is willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.

2. In the event of the resignation or removal of any Paying Agent, such Paying Agent shall pay over, assign and deliver any money held by it as Paying Agent to its successor, or if there be no successor, to the Trustee. In the event that for any reason there shall be a vacancy in the office of any Paying Agent, the Trustee shall act as such Paying Agent.

3. In the event of the resignation or removal of any Registrar, such Registrar shall transfer and deliver all records, certificates and documents held by it as Registrar to its successor, or if there be no successor, to the Trustee. In the event that for any reason there shall be a vacancy in the office of any Registrar, the Trustee shall act as such Registrar.

**Section A-714. Adoption of Authentication.** In case any of the Obligations contemplated to be issued under the Resolution shall have been authenticated but not delivered, any successor Trustee may adopt the certificate of authentication of any predecessor Trustee so authenticating such Obligations and deliver the Obligations so authenticated; and in case any of such Obligations shall not have been authenticated, any successor Trustee may authenticate such Obligations in the name of the predecessor Trustee, or in the name of the successor Trustee, and in all such cases such certificate shall have the full force which it is anywhere in said Obligations or in the Resolution provided that the certificate of the Trustee shall have.

**Section A-715. Continuing Disclosure Agreements.** The Trustee shall be entitled to the same rights and the same degree of indemnification in its execution and performance of each continuing disclosure agreement entered into pursuant to Rule 15c2-12 promulgated under the Securities Exchange Act of 1934 as amended, as it is under the Resolution.

## ARTICLE A-VIII

### SUPPLEMENTAL RESOLUTIONS

**Section A-801. Supplemental Resolutions Effective Upon Filing With the Trustee.** For any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution may be adopted, without the consent of or notice to any Owner, which, upon the filing with the Trustee of a copy thereof certified by an Authorized Officer, or, if adopted prior to the appointment of a Trustee pursuant to Section A-701, upon its adoption, shall be fully effective in accordance with its terms:

1. To close the Resolution against, or provide limitations and restrictions in addition to the limitations and restrictions contained in the Resolution on, the issuance and delivery of the Obligations, or the issuance or entering into of other evidences of indebtedness; or to close any resolution authorizing Pre-existing Indebtedness of the Issuer against, or provide limitations and restrictions in addition to the limitations and restrictions contained in such resolution on, the issuance and delivery of obligations under such resolutions, or the issuance or entering into of other evidences of indebtedness;

2. To add to the covenants and agreements of the Issuer in the Resolution, other covenants and agreements to be observed by the Issuer which are not contrary to or inconsistent with the Resolution as theretofore in effect;

3. To add to the limitations and restrictions in the Resolution, other limitations and restrictions to be observed by the Issuer which are not contrary to or inconsistent with the Resolution as theretofore in effect;

4. To surrender any right, power or privilege reserved to or conferred upon the Issuer by the Resolution;

5. To authorize Obligations of a Series and, in connection therewith, (a) specify and determine the matters and things referred to in the provisions of the Resolution authorizing issuance of Obligations, and also any other matters and things relative to such Obligations which are not contrary to or inconsistent with the Resolution as theretofore in effect, (b) in the case of Variable Interest Rate Obligations or Put Obligations, as applicable, set forth provisions specifying the manner in which interest on Variable Interest Rate Obligations or Put Obligations, as applicable, is to be calculated for the purposes of various definitions and provisions of the Resolution, provisions providing for changes in interest rates, interest rate periods or interest payment dates for any Variable Interest Rate Obligation of a Series or Put Obligations, as applicable, provisions regarding an Owner's right or obligation to tender Put Obligations for redemption or purchase in lieu of redemption, and provisions governing the manner in which Variable Interest Rate Obligations or Put Obligations, as applicable, which the Owner thereof has the right to, or has exercised a right to, tender for redemption or purchase in lieu of redemption shall be treated for purposes of various definitions and provisions of the Resolution, (c) set forth provisions governing the administration of any Qualified Swap or Credit Facility, and provisions providing for the issuance of Reimbursement Obligations or the conversion of other Obligations to Reimbursement Obligations (and in connection with such conversion to

change the interest rates, sinking fund provisions or maturity date on such Obligations) to secure or reimburse the provider of such Credit Facility, (d) in the case of either Taxable Obligations or Tax-Exempt Obligations, set forth defeasance provisions with respect thereto (including the manner of attaining such defeasance and the effect thereof), and (e) make such additional changes herein, not materially adverse to the rights of the Owners of the Obligations previously issued, as are necessary or appropriate; or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance and delivery of such Obligations;

6. To authorize Obligation Anticipation Notes in accordance with Section A-203 and, in connection therewith, specify and determine the matters and things referred to in Section A-203, and also any other matters and things relative to such Obligations which are not contrary to or inconsistent with the Resolution as theretofore in effect;

7. To confirm, as further assurance, any pledge under, and the subjection to any lien or pledge created or to be created by, the Resolution of any additional security other than that granted or pledged under the Resolution;

8. To (a) establish for any one or more Series of Obligations a separate debt service reserve fund which shall be permitted to be applied solely to the payment of specified Obligations, provided that (i) the specified Obligations shall have no claim or lien on nor be payable from any amounts in any other such debt service reserve fund, (ii) the specified Obligations shall be excluded from the calculation of any applicable debt service reserve fund requirement for any other Outstanding Obligations, and (iii) the amount required to be on deposit in such debt service reserve funds shall be specified in the Supplemental Resolutions authorizing the specified Obligations, but in no event shall such amount, after giving effect to any surety bond, insurance policy, letter of credit or similar obligation deposited in any such separate debt service reserve fund pursuant to the Resolution, be in excess of the amount that would otherwise be the debt service reserve fund requirement for such specified Obligations assuming that such Obligations were the only Obligations Outstanding under the Resolution; and (b) make such other amendments, changes or modifications to the Resolution as may be deemed necessary or desirable by the Issuer to insure that such debt service reserve funds function in the manner contemplated in this subsection;

9. To authorize Parity Debt and, in connection therewith, specify and determine (or provide procedures for an Authorized Officer to specify or determine) the matters and things referred to in paragraphs (4) and (6) of Section A-202 of the Resolution, and also any other matters and things relative to such Parity Debt which are not contrary to or inconsistent with the Resolution as then in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first issuance or entering into of such Parity Debt, and at any time to rescind or limit any authorization for any such Parity Debt theretofore authorized but not issued or entered into; in connection with the authorization of Parity Swap Obligations and Parity Reimbursement Obligations, any such Supplemental Resolution may include provisions for the availability, transferability, use or application of the Funds, Accounts and subaccounts established pursuant to Section 502 of the Resolution for the benefit of such Parity Swap Obligations and Parity Reimbursement Obligations; and shall grant to the Owners of such Parity

Debt the same rights granted to Owners of Obligations in Section A-802 and Article A-1X herein;

10. To authorize Subordinated Indebtedness or Subordinated Contract Obligations and, in connection therewith, specify and determine (or provide procedures for an Authorized Officer to specify or determine) the matters and things required or permitted by Article V of the Resolution in connection therewith, and also any other matters and things relative to such Subordinated Indebtedness or Subordinated Contract Obligations which are not contrary to or inconsistent with the Resolution as then in effect, or at any time to amend, rescind or limit any authorization for any such Subordinated Indebtedness or Subordinated Contract Obligations thereto be authorized but not issued or entered into; and in connection with the authorization of Subordinated Indebtedness or Subordinated Contract Obligations, any such Supplemental Resolution may include provisions for the availability, transferability, use or application of amounts available to pay Subordinated Indebtedness or Subordinated Contract Obligations and any other funds, accounts or subaccounts created for the benefit of such Subordinated Indebtedness or Subordinated Contract Obligations;

11. To modify any of the provisions of the Resolution in any respect whatsoever, *provided that* (i) such modification shall be, and be expressed to be, effective only after all Obligations affected thereby and Outstanding at the date of the adoption of such Supplemental Resolution shall cease to be Outstanding and (ii) such Supplemental Resolution shall be specifically referred to in the text of all Obligations delivered on original issuance after the date of the adoption of such Supplemental Resolution and of the Obligations issued in exchange therefor or in place thereof;

12. To add to the Resolution any provisions required by law to preserve the exclusion from gross income for Federal income tax purposes of interest received on Tax-Exempt Obligations then Outstanding or to be issued or the exemption of interest received on any Obligations from State income taxation;

13. To modify, amend or supplement the Resolution in any manner, not already provided for in or pursuant to the Supplemental Resolution authorizing the related Series of Obligations in order to provide for a Credit Facility, Qualified Swap, or other similar arrangement with respect to any Series of Obligations, under the Resolution, so long as the Issuer determines that such Supplemental Resolution does not materially adversely affect the right, security and interest of the Owners of Outstanding Obligations;

14. To modify, amend or supplement the Resolution in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar Federal statute hereafter in effect or to permit the qualification of the Obligations for sale under the securities laws of any of the states of the United States of America, and, if the Issuer so determines, to add hereto such other terms, conditions and provisions as may be required by said Trust Indenture Act of 1939 or similar Federal statute;

15. To amend or modify any Supplemental Resolution authorizing Obligations of a Series to reflect the substitution of a new Credit Facility for the Credit Facility then in effect;

16. At any time prior to the first authentication and delivery of any Obligations under the Resolution or at any other time when no Obligations are Outstanding under the Resolution, to modify the provisions of the Resolution in such manner as the Issuer deems necessary or appropriate;

17. To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Resolution;

18. To insert such provisions clarifying matters or questions arising under the Resolution as are necessary or desirable and are not contrary to or inconsistent with the Resolution as theretofore in effect, including, in the event the Issuer Act is amended or other legislation is enacted to so provide, the substitution of an alternate or different legal name for the current name of the Issuer or any other Related Entity in the Resolution or the form of Obligations; or

19. With Rating Confirmation, to make any other modification or amendment of the Resolution which the Issuer shall in its sole discretion determine will not have a material adverse effect on the interests of the Owners of Outstanding Obligations.

In making any determination under paragraph (19) of this Section A-80I, the Issuer may conclusively rely upon an Opinion of Counsel or opinions of other experts or professionals.

**Section A-802. Supplemental Resolutions Effective With Consent of Owners of Obligations.** At any time or from time to time, a Supplemental Resolution may be adopted subject to consent by Owners of Obligations in accordance with and subject to the provisions of Article A-IX hereof, which Supplemental Resolution, upon the filing with the Trustee of a copy thereof certified by an Authorized Officer of the Issuer and upon compliance with the provisions of said Article A-IX, shall become fully effective in accordance with its terms as provided in said Article A-IX.

**Section A-803. General Provisions.**

1. The Resolution shall not be modified or amended in any respect except as provided in and in accordance with and subject to the provisions of this Article A-VIII and Article A-IX hereof. Nothing contained in this Article A-VIII or in Article A-IX shall affect or limit the right or obligation of the Issuer to execute and deliver to any Fiduciary any instrument which elsewhere in the Resolution it is provided shall be delivered to said Fiduciary.

2. Any Supplemental Resolution referred to and permitted or authorized by Section A-801 may be adopted by the Issuer without the consent of any of the Owners, but shall become effective only on the conditions, to the extent and at the time provided in said Section. The copy of every Supplemental Resolution when tiled with the Trustee shall be accompanied by a Counsel's Opinion stating that such Supplemental Resolution has been duly and lawfully adopted in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon the Issuer and enforceable in accordance with its terms; *provided, however*, that the concurrent delivery of an Opinion of Bond Counsel required by Section A-201.2(a) shall satisfy this requirement.

3. No Supplemental Resolution shall change or modify any of the rights or obligations of any Fiduciary without its written consent.

## ARTICLE A-IX

### AMENDMENTS

**Section A-901. Mailing.** Any provision in this Article for the mailing of a notice or other paper to Owners shall be fully complied with if it is mailed postage prepaid to each Owner of any affected Obligation then Outstanding at such Owner's address, if any, appearing upon the registry books of the Issuer, and (ii) to the Trustee; or, in each case, to such parties by facsimile or other means to the extent permitted by applicable law and arrangements.

**Section A-902. Powers of Amendment.** Any modification or amendment of the Resolution and of the rights and obligations of the Issuer and of the Owners, in any particular, may be made by a Supplemental Resolution, with the written consent given as provided in Section A-903, (i) of the Owners of a majority in principal amount of the Obligations Outstanding at the time such consent is given, and (ii) in case less than all of the Obligations then Outstanding are affected by the modification or amendment, of the Owners of a majority in principal amount of the Obligations so affected and Outstanding at the time such consent is given; *provided, however*, that if such modification or amendment will, by its terms, not take effect so long as particular Obligations remain Outstanding, the consent of the Owners of such Obligations shall not be required and such Obligations shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Obligations under this Section. No such modification or amendment shall (a) permit a change in the terms of redemption or maturity of the principal of any Outstanding Obligation or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Owner of such Obligation, (b) reduce the percentages or otherwise affect the classes of Obligations the consent of the Owners of which is required to waive an Event of Default or otherwise effect any such modification or amendment, (c) create a preference or priority of any Obligation or Obligations over any other Obligation or Obligations, without the consent of the Owners of all such Obligations, (d) create a lien prior to or on parity with the lien of the Resolution securing Obligations, without the consent of the Owners of all of the Obligations then Outstanding, or (e) change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. For the purposes of this Section, an Obligation shall be deemed to be affected by a modification or amendment of the Resolution if the same materially and adversely affects the rights of the Owner of such Obligation. The Trustee may in its discretion determine whether or not in accordance with the foregoing powers of amendment particular Obligations would be affected by any modification or amendment of the Resolution and any such determination shall be binding and conclusive on the Issuer and all Owners of Obligations. The Trustee may request and receive an opinion of counsel, including a Counsel's Opinion, as conclusive evidence as to whether particular Obligations would be so affected by any such modification or amendment of the Resolution and the Trustee shall have no duty or obligation to take any action hereunder unless and until it has received such opinion. Notwithstanding anything in this Section or the Resolution to the contrary, the consent of Owners of any Series of additional Obligations to be issued hereunder shall be deemed given if the underwriters or initial purchasers for resale thereof consent in writing to any modification or amendment effected thereby, and such modification or amendment, as well as such consent, is disclosed in the official statement or other offering document pursuant to which such Series of additional Obligations is offered and sold.

**Section A-903. Consent of Owners of Obligations.** The Issuer at any time may adopt a Supplemental Resolution making a modification or amendment permitted by the provisions of Section A-902 to take effect when and as provided in this Section. A copy of such Supplemental Resolution (or brief summary thereof or reference thereto in form approved by the Trustee) together with a request to the Owners for their consent thereto in form satisfactory to the Trustee, shall be mailed by the Issuer to the Owners (but failure to mail such copy and request shall not affect the validity of the Supplemental Resolution when consented to as in this Section provided). Such Supplemental Resolution shall not be effective unless and until (i) there shall have been filed with the Trustee (a) the written consents of Owners of the percentages of Outstanding Obligations specified in Section A-902 and (b) a Counsel's Opinion stating that such Supplemental Resolution has been duly and lawfully adopted and filed by the Issuer in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon the Issuer and enforceable in accordance with its terms, and (ii) a notice shall have been mailed to Owners as hereinafter in this Section A-903 provided. Any such consent, including any consent provided by the initial purchaser of an Obligation from the Issuer, shall be binding upon the Owner of the Obligations giving such consent and, anything in Section A-1102 to the contrary notwithstanding, upon any subsequent Owner of such Obligations and of any Obligations issued in exchange therefor (whether or not such subsequent Owner thereof has notice thereof). At any time after the Owners of the required percentages of obligations shall have filed their consents to the Supplemental Resolution, the Trustee shall make and file with the Issuer and the Trustee a written statement that the Owners of such required percentages of Obligations have filed such consents. Such written statement shall be conclusive that such consents have been so filed. At any time thereafter, notice, stating in substance that the Supplemental Resolution (which may be referred to as a Supplemental Resolution adopted by the Issuer on a stated date, a copy of which is on file with the Trustee) has been consented to by the Owners of the required percentages of Obligations and will be effective as provided in this Section A-903, may be given to Owners of Obligations by the Issuer by mailing such notice to Owners of Obligations (but failure to mail such notice shall not prevent such Supplemental Resolution from becoming effective and binding as in this Section A-903 provided). The Issuer shall file with the Trustee proof of the mailing of such notice. A record, consisting of the papers required or permitted by this Section A-903 to be filed with the Trustee, shall be proof of the matters therein stated. Such Supplemental Resolution making such amendment or modification shall be deemed conclusively binding upon the Issuer, the Fiduciaries and the Owners of all Obligations at the expiration of 40 days after the filing with the Trustee of the proof of the mailing of such last-mentioned notice, except in the event of a final decree of a court of competent jurisdiction setting aside such Supplemental Resolution in a legal action or equitable proceeding for such purpose commenced within such 40-day period; provided, however, that any Fiduciary and the Issuer during such 40-day period and any such further period during which any such action or proceeding may be pending shall be entitled in their absolute discretion to take such action, or to refrain from taking such action, with respect to such Supplemental Resolution as they may deem expedient.

**Section A-904. Modifications by Unanimous Consent.** The terms and provisions of the Resolution and the rights and obligations of the Issuer and of the Owners of Obligations may be modified or amended in any respect upon the adoption and filing by the Issuer of a Supplemental Resolution and the consent of the Owners of all of the Obligations then Outstanding, such consent to be given as provided in Section A-903 except that no notice to

Owners of Obligations shall be required; *provided, however*, that no such modification or amendment shall change or modify any of the rights or obligations of any Fiduciary without the filing with the Trustee of the written consent thereto of such Fiduciary in addition to the consent of the Owners of Obligations.

**Section A-905. Notation on Obligations.** Obligations issued and delivered after the effective date of any action taken as in Article A-VIII or this Article provided may, and, if the Trustee so determines, shall, bear a notation by endorsement or otherwise in form approved to the Issuer and the Trustee as to such action, and in that case upon demand of the Owner of any Obligation Outstanding at such effective date and presentation of its Obligation for the purpose at the corporate trust office of the Trustee, suitable notation shall be made on such Obligation by the Trustee as to any such action. If the Issuer or the Trustee shall so determine, Obligations so modified as in the opinion of the Trustee and the Issuer to conform to such action shall be prepared, authenticated and delivered. Upon demand of the Owner of any Obligations then Outstanding and the surrender of such Obligations, there shall be authenticated and exchanged therefor, new Obligations having the same terms, other than the noted modification, as the Obligations surrendered.

## **ARTICLE A-X**

### **DEFAULT AND REMEDIES**

**Section A-1001. Abrogation of Right to Appoint Statutory Trustee; Preservation of Statutory Rights and Remedies.** Any right of the Owners of Obligations to appoint a trustee under the Issuer Act is hereby abrogated. Subject to the foregoing sentence of this Section A-1001 and the provisions of Section 701 of the Resolution, the Owners of Obligations and the Trustee acting on behalf of the Owners of Obligations shall be entitled to all of the rights and remedies provided or permitted by law.

## ARTICLE A-XI

### MISCELLANEOUS

#### **Section A-1101. Defeasance.**

1. If the Issuer shall pay or cause to be paid to the Owners of all Obligations then Outstanding the principal and interest and Redemption Price, if any, to become due thereon, at the times and in the manner stipulated therein and in the Resolution, then, at the option of the Issuer, expressed in an instrument in writing signed by an Authorized Officer and delivered to the Trustee, the covenants, agreements and other obligations of the Issuer to the Owners of Obligations shall be discharged and satisfied. In such event, the Trustee shall, upon the request of the Issuer, execute and deliver to the Issuer all such instruments as may be desirable to evidence such discharge and satisfaction and the Fiduciaries shall pay over or deliver to the Issuer all money, securities and funds held by them pursuant to the Resolution which are not required for the payment or redemption of Obligations not theretofore surrendered for such payment or redemption.

2. Outstanding Obligations or any portions thereof for the payment or redemption of which money shall have been set aside and shall be held in trust by the Paying Agents shall at the respective maturity or redemption dates thereof be deemed to have been paid within the meaning and with the effect expressed in subsection I of this Section. Outstanding Obligations or any portions thereof shall, prior to the maturity or redemption date thereof, be deemed to have been paid within the meaning and with the effect expressed in subsection I of this Section either (A) with respect to the defeasance of Taxable Obligations, Tax-Exempt Obligations or otherwise, as provided in the Supplemental Resolution authorizing their issuance or (B) if (a) in case any of said Obligations are to be redeemed on any date prior to their maturity, the Issuer shall have given to the Trustee in form satisfactory to it irrevocable instructions to mail as provided in Article A-IV notice of redemption on said date of such Obligations, (b) there shall have been irrevocably deposited with the Trustee either money in an amount which shall be sufficient, or Defeasance Securities the principal of and the interest on which when due will provide money which, together with the money, if any, deposited with the Trustee at the same time, shall be sufficient, without further investment or reinvestment of either the principal amount thereof or the interest earnings thereon, to pay when due, the principal or Redemption Price, if applicable, and interest due and to become due on such Obligations or such portions thereof on and prior to the redemption date or maturity date thereof, as the case may be, and (c) in the event such Obligations are not by their terms maturing or are not subject to redemption within the next succeeding 60 days, the Issuer shall have given the Trustee in form satisfactory to it irrevocable instructions to mail, as soon as practicable, a notice to the Owners of such Obligations that the deposit required by (b) above has been made with the Trustee and that said Obligations are deemed to have been paid in accordance with this Section and stating such maturity or redemption date upon which money is to be available for the payment of the principal or Redemption Price, if applicable, on such Obligations. Neither Defeasance Securities nor money deposited with the Trustee pursuant to this Section nor principal or interest payments on any such Defeasance Securities shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Redemption Price, if applicable, and interest on said Obligations; *provided, however*, that any money on deposit with the Trustee, (i) to the extent

such money will not be required at any time for such purpose, shall be paid over to the issuer as received by the Trustee, free and clear of any trust, lien or pledge securing said Obligations or otherwise existing under the Resolution, and (ii) to the extent such money will be required for such purpose at a later date, shall, to the extent practicable, be reinvested in Defeasance Securities maturing at times and in amounts sufficient, together with any money available to the Trustee for such purpose, to pay when due the principal or Redemption Price, if applicable, and interest to become due on said Obligations on and prior to such redemption date or maturity date thereof, as the case may be. Notwithstanding any other provision hereof, the Issuer may at the time of defeasance elect to retain the right to redeem or require the tender of Any obligations deemed paid pursuant to this Section A-1101.2. The Trustee shall, at the direction of the Issuer, select the Obligations or portions thereof that are deemed to have been paid in advance of the redemption of such Obligations.

3. Anything in the Resolution to the contrary notwithstanding, any money held by a Fiduciary in trust for the payment and discharge of the principal or Redemption Price of or interest on any of the Obligations which remains unclaimed for 2 years after the date when such principal, Redemption Price or interest, respectively, has become due and payable, either at stated maturity dates or by call for earlier redemption, if such money was held by the Fiduciary At such date, or for 2 years after the date of deposit of such money if deposited with the Fiduciary after the date when such principal, Redemption Price, or interest, respectively, became due and payable, shall, at the written request of the Issuer, be repaid by the Fiduciary to the Issuer, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Owners of Obligations shall look only to the Issuer for the payment of such principal, Redemption Price, or interest, respectively. Notwithstanding the foregoing or anything in the Resolution to the contrary, any money held by a Fiduciary in trust for the payment and discharge of any Obligations which remains unclaimed after such money was to be applied to the payment of such Obligations in accordance with the Resolution may be applied in accordance with the provisions of the Abandoned Property Law of the State, being Chapter 1 of the Consolidated Laws of the State or any successor provision thereto, and upon such application, the Fiduciary shall thereupon be released and discharged with respect thereto and the Owners of Obligations shall look only to the Issuer or the Comptroller of the State for the payment of such Obligations. Before being required to make any such payment to the Issuer or to apply such money in accordance with the Abandoned Property Law of the State, the Fiduciary shall, at the expense of the Issuer, cause to be mailed to the Owners entitled to receive such money a notice that said money remains unclaimed and that, after a date named in said notice, which date shall be not less than 30 days after the date of the mailing, the balance of such money then unclaimed will be returned to the Issuer or applied in accordance with the Abandoned Property Law of the State, as the case may be.

#### **Section A-1102. Evidence of Signatures of Owners of Obligations and Ownership of Obligations.**

1. Any request, consent, revocation of consent or other instrument which the Resolution may require or permit to be signed and executed by the Owners of Obligations may be in one or more instruments of similar tenor, and shall be signed or executed by such Owners of Obligations in Person or by their attorneys-in-fact appointed in writing or by such electronic or other means as may be recognized pursuant to applicable law. Proof of (i) the execution of

any such instrument, or of an instrument appointing any such attorney, or (ii) the holding by any Person of the Obligations shall be sufficient for any purpose of the Resolution except as otherwise therein expressly provided) if made in the following manner, or in any other manner satisfactory to the Trustee, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable:

(a) The fact and date of the execution by any Owner or his attorney-in-fact of such instrument may be proved by the certificate of a signature guarantor, or of any notary public or other officer authorized to take acknowledgments of deeds, that the Person signing such request or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership such certificate or affidavit shall also constitute sufficient proof of his authority;

(b) The ownership of Obligations and the amount, numbers and other identification, and date of holding the same shall be proved by the registry books.

2. Any request or consent by the Owner of any Obligation shall bind all future Owners of such Obligation in respect of anything done or suffered to be done by the Issuer or any Fiduciary in accordance therewith.

**Section A-1103. Money field for Particular Obligations.** The amounts held by any Fiduciary for the payment of the interest, principal or Redemption Price due on any date with respect to particular Obligations shall, on and after such date and pending such payment, be set aside on its books and held in trust by it for the Owners of Obligations entitled thereto.

**Section A-1104. General Regulations as to Money and Funds.**

1. Each of the Funds and Accounts established by the Resolution shall be a trust fund for the purposes thereof.

2. All amounts of the Issuer held or set aside under the Resolution shall, until paid over to the Fiduciaries or otherwise invested or applied as provided in the Resolution, be deposited by the Issuer in its name, on demand or time deposit, in such Banks as shall be selected by the Issuer. Any amounts held by any Fiduciary under the Resolution shall be deposited in such Banks as the Issuer may select. Any such deposit may be made in the commercial banking department of any Fiduciary which may honor checks on such deposit with the same force and effect as if it were not such Fiduciary, and without any duty to inquire into whether any withdrawals of such funds are in accordance with or might violate any of the provisions of the Resolution. Such deposits shall be continuously secured by the obligations of the United States of America or of the State, which obligations shall have a market value (exclusive of accrued interest) at all times at least equal to the amount of such deposits, which obligations shall be segregated in trust for the account of the Issuer, or shall be otherwise held as the Issuer and the depository may agree. Securities deposited with the Federal Reserve Bank to secure all trust accounts of a depository shall be deemed to comply with the foregoing requirement.

3. Unless otherwise specified in a Supplemental Resolution authorizing the issuance of Obligations, all money held by any Fiduciary, as such, may be deposited by such Fiduciary in its banking department on demand or, if and to the extent directed by the Issuer and acceptable to such Fiduciary, on time deposit, and all such deposits shall be continuously secured by the obligations of the United States of America or of the State which obligations shall have a market value (exclusive of accrued interest) at all times at least equal to the amount of such deposits. Securities deposited with the Federal Reserve Bank to secure all trust accounts of the Fiduciary shall be deemed to comply with the foregoing requirement. Such Fiduciary shall allow and credit on such money such interest, if any, as it customarily allows upon similar funds of similar size and under similar conditions or as required by law.

**Section A-1105. Preservation and Inspection of Documents.** All documents received by a Fiduciary under the provisions of the Resolution shall be retained in its possession and shall be subject at all reasonable times to the inspection of the Issuer, any other Fiduciary, and any Owners of at least 5% aggregate principal amount of Obligations and their agents and their representatives, any of whom may make copies thereof

**Section A-1106. Parties Interest Herein.** Nothing in the Resolution expressed or implied is intended or shall be construed to confer upon, or to give to any Person, other than he Issuer, the Fiduciaries, the Owners of Obligations and the holders of Parity Debt, any right, remedy or claim under or by reason of the Resolution or any covenant, condition or stipulation thereof, and all the covenants, stipulations, promises and agreements in the Resolution contained by and on behalf of the Issuer shall be for the sole and exclusive benefit of the Issuer, the Fiduciaries, the Owners of Obligations and the holders of Parity Debt.

**Section A-1107. No Recourse on the Obligations.** No recourse shall be had for the payment of the principal or Redemption Price of or interest on the Obligations or Parity Debt or for any claim based thereon or on the Resolution against any member, officer, or employee of the Issuer or any Person executing the Obligations.

**Section A-1108. Successors and Assigns.** Whenever in the Resolution the Issuer is named or referred to, it shall be deemed to include its successors and assigns and all the covenants and agreements in the Resolution contained by or on behalf of the Issuer shall bind and ensure to the benefit of its successors and assigns whether so expressed or not.

**Section A-1109. Business Days.** Except as otherwise provided pursuant to a Supplemental Resolution, if the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in the Resolution, is not a Business Day, such payment may be made or act performed or right exercised on the next succeeding Business Day with the same force and effect as if made or done on the nominal date provided in the Resolution and no interest shall accrue during the intervening period with respect to any payment so deferred.

**Section A-1110. Severability of Invalid Provisions.** If any term or provision of this Annex A or the Resolution shall be invalid, inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions or in all jurisdictions, or in all cases because it conflicts with any other provision or provisions hereof or any constitution or statute or rule of

public policy, or for any other reason, such circumstances shall not have the effect of rendering the provision in question inoperative or unenforceable in any other case or circumstance, or of rendering any other provision or provisions herein contained invalid, inoperative, or unenforceable to any extent whatever, and such term and provision shall be valid and enforced to the fullest extent permitted by law.

The invalidity of any one or more phrases, sentences, clauses or Sections of the Resolution shall not affect the remaining portions of the Resolution, or any part hereof, including any part of this Annex A.

**Section A-1111. Exclusion of Obligations.** Obligations owned or held by or for the account of the Issuer or any Related Entity shall not be deemed Outstanding for the purpose of any consent to be given or other action to be taken by or upon the direction of Owners of a specified portion of Obligations Outstanding, and the Issuer or any Related Entity shall not be entitled with respect to such Obligations to give any such consent or to take, or direct the taking of, any such action. At the time of any such consent or action, the Issuer shall furnish to the Trustee a certificate of an Authorized Officer, upon which the Trustee may conclusively rely, describing all Obligations so to be excluded.

**Section A-1112. Governing Law.** The Resolution, including this Annex A, shall be governed by and interpreted in accordance with internal laws of the State, without regard to conflict of law principles thereof.



**SUPPLEMENTAL STANDARD RESOLUTION PROVISIONS FOR REGIONAL  
PAYROLL MOBILITY TAX SECOND LIEN OBLIGATIONS AND SECOND LIEN  
PARITY DEBT**

Adopted \_\_\_\_\_, 2017  
As Approved By The  
Metropolitan Transportation Authority  
Capital Program Review Board  
on \_\_\_\_\_, 2017



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**SUPPLEMENTAL STANDARD RESOLUTION PROVISIONS FOR REGIONAL  
PAYROLL MOBILITY TAX SECOND LIEN OBLIGATIONS AND SECOND LIEN  
PARITY DEBT**

**ARTICLE B-I**

**DEFINITIONS AND STATUTORY AUTHORITY**

**Section B-101. Definitions.** Capitalized terms used but not otherwise defined in this Annex B shall have the meanings set forth in the Resolution, including Annex A appended thereto, to which this Annex B is appended. The following terms shall, for all purposes herein and (except as the context may otherwise require) in the Resolution to which this Annex B is appended, have the following meanings:

**Accrued Second Lien Debt Service** shall mean, as of any date of calculation, an amount equal to the sum of the amounts of accrued and unpaid Second Lien Obligation Debt Service with respect to all Second Lien Obligations and Second Lien Parity Debt, calculating the accrued Second Lien Obligation Debt Service with respect to Second Lien Obligations at an amount equal to the sum of (i) as estimated by an Authorized Officer, interest on the Second Lien Obligations and interest components of Second Lien Parity Debt accrued and unpaid and to accrue to the end of the then current calendar month, and (ii) Second Lien Obligation Principal Installments due and unpaid and that portion of the Second Lien Obligation Principal Installment for such Second Lien Obligations and Second Lien Parity Debt next due which would have accrued (if deemed to accrue in the manner set forth in the definition of Second Lien Obligation Debt Service) to the end of such calendar month. For purposes of calculating deposits relating to Second Lien Debt Service Fund, Second Lien Obligation Principal Installments shall not include amounts that an Authorized Officer has notified the Second Lien Trustee are to be paid from sources other than Mobility Tax Receipts and ATA Tax Receipts, nor shall Accrued Second Lien Debt Service include any amounts that, as certified by an Authorized Officer, have been set aside hereunder or otherwise in trust for the payment thereof.

**Calculated Second Lien Debt Service** for any period shall mean, as of any date of calculation and with respect to any Series of Second Lien Obligations or any Second Lien Parity Debt, the sum of Second Lien Obligation Debt Service for such period determined by the Issuer based on the following adjustments:

- (i) Interest on Variable Interest Rate Second Lien Obligations shall be based on the Second Lien Obligation Estimated Average Interest Rate applicable thereto.
- (ii) Interest on any Second Lien Obligations or Second Lien Parity Debt in respect of which the Issuer has entered into a Qualified Second Lien Swap shall be based on:
  - (a) the fixed rate or rates of the Qualified Second Lien Swap if the Issuer has entered into what is generally referred to as a “floating-to-fixed” Qualified Second Lien Swap (where the Issuer pays a fixed rate and receives a floating rate); or

(b) the lower of (i) the Second Lien Obligation Estimated Average Interest Rate and (ii) the effective capped rate of any Second Lien Obligations or Second Lien Parity Debt if the Issuer has entered into a Qualified Second Lien Swap that is generally referred to as an “interest rate cap” (where the Issuer receives a payment if a variable rate exceeds a certain amount); or

(c) the Second Lien Obligation Estimated Average Interest Rate of the Qualified Second Lien Swap if the Issuer has entered into either what is generally referred to as a “fixed-to-floating” Qualified Second Lien Swap (where the Issuer pays a variable rate and receives a fixed rate) or a “floating-to-floating” Qualified Second Lien Swap (where the Issuer pays a variable rate and receives a different variable rate).

(iii) With respect to Second Lien Put Obligations and any Second Lien Obligations of a Series the interest on which is payable periodically and at least fifteen per centum (15%) of the original principal amount of which is stated to mature at one time and for which maturing principal amount amortization requirements have not been designated, (i) Second Lien Obligation Principal Installments shall be deemed to amortize over a 30-year period from their date of issuance (or any shorter period provided by Supplemental Resolution) based on substantially level debt service as estimated by the Issuer, and (ii) interest shall be based on the actual interest rate or the Second Lien Obligation Estimated Average Interest Rate, as applicable.

(iv) If the Issuer has irrevocably deposited Authorized Investments or money with the Second Lien Trustee (or otherwise in trust) for the payment of any portion of Second Lien Obligation Debt Service, the expected future cash flow from such Authorized Investments and money shall be deducted from Second Lien Obligation Debt Service.

(v) If the Issuer has, at any time, irrevocably called for redemption one or more Series of Second Lien Obligations, including pursuant to a covenant to apply any portion of the Second Lien Obligations Trust Estate to redeem Second Lien Obligations or Second Lien Parity Debt (which particular Second Lien Obligations or Second Lien Parity Debt need not be specifically identified in advance, except as to interest rate and maturity), the Issuer shall take into account such redemption for purposes of determining Calculated Second Lien Debt Service.

(vi) With respect to Parity Reimbursement Second Lien Obligations, accelerated payments of principal shall only be taken into account if, at the time of calculation, such amounts are payable due to a draw under a credit or liquidity facility.

**Capital Appreciation Second Lien Obligations** shall mean any Second Lien Obligations denominated as such and issued as to which interest is payable only at the maturity or prior redemption of such Second Lien Obligations. Except as otherwise provided by Supplemental Resolution, for the purposes of (i) receiving payment of the Second Lien Obligation Redemption Price if Capital Appreciation Second Lien Obligations are redeemed prior to maturity, (ii) computing the principal amount of Second Lien Obligations held by the

registered owner of a Capital Appreciation Second Lien Obligations in giving to the Issuer or the Second Lien Trustee any notice, consent, request, or demand pursuant to the Resolution for any purpose whatsoever or (iii) computing Second Lien Obligation Debt Service, the principal amount of a Capital Appreciation Second Lien Obligations shall be deemed to be its Second Lien Obligation Accreted Value (which in the case of clause (ii) may be the Second Lien Obligation Accreted Value as of the immediately preceding Second Lien Obligation Valuation Date).

**Certificate of Determination**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean a certificate of an Authorized Officer of the Issuer fixing terms, conditions and other details of Second Lien Obligations, Second Lien Parity Debt, Second Lien Obligation Anticipation Notes or Second Lien Obligation Credit Facilities or such other matters in accordance with the delegation of power to do so under the Resolution or a Supplemental Resolution.

**Deferred Income Second Lien Obligations** shall mean any Second Lien Obligations (A) as to which interest accruing thereon prior to the Second Lien Obligation Interest Commencement Date of such Second Lien Obligations is (i) compounded on each Second Lien Obligation Valuation Date for such Deferred Income Second Lien Obligations and (ii) payable only at the maturity or prior redemption of such Second Lien Obligations and (B) as to which interest accruing after the Second Lien Obligation Interest Commencement Date is payable on the first interest payment date succeeding the Second Lien Obligation Interest Commencement Date and periodically thereafter on the dates specified in or determined by Supplemental Resolution. Except as otherwise provided by Supplemental Resolution, for the purposes of (i) receiving payment of the Second Lien Obligation Redemption Price if Deferred Income Second Lien Obligations are redeemed prior to maturity, (ii) computing the principal amount of Second Lien Obligations held by the registered owner of a Deferred Income Second Lien Obligations in giving to the Issuer or the Second Lien Trustee any notice, consent, request, or demand pursuant to the Resolution for any purpose whatsoever or (iii) computing Second Lien Obligation Debt Service, the principal amount of a Deferred Income Second Lien Obligations shall be deemed to be its Second Lien Obligation Appreciated Value (which in the case of clause (ii) may be the Second Lien Obligation Appreciated Value as of the immediately preceding Second Lien Obligation Valuation Date).

**DTC** has the meaning provided in Section B-309.

**Fiduciary or Fiduciaries**, when used with reference to Second Lien Obligations or Second Lien Party Debt, shall mean the Trustee, the Second Lien Trustee, any Registrar or Second Lien Registrar, any Paying Agent, any Second Lien Paying Agent, any tender agent or any or all of them, as may be appropriate, or any Person appointed to act as a Fiduciary as provided in the Resolution.

**Issuer Act**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean the MTA Act in the event that the MTA is defined in the Resolution as the Issuer or the TBTA Act in the event that the TBTA is defined in the Resolution as the Issuer, together with any other applicable law of the State authorizing the issuance of the related Second Lien Obligations by the Issuer or expressly limiting the issuance thereof or governing the security therefor.

**Opinion of Bond Counsel**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean an opinion signed by Nixon Peabody LLP, Hawkins Delafield & Wood LLP or any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to the issuance of Second Lien Obligations by state and municipal entities, selected by the Issuer.

**Outstanding**, when used with reference to Second Lien Obligations or Second Lien Obligations of a Series, shall mean, as of any date, Second Lien Obligations or Second Lien Obligations of such Series theretofore or thereupon to be delivered under the Resolution except:

- (i) Any Second Lien Obligations canceled at or prior to such date;
- (ii) Second Lien Obligations the principal and Second Lien Obligation Redemption Price, if any, of and interest on which have been paid in accordance with the terms thereof;
- (iii) Second Lien Obligations in lieu of or in substitution for which other Second Lien Obligations shall have been delivered pursuant to Article B-III or Section B-406 or Section B-805;
- (iv) Second Lien Obligations deemed to have been paid as provided in subsection 2 of Section B-1001;
- (v) Second Lien Put Obligations tendered or deemed tendered in accordance with the provisions of the Supplemental Resolution authorizing such Second Lien Obligations on the applicable tender date, if the Second Lien Obligation Purchase Price thereof and interest thereon shall have been paid or amounts are available and set aside for such payment as provided in such Supplemental Resolution, except to the extent such tendered Second Lien Put Obligations thereafter may be resold pursuant to the terms thereof and of such Supplemental Resolution; and
- (vi) For the purpose of any consent to be given or other action to be taken by or upon the direction of Second Lien Owners of a specified portion of Second Lien Obligations Outstanding, Second Lien Obligations excluded pursuant to Section B-1008.

The principal component of any Second Lien Parity Debt shall be deemed to be Outstanding in a principal amount equal to the principal amount of the Second Lien Obligations then owed by the Issuer thereunder in lieu of the related Second Lien Obligations, regardless of the authorized amount of the principal component of such Second Lien Parity Debt or the related Second Lien Obligations and provided that, unless otherwise required pursuant to the related Supplemental Resolution, the principal component of such Second Lien Parity Debt shall not by itself increase the Outstanding principal amount of Second Lien Obligations.

**Parity Reimbursement Second Lien Obligation** has the meaning provided in subsection 4 of Section B-202.

**Parity Swap Second Lien Obligation** has the meaning provided in subsection 6 of Section B-202.

**Principal Office of the Second Lien Trustee** shall mean the designated corporate trust office of the Second Lien Trustee.

**Qualified Second Lien Swap** shall mean, to the extent from time to time permitted by law, with respect to Second Lien Obligations, any financial arrangement (i) which is entered into by the Issuer with an entity that is a Qualified Second Lien Swap Provider at the time the arrangement is entered into, (ii) which is a cap, floor or collar; forward rate or future rate swap (such swap may be based on an amount equal either to the principal amount of such Second Lien Obligations of the Issuer as may be designated or a notional principal amount relating to all or a portion of the principal amount of such Second Lien Obligations); asset, index, price or market-linked transaction or agreement; other exchange or rate protection transaction agreement; other similar transaction (however designated); or any combination thereof; or any option with respect thereto, in each case executed by the Issuer for the purpose of moderating interest rate fluctuations, reducing debt service costs or creating either fixed interest rate Second Lien Obligations or Variable Interest Rate Second Lien Obligations on a synthetic basis or otherwise, and (iii) which has been designated in writing to the Second Lien Trustee by an Authorized Officer as a Qualified Second Lien Swap with respect to such Second Lien Obligations.

**Qualified Second Lien Swap Provider** shall mean an entity whose senior long-term obligations, other senior unsecured long-term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under an interest rate exchange agreement are guaranteed by an entity whose senior long-term debt obligations, other senior unsecured long-term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either at least as high as (i) the third highest Rating Category of each Rating Agency then maintaining a rating for the Qualified Second Lien Swap Provider or (ii) any such lower Rating Categories which each such Rating Agency indicates in writing to the Issuer and the Second Lien Trustee will not, by itself, result in a reduction or withdrawal of its rating on the Outstanding Second Lien Obligations subject to such Qualified Second Lien Swap that is in effect prior to entering into such Qualified Second Lien Swap.

**Rating Agency**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean each nationally recognized statistical rating organization then maintaining a rating on the Second Lien Obligations at the request of the Issuer.

**Rating Confirmation**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean evidence that no rating then in effect from a Rating Agency will be withdrawn or reduced solely as the result of an action to be taken hereunder; provided, however, that no action requiring Rating Confirmation shall be undertaken unless at least one Rating Agency at that time maintains a rating on Second Lien Obligations.

**Reimbursement Second Lien Obligations** has the meaning provided in subsection 4 of Section B-202.

**Responsible Second Lien Obligation Officer** shall mean any officer assigned to the corporate trust office of the Second Lien Trustee, or any other officer of the Second Lien Trustee customarily performing functions similar to those performed by any of such officers and who has direct responsibility for the administration of the Resolution, and also, with respect to a particular matter, any other officer, to whom such matter is referred because of such officer's knowledge of and familiarity with the particular subject.

**Second Lien Costs of Issuance** shall mean Costs of Issuance as defined in the Standard Resolution Provisions relating to Second Lien Obligations, Second Lien Parity Debt or Second Lien Obligation Anticipation Notes.

**Second Lien Obligation Accreted Value** shall mean with respect to any Capital Appreciation Second Lien Obligations (i) as of any Second Lien Obligation Valuation Date, the amount set forth for such date in the Supplemental Resolution authorizing such Capital Appreciation Second Lien Obligations and (ii) as of any date other than a Second Lien Obligation Valuation Date, the sum of (a) the Second Lien Obligation Accreted Value on the preceding Second Lien Obligation Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Second Lien Obligation Valuation Date and the denominator of which is the number of days from such preceding Second Lien Obligation Valuation Date to the next succeeding Second Lien Obligation Valuation Date and (2) the difference between the Second Lien Obligation Accreted Values for such Second Lien Obligation Valuation Dates. For purposes of this definition, the number of days having elapsed from the preceding Second Lien Obligation Valuation Date and the number of days from the preceding Second Lien Obligation Valuation Date to the next succeeding Second Lien Obligation Valuation Date shall be calculated on the basis of a 360-day year of 12 30-day months, unless otherwise provided pursuant to a Supplemental Resolution.

**Second Lien Obligation Anticipation Notes** shall mean any such notes issued and delivered pursuant to Section B-203, except to the extent (but only to the extent) that all or any portion of such notes either are not payable, or are anticipated by the Issuer not to be paid, from the proceeds of the Second Lien Obligations in anticipation of which such notes are being issued.

**Second Lien Obligation Appreciated Value** shall mean with respect to any Deferred Income Second Lien Obligations (i) as of any Second Lien Obligation Valuation Date, the amount set forth for such date in the Supplemental Resolution authorizing such Deferred Income Second Lien Obligations, (ii) as of any date prior to the Second Lien Obligation Interest Commencement Date other than a Second Lien Obligation Valuation Date, the sum of (a) the Second Lien Obligation Appreciated Value on the preceding Second Lien Obligation Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Second Lien Obligation Valuation Date and the denominator of which is the number of days from such preceding Second Lien Obligation Valuation Date to the next succeeding Second Lien Obligation Valuation Date and (2) the difference between the Second Lien Obligation Appreciated Values for such Second Lien Obligation Valuation Dates, and (iii) as of any date on and after the Second Lien Obligation Interest Commencement Date, the Second Lien Obligation Appreciated Value on the Second Lien Obligation Interest Commencement Date. For purposes of this definition, the number of days having elapsed from the preceding Second Lien Obligation Valuation Date and the number of days from the

preceding Second Lien Obligation Valuation Date to the next succeeding Second Lien Obligation Valuation Date shall be calculated on the basis of a 360-day year of 12 30-day months, unless otherwise provided pursuant to a Supplemental Resolution.

**Second Lien Obligation Business Day** shall mean any day of the year other than (i) Saturday or Sunday, (ii) any day on which Banks located in New York, New York or the cities in which the Principal Office of the Trustee and the Second Lien Trustee are located are required or authorized by law to remain closed, or (iii) any day on which the New York Stock Exchange is closed.

**Second Lien Obligation Credit Facility** shall mean any letter of credit, standby bond purchase agreement, line of credit, policy of bond insurance, surety bond, guarantee or similar instrument, or any agreement relating to the reimbursement of any payment thereunder (or any combination of the foregoing), which is obtained by the Issuer and is issued by a financial institution, insurance provider or other Person and which provides security or liquidity in respect of any Outstanding Second Lien Obligations, Second Lien Parity Debt or Second Lien Obligation Anticipation Notes.

**Second Lien Obligation Debt Service** for any period shall mean, as of any date of calculation and with respect to any Series of Second Lien Obligations or any Second Lien Parity Debt Outstanding, the sum of: (i) interest on the Second Lien Obligations of such Series and the interest components of Second Lien Parity Debt accruing during such period and (ii) that portion of each Second Lien Obligation Principal Installment for such Second Lien Obligations and Second Lien Parity Debt that would accrue during such period if such Second Lien Obligation Principal Installment were deemed to accrue daily in equal amounts from the preceding Second Lien Obligation Principal Installment payment date on Outstanding Second Lien Obligations and Second Lien Parity Debt; provided, however, that, unless otherwise set forth in a Supplemental Resolution, no Second Lien Obligation Principal Installment shall be deemed to begin accruing until the later of one year prior to such Second Lien Obligation Principal Installment's due date and the date of issuance or incurrence of the related Second Lien Obligations or Second Lien Parity Debt.

**Second Lien Obligation Debt Service Payment Date** shall mean, with respect to any portion of Second Lien Obligation Debt Service, the date on which the Second Lien Obligation Debt Service shall be payable.

**Second Lien Obligation Defeasance Security** shall mean

(i) an Authorized Investment as specified in clause (i) of the definition thereof (other than an obligation of the State), which is not redeemable at the option of the issuer thereof,

(ii) an Authorized Investment as specified in clause (i) (which is an obligation of the State), (ii), (iii), (vi) or (vii) of the definition thereof, which is not redeemable at the option of the issuer thereof and which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency,

(iii) any depositary receipt issued by a Bank as custodian with respect to any Second Lien Obligation Defeasance Security which is specified in clause (i) above and held by such Bank for the account of the holder of such depositary receipt or with respect to any specific payment of principal of or interest on any such Second Lien Obligation Defeasance Security which is so specified and held, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Second Lien Obligation Defeasance Security or the specific payment of principal or interest evidenced by such depositary receipt,

(iv) any certificate of deposit specified in clause (iii) of the definition of Authorized Investments in Section A-101, including certificates of deposit issued by the Trustee, Second Lien Trustee, a Paying Agent or a Second Lien Paying Agent, secured by obligations specified in clause (i) above of a market value equal at all times to the amount of the deposit, which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency, or

(v) any other Authorized Investment designated in a Supplemental Resolution as a Second Lien Obligation Defeasance Security for purposes of defeasing the Second Lien Obligations authorized by such Supplemental Resolution, which is not redeemable at the option of the issuer thereof and which shall be rated at the time of the investment in the highest long-term Rating Category by each Rating Agency.

**Second Lien Obligation Estimated Average Interest Rate** shall mean, as to any Variable Interest Rate Second Lien Obligations or Qualified Second Lien Swap and as of any date of calculation, the average interest rate or rates anticipated to be borne by such Second Lien Obligations or Qualified Second Lien Obligation Swap, or by the combination of such arrangements, over the period or periods for which such rate or rates are anticipated to be in effect, all as estimated by an Authorized Officer.

**Second Lien Obligation Interest Commencement Date** shall mean, with respect to any particular Deferred Income Second Lien Obligations, the date determined by Supplemental Resolution after which interest accruing on such Second Lien Obligations shall be payable on the first interest payment date succeeding such Second Lien Obligation Interest Commencement Date and periodically thereafter on the dates determined pursuant to such Supplemental Resolution.

**Second Lien Obligation Principal Installments** shall mean, as of any date of calculation and with respect to any Series of Second Lien Obligations or any Second Lien Parity Debt, as applicable, (a) the principal amount of Outstanding Second Lien Obligations of such Series, due on the dates and in the amounts specified by Supplemental Resolution, reduced by the principal amount of such Second Lien Obligations which would be retired by reason of the payment when due and application in accordance with the Resolution of Second Lien Sinking Fund Installments payable before such dates, plus the unsatisfied balance (determined as provided in Section B-501 of the Resolution) of any Second Lien Sinking Fund Installments due on any certain future date for Second Lien Obligations of such Series, together with such redemption premiums, if any, applicable on any such future date, and (b) with respect to any

Second Lien Parity Debt, the amount due thereunder on the dates and in the amounts established in accordance with Section B-202 as a principal component of such Second Lien Parity Debt payable on a parity with the Second Lien Obligations.

**Second Lien Obligation Purchase Price** shall mean, with respect to any Second Lien Obligations, 100% of the principal amount thereof plus accrued interest, if any, plus in the case of a Second Lien Obligation subject to mandatory tender for purchase on a date when such Second Lien Obligations are also subject to optional redemption at a premium, an amount equal to the premium that would be payable on such Second Lien Obligations if redeemed on such date.

**Second Lien Obligation Redemption Price** shall mean, with respect to any Second Lien Obligations, 100% of the principal amount thereof plus the applicable premium, if any, payable upon the redemption thereof pursuant to the Resolution.

**Second Lien Obligation Valuation Date** shall mean (i) with respect to any Capital Appreciation Second Lien Obligations the date or dates set forth in the Supplemental Resolution authorizing such Second Lien Obligations on which specific Second Lien Obligation Accreted Values are assigned to the Capital Appreciation Second Lien Obligations and (ii) with respect to any Deferred Income Second Lien Obligations, the date or dates on or prior to the Second Lien Obligation Interest Commencement Date set forth in the Supplemental Resolution authorizing such Second Lien Obligations on which specific Second Lien Obligation Appreciated Values are assigned to the Deferred Income Second Lien Obligations.

**Second Lien Obligation Variable Interest Rate** shall mean a variable interest rate to be borne by any Second Lien Obligations. The method of computing such variable interest rate shall be specified in the Supplemental Resolution authorizing such Series of Second Lien Obligations.

**Second Lien Owner**, or any similar terms, shall mean the registered owner of any Second Lien Obligations as shown on the books for the registration and transfer of Second Lien Obligations maintained in accordance with Section B-305.

**Second Lien Parity Debt** shall mean any Parity Reimbursement Second Lien Obligations, any Parity Swap Second Lien Obligations or any other contract, agreement or other Second Lien Obligations of the Issuer designated as constituting "Second Lien Parity Debt" in a certificate of an Authorized Officer delivered to the Second Lien Trustee; provided, however, that any such Parity Reimbursement Second Lien Obligations, Parity Swap Second Lien Obligations, or other contract, agreement or other Second Lien Obligations shall not constitute Second Lien Parity Debt solely to the extent of any obligation to pay termination or other fees, expenses, indemnification or other similar payments to the counterparty to such arrangement; provided further that Parity Reimbursement Second Lien Obligations may include accelerated principal amortization provisions to the extent permitted by subsection 4 of Section B-202. Each Second Lien Parity Debt shall be payable and secured in a manner permitted by Article V, and any lien on and pledge of any portion of the Second Lien Obligations Trust Estate securing Second Lien Parity Debt shall be junior and inferior to the lien on and pledge of the Obligations Trust Estate created for the payment of the Obligations and Parity Debt.

**Second Lien Paying Agent** shall mean any paying agent for the Second Lien Obligations of any Series and its successor or successors and any other Person which may at any time be substituted in its place pursuant to the Resolution.

**Second Lien Put Obligations** shall mean Second Lien Obligations which by their terms may be tendered at the option of the Second Lien Owner thereof, or are subject to a mandatory tender other than at the election of the Issuer or a Related Entity, for payment or purchase prior to the stated maturity or redemption date thereof.

**Second Lien Registrar** shall mean any registrar for the Second Lien Obligations of any Series and its successor or successors and any other Person which may at any time be substituted in its place pursuant to the Resolution.

**Second Lien Sinking Fund Installment** shall mean, as of a particular date, any Second Lien Sinking Fund Installment established pursuant to paragraph (m) of subsection 1 of Section B-201.

**Securities Depository** shall mean a recognized securities depository selected by the Issuer to maintain a book-entry system in respect to all or any portion of a Series of Second Lien Obligations (including, as appropriate, any nominee thereof), and shall include any substitute for or successor to the Securities Depository initially acting as Securities Depository.

**Series**, when used with reference to Second Lien Obligations or Second Lien Parity Debt, shall mean all of the Second Lien Obligations delivered on original issuance pursuant to a single Supplemental Resolution and denominated therein a single series, and any Second Lien Obligations thereafter delivered in lieu of or in substitution therefor pursuant to Article B-III or Section B-406 or Section B-805, regardless of variations in maturity, interest rate, or other provisions.

**Taxable Second Lien Obligations** shall mean any Second Lien Obligations which are not Tax-Exempt Second Lien Obligations.

**Tax-Exempt Second Lien Obligations** shall mean any Second Lien Obligations the interest on which is intended by the Issuer to be generally excluded from gross income for federal income tax purposes and which are designated as Tax-Exempt Second Lien Obligations in the Supplemental Resolution authorizing such Second Lien Obligations.

**Variable Interest Rate Second Lien Obligations** shall mean Second Lien Obligations which bear a Variable Interest Rate.

## **Section B-102. Rules of Construction.**

1. This Annex B constitutes an integral part of the Resolution and, except to the extent provided in the next two sentences, has the same force and effect as if set forth in the forepart of the Resolution. To the extent expressly provided in the Resolution (not including this Annex B), the Issuer may negate, amend or modify any provision of this Annex B. In the event of any conflict between this Annex B and the forepart of the Resolution, the forepart of the

Resolution shall control. In the event of any conflict between this Annex B and Annex A in respect of Second Lien Obligations or Second Lien Parity Debt, this Annex B shall control.

2. Second Lien Obligations shall constitute Subordinated Indebtedness for all purposes of Annex A.

**Section B-103. Resolution to Constitute Contract.** In consideration of the purchase and acceptance of any and all of the Second Lien Obligations and Second Lien Parity Debt authorized to be issued hereunder by those who are Second Lien Owners of the Second Lien Obligations and Second Lien Parity Debt from time to time, the Resolution shall be deemed to be and shall constitute a contract between the Issuer and the Second Lien Owners and the holders of Second Lien Parity Debt from time to time; and the pledge made in the Resolution and the covenants and agreements therein set forth to be performed on behalf of the Issuer shall be for the equal benefit, protection and security of the Second Lien Owners of any and all of the Second Lien Obligations and Second Lien Parity Debt, all of which, regardless of the time or times of their authentication, issuance and delivery, or maturity, shall be of equal rank without preference, priority or distinction of any of the Second Lien Obligations or Second Lien Parity Debt over any other Second Lien Obligations or Second Lien Parity Debt, except as expressly provided in or permitted by the Resolution.

## **ARTICLE B-II**

### **GENERAL PROVISIONS FOR ISSUANCE OR INCURRENCE OF SECOND LIEN OBLIGATIONS, SECOND LIEN PARITY DEBT AND SECOND LIEN OBLIGATION ANTICIPATION NOTES**

#### **Section B-201. General Provisions for Issuance of Second Lien Obligations.**

1. Second Lien Obligations may be issued pursuant to a Supplemental Resolution in such principal amount or amounts for each Series or subseries as may be specified in such Supplemental Resolution. Second Lien Obligations of any Series or subseries shall be authorized by a Supplemental Resolution which shall specify, among other things, the following matters (or the manner of determining such matters):

(a) The authorized principal amount, designation and Series of such Second Lien Obligations;

(b) The purpose or purposes for which such Second Lien Obligations are being issued which shall be one or more of the purposes set forth in Section 201;

(c) The dates and the maturity dates of the Second Lien Obligations of such Series;

(d) If the Second Lien Obligations of such Series are interest bearing Second Lien Obligations, the interest rates of the Second Lien Obligations of such Series and the interest payment dates therefor;

(e) If Second Lien Obligations of such Series are Capital Appreciation Second Lien Obligations, the Second Lien Obligation Valuation Dates for such Second Lien Obligations and the Second Lien Obligation Accreted Value on each such Second Lien Obligation Valuation Date;

(f) If Second Lien Obligations of such Series are Deferred Income Second Lien Obligations, the Second Lien Obligation Interest Commencement Date for such Second Lien Obligations, the Second Lien Obligation Valuation Dates prior to the Second Lien Obligation Interest Commencement Date for such Second Lien Obligations and the Second Lien Obligation Appreciated Value on each such Second Lien Obligation Valuation Date;

(g) If Second Lien Obligations of such Series are Capital Appreciation Second Lien Obligations or Deferred Income Second Lien Obligations, the manner in which and the period during which principal and interest shall be deemed to accrue on such Second Lien Obligations;

(h) If Second Lien Obligations of such Series are Variable Interest Rate Second Lien Obligations, the maximum interest rate, if any, or the method of calculating such maximum rate for such Second Lien Obligations, and the provisions, if any, as to the calculation or change of Second Lien Obligation Variable Interest Rates;

(i) If Second Lien Obligations of such Series are Second Lien Put Obligations, provisions regarding tender for purchase or redemption thereof and payment of the purchase or Second Lien Obligation Redemption Price thereof;

(j) The denominations of, and the manner of dating, numbering and lettering, the Second Lien Obligations of such Series;

(k) The Second Lien Paying Agents, if any, and the places of payment of the principal and Second Lien Obligation Redemption Price, if any, of, and interest on, the Second Lien Obligations of such Series;

(l) The Second Lien Obligation Redemption Prices, if any, and the redemption terms, if any, for the Second Lien Obligations of such Series, provided that Second Lien Obligations of any maturity for which Second Lien Sinking Fund Installments shall be established pursuant to paragraph (m) of this subsection 1 shall in any event be redeemable, or payable at maturity, by application of the Second Lien Sinking Fund Installments for such Second Lien Obligations on the due dates of such Second Lien Sinking Fund Installments;

(m) The amount and due date of each Second Lien Sinking Fund Installment, if any, for Second Lien Obligations of like maturity of such Series;

(n) Provisions necessary to authorize, in compliance with all applicable law, Second Lien Obligations of such Series to be issued in the form of Second Lien Obligations issued and held in book-entry form on the books of the Issuer or any Fiduciary appointed for that purpose by the Issuer and, in connection therewith, make

such additional changes in the Resolution, not adverse to the rights of the Second Lien Owners, as are necessary or appropriate to accomplish or recognize such book-entry form Second Lien Obligations and specify and determine the matters and things relative to the issuance of such book-entry form Second Lien Obligations as are appropriate or necessary;

(o) To the extent applicable, the provisions relating to (a) any Second Lien Obligation Credit Facility, Qualified Second Lien Swap or other financial arrangement entered into in connection with the issuance of the Second Lien Obligations of such Series and (b) the obligations payable thereunder;

(p) The amount, if any, to be deposited in the Second Lien Obligations Proceeds Fund or any Account therein;

(q) If so determined by the Issuer, provisions for the application of any money available therefor to the purchase, exchange or redemption of Second Lien Obligations of such Series and for the order of purchase, exchange or redemption of such Second Lien Obligations;

(r) If so determined by the Issuer, provisions for the sale of the Second Lien Obligations of such Series;

(s) The forms of the Second Lien Obligations of such Series and of the Second Lien Trustee's certificate of authentication if other than as provided in Section 301; and

(t) Such other matters, not contrary to or inconsistent with the Resolution, as the Issuer may deem advisable or necessary in connection with the authorization, issuance, sale, or delivery of such Series of Second Lien Obligations.

An Authorized Officer to whom a Supplemental Resolution has delegated the power to determine any of the foregoing shall execute a Certificate of Determination evidencing such determinations or other actions taken pursuant to the delegation under such Supplemental Resolution, and such Certificate of Determination shall be conclusive evidence of the terminations or actions of such Authorized Officer as to the matters stated therein. The matters set forth in any such Certificate of Determination shall have the same effect as if set forth in the related Supplemental Resolution.

2. The Second Lien Obligations may be sold in one or more Series or subseries (each of which shall contain a designation distinguishing it from other Series or subseries) and shall be delivered by the Issuer under the Resolution but only upon receipt by the Second Lien Trustee of

(a) An Opinion of Bond Counsel in customary form to the effect that (i) the Issuer has the right and power under the Issuer Act to adopt the Resolution, and the Resolution has been duly and lawfully adopted by the Issuer, is in full force and effect, and is valid and binding upon the Issuer, and enforceable in accordance with its terms, and no other authorization for the Resolution is required as of the date thereof; (ii) the

Resolution creates the valid pledge which it purports to create of the Second Lien Obligations Trust Estate in the manner and to the extent provided in Section 501; (iii) the Second Lien Obligations are valid and binding obligations of the Issuer, enforceable in accordance with their terms and the terms of the Resolution and entitled to the benefits of the Issuer Act and the Resolution, each as amended to the date of such Opinion of Bond Counsel; and (iv) such Second Lien Obligations have been duly and validly authorized and issued in accordance with law and the Resolution;

(b) A copy of the Supplemental Resolution authorizing such Second Lien Obligations, certified by an Authorized Officer;

(c) A written order of the Issuer as to the delivery of the Second Lien Obligations, signed by an Authorized Officer;

(d) A certificate of an Authorized Officer to the effect that, upon the delivery of the Second Lien Obligations of such Series (i) no event which constitutes a default under the Resolution or any of the Second Lien Obligations shall have occurred and be continuing or, if such an event is continuing, upon issuance of the Second Lien Obligations such default shall be cured, and (ii) no such event would result from the authentication and delivery of the Second Lien Obligations of such Series;

(e) If any Second Lien Obligations are Variable Interest Rate Second Lien Obligations or a Qualified Second Lien Swap is being entered into that will result in a variable interest rate obligation of the Issuer, a determination by an Authorized Officer of the Second Lien Obligation Estimated Average Interest Rate;

(f) If any Second Lien Obligations of such Series are Second Lien Put Obligations, a determination by an Authorized Officer of the method or methods to be employed to provide for the purchase or redemption of all Second Lien Put Obligations of such Series if the Second Lien Owners thereof elected to tender for purchase or redemption the entire aggregate Outstanding principal amount of the Second Lien Put Obligations of such Series; and

(g) Such further documents and money as are required by the provisions of Article II, this Article B-II or Article VIII.

3. If Second Lien Obligations are to be listed on a domestic or foreign stock exchange, the Authorized Officers are hereby authorized to take all such actions as they deem necessary or appropriate to comply with the listing requirements of such exchange, including the appointment of a member of such exchange as listing agent, the publication where required by such exchange of all redemption notices, the appointment of a special clearing agent and paying agent, and the execution of an undertaking letter with such exchange.

4. The Second Lien Obligations shall not be a debt of the State or the City and neither the State nor the City shall be liable thereon, nor shall Second Lien Obligations be payable out of any funds other than those of the Issuer as provided in the Resolution.

**Section B-202. Second Lien Obligation Credit Facilities; Qualified Second Lien Swaps and Other Similar Arrangements; Second Lien Parity Debt.**

1. The Issuer may include such provisions in a Supplemental Resolution authorizing the issuance of a Series of Second Lien Obligations secured by a Second Lien Obligation Credit Facility as the Issuer deems appropriate, and no such provisions shall be deemed to constitute an amendment to the Resolution requiring action under Article VIII, Article A-IX or Article B-VIII, including:

(a) So long as the Second Lien Obligation Credit Facility is in full force and effect and payment on the Second Lien Obligation Credit Facility is not in default, then (i) the issuer of the Second Lien Obligation Credit Facility shall be deemed to be the sole owner of the Outstanding Second Lien Obligations the payment of which such Second Lien Obligation Credit Facility secures or (ii) in the alternative or with respect to particular matters, the approval, consent or action of the issuer of the Second Lien Obligation Credit Facility shall be required in addition to the approval, consent or action of the applicable percentage of the Second Lien Owners of the Outstanding Second Lien Obligations, in either case when the approval, consent or action of the Second Lien Owners for such Second Lien Obligations is required or may be exercised under the Resolution including Section B-803 hereof and following a Second Lien Obligations Event of Default hereunder; provided, however, that no issuer of a Second Lien Obligation Credit Facility shall be deemed to be the sole owner of Outstanding Second Lien Obligations pursuant to this provision in the event that the Second Lien Obligation Credit Facility or Second Lien Obligation Credit Facilities securing such Second Lien Obligations provide only liquidity support.

(b) In the event that the principal, Second Lien Sinking Fund Installments, if any, and Second Lien Obligation Redemption Price, if applicable, and interest due on any Outstanding Second Lien Obligations (or Second Lien Obligation Purchase Price of any Outstanding Second Lien Obligations to the extent the issuer of the Second Lien Obligation Credit Facility has not been reimbursed) shall be paid under the provisions of the Second Lien Obligation Credit Facility, all covenants, agreements and other Second Lien Obligations of the Issuer to the Second Lien Owners of such Second Lien Obligations shall continue to exist and such issuer of the Second Lien Obligation Credit Facility shall be subrogated to the rights of such Second Lien Owners in accordance with the terms of such Second Lien Obligation Credit Facility.

2. In addition, such Supplemental Resolution may establish such provisions as are necessary (i) to comply with the provisions of each such Second Lien Obligation Credit Facility, (ii) to provide relevant information to the issuer of the Second Lien Obligation Credit Facility, (iii) to provide a mechanism for paying Second Lien Obligation Principal Installments and interest on Second Lien Obligations secured by the Second Lien Obligation Credit Facility, and (iv) to make provision for any events of default or for additional or improved security required by the issuer of a Second Lien Obligation Credit Facility.

3. The Issuer may enter into such agreements with the issuer of such Second Lien Obligation Credit Facility providing for, *inter alia*: (i) the payment of fees and expenses to such issuer for the issuance of such Second Lien Obligation Credit Facility, (ii) the terms and

conditions of such Second Lien Obligation Credit Facility and the Second Lien Obligations affected thereby, and (iii) the security, if any, to be provided for the issuance of such Second Lien Obligation Credit Facility.

4. The Issuer may secure such Second Lien Obligation Credit Facility by an agreement providing for the purchase of the Second Lien Obligations secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as specified by the Issuer in the applicable Supplemental Resolution. The Issuer may also in an agreement with the issuer of such Second Lien Obligation Credit Facility agree to directly reimburse such issuer for amounts paid under the terms of such Second Lien Obligation Credit Facility (together with interest thereon, the “**Reimbursement Second Lien Obligations**”); *provided, however*, that no amounts shall be payable by the Issuer under a Reimbursement Second Lien Obligation for purposes of the Resolution, until amounts are paid under such Second Lien Obligation Credit Facility by the issuer thereof as determined by Supplemental Resolution, any such Reimbursement Second Lien Obligations, which may include interest calculated at a rate higher than the interest rate on the related Second Lien Obligations and accelerated principal amortization, (i) may be secured by a pledge of, and a lien on, the Second Lien Obligations Trust Estate on a parity with the lien created by Section 501 of the Resolution to secure the Second Lien Obligations (a “**Parity Reimbursement Second Lien Obligation**”), but only to the extent that (prior to any acceleration of all Second Lien Obligations, if permitted) any principal amortization requirements are *either* (A) commensurate with the amortization requirements for such related Second Lien Obligations, without acceleration or (B) accelerated to no greater extent than to require repayment in equal principal installments over 5 or more years, or (ii) may constitute an Other Subordinated Contract Obligation, as determined by the Issuer. Parity Reimbursement Second Lien Obligations shall not include any payments (other than interest calculated at a higher rate pursuant to a Second Lien Obligation Credit Facility) (x) of any fees or expenses, (y) pursuant to any indemnification provisions or (z) pursuant to term-loan or other principal amortization requirements in reimbursement of any such advance that are more accelerated than permitted by clauses (A) and (B) of the preceding sentence, and any such payments of the items specified in clauses (x), (y) or (z) shall be paid from amounts available to be transferred pursuant to clause third of subsection 4 of Section 505 of the Resolution.

5. Any such Second Lien Obligation Credit Facility shall be for the benefit of and secure such Second Lien Obligations or portion thereof as specified in any applicable Supplemental Resolution.

6. In connection with the issuance of any Second Lien Obligations or at any time thereafter so long as Second Lien Obligations remain Outstanding, the Issuer may, to the extent permitted pursuant to law, from time to time enter into Qualified Second Lien Swaps. The Issuer’s obligation to pay any amount under any Qualified Second Lien Swap may be secured by a pledge of, and a lien on the Second Lien Obligations Trust Estate on a parity with the lien created by Section 501 of the Resolution to secure the Second Lien Obligations (a “**Parity Swap Second Lien Obligation**”), or may constitute a Second Lien Parity Debt, as determined by the Issuer. Parity Swap Second Lien Obligations shall not include any payments of (x) of any fees or expenses, (y) pursuant to any indemnification provisions or (z) any termination payments or other obligations to a counterparty to a Qualified Second Lien Swap, which payments shall be

paid from amounts available to be transferred pursuant to clause third of subsection 4 of Section 505 of the Resolution.

7. Second Lien Parity Debt shall not be a debt of the State or the City and neither the State nor the City shall be liable thereon, nor shall Second Lien Parity Debt be payable out of any funds other than those of the Issuer pledged therefor pursuant to the Resolution.

8. Except to the extent that an Authorized Officer directs that such amounts be deposited in any other Fund or Account pledged to the payment of Second Lien Obligations, any amounts paid to the Issuer under a Qualified Second Lien Swap shall be deposited in the Second Lien Obligations Debt Service Fund.

9. To the extent applicable and not readily apparent with respect any Second Lien Parity Debt, either the terms of such Second Lien Parity Debt shall specify (or an Authorized Officer shall specify in writing) the interest and principal components of or the scheduled payments corresponding to principal and interest under such Second Lien Parity Debt or the manner of determining the foregoing.

**Section B-203. Second Lien Obligation Anticipation Notes.** Whenever the Issuer shall have, by Supplemental Resolution, authorized the issuance of a Series of Second Lien Obligations, the Issuer may by resolution authorize the issuance of Second Lien Obligation Anticipation Notes in anticipation of the issuance of such authorized Series of Second Lien Obligations, in a principal amount not exceeding the principal amount of the Second Lien Obligations of such Series so authorized. The principal of and premium, if any, and interest on such Second Lien Obligation Anticipation Notes and any renewals of such Second Lien Obligation Anticipation Notes shall be payable only from any or all of the following items designated by the Issuer at or prior to issuance of any such series of Second Lien Obligation Anticipation Notes: (i) the proceeds of any renewals of such Second Lien Obligation Anticipation Notes issued to repay such Second Lien Obligation Anticipation Notes, (ii) the proceeds of the sale of the Series of Second Lien Obligations in anticipation of which such Second Lien Obligation Anticipation Notes are issued, (iii) amounts available to pay Other Subordinated Obligations, or (iv) any other money available therefor and not pledged under the Resolution. Such proceeds and other amounts set forth in clauses (i), (ii), (iii) and (iv) may be pledged for the payment of the principal of and premium, if any, and interest on such Second Lien Obligation Anticipation Notes, and any such pledge of the items set forth in clauses (i) and (ii) shall have priority over any other pledge created by the Resolution, including Section 501. In any case, such Second Lien Obligation Anticipation Notes shall be retired or provision shall be made for their retirement not later than the date of authentication and delivery of the Series of Second Lien Obligations in anticipation of which they are issued. The proceeds of the sale of Second Lien Obligation Anticipation Notes other than renewals thereof shall be applied to the purposes for which the Second Lien Obligations in anticipation of which such Second Lien Obligation Anticipation Notes are authorized and shall be deposited in the appropriate Fund or Account established by the Resolution for such purposes or, if so provided in the resolution authorizing renewals of Second Lien Obligation Anticipation Notes issued to pay outstanding Second Lien Obligation Anticipation Notes, applied directly to such payment. Investment earnings from any amounts on deposit in any Fund or Account under the Resolution representing

the proceeds of any Second Lien Obligation Anticipation Notes shall be applied in the manner set forth in the resolution authorizing such Second Lien Obligation Anticipation Notes.

## **ARTICLE B-III**

### **GENERAL TERMS AND PROVISIONS OF SECOND LIEN OBLIGATIONS**

Except as otherwise provided by Supplemental Resolution, the Second Lien Obligations and Second Lien Parity Debt shall be subject to the terms and provisions of the Standard Resolutions Provisions and these Supplemental Standard Resolution Provisions.

#### **Section B-301. Medium of Payment; Form and Date.**

1. The Second Lien Obligations and Second Lien Parity Debt shall be payable, with respect to interest, principal and Redemption Price, in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts (or to the extent permitted by law, in any other coin or currency authorized pursuant to a Supplemental Resolution for Second Lien Obligations and related Second Lien Parity Debt).

2. Second Lien Obligations shall be issued in the form of fully registered Second Lien Obligations without coupons. Second Lien Obligations, the certificate of authentication, if any, and the form of assignment shall be in substantially the form provided for in Exhibit Two of the Resolution with such appropriate variations, omissions, substitutions and insertions as are permitted or required hereby or thereby or are required by law, and may have such letters, numbers or other marks of identification and such legends and endorsements placed thereon as may be required to comply with any applicable laws or rules or regulations, or as may, consistent herewith, be determined by the officers executing such Second Lien Obligations, as evidenced by their execution of the Second Lien Obligations. Any portion of the text of any Second Lien Obligations may be set forth on the reverse thereof, with an appropriate reference thereto on the face of such security evidencing Second Lien Obligations, or as multiple pages (with or without such a reference). Second Lien Obligations may be typewritten, printed, engraved, lithographed or otherwise produced.

3. Second Lien Obligations shall be dated, and shall bear or not bear interest, as provided in the Supplemental Resolution authorizing such Second Lien Obligations.

**Section B-302. Legends.** Second Lien Obligations may contain or have endorsed thereon such provisions, specifications and descriptive words not inconsistent with the provisions of the Resolution as may be necessary or desirable to comply with custom, the rules of any securities exchange or commission or brokerage board, or otherwise, as may be determined by the Issuer.

#### **Section B-303. Execution and Authentication.**

1. The Second Lien Obligations shall be executed in the name of the Issuer by the manual or facsimile signature of an Authorized Officer or in such other manner as may be required by law or specified in a Supplemental Resolution. In case any of the officers who shall have signed any of the Second Lien Obligations shall cease to be such officer before the Second

Lien Obligations so signed shall have been actually delivered, such Second Lien Obligations may, nevertheless, be delivered as herein provided, and may be issued as if the Persons who signed such Second Lien Obligations had not ceased to hold such offices. Any Second Lien Obligations may be signed on behalf of the Issuer by such Persons as at the actual time of the execution of such Second Lien Obligations shall be duly authorized or hold the proper office in the Issuer, although at the date of the Second Lien Obligations such Persons may not have been so authorized or have held such office.

2. Second Lien Obligations of each Series shall bear thereon a certificate of authentication, executed manually by the Second Lien Trustee. Only such Second Lien Obligations as shall bear thereon such certificate of authentication shall be entitled to any right or benefit under the Resolution and no Second Lien Obligations shall be valid or obligatory for any purpose until such certificate of authentication shall have been duly executed by the Second Lien Trustee. Such certificate of the Second Lien Trustee upon any Second Lien Obligations executed on behalf of the Issuer shall be conclusive evidence that the Second Lien Obligations so authenticated has been duly authenticated and delivered under the Resolution and that the Second Lien Owner thereof is entitled to the benefits of the Resolution.

**Section B-304. Interchangeability of Second Lien Obligations.** Second Lien Obligations, upon surrender thereof at the office of the Second Lien Registrar with a written instrument of transfer satisfactory to the Second Lien Registrar, duly executed by the Second Lien Owner or his duly authorized attorney, may, at the option of such Second Lien Owner, be exchanged for an equal aggregate principal amount of Second Lien Obligations of the same Series, maturity and interest rate of any other authorized denomination.

**Section B-305. Negotiability, Transfer and Registry.** All the Second Lien Obligations issued under the Resolution shall be negotiable, subject to the provisions for registration and registration of transfer contained in the Resolution and in the Second Lien Obligations. So long as any of the Second Lien Obligations shall remain Outstanding, the Issuer shall maintain and keep, at the office of the Second Lien Registrar, books for the registration and registration of transfer of Second Lien Obligations; and, upon presentation thereof for such purpose at said office and under such reasonable regulations as it or the Second Lien Registrar may prescribe, the Issuer shall register or cause to be registered therein, and permit to be transferred thereon, the registration of any Second Lien Obligations entitled to registration or registration of transfer. So long as any of the Second Lien Obligations remain Outstanding, the Issuer shall make all necessary provision to permit the exchange of Second Lien Obligations at the office of the Second Lien Registrar.

**Section B-306. Transfer of Second Lien Obligations.**

1. The transfer of each Second Lien Obligations shall be registerable only upon the books of the Issuer, which shall be kept by the Second Lien Registrar, by the Second Lien Owner thereof in person or by his attorney authorized in writing, upon surrender thereof together with a written instrument of transfer satisfactory to the Second Lien Registrar executed by the Second Lien Owner or his authorized attorney. Upon the registration of transfer of any such Second Lien Obligations, the Issuer shall issue in the name of the transferee a new Second Lien

Obligation of the same aggregate principal amount, Series, maturity and interest rate as the surrendered Second Lien Obligation.

2. The Issuer and each Fiduciary may deem and treat the Person in whose name any Outstanding Second Lien Obligations shall be registered upon the books of the Issuer as the absolute owner of such Second Lien Obligations, whether such Second Lien Obligations shall be overdue or not, for the purpose of receiving payment of or on account of the principal and Second Lien Obligation Redemption Price, if any, of and interest on such Second Lien Obligations and for all other purposes, and all such payments so made to any such registered owner or upon his order shall be valid and effectual to satisfy and discharge the liability upon such Second Lien Obligations to the extent of the sum or sums so paid, and neither the Issuer nor any Fiduciary shall be affected by any notice to the contrary. The Issuer agrees to indemnify and save each Fiduciary harmless from and against any and all loss, cost, charge, expense, judgment or liability incurred by it, unless acting in bad faith or with negligence under the Resolution, in so treating such registered owner.

**Section B-307. Regulations With Respect to Exchanges and Transfers.** In all cases in which the privilege of exchanging Second Lien Obligations or registering the transfer of Second Lien Obligations is exercised, the Issuer shall execute and the Second Lien Registrar shall deliver Second Lien Obligations in accordance with the provisions of the Resolution. All Second Lien Obligations surrendered in any such exchanges or registrations of transfer shall forthwith be canceled by the Second Lien Registrar. For every such exchange or registration of transfer of Second Lien Obligations, whether temporary or definitive, the Issuer or the Second Lien Registrar may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer.

**Section B-308. Second Lien Obligations Mutilated, Destroyed, Stolen or Lost.** In case any Second Lien Obligations shall become mutilated or be destroyed, stolen or lost, the Issuer shall execute, and thereupon the Second Lien Trustee and Second Lien Registrar shall deliver, a new Second Lien Obligations of like tenor, Series, maturity, interest rate and principal amount as the Second Lien Obligations so mutilated, destroyed, stolen or lost, in exchange and substitution for such mutilated Second Lien Obligations, upon surrender and cancellation of such mutilated Second Lien Obligations, or in lieu of and substitution for the Second Lien Obligations destroyed, stolen or lost, upon filing with the Second Lien Trustee and Second Lien Registrar evidence satisfactory to the Issuer and the Second Lien Trustee and Second Lien Registrar that such Second Lien Obligations has been destroyed, stolen or lost and proof of ownership thereof, and upon furnishing the Issuer and the Second Lien Trustee and Second Lien Registrar with indemnity satisfactory to them and complying with such other reasonable regulations as the Issuer and the Second Lien Trustee and Second Lien Registrar may prescribe and paying such expenses as the Issuer and Second Lien Trustee and Second Lien Registrar may incur. All Second Lien Obligations so surrendered to the Second Lien Registrar shall be canceled by it. If any such Second Lien Obligations shall have matured, or if such Second Lien Obligations shall have been called for redemption or a redemption date pertaining thereto shall have passed, instead of issuing a new Second Lien Obligation the Issuer may cause the same to be paid without surrender thereof upon indemnity satisfactory to the Issuer and the Second Lien Trustee. Any such new Second Lien Obligations issued pursuant to this Section in substitution for Second Lien Obligations alleged to be destroyed, stolen or lost shall constitute original additional

contractual obligations on the part of the Issuer, whether or not the Second Lien Obligations so alleged to be destroyed, stolen or lost be at any time enforceable by anyone, and shall be equally secured by and entitled to equal and proportionate benefits with all other Second Lien Obligations issued under the Resolution, in any money or securities held by the Issuer or the Fiduciary for the benefit of the Second Lien Owners.

**Section B-309. Book-Entry-Only System.** The Issuer may employ a book-entry-only system of registration with respect to any Second Lien Obligations and may utilize the procedures regarding such registration set forth in this Section B-309, as such procedures may be modified or superseded pursuant to the Supplemental Resolution authorizing such Second Lien Obligations. Any provisions of the Resolution inconsistent with book-entry-only Second Lien Obligations shall not be applicable to such book-entry-only Second Lien Obligations.

Any Authorized Officer is hereby authorized to take all actions required for each Series of Second Lien Obligations to be eligible under the rules and regulations of The Depository Trust Company ("DTC"), 55 Water Street, New York, New York, for investment and trading as uncertificated securities. DTC is hereby appointed as the initial Securities Depository for the obligations, with Cede & Co., a nominee thereof, being the initial registered owner of the Second Lien Obligations. In the event that any Securities Depository resigns or is removed, any Authorized Officer may select a substitute Securities Depository. The Issuer and any Fiduciary, and any agent of the Issuer or any Fiduciary, may treat any Securities Depository in whose name any Second Lien Obligation is registered as the owner of such Second Lien Obligations for all purposes under the Resolution. For so long as the Securities Depository is the registered owner of the Second Lien Obligations, procedures with respect to the transmission of notices and the transfer of ownership of, redemption of and payment of principal or Second Lien Obligation Redemption Price, if any, of and interest on such Second Lien Obligations so held shall be in accordance with arrangements among the Second Lien Trustee, the Issuer and the Securities Depository.

So long as the Second Lien Obligations are registered in the name of the Securities Depository, the Issuer and the Second Lien Trustee shall have no responsibility or obligation to any Securities Depository participant, indirect participant or beneficial owner of the Second Lien Obligations. Without limiting the immediately preceding sentence, the Issuer and the Second Lien Trustee shall have no responsibility or obligation with respect to (i) the accuracy of the records of any Securities Depository or any Securities Depository participant or indirect participant with respect to any beneficial ownership interest in the Second Lien Obligations, (ii) the delivery to any Securities Depository participant, indirect participant, beneficial owner or any other person, other than the Securities Depository, of any notice with respect to the Second Lien Obligations, including any notice of redemption or tender, or (iii) the payment to any Securities Depository participant, indirect participant, beneficial owner or any other person, other than the Securities Depository, of any amount with respect to the principal of or Second Lien Obligation Redemption Price or interest on the Second Lien Obligations.

The Issuer, in its sole discretion and without the consent of any other person, may terminate the services of any Securities Depository with respect to any Series of Second Lien Obligations. Notice of such termination shall be given by the Issuer to the Second Lien Trustee prior to or simultaneously with such termination. In the event the book-entry only system is

discontinued with respect to the Second Lien Obligations, principal and Redemption Price of and interest on the Second Lien Obligations shall be paid as provided in the Resolution.

Consistent with DTC book-entry provisions, one or more typewritten certificates shall be prepared for each maturity of the Second Lien Obligations of a Series and registered in the name of the Securities Depository. There shall be no physical distribution of bond or other certificates to beneficial owners of such Second Lien Obligations. In the event that the Second Lien Obligations do not qualify to be held by the Securities Depository or that either the Issuer determines to discontinue the book-entry only system or DTC determines to discontinue providing its service with respect to the Second Lien Obligations and there is no successor Securities Depository, the bond or other certificates shall be delivered in the form required by the Resolution.

Unless otherwise directed by an Authorized Officer, “CUSIP” or other recognized identification numbers (“CUSIP numbers”) will be imprinted on the Second Lien Obligations, but such numbers shall not constitute a part of the contract evidenced by the Second Lien Obligations and any error or omission with respect thereto shall not constitute cause for refusal of any purchaser to accept delivery of and pay for the Second Lien Obligations. As a convenience to the Second Lien Owners, the Issuer and the Second Lien Trustee may use such CUSIP numbers in any notices to the Second Lien Owners, including any notices of redemption of the Second Lien Obligations. Failure on the part of the Issuer or the Second Lien Trustee to use such CUSIP numbers in any notice to Second Lien Owners shall not constitute a Second Lien Obligations Event of Default or any similar violation of the Issuer’s contract with such Second Lien Owners. The Issuer will promptly notify the Second Lien Trustee of any change in the CUSIP numbers.

## **ARTICLE B-IV**

### **REDEMPTION AND TENDER OF SECOND LIEN OBLIGATIONS**

**Section B-401. Privilege of Redemption and Second Lien Obligation Redemption Price.** Except as otherwise provided in the Resolution or a Supplemental Resolution, Second Lien Obligations subject to redemption pursuant to a Supplemental Resolution shall be subject to redemption only in accordance with this Article B-IV.

Second Lien Obligations subject to redemption prior to maturity pursuant to a Supplemental Resolution shall be redeemable, upon written notice as provided in this Article B-IV, at such times, at such Second Lien Obligation Redemption Prices and upon such terms as may be specified in the Supplemental Resolution authorizing such Second Lien Obligations.

**Section B-402. Redemption at the Election of the Issuer; Tender to Related Entities.** In the case of any redemption of Second Lien Obligations at the election of the Issuer, the Issuer shall give written notice to the Second Lien Trustee of its election so to redeem, of the redemption date, of the Series, of the principal amounts of the Second Lien Obligations of each maturity and interest rate of such Series to be redeemed (which Series, maturities, interest rates and principal amounts thereof to be redeemed shall be determined by the Issuer in its sole

discretion, subject to any limitations with respect thereto contained in any Supplemental Resolution). Such notice shall be given at least 45 days prior to the redemption date or such shorter period as may be provided in the Supplemental Resolution or as shall be acceptable to the Second Lien Trustee. In the event notice of redemption shall have been given as in Section B-405 provided but subject to the second paragraph of Section B-405, the Issuer shall on or prior to the redemption date cause to be paid out to the appropriate Second Lien Paying Agent or Second Lien Paying Agents out of money available therefor an amount in cash which, in addition to other money, if any, available therefor held by such Second Lien Paying Agent or Second Lien Paying Agents, will be sufficient to redeem on the redemption date at the Second Lien Obligation Redemption Price thereof, all of the Second Lien Obligations to be redeemed.

To the extent provided by Supplemental Resolution the Issuer may, in its sole discretion, purchase or grant to any Related Entity the option to purchase, at any time and from time to time, any Second Lien Obligations which are redeemable at the election of the Issuer at a purchase price equal to the redemption price therefor. To exercise any such option, the Issuer or the Related Entity shall give the Second Lien Trustee a written request exercising such option within the time periods specified in the related Supplemental Resolution as though such written request were a written request of the related Issuer for redemption, and the Second Lien Trustee shall thereupon give the Second Lien Owners of the Second Lien Obligations to be purchased notice of such purchase in the manner specified in the related Supplemental Resolution as though such purchase were a redemption. On the date fixed for purchase pursuant to any exercise of such an option, the Issuer or the Related Entity shall pay the purchase price of the Second Lien Obligations then being purchased to the Second Lien Trustee in immediately available funds, and the Second Lien Trustee shall pay the same to the sellers of such Second Lien Obligations against delivery thereof. Following such purchase, the Second Lien Trustee shall cause such Second Lien Obligations to be registered in the name of the Issuer or the Related Entity or its nominee and shall deliver them to the Issuer, the Related Entity or its nominee. Except to the extent otherwise directed by an Authorized Officer, no purchase of Second Lien Obligations pursuant to such an option shall operate to extinguish the indebtedness of the Issuer evidenced thereby. Any such option to purchase by a Related Entity either shall be conditioned on the provision of sufficient money therefor by the Related Entity or shall be an obligation of the Issuer in the event that the Related Entity does not provide sufficient money therefor.

**Section B-403. Redemption Otherwise Than at the Issuer's Election.** Whenever by the terms of the Resolution Second Lien Obligations are required to be redeemed otherwise than at the election of the Issuer, the Second Lien Trustee shall select the Second Lien Obligations to be redeemed, give the notice of redemption and pay out of money available therefor the Second Lien Obligation Redemption Price to the appropriate Second Lien Paying Agents in accordance with the terms of this Article B-IV. The Second Lien Trustee shall have no liability in making such selection.

**Section B-404. Selection of Second Lien Obligations to Be Redeemed.** In the event of redemption of less than all the Outstanding Second Lien Obligations of like tenor, Series, maturity and interest rate, the Second Lien Trustee shall select, as directed by the Issuer (as to the timing of such selection, manner of such selection or otherwise) or otherwise in such manner as the Second Lien Trustee in its discretion shall deem appropriate and fair, the numbers of the Second Lien Obligations to be redeemed and portions of any thereof to be redeemed in

part. Second Lien Obligations of denominations equal or less than the minimum authorized denomination thereof may be redeemed only as a whole. Second Lien Obligations of denominations of more than the minimum authorized denomination thereof may be redeemed either as a whole or in part (which, if redeemed in part, must assure that the portion of the Second Lien Obligations which is not redeemed is an authorized denomination). For the purposes of this Section B-404, Second Lien Obligations, or portions thereof, theretofore selected for redemption shall not be deemed Outstanding.

**Section B-405. Notice of Redemption.** When the Second Lien Trustee shall receive notice from the Issuer of its election to redeem Second Lien Obligations pursuant to Section B-402, and when redemption of Second Lien Obligations is required by the Resolution pursuant to Section B-403, the Second Lien Trustee shall give notice, in the name of the Issuer, of the redemption of such Second Lien Obligations, which notice shall specify the Series (including CUSIP numbers), maturities and, if any maturity shall include Second Lien Obligations bearing different interest rates and all Second Lien Obligations of such maturity are not being redeemed, the interest rate of the Second Lien Obligations to be redeemed, the redemption date and the place or places where amounts due upon such redemption will be payable and, if less than all of the Second Lien Obligations of any like tenor, Series, maturity and interest rate are to be redeemed, the letters and numbers or other distinguishing marks of such Second Lien Obligations so to be redeemed, and, in the case of Second Lien Obligations to be redeemed in part only, such notice shall also specify the respective portions of the principal amount thereof to be redeemed, and, if applicable, that such notice is conditional and the conditions that must be satisfied. Such notice shall further state that on such date there shall become due and payable upon the Second Lien Obligations to be redeemed the Second Lien Obligation Redemption Price thereof, or the Second Lien Obligation Redemption Price of the specified portions of the principal thereof in the case of Second Lien Obligations to be redeemed in part only, together with interest accrued to the redemption date; and that from and after such date interest thereon shall cease to accrue and be payable. Such notice shall be given not less than 30 days nor more than 45 days, or for such other period as may be specified in a Supplemental Resolution authorizing a particular Series, before the redemption date, to the Second Lien Owners of any Second Lien Obligations or portions of Second Lien Obligations which are to be redeemed. Failure so to give any such notice to any particular Owner shall not affect the validity of the proceedings for the redemption of Second Lien Obligations not owned by such Second Lien Owner and failure of any Second Lien Owner to receive such notice shall not affect the validity of the proposed redemption of Second Lien Obligations. The Issuer may provide notices of redemption at such additional times as it may determine necessary or appropriate.

Any notice of optional redemption given pursuant to this Section may state that it is conditional upon receipt by the Second Lien Trustee of money sufficient to pay the Second Lien Obligation Redemption Price of such Second Lien Obligations or upon the satisfaction of any other condition, or that it may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before payment of such Second Lien Obligation Redemption Price if any such condition so specified is not satisfied or if any such other event occurs. Notice of such rescission shall be given by the Second Lien Trustee to affected Second Lien Owners as promptly as practicable upon the failure of such condition or the occurrence of such other event.

Unless otherwise provided by Supplemental Resolution, notices of redemption shall be sent by first class mail, postage prepaid.

Notice of redemption of any Series of Second Lien Obligations shall also be sent by the Second Lien Trustee to such additional Persons as may be specified in the Supplemental Resolution authorizing such Series.

**Section B-406. Payment of Redeemed Second Lien Obligations.** Notice having been given in the manner provided in Section B-405, the Second Lien Obligations or portions thereof so called for redemption shall, subject to the second paragraph of Section B-405, become due and payable on the redemption date so designated at the Second Lien Obligation Redemption Price, plus interest accrued and unpaid to the redemption date, and, upon presentation and surrender thereof at the office specified in such notice, such Second Lien Obligations, or portions thereof, shall be paid at the Second Lien Obligation Redemption Price plus interest accrued and unpaid to the redemption date. If there shall be called for redemption less than all of a Second Lien Obligation, the Issuer shall execute and cause to be delivered, upon the surrender of such Second Lien Obligation, without charge to the owner thereof, for the unredeemed balance of the principal amount of the Second Lien Obligation so surrendered, at the option of the owner thereof, Second Lien Obligations of like tenor, Series, maturity and interest rate in any of the authorized denominations. If, on the redemption date, money for the redemption of all the Second Lien Obligations or portions thereof of any like tenor, Series, maturity and interest rate to be redeemed, together with interest to the redemption date, shall be held by the Second Lien Paying Agents so as to be available therefor on said date and if notice of redemption shall have been given as aforesaid, then, from and after the redemption date interest on the Second Lien Obligations or portions thereof of such Series, maturity and interest rate so called for redemption shall cease to accrue. If said money shall not be so available on the redemption date, such Second Lien Obligations or portions thereof shall continue to bear interest until paid at the same rate as they would have borne had they not been called for redemption.

## **ARTICLE B-V**

### **SECOND LIEN SINKING FUND INSTALLMENTS; CANCELLATION AND DISPOSITION OF SECOND LIEN OBLIGATIONS**

#### **Section B-501. Satisfaction of Second Lien Sinking Fund Installments.**

1. Any amount accumulated in the Second Lien Debt Service Fund in respect of and up to the unsatisfied balance of each Second Lien Sinking Fund Installment shall be applied by the Second Lien Trustee to either (a) or (b) below as directed by the Issuer (together with amounts accumulated in the Second Lien Debt Service Fund with respect to interest on the Series of Second Lien Obligations for which such Second Lien Sinking Fund Installment was established) if so directed by an Authorized Officer prior to the 45th day preceding the due date of such Second Lien Sinking Fund Installment as follows:

(a) to the purchase of Second Lien Obligations for which such Second Lien Sinking Fund Installment was established, at prices (including any brokerage and other charges) not exceeding the principal amount of such Second Lien Obligations plus unpaid

interest accrued to the date of purchase, such purchases to be made in such manner as the Issuer shall direct; or

(b) to the redemption of Second Lien Obligations for which such Second Lien Sinking Fund Installment was established, if then redeemable by their terms at the prices referred to in clause (a) of this subsection 1 of this Section B-501.

All Second Lien Obligations so purchased or redeemed shall be canceled by the Second Lien Trustee prior to the 45th day preceding the due date of such Second Lien Sinking Fund Installment.

2. Upon the purchase or redemption of any Second Lien Obligations pursuant to subsection 1 of this Section, an amount equal to the principal amount of the Second Lien Obligations so purchased or redeemed shall be credited toward the next Second Lien Sinking Fund Installment thereafter to become due with respect to the Second Lien Obligations of such maturity and the amount of any excess of the amounts so credited over the amount of such Second Lien Sinking Fund Installment shall be credited by the Second Lien Trustee against future Second Lien Sinking Fund Installments for such Series as specified by an Authorized Officer. Prior to the purchase or redemption of such Second Lien Obligations, the Issuer shall deliver to the Second Lien Paying Agent and to the Second Lien Trustee a certificate of an Authorized Officer specifying (i) the principal amount, Series, maturity, interest rate and numbers of the Second Lien Obligations so to be purchased or redeemed, (ii) the date and Series of the Second Lien Sinking Fund Installment in satisfaction of which such Second Lien Obligations are so to be purchased or redeemed, (iii) the aggregate principal amount of the Second Lien Obligations so to be purchased or redeemed, and (iv) the unsatisfied balance of each such Second Lien Sinking Fund Installment after giving effect to the delivery of such Second Lien Obligations.

3. In satisfaction, in whole or in part, of any Second Lien Sinking Fund Installment, the Issuer may deliver to the Second Lien Trustee at least 45 days prior to the date of such Second Lien Sinking Fund Installment, for cancellation, Second Lien Obligations acquired by purchase or redemption, except Second Lien Obligations acquired by purchase or redemption pursuant to the provisions of subsection 1 of this Section, of the maturity and interest rate entitled to such Second Lien Sinking Fund Installment. All Second Lien Obligations so delivered to the Second Lien Trustee in satisfaction of a Second Lien Sinking Fund Installment shall reduce the amount thereof by the amount of the aggregate principal amount of such Second Lien Obligations. Concurrently with such delivery of such Second Lien Obligations the Issuer shall deliver to the Second Lien Paying Agent and to the Second Lien Trustee a certificate of an Authorized Officer, specifying (i) the principal amount, Series, maturity, interest rate and numbers of the Second Lien Obligations so delivered, (ii) the date and Series of the Second Lien Sinking Fund Installment in satisfaction of which such Second Lien Obligations are so delivered, (iii) the aggregate principal amount of the Second Lien Obligations so delivered, and (iv) the unsatisfied balance of each such Second Lien Sinking Fund Installment after giving effect to the delivery of such Second Lien Obligations.

4. The Second Lien Trustee shall, upon receipt of the notice and in the manner required by the Resolution, call for redemption, on the date of each Second Lien Sinking Fund

Installment falling due prior to maturity, such principal amount of Second Lien Obligations of the Series, interest rate and maturity entitled to such Second Lien Sinking Fund Installment as is required to exhaust the unsatisfied balance of such Second Lien Sinking Fund Installment.

**Section B-502. Cancellation and Disposition of Second Lien Obligations.** All Second Lien Obligations that have been paid (whether at maturity or by acceleration, call for redemption, purchase by the Issuer and presentation for cancellation, or otherwise) or delivered to the Second Lien Trustee for cancellation shall be canceled and not reissued, except as otherwise provided in a Supplemental Resolution with respect to Second Lien Put Obligations. Unless otherwise directed by the Issuer, the Second Lien Trustee shall treat canceled Second Lien Obligations in accordance with its document retention policies. Notwithstanding any other provision of the Resolution, the Issuer may in its sole discretion purchase any Second Lien Obligations of the Issuer or any Related Entity for investment purposes and any such Second Lien Obligations shall remain outstanding unless and until presented for cancellation.

## **ARTICLE B-VI**

### **PARTICULAR COVENANTS OF THE ISSUER**

The Issuer covenants and agrees with the Second Lien Trustee and the Second Lien Owners as follows:

**Section B-601. Payment of Second Lien Obligations and Second Lien Parity Debt.** The Issuer shall duly and punctually pay or cause to be paid from the Second Lien Obligations Trust Estate as provided in the Resolution the principal or Second Lien Obligation Redemption Price, if any, of every Second Lien Obligations and the interest thereon and all Second Lien Parity Debt, at the dates and places, and in the manner provided in the Second Lien Obligations and Second Lien Parity Debt, according to the true intent and meaning thereof.

**Section B-602. Extension of Payment of Second Lien Obligations.** The Issuer shall not directly or indirectly extend or assent to the extension of the maturity of any of the Second Lien Obligations or the time of payments of any claims for interest by the purchase or funding of such Second Lien Obligations or claims for interest or by any other arrangement, and in case the maturity of any of the Second Lien Obligations or the time for payment of such claims for interest shall be extended, such Second Lien Obligations or claims for interest shall not be entitled, in case of any Second Lien Obligations Event of Default, to the benefit of the Resolution or to any payment out of the Second Lien Obligations Trust Estate, except subject to the prior payment of the principal of all Second Lien Obligations Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Second Lien Obligations as shall not be represented by such extended claims for interest. Nothing herein shall be deemed to limit the right of the Issuer (i) to issue refunding Second Lien Obligations as provided in the Resolution and such issuance shall not be deemed to constitute an extension of maturity of the Second Lien Obligations, (ii) to issue Second Lien Put Obligations and neither such issuance nor the operation of the provisions of such Second Lien Put Obligations shall be deemed to constitute an extension of maturity of the Second Lien Obligations, (iii) to apply any amount in any Fund held under the Resolution for such purpose to the purchase or redemption of Second Lien Obligations or (iv) to issue securities having a maturity date, including any

extension of maturity contemplated at the time of issuance, of no more than 270 days from the issue date.

**Section B-603. Offices for Servicing Second Lien Obligations.** Except as otherwise provided in the Resolution, the Issuer shall at all times maintain one or more offices or agencies in the City and State where Second Lien Obligations may be presented for payment, registration, transfer or exchange, and where notices, demands and other documents may be served upon the Issuer in respect of the Second Lien Obligations or of the Resolution. The Issuer may appoint the Second Lien Trustee or any other Fiduciary as its agent to maintain such office or agency for the payment, redemption, registration, transfer or exchange of Second Lien Obligations and for the service upon the Issuer of such notices, demands and other documents. The Issuer may also maintain one or more offices or agencies outside of the City or State for the same purposes.

**Section B-604. Further Assurance.** To the extent permitted by law, the Issuer from time to time shall make, do, execute, adopt, acknowledge and deliver, and take all and every such further acts, deeds, conveyances, assignments, resolutions, transfers and assurances as may be necessary or desirable for the better assuring, conveying, granting, assigning and confirming all and singular the rights and interests in the Second Lien Obligations Trust Estate or assigned, or intended so to be, or which the Issuer may become bound to pledge or assign.

**Section B-605. Accounts and Reports.**

1. The Issuer shall keep proper books of record and account of its operations. Such books of account are to be audited at least annually by independent certified public accountants experienced in governmental accounting selected by the Issuer. A copy of each audit report, annual balance sheet and income and expense statement shall be filed with the Second Lien Trustee and sent to any Second Lien Owner filing with the Issuer a written request therefor.

2. The Issuer shall annually, within 6 months after the close of each fiscal year or at such other time required under applicable law or a subsequent contract with all or certain Second Lien Owners (or, if not available by such date, when and if available), file with the Second Lien Trustee, and otherwise as provided by law, a copy of an annual report for such year, accompanied by the opinion of the accountants specified in subsection 1 of this Section.

**Section B-606. General.**

1. The Issuer shall do and perform or cause to be done and performed all acts and things required to be done or performed by or on behalf of the Issuer under the provisions of the Resolution and, to the extent material to the interests of Second Lien Owners, the Issuer Act.

2. Upon the date of authentication and delivery of any of the Second Lien Obligations, all conditions, acts and things required by law and the Resolution to exist, to have happened and to have been performed precedent to and in connection with the issuance of such Second Lien Obligations (and any related Second Lien Parity Debt then being incurred) shall exist, shall have happened and shall have been performed and the issuance of such Second Lien Obligations (and any related Second Lien Parity Debt then being incurred), together with all

other indebtedness of the Issuer, shall be within every debt and other limit prescribed by the laws of the State, as applicable.

## **ARTICLE B-VII**

### **CONCERNING THE SECOND LIEN TRUSTEE, SECOND LIEN PAYING AGENTS AND THE SECOND LIEN REGISTRAR**

#### **Section B-701. Second Lien Trustee; Appointment and Acceptance of Duties.**

On or prior to the delivery of any Second Lien Obligations, the Issuer shall appoint a Second Lien Trustee. The Second Lien Trustee shall signify its acceptance of the duties and Second Lien Obligations imposed upon it by the Resolution by executing and delivering to the Issuer a written acceptance thereof.

#### **Section B-702. Duties, Liabilities and Rights of the Second Lien Trustee.**

1. Prior to the occurrence of a Second Lien Obligations Event of Default of which a Responsible Second Lien Obligation Officer has written notice or actual knowledge, and after the curing or waiver of any Second Lien Obligations Event of Default which may have occurred:

(a) the Second Lien Trustee undertakes to perform such duties and only such duties as are specifically set forth in the Resolution, and no implied covenants or Second Lien Obligations shall be read into the Resolution against the Second Lien Trustee; and

(b) in the absence of bad faith on its part, the Second Lien Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Second Lien Trustee and conforming to the requirements of the Resolution; but in the case of any such certificates or opinions which by any provision hereof are specifically required to be furnished to the Second Lien Trustee, the Second Lien Trustee is under a duty to examine same to determine whether or not they conform to the requirements of the Resolution.

2. In case a Second Lien Obligations Event of Default of which a Responsible Second Lien Obligation Officer has written notice or actual knowledge has occurred and is continuing, the Second Lien Trustee shall exercise such of the rights and powers vested in it by the Resolution, and use the same degree of care and skill in their exercise, as a prudent Person would exercise or use in the conduct of such Person's own affairs.

3. No provision of the Resolution shall be construed to relieve the Second Lien Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

(a) this subsection 3 shall not be construed to limit the effect of subsection 1 of this Section B-702;

(b) the Second Lien Trustee is not and shall not be liable for any error of judgment made in good faith by a Responsible Second Lien Obligation Officer, unless it is proven that the Second Lien Trustee was negligent in ascertaining the pertinent facts;

(c) the Second Lien Trustee is not and shall not be liable with respect to any action taken or omitted to be taken by it in good faith (i) in accordance with the direction of the Second Lien Owners of the applicable percentage of Second Lien Obligations then Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Second Lien Trustee, or (ii) which it believes to be authorized or within its rights or powers under the Resolution;

(d) no provision of the Resolution shall require the Second Lien Trustee to expend or risk its own funds or otherwise incur any personal or financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, for which it has not received a satisfactory indemnity;

(e) the Second Lien Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper Person and shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Second Lien Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit;

(f) the Second Lien Trustee shall not be charged with knowledge of a Second Lien Obligations Event of Default unless a Responsible Second Lien Obligation Officer shall have received written notice from a Second Lien Owner or the Issuer or have actual knowledge; provided that the Second Lien Trustee shall be deemed to have actual knowledge of any failure to pay principal or Second Lien Obligation Redemption Price of or interest on Second Lien Obligations when due;

(g) the Second Lien Trustee shall not be under any obligation to take any action that is discretionary hereunder;

(h) neither the Second Lien Trustee nor any of its directors, officers, employees or agents shall be personally liable for any action taken, suffered or omitted by the Second Lien Trustee in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon the Second Lien Trustee by the Resolution;

(i) the Second Lien Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents, attorneys, custodians, or nominees and the Second Lien Trustee shall not be responsible for any misconduct or negligence on the part of any agent, attorney, custodians or nominees appointed with due care by it hereunder; and

(j) the Second Lien Trustee may request that the Issuer deliver a certificate of an Authorized Officer setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant hereto, which certificate may be signed by any Person authorized to sign such a certificate, including any Person specified as so authorized in any such certificate previously delivered and not superseded.

4. Whether or not expressly so provided, every provision of the Resolution relating to the conduct or affecting the liability of or affording protection to the Second Lien Trustee is subject to the provisions of this Section B-702.

5. In the event that the Second Lien Trustee is also acting as Second Lien Paying Agent or Second Lien Registrar hereunder, the rights and protections afforded to the Second Lien Trustee pursuant to this Article B-VII shall also be afforded to the Second Lien Paying Agent and Second Lien Registrar.

**Section B-703. Second Lien Paying Agents and Second Lien Registrars; Appointment and Acceptance of Duties.**

1. The Second Lien Trustee is hereby appointed the Second Lien Registrar and a Second Lien Paying Agent with respect to the Second Lien Obligations. The Issuer may at any time or from time to time appoint one or more other Second Lien Paying Agents and Second Lien Registrars in the manner and subject to the conditions set forth in Section B-713 for the appointment of a successor Second Lien Paying Agent or Second Lien Registrar. The Issuer may be appointed a Second Lien Paying Agent or Second Lien Registrar.

2. Each Second Lien Paying Agent and Second Lien Registrar other than the Second Lien Trustee shall signify its acceptance of the duties and obligations imposed upon it by the Resolution by executing and delivering to the Issuer and to the Second Lien Trustee a written acceptance thereof.

**Section B-704. Responsibilities of Fiduciaries.** The recitals of fact contained in the Resolution and in the Second Lien Obligations shall be taken as the statements of the Issuer and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of the Resolution or of any Second Lien Obligations issued thereunder or in respect of the security afforded by the Resolution, and no Fiduciary shall incur any liability in respect thereof. No Fiduciary shall be under any responsibility or duty with respect to the issuance of the Second Lien Obligations for value or the application of the proceeds thereof or the application of any money paid to the Issuer. No Fiduciary shall be under any responsibility or duty with respect to the application of any money paid to any other Fiduciary. No Fiduciary shall be liable in connection with the performance of its duties under the Resolution, or for any losses, fees, taxes or other charges incurred upon the purchase or sale or redemption of any securities purchased for or held in any Fund under the Resolution, including any losses incurred by reason of having to sell securities prior to their maturity date, except in each case for its own willful misconduct, negligent action or negligent failure to act.

**Section B-705. Evidence on Which Fiduciaries May Act.**

1. Each Fiduciary shall be protected in acting or refraining from acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond, or other paper or document believed by it to be genuine, and to have been signed or presented by the proper party or parties. Each Fiduciary may consult with counsel of its selection, who may or may not be counsel to the Issuer, and the opinion of such counsel shall be full and complete authorization

and protection in respect of any action taken, omitted to be taken or suffered by it under the Resolution in good faith and in accordance therewith.

2. Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under the Resolution, such matter (unless other evidence in respect thereof be therein specifically prescribed) may be deemed to be conclusively proved and established by a certificate of an Authorized Officer, and such certificate shall be full warrant for any action taken or suffered in good faith under the provisions of the Resolution; but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or may require such further or additional evidence as to it may seem reasonable.

3. Except as otherwise expressly provided in the Resolution, any request, order, notice or other direction required or permitted to be furnished pursuant to any provision thereof by the Issuer to any Fiduciary shall be sufficiently executed if executed in the name of the Issuer by an Authorized Officer.

**Section B-706. Compensation.** The Issuer shall pay to each Fiduciary from time to time such compensation as shall be agreed to in writing between the Fiduciary and the Issuer for all services rendered under the Resolution (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust), and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents, and employees, incurred in and about the performance of their powers and duties under the Resolution. To the extent permitted by law, the Issuer further agrees to indemnify and save each Fiduciary and its officers, directors, agents, and employees harmless against any and all liabilities, losses, damages, claims or expenses which it may incur in the acceptance, exercise and performance of its powers and duties hereunder and which are not due to its willful misconduct, negligence or bad faith. The obligations of this Section B-706 shall survive the discharge of the Resolution. No obligations of the Issuer to make any payment to any Fiduciary shall have the benefit of any lien on or pledge or assignment of the Obligations Trust Estate or the Second Lien Obligations Trust Estate.

A Fiduciary shall notify the Issuer promptly of any claim for which it may seek indemnity. The Issuer shall defend the claim and the Second Lien Trustee shall cooperate in the defense. The Fiduciary may have separate counsel and the Issuer shall pay the reasonable fees and expenses of such counsel.

**Section B-707. Certain Permitted Acts.** Any Fiduciary may become the owner of any Second Lien Obligations or any other obligations of the Issuer, with the same rights it would have if it were not a Fiduciary. To the extent permitted by law and pursuant to the Resolution, any Fiduciary may act as depository for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Second Lien Owners or the holders of any other obligations of the Issuer or to effect or aid in any reorganization growing out of the enforcement of the Second Lien Obligations or any other obligations of the Issuer under the Resolution, whether or not any such committee shall represent the Second Lien Owners of a majority in principal amount of the Second Lien Obligations then Outstanding.

**Section B-708. Resignation of Second Lien Trustee.** The Second Lien Trustee may at any time resign and be discharged of the duties and obligations created by the Resolution by giving not less than 60 days' written notice to the Issuer and mailing notice thereof to the Second Lien Owners of the Second Lien Obligations, specifying the date when such resignation shall take effect, at least 45 days prior to the effective date, provided that such resignation shall take effect upon *the later of* (i) the day specified in such notice and (ii) the day a successor shall have been appointed by the Issuer or the Second Lien Owners as provided in Section B-710 and shall have qualified therefor.

**Section B-709. Removal of Second Lien Trustee.** The Second Lien Trustee may be removed at any time by an instrument or concurrent instruments in writing, filed with the Second Lien Trustee, and signed by the Second Lien Owners of a majority in principal amount of the Second Lien Obligations then Outstanding or their attorneys-in-fact duly authorized, excluding any Second Lien Obligations held by or for the account of the Issuer or any Related Entity. In addition, so long as no Second Lien Obligations Event of Default shall have occurred and be continuing hereunder and the Second Lien Trustee is not pursuing any right or remedy available to it pursuant to the Resolution, the Second Lien Trustee may be removed by the Issuer at any time for failure to provide reasonably acceptable services, failure to charge reasonably acceptable fees or any other reasonable cause, all as determined by a certificate of an Authorized Officer filed with the Second Lien Trustee. Any such removal shall not be effective until a successor shall have been appointed by the Issuer or the Second Lien Owners as provided in Section B-710 and shall have qualified therefor.

**Section B-710. Appointment of Successor Second Lien Trustee.**

1. In case at any time the Second Lien Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or if a receiver, liquidator or conservator of the Second Lien Trustee, or of its property, shall be appointed, or if any public officer shall take charge or control of the Second Lien Trustee, or of its property or affairs, a successor may be appointed by the Second Lien Owners of a majority in principal amount of the Second Lien Obligations then Outstanding, excluding any Second Lien Obligations held by or for the account of the Issuer, by an instrument or concurrent instruments in writing signed and acknowledged by such Second Lien Owners or by their attorneys-in-fact duly authorized and delivered to such successor Second Lien Trustee, notification thereof being given to the Issuer and the predecessor Second Lien Trustee; provided, nevertheless, that unless a successor Second Lien Trustee shall have been appointed by the Second Lien Owners as aforesaid, the Issuer by a duly executed written instrument signed by an Authorized Officer of the Issuer shall therewith appoint a Second Lien Trustee to fill such vacancy until a successor Second Lien Trustee shall be appointed by the Second Lien Owners as authorized in this Section B-710. The Issuer shall mail notice of any such appointment made by it to all Second Lien Owners within 20 days after such appointment. Any successor Second Lien Trustee appointed by the Issuer shall, immediately and without further act, be superseded by a Second Lien Trustee appointed by the Second Lien Owners.

2. If in a proper case no appointment of a successor Second Lien Trustee shall be made pursuant to the foregoing provisions of this Section within 45 days after the Second Lien Trustee shall have given to the Issuer written notice as provided in Section B-708 or after a

vacancy in the office of the Second Lien Trustee shall have occurred by reason of its inability to act, the Second Lien Trustee or the Second Lien Owner of any Second Lien Obligations may, at the expense of the Issuer, apply to any court of competent jurisdiction to appoint a successor Second Lien Trustee. Said court may thereupon, after such notice, if any, as such court may deem proper and prescribe, appoint a successor Second Lien Trustee.

3. Any Second Lien Trustee appointed under the provisions of this Section B-710 in succession to the Second Lien Trustee shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.

**Section B-711. Transfer of Rights and Property to Successor Second Lien Trustee.** Any successor Second Lien Trustee appointed under the resolution shall execute, acknowledge and deliver to its predecessor Second Lien Trustee, and also to the Issuer, an instrument accepting such appointment, and thereupon such successor Second Lien Trustee, without any further act, deed or conveyance, shall become fully vested with all money, estates, properties, rights, powers, duties and obligations of such predecessor Second Lien Trustee, with like effect as if originally named as Second Lien Trustee; but the Second Lien Trustee ceasing to act shall nevertheless, on the written request of the Issuer, or of the successor Second Lien Trustee, and, upon the payment of all of its charges hereunder, execute, acknowledge and deliver such instruments of conveyance and further assurance and do such other things as may reasonably be required for more fully and certainly vesting and confirming in such successor Second Lien Trustee all the right, title and interest of the predecessor Second Lien Trustee in and to any property held by it under the Resolution, and shall pay over, assign and deliver to the successor Second Lien Trustee any money or other property subject to the trusts and conditions herein set forth. Should any deed, conveyance or instrument in writing from the Issuer be required by such successor Second Lien Trustee for more fully and certainly vesting in and confirming to such successor Second Lien Trustee any such estates, rights, powers and duties, any and all such deeds, conveyances and instruments in writing shall, on request, and so far as may be authorized by law, be executed, acknowledged and delivered by the Issuer. Any successor Second Lien Trustee shall promptly notify the Second Lien Registrar and the Second Lien Paying Agents of its appointment as Second Lien Trustee.

**Section B-712. Merger or Consolidation.** Any Person into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a party or any company to which any Fiduciary may sell or transfer all or substantially all of its municipal corporate trust business, provided such Person shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America,

doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution and shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act.

**Section B-713. Resignation or Removal of Second Lien Paying Agent or Second Lien Registrar and Appointment of Successor.**

1. Any Second Lien Paying Agent or Second Lien Registrar may at any time resign and be discharged of the duties and obligations created by the Resolution by giving at least 60 days' written notice to the Issuer, the Second Lien Trustee, and the other Second Lien Paying Agents or Second Lien Registrar, as the case may be. Any Second Lien Paying Agent or Second Lien Registrar may be removed at any time by an instrument filed with such Second Lien Paying Agent or Second Lien Registrar, the Second Lien Trustee and the Trustee and signed by the Issuer. Any successor Second Lien Paying Agent or Second Lien Registrar shall be appointed by the Issuer, with the approval of the Second Lien Trustee, and (subject to the requirements of Section B-603) shall be a Bank that is organized under the laws of the State, or, if organized under the laws of another state, authorized to do business in the State of New York, or is a national banking association organized under the laws of the United States of America, doing business and having a corporate trust office in The City of New York, and which at the time of selection meets all thresholds for being well capitalized or adequately capitalized under the prompt corrective action framework applicable to insured depository institutions under Section 38 of the Federal Deposit Insurance Act as in effect from time to time or all thresholds for substantially equivalent categories in any successor legislation, if there be such a Bank willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution.

2. In the event of the resignation or removal of any Second Lien Paying Agent, such Second Lien Paying Agent shall pay over, assign and deliver any money held by it as Second Lien Paying Agent to its successor, or if there be no successor, to the Second Lien Trustee. In the event that for any reason there shall be a vacancy in the office of any Second Lien Paying Agent, the Second Lien Trustee shall act as such Second Lien Paying Agent.

3. In the event of the resignation or removal of any Second Lien Registrar, such Second Lien Registrar shall transfer and deliver all records, certificates and documents held by it as Second Lien Registrar to its successor, or if there be no successor, to the Second Lien Trustee. In the event that for any reason there shall be a vacancy in the office of any Second Lien Registrar, the Second Lien Trustee shall act as such Second Lien Registrar.

**Section B-714. Adoption of Authentication.** In case any of the Second Lien Obligations contemplated to be issued under the Resolution shall have been authenticated but not delivered, any successor Second Lien Trustee may adopt the certificate of authentication of any predecessor Second Lien Trustee so authenticating such Second Lien Obligations and deliver the

Second Lien Obligations so authenticated; and in case any of such Second Lien Obligations shall not have been authenticated, any successor Second Lien Trustee may authenticate such Second Lien Obligations in the name of the predecessor Second Lien Trustee, or in the name of the successor Second Lien Trustee, and in all such cases such certificate shall have the full force which it is anywhere in said Second Lien Obligations or in the Resolution provided that the certificate of the Second Lien Trustee shall have.

**Section B-715. Continuing Disclosure Agreements.** The Second Lien Trustee shall be entitled to the same rights and the same degree of indemnification in its execution and performance of each continuing disclosure agreement entered into pursuant to Rule 15c2-12 promulgated under the Securities Exchange Act of 1934, as amended, as it is under the Resolution.

## **ARTICLE B-VIII**

### **AMENDMENTS**

**Section B-801. Mailing.** Any provision in this Article for the mailing of a notice or other paper to Second Lien Owners shall be fully complied with if it is mailed, postage prepaid, (i) to each Second Lien Owner of any affected Second Lien Obligations then Outstanding at such Second Lien Owner's address, if any, appearing upon the registry books of the Issuer, and (ii) to the Second Lien Trustee; or, in each case, to such parties by facsimile or other means to the extent permitted by applicable law and arrangements.

**Section B-802. Powers of Amendment.** Any modification or amendment of the Resolution and of the rights and obligations of the Issuer and of the Second Lien Owners, in any particular, requiring the consent of the Second Lien Owners may be made by a Supplemental Resolution, with the written consent given as provided in Section B-803, (i) of the Second Lien Owners of a majority in principal amount of the Second Lien Obligations Outstanding at the time such consent is given, and (ii) in case less than all of the Second Lien Obligations then Outstanding are affected by the modification or amendment, of the Second Lien Owners of a majority in principal amount of the Second Lien Obligations so affected and Outstanding at the time such consent is given; *provided, however*, that if such modification or amendment will, by its terms, not take effect so long as particular Second Lien Obligations remain Outstanding, the consent of the Second Lien Owners of such Second Lien Obligations shall not be required and such Second Lien Obligations shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Second Lien Obligations under this Section. No such modification or amendment shall (a) permit a change in the terms of redemption or maturity of the principal of any Outstanding Second Lien Obligations or of any installment of interest thereon or a reduction in the principal amount or the Second Lien Obligation Redemption Price thereof or in the rate of interest thereon without the consent of the Second Lien Owner of such Second Lien Obligations, (b) reduce the percentages or otherwise affect the classes of Second Lien Obligations the consent of the Second Lien Owners of which is required to waive a Second Lien Obligations Event of Default or otherwise effect any such modification or amendment, (c) create a preference or priority of any Second Lien Obligations over any other Second Lien Obligations, without the consent of the Second Lien Owners of all such Second Lien Obligations, (d) create a lien prior to or on parity with the lien of the Resolution securing Second Lien Obligations, other than the lien

on the Obligations Trust Estate securing Obligations, without the consent of the Second Lien Owners of all of the Second Lien Obligations then Outstanding, or (e) change or modify any of the rights or Second Lien Obligations of any Fiduciary without its written assent thereto. For the purposes of this Section, Second Lien Obligations shall be deemed to be affected by a modification or amendment of the Resolution if the same materially and adversely affects the rights of the Second Lien Owner of such Second Lien Obligations. The Second Lien Trustee may in its discretion determine whether or not in accordance with the foregoing powers of amendment particular Second Lien Obligations would be affected by any modification or amendment of the Resolution and any such determination shall be binding and conclusive on the Issuer and all Second Lien Owners. The Second Lien Trustee may request and receive an opinion of counsel, including a Counsel's Opinion, as conclusive evidence as to whether particular Second Lien Obligations would be so affected by any such modification or amendment of the Resolution and the Second Lien Trustee shall have no duty or obligation to take any action hereunder unless and until it has received such opinion. Notwithstanding anything in this Section or the Resolution to the contrary, the consent of Second Lien Owners of any Series of additional Second Lien Obligations to be issued hereunder to any amendment or modification of the Resolution, which modification or amendment, as well as such consent, is disclosed in the official statement or other offering document prepared in connection with the primary offering of such Series of additional Second Lien Obligations, shall be deemed given and irrevocable, and no other evidence of such consent shall be required.

**Section B-803. Consent of Second Lien Owners.** The Issuer at any time may adopt a Supplemental Resolution making a modification or amendment permitted by the provisions of Section B-802 to take effect when and as provided in this Section. A copy of such Supplemental Resolution (or brief summary thereof or reference thereto in form approved by the Second Lien Trustee) together with a request to the Second Lien Owners for their consent thereto in form satisfactory to the Second Lien Trustee, shall be mailed by the Issuer to the Second Lien Owners (but failure to mail such copy and request shall not affect the validity of the Supplemental Resolution when consented to as in this Section provided). Such Supplemental Resolution shall not be effective unless and until (i) there shall have been filed with the Second Lien Trustee (a) the written consents of Second Lien Owners of the percentages of Outstanding Second Lien Obligations specified in Section B-802 and (b) a Counsel's Opinion stating that such Supplemental Resolution has been duly and lawfully adopted and filed by the Issuer in accordance with the provisions of the Resolution, is authorized or permitted by the Resolution, and is valid and binding upon the Issuer and enforceable in accordance with its terms, and (ii) a notice shall have been mailed to Second Lien Owners as hereinafter in this Section B-803 provided. Any such consent, including any consent provided pursuant to the last sentence of Section 802, shall be irrevocable and binding upon the Second Lien Owner of the Second Lien Obligations giving such consent and, anything in Section B-1002 to the contrary notwithstanding, upon any subsequent Second Lien Owner of such Second Lien Obligations and of any Second Lien Obligations issued in exchange therefor (whether or not such subsequent Owner thereof has notice thereof). At any time after the Second Lien Owners of the required percentages of Second Lien Obligations shall have filed their consents to the Supplemental Resolution, the Second Lien Trustee shall make and file with the Issuer and the Second Lien Trustee a written statement that the Second Lien Owners of such required percentages of Second Lien Obligations have filed such consents. Such written statement shall be conclusive that such consents have been so filed. At any time thereafter, notice, stating in substance that the

Supplemental Resolution (which may be referred to as a Supplemental Resolution adopted by the Issuer on a stated date, a copy of which is on file with the Second Lien Trustee) has been consented to by the Second Lien Owners of the required percentages of Second Lien Obligations and will be effective as provided in this Section B-803, may be given to Second Lien Owners by the Issuer by mailing such notice to Second Lien Owners (but failure to mail such notice shall not prevent such Supplemental Resolution from becoming effective and binding as in this Section B-803 provided). The Issuer shall file with the Second Lien Trustee proof of the mailing of such notice. A record, consisting of the papers required or permitted by this Section B-803 to be filed with the Second Lien Trustee, shall be proof of the matters therein stated. Such Supplemental Resolution making such amendment or modification shall be deemed conclusively binding upon the Issuer, the Fiduciaries and the Second Lien Owners of all Second Lien Obligations at the expiration of 40 days after the filing with the Second Lien Trustee of the proof of the mailing of such last-mentioned notice, except in the event of a final decree of a court of competent jurisdiction setting aside such Supplemental Resolution in a legal action or equitable proceeding for such purpose commenced within such 40-day period; provided, however, that any Fiduciary and the Issuer during such 40-day period and any such further period during which any such action or proceeding may be pending shall be entitled in their absolute discretion to take such action, or to refrain from taking such action, with respect to such Supplemental Resolution as they may deem expedient.

**Section B-804. Modifications by Unanimous Consent.** The terms and provisions of the Resolution and the rights and obligations of the Issuer and of the Second Lien Owners may be modified or amended in any respect upon the adoption and filing by the Issuer of a Supplemental Resolution and the consent of the Second Lien Owners of all of the Second Lien Obligations then Outstanding, such consent to be given as provided in Section B-803 except that no notice to Second Lien Owners shall be required; *provided, however*, that no such modification or amendment shall change or modify any of the rights or obligation of any Fiduciary without the filing with the Second Lien Trustee of the written consent thereto of such Fiduciary in addition to the consent of the Second Lien Owners.

**Section B-805. Notation on Second Lien Obligations.** Second Lien Obligations issued and delivered after the effective date of any action taken as in this Article B-VIII provided may, and, if the Second Lien Trustee so determines, shall, bear a notation by endorsement or otherwise in form approved to the Issuer and the Second Lien Trustee as to such action, and in that case upon demand of the Second Lien Owner of any Second Lien Obligations Outstanding at such effective date and presentation of its Second Lien Obligations for the purpose at the corporate trust office of the Second Lien Trustee, suitable notation shall be made on such Second Lien Obligations by the Second Lien Trustee as to any such action. If the Issuer or the Second Lien Trustee shall so determine, Second Lien Obligations so modified as in the opinion of the Second Lien Trustee and the Issuer to conform to such action shall be prepared, authenticated and delivered. Upon demand of the Second Lien Owner of any Second Lien Obligations then Outstanding and the surrender of such Second Lien Obligations, there shall be authenticated and exchanged therefor, new Second Lien Obligations having the same terms, other than the noted modification, as the Second Lien Obligations surrendered.

## **ARTICLE B-IX**

### **DEFAULT AND REMEDIES**

**Section B-901. Abrogation of Right to Appoint Statutory Second Lien Trustee; Preservation of Statutory Rights and Remedies.** Any right of the Second Lien Owners to appoint a trustee under the Issuer Act is hereby abrogated. Subject to the foregoing sentence of this Section B-901 and the provisions of Section 704, the Second Lien Owners and the Second Lien Trustee acting on behalf of the Second Lien Owners shall be entitled to all of the rights and remedies provided or permitted by law.

## **ARTICLE B-X**

### **MISCELLANEOUS**

**Section B-1001. Defeasance.**

1. If the Issuer shall pay or cause to be paid to the Second Lien Owners of all Second Lien Obligations then Outstanding the principal and interest and Second Lien Obligation Redemption Price, if any, to become due thereon, at the times and in the manner stipulated therein and in the Resolution, then, at the option of the Issuer, expressed in an instrument in writing signed by an Authorized Officer and delivered to the Second Lien Trustee, the covenants, agreements and other obligations of the Issuer to the Second Lien Owners shall be discharged and satisfied. In such event, the Second Lien Trustee shall, upon the request of the Issuer, execute and deliver to the Issuer all such instruments as may be desirable to evidence such discharge and satisfaction and the Fiduciaries for the Second Lien Obligations shall pay over or deliver to the Issuer all money, securities and funds held by them pursuant to the Resolution which are not required for the payment or redemptions of Second Lien Obligations not theretofore surrendered for such payment or redemption.

2. Outstanding Second Lien Obligations or any portions thereof for the payment or redemption of which money shall have been set aside and shall be held in trust by the Second Lien Paying Agents shall at the respective maturity or redemption dates thereof be deemed to have been paid within the meaning and with the effect expressed in subsection 1 of this Section. Outstanding Second Lien Obligations or any portions thereof shall, prior to the respective maturity or redemption dates thereof, be deemed to have been paid within the meaning and with the effect expressed in subsection 1 of this Section either (A) as provided in the Supplemental Resolution authorizing their issuance or (B) if not so provided, if (a) in case any of said Second Lien Obligations are to be redeemed on any date prior to their maturity, the Issuer shall have given to the Second Lien Trustee in form satisfactory to it irrevocable instructions to mail as provided in Article B-IV notice of redemption on said date of such Second Lien Obligations, (b) there shall have been irrevocably deposited with the Second Lien Trustee either money in an amount which shall be sufficient, or Second Lien Obligation Defeasance Securities the principal of and the interest on which when due will provide money which, together with the money, if any, deposited with the Second Lien Trustee at the same time, shall be sufficient, without further

investment or reinvestment of either the principal amount thereof or the interest earnings thereon, to pay when due, the principal or Second Lien Obligation Redemption Price, if applicable, and interest due and to become due on such Second Lien Obligations or such portions thereof on and prior to the redemption date or maturity date thereof, as the case may be, and (c) in the event such Second Lien Obligations are not by their terms maturing or are not subject to redemption within the next succeeding 60 days, the Issuer shall have given the Second Lien Trustee in form satisfactory to it irrevocable instructions to mail, as soon as practicable, a notice to the Second Lien Owners of such Second Lien Obligations that the deposit required by (b) above has been made with the Second Lien Trustee and that said Second Lien Obligations are deemed to have been paid in accordance with this Section and stating such maturity or redemption date upon which money is to be available for the payment of the principal or Second Lien Obligation Redemption Price, if applicable, on such Second Lien Obligations. Neither Second Lien Obligation Defeasance Securities nor money deposited with the Second Lien Trustee pursuant to this Section nor principal or interest payments on any such Second Lien Obligation Defeasance Securities shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Second Lien Obligation Redemption Price, if applicable, and interest on said Second Lien Obligations; *provided, however*, that any money on deposit with the Second Lien Trustee, (i) to the extent such money will not be required at any time for such purpose, shall be paid over to the Issuer as received by the Second Lien Trustee, free and clear of any trust, lien or pledge securing said Second Lien Obligations or otherwise existing under the Resolution, and (ii) to the extent such money will be required for such purpose at a later date, shall, to the extent practicable, be reinvested in Second Lien Obligation Defeasance Securities maturing at times and in amounts sufficient, together with any money available to the Second Lien Trustee for such purpose, to pay when due the principal or Second Lien Obligation Redemption Price, if applicable, and interest to become due on said Second Lien Obligations on and prior to such redemption date or maturity date thereof, as the case may be. Notwithstanding any other provision hereof, the Issuer may at the time of defeasance elect to retain the right to redeem or require the tender of obligations deemed paid pursuant to this Section B-1001.2. The Second Lien Trustee shall, at the direction of the Issuer, select the Second Lien Obligations or portions thereof that are deemed to have been paid in advance of the redemption of such Second Lien Obligations.

3. Anything in the Resolution to the contrary notwithstanding, any money held by a Fiduciary in trust for the payment and discharge of the principal or Second Lien Obligation Redemption Price of or interest on any of the Second Lien Obligations which remains unclaimed for 2 years after the date when such principal, Second Lien Obligation Redemption Price or interest, respectively, has become due and payable, either at stated maturity dates or by call for earlier redemption, if such money was held by the Fiduciary at such date, or for 2 years after the date of deposit of such money if deposited with the Fiduciary after the date when such principal, Second Lien Obligation Redemption Price, or interest, respectively, became due and payable, shall, at the written request of the Issuer, be repaid by the Fiduciary to the Issuer, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Second Lien Owners shall look only to the Issuer for the payment of such principal, Second Lien Obligation Redemption Price, or interest, respectively. Notwithstanding the foregoing or anything in the Resolution to the contrary, any money held by a Fiduciary in trust for the payment and discharge of any Second Lien Obligations which remains unclaimed after such money was to be applied to the payment of such Second Lien Obligations in

accordance with the Resolution may be applied in accordance with the provisions of the Abandoned Property Law of the State, being Chapter 1 of the Consolidated Laws of the State or any successor provision thereto, and upon such application, the Fiduciary shall thereupon be released and discharged with respect thereto and the Second Lien Owners shall look only to the Issuer or the Comptroller of the State for the payment of such Second Lien Obligations. Before being required to make any such payment to the Issuer or to apply such money in accordance with the Abandoned Property Law of the State, the Fiduciary shall, at the expense of the Issuer, cause to be mailed to the Second Lien Owners entitled to receive such money a notice that said money remains unclaimed and that, after a date named in said notice, which date shall be not less than 30 days after the date of the mailing, the balance of such money then unclaimed will be returned to the Issuer or applied in accordance with the Abandoned Property Law of the State, as the case may be.

**Section B-1002. Evidence of Signatures of Second Lien Owners and Ownership of Second Lien Obligations.**

1. Any request, consent, revocation of consent or other instrument which the Resolution may require or permit to be signed and executed by the Second Lien Owners may be in one or more instruments of similar tenor, and shall be signed or executed by such Second Lien Owners in Person or by their attorneys-in-fact appointed in writing or by such electronic or other means as may be recognized pursuant to applicable law. Proof of (i) the execution of any such instrument, or of an instrument appointing any such attorney, or (ii) the holding by any Person of the Second Lien Obligations shall be sufficient for any purpose of the Resolution, except as otherwise therein expressly provided, if made in the following manner, or in any other manner satisfactory to the Second Lien Trustee, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable:

(a) The fact and date of the execution by any Second Lien Owner or his attorney-in-fact of such instrument may be proved by the certificate of a signature guarantor, or of any notary public or other officer authorized to take acknowledgments of deeds, that the Person signing such request or other instrument acknowledged to him or her the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership such certificate or affidavit shall also constitute sufficient proof of his authority; and

(b) The ownership of Second Lien Obligations and the amount, numbers and other identification, and date of holding the same shall be proved by the registry books.

2. Any request or consent by a Second Lien Owner of Second Lien Obligations shall bind all future Second Lien Owners of such Second Lien Obligations in respect of anything done or suffered to be done by the Issuer or any Fiduciary in accordance therewith.

**Section B-1003. Money Held for Particular Second Lien Obligations.** The amounts held by any Fiduciary for the payment of the interest, principal or Second Lien Obligation Redemption Price due on any date with respect to particular Second Lien Obligations

shall, on and after such date and pending such payment, be set aside on its books and held in trust by it for the Second Lien Owners entitled thereto.

**Section B-1004. Preservation and Inspection of Documents.** All documents received by a Fiduciary under the provisions of the Resolution shall be retained in its possession and shall be subject at all reasonable times to the inspection of the Issuer, any other Fiduciary, and any Second Lien Owners of at least 5% aggregate principal amount of Second Lien Obligations and their agents and their representatives, any of whom may make copies thereof.

**Section B-1005. Interest of Parties Herein.** Nothing in the Resolution expressed or implied is intended or shall be construed to confer upon, or to give to any Person, other than the Issuer, the Fiduciaries, the Second Lien Owners and the holders of Second Lien Parity Debt, any right, remedy or claim under or by reason of the Resolution or any covenant, condition or stipulation thereof, and all the covenants, stipulations, promises and agreements in the Resolution contained by and on behalf of the Issuer shall be for the sole and exclusive benefit of the Issuer, the Fiduciaries, the Second Lien Owners and the holders of Second Lien Parity Debt.

**Section B-1006. No Recourse on the Second Lien Obligations.** No recourse shall be had for the payment of the principal or Second Lien Obligation Redemption Price of or interest on the Second Lien Obligations or Second Lien Parity Debt or for any claim based thereon or on the Resolution against any member, officer, or employee of the Issuer or any Person executing the Second Lien Obligations.

**Section B-1007. Severability of Invalid Provisions.** If any term or provision of Annex A, this Annex B or the Resolution shall be invalid, inoperative or unenforceable as applied in any particular case in any jurisdiction or jurisdictions or in all jurisdictions, or in all cases because it conflicts with any other provision or provisions hereof or any constitution or statute or rule of public policy, or for any other reason, such circumstances shall not have the effect of rendering the provision in question inoperative or unenforceable in any other case or circumstance, or of rendering any other provision or provisions herein contained invalid, inoperative, or unenforceable to any extent whatever, and such term and provision shall be valid and enforced to the fullest extent permitted by law.

The invalidity of any one or more phrases, sentences, clauses or Sections of the Resolution shall not affect the remaining portions of the Resolution, or any part thereof, including any part of Annex A or this Annex B.

**Section B-1008. Exclusion of Second Lien Obligations.** Second Lien Obligations owned or held by or for the account of the Issuer or any Related Entity shall not be deemed Outstanding for the purpose of any consent to be given or other action to be taken by or upon the direction of Second Lien Owners of a specified portion of Second Lien Obligations Outstanding, and the Issuer or any Related Entity shall not be entitled with respect to such Second Lien Obligations to give any such consent or to take, or direct the taking of, any such action. At the time of any such consent or action, the Issuer shall furnish to the Second Lien Trustee a certificate of an Authorized Officer, upon which the Second Lien Trustee may conclusively rely, describing all Second Lien Obligations so to be excluded.

**Section B-1009. Governing Law.** The Resolution, including Annex A and this Annex B, shall be governed by and interpreted in accordance with internal laws of the State, without regard to conflict of law principles thereof.

# Staff Summary






## Schedule F: Personal Service Contracts

<b>Item Number:</b> Dept. & Dept. Head Name: MTA Office of General Counsel Division & Division Head Name: Helene Fromm, Acting General Counsel						<b>SUMMARY INFORMATION</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"> <b>Vendor Name:</b>            Multiple         </td> <td style="width: 30%; padding: 5px;"> <b>Contract Number:</b>            15385-0100 thru 0106         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Description:</b>            Legal Services for the MTA and its Subsidiaries and Affiliated Agencies         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Total Amount:</b>            N/A         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Contract Term (Including Options, if any)</b> </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Option(s) included in Total Amount?</b>     <input type="checkbox"/> Yes    <input checked="" type="checkbox"/> No         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Renewal?</b>     <input type="checkbox"/> Yes    <input checked="" type="checkbox"/> No         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Procurement Type:</b>  <input checked="" type="checkbox"/> Competitive    <input type="checkbox"/> Non-competitive         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Solicitation Type:</b>  <input checked="" type="checkbox"/> RFP     <input type="checkbox"/> Bid     <input type="checkbox"/> Other: New York State Ride         </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <b>Funding Source:</b>  <input checked="" type="checkbox"/> Operating    <input type="checkbox"/> Capital    <input type="checkbox"/> Federal    <input type="checkbox"/> Other:         </td> </tr> </table>		<b>Vendor Name:</b> Multiple	<b>Contract Number:</b> 15385-0100 thru 0106	<b>Description:</b> Legal Services for the MTA and its Subsidiaries and Affiliated Agencies		<b>Total Amount:</b> N/A		<b>Contract Term (Including Options, if any)</b>		<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Renewal?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Procurement Type:</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive		<b>Solicitation Type:</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: New York State Ride		<b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
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<b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:																									

Board Reviews					
Order	To	Date	Approval	Info	Other
1	Finance	5/22/17	X		
2	Board	5/24/17	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Procurement 	3	DDCR 
2	Legal 	4	CFO 
		5	Chief of Staff 

### Narrative

#### I. PURPOSE/RECOMMENDATION:

To obtain Board approval to enter into retainer agreements, based on a competitive Request for Proposal (RFP) process, on behalf of the MTA and its affiliates and subsidiaries (collectively, MTA) with the attorneys and law firms identified on Attachment A. These firms and attorneys will provide legal services at competitive rates on an as-needed basis in specific areas of expertise where retention of outside counsel may be necessary.

#### II. DISCUSSION

MTA and its subsidiaries and affiliates' legal departments retain outside counsel on an as-needed basis. The current approved panel for outside counsel in general law matters, which excludes finance and personal injury, Federal Employers' Liability Act (FELA) or Workers' Compensation matters, was approved by the Board in 2003. The Board has since approved the addition of other firms as necessary, including bond counsel, disclosure counsel and derivatives counsel, and, pursuant to section 2879(3)(b)(i) of the Public Authorities Law (the Discretionary Procurement Law), small businesses or New York State certified Minority and Women-Owned Business Enterprises (M/WBE) law firms for individual assignments up to \$200,000 in personal injury or property damage, Workers' Compensation, FELA, Employment and Civil Rights matters.

Pursuant to the RFP, the MTA sought proposals from law firms and attorneys interested in providing legal services on an as-needed basis in the following practice areas: Employment and Labor; Pension and Benefits; Litigation; Insurance; Real Estate; Contracting; Corporate; Energy; Environmental; Landlord-Tenant; Administrative and Regulatory Law; and Intellectual Property. To maximize participation by attorneys and law firms that are New York State certified M/WBEs and Service Disabled Veteran-Owned Businesses (SDVOBs), in addition to advertising the RFP in the New York Law Journal and the New York State Contract Reporter, the MTA placed ads in the Minority Commerce Weekly, Connecticut Law Tribune, Amsterdam News, El Diario, New York Post and New York Times. MTA also separately sent 836 notices of the RFP, including to a number of minority and women's bar associations and to law firms that attended two informational sessions organized by the MTA Department of Diversity and Civil Rights (DDCR) prior to the release of the RFP. In addition, the RFP encouraged qualified M/WBE and SDVOB firms to propose as stand-alone counsel or to establish co-counsel teams with other firms.

A total of 134 proposals were received of which thirty-eight were M/WBE firms. The proposals were initially reviewed by a Selection Committee composed of panels of attorneys from MTA and its affiliates and subsidiaries with expertise in the respective practice areas and DDCR staff. The RFP criteria, which were used to evaluate the proposals were: (i) the qualifications, experience and capacity of the firm and of the particular attorney who will be handling the MTA's matters in each practice area; (ii) the value of the services to be received; (iii) the firms' equal employment opportunity profile and commitment to diversity; and (iv) the overall quality of the response and the firm's demonstration of a clear understanding of the MTA's legal structure and financing practices. The Selection Committee's panel ratings were submitted to a final Steering Committee composed of the MTA General Counsel, the General Counsels from NYCT, MTA Bus, LIRR, MNR, MTA, MTACC and TBTA and Michael J. Garner, MTA's Chief Diversity Officer, that concurred unanimously in the rating panels' recommendations.

A total of 105 law firms and attorneys were selected, of which 30 are MBEs, WBEs, or M/WBEs. In connection with a review of the proposed awardees' responsibility pursuant to the All-Agency Responsibility Guidelines, 104 firms were found to be responsible. One firm, Greenberg Traurig, LLP, was found to be responsible notwithstanding significant adverse information and such responsibility finding was approved by the MTA Interim Executive Director in consultation with the MTA General Counsel.

It is a goal of the MTA to obtain quality legal representation at the most cost-effective rates achievable. As specified in the RFP and as a result of negotiations conducted by Procurement, retainers to be executed by the approved firms accordingly will provide for rates no greater than 80% of an attorney's normal and customary rates.

As in the past, it is requested that (i) the Board authorize the use of any firm on the general law outside counsel panel for any matter regardless of the practice area for which such firm or attorney was selected to be included on the new general law panel; and (ii) the Board's approval of the firms listed on Attachment A also entail the approved use of a successor firm, in the event a firm on the list should subsequently merge into another firm or a partner or principal lawyer in charge of an MTA matter at one of the listed firms moves to a different firm.

### **III. D/M/WBE INFORMATION**

The retainer agreements do not contain any specific numerical goals for the utilization of NYS certified MWBEs or SDVOBs. However, as stated in the RFP, the Authorities have established an aspirational goal of at least 30% of the total amount of fees paid by the Authorities for outside counsel legal services will be paid to certified MWBEs and SDVOB firms. Further, the retainer agreements contain detailed provision regarding diversity and EEO issues.

### **IV. IMPACT ON FUNDING**

Funding is allocated in each agency's operating budgets.

### **V. ALTERNATIVES**

Do not Approve the Award of the Contract: This is not practical. This would delay and compromise MTA's ability to streamline its legal operations. It is recommended that the Board approve the execution of retainer agreements with the attorneys and firms identified on Attachment A.

MTA Staff Summary -Schedule F: Personal Service Contracts  
Contract No. 15385-0100 thru 0106 - Attachment (A)

No.	NYS CERTIFIED MBE/WBE	FIRMS
1		Adam Leitman Bailey, P.C.
2		Alter Mantel, LLP
3		Arent Fox LLP
4		Ashurst LLP
5		BakerHostetler
6		Ballard Spahr LLP
7		Barry, McTiernan & Moore LLC
8		Bee Ready Fishbein Hatter & Donovan LLP
9		Berger & Webb, LLP
10		Bernstein Litowitz Berger & Grossmann LLP
11		Boies, Schiller & Flexner LLP
12	MBE	Brown Hutchinson LLP
13		Bryan Cave LLP
14	MBE	Bryant Rabbino LLP
15	MBE	Burgher Gray Jaffe LLP
16		Campolo Middleton & McCormick LLP
17		Carter Ledyard & Milburn LLP
18	M/WBE	Cockburn Law P.C.
19		Couch White, LLP
20	MBE	Crumbie Law Group LLC
21		Dai & Associates, P.C.
22		Davis Wright Tremaine, LLP
23		Doar Rieck Kaley & Mack
24	MBE	Drohan Lee LLP
25		Epstein Becker & Green PC
26		Fabiani Cohen & Hall, LLP
27	WBE	Feller Law Group, PLLC
28		Finkelstein Platt LLP
29	WBE	French & Casey, LLP
30		Ganfer & Shore, LLP
31		Goulston & Storrs PC
32	MBE	Graves, Horton, Askew & Jenkins, LLC
33		Greenberg Traurig
34	MBE	Hardwick Law Firm, LLC
35		Harris Beach PLLC
36		Hawkins Delafield & Wood LLP
37		Haynes and Boone, LLP
38		Hogan Lovells
39	WBE	Hoguet Newman Regal & Kenney LLP
40		Holland & Knight LLP
41		Ingram Yuzek Gainen Carroll & Bertolotti, LLP
42	WBE	Itkowitz PLLC
43		Jackson Lewis P.C.
44	MBE	Johnson Liebman LLP
45		K&L Gates LLP

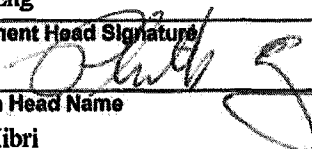
MTA Staff Summary -Schedule F: Personal Service Contracts  
Contract No. 15385-0100 thru 0106 - Attachment (A)

No.	NYS CERTIFIED MBE/WBE	FIRMS
46		Kalib & Kalib
47		Kaplan Kirsch & Rockwell LLP
48		Kilpatrick Townsend & Stockton, LLP
49		Landman Corsi Ballaine & Ford, P.C.
50	MBE	LAW FIRM OF DAYREL SEWELL, PLLC
51	MBE	Law Office of David M. Pyun
52		Law Office of Ricardo E. Oquendo, Esq.
53	MBE	Law Offices of Barry D. Lites, LLP
54		Law Offices of Donald J. Tobias
55	WBE	Law Offices of Martha Buyer, PLLC
56	MBE	Lewis & Munday, P.C.
57		Littler Mendelson, P.C.
58		Lois LLC
59		Manatt, Phelps & Phillips, LLP
60		McAnaney & McAnaney
61		McCarter & English, LLP
62		Miller Friel, PLLC
63	WBE	Mintz, Levin, Cohn, Ferris Glovsky and Popeo, P.C.
64		Morgan, Lewis & Bockius LLP
65	M/WBE	Morris Duffy Alonso & Faley
66		Nixon Peabody LLP
67		Ogletree, Deakins, Nash, Smoak & Stewart, PC
68		Pacheco & Lugo, PLLC
69		Paul, Weiss, Rifkind, Wharton & Garrison LLP
70		Peter C. Merani, PC
71	M/WBE	Pilgrim & Associates
72		Proskauer Rose LLP
73		Pryor Cashman LLP
74	MBE	Pugh, Jones & Johnson, P.C.
75		Read and Laniado, LLP
76		Redmond Law PLLC
77		Reed Smith LLP
78	M/WBE	Rhonda L. Maco, PLLC
79	M/WBE	ROACH BERNARD, PLLC
80		Robinson & Cole LLP
81		Rozario & Associates, P.C.
82		Ryan Ryan Deluca LLP
83		Sahn Ward Coschignano, PLLC
84		Schiff Hardin LLP
85	WBE	Schoeman Updike & Kaufman LLP
86		Seward & Kissell LLP
87		Seyfarth Shaw
88		Shearman & Sterling LLP
89		Shein & Associates, P.C.
90		Sidley Austin LLP
91		Silverman Acampora LLP

MTA Staff Summary -Schedule F: Personal Service Contracts  
Contract No. 15385-0100 thru 0106 - Attachment (A)




No.	NYS CERTIFIED MBE/WBE	FIRMS
92	MBE	Silverman Shin & Byrne PLLC
93		Smith Mazure Director Wilkins Young & Yagerman PC
94		Squire Patton Boggs (US)
95		Steve S. Efron, Esq.
96	MBE	The Chandler Law Firm PLLC
97		Thompson Coburn LLP
98	WBE	Towne, Ryan & Partners, P.C.
99		Wasserman Grubin & Rogers, LLP
100		West Group Law PLLC and Pannone Lopes Devereaux and O'Gara
101	MBE WBE	Wiggin and Dana LLP
102		Wilson Elser Moskowitz Edelman & Dicker LLP
103	MBE/WBE	Wong Fleming
104		Zarin & Steinmetz
105		Zuber Lawler & Del Duca LLP

# Staff Summary

<b>Subject</b> Request for Authorization to Award Various Procurements
<b>Department</b> Executive
<b>Department Head Name</b> Philip Eng
<b>Department Head Signature</b> 
<b>Division Head Name</b> Wael Hibri

<b>Date</b> May 8, 2017
<b>Vendor Name</b> Various
<b>Contract Number</b> Various
<b>Contract Manager Name</b> Various
<b>Table of Contents Ref #</b>

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance	5/24/2017	X		
2	Board	5/24/2017	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Procurement 	3	CFO 
2	Legal 		

## PURPOSE:

To obtain approval of the Board to award various contracts/contract modifications and purchase orders, as reviewed by the MTA Finance Committee.

## DISCUSSION:

**MTAHQ proposes to award Non-competitive procurements in the following categories:**

Schedule J: Modification to Miscellaneous Procurement Contracts

**SUBTOTAL**

# of Actions	\$ Amount
None	None
1	\$25,789,063.00
1	\$25,789,063.00

**MTAHQ proposes to award Competitive procurements in the following categories:**

Schedules Requiring Majority Vote

Schedule F: Personal Services Contracts

Schedule J: Modification to Miscellaneous Procurement Contracts

**SUBTOTAL**

1	\$ 1,200,000.00
1	\$12,899,411.00
2	\$14,099,411.00

**MTAHQ presents the following procurement actions for Ratification:**

Schedule K: Ratification of Completed Procurement Actions

**TOTAL**

1	\$ 2,295,000.00
4	\$42,183,474.00

**BUDGET IMPACT:** The purchases/contracts will result in obligating MTAHQ operating and capital funds in the amount listed. Funds are available in the current MTAHQ operating/capital budgets for this purpose.

**RECOMMENDATION:** That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

## BOARD RESOLUTION

### METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

7. The Board authorizes the budget adjustments to estimated quantity contracts set forth in Schedule L.

**LIST OF PROCUREMENTS FOR BOARD APPROVAL, MAY 2017**  
**NON-COMPETITIVE PROCUREMENTS**

**METROPOLITAN TRANSPORTATION AUTHORITY**

*Procurements Requiring Majority Vote:*

**J. Miscellaneous Service Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M RFP;  
No Staff Summary required if Sealed Bid Procurement)

- |   |  |
|---|--|
| <b>1. Oracle America, Inc.</b><br><b>All Agency Oracle Software/Hardware Support</b><br><b>And Subscription Services</b><br><b>Contract No. Various</b> | <b>\$25,789,062.43</b> <b><u>Staff Summary Attached</u></b><br>(not-to-exceed) |
|---|--|
- Base plus previous change orders = \$59,218,756.60
- Approval is requested to award a consolidated all-agency umbrella amendment to various non-competitive, Board-approved, miscellaneous procurement contracts with Oracle America, Inc. (Oracle) for software/ hardware support and subscription services, in the amount of \$25,789,062.00 for a period of thirty-six (36) months from May 30th, 2017 to May 29, 2020. The newly created All-Agency Umbrella Agreement will consolidate all current existing Oracle software and hardware agreements purchased outside the current ELA and will formalize Oracle/Peoplesoft software, SUN legacy hardware, Oracle subscriptions, Oracle Siebel, Oracle Primavera, Oracle Linux, Oracle Cloud base products such as RightNow, CRM, SRM, and other Oracle products under one agreement.

# Staff Summary

## Schedule J: Modifications to Miscellaneous Procurement Contracts



Item Number:

Page 1 of 1

<b>Vendor Name (&amp; Location):</b> Oracle America, Inc.		<b>Contract Number:</b> Various	<b>AWO/Modifica</b> 1
<b>Description:</b> All-Agency Oracle Software/Hardware Support and Subscription Services		<b>Original Amount:</b> \$25,331,620.74	
<b>Contract Term (including Options, if any):</b> May 30, 2017 - May 29, 2020		<b>Prior Modifications:</b> \$33,887,135.86	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Prior Budgetary Increases:</b> ---	
<b>Procurement Type:</b> <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Non-competitive		<b>Current Amount:</b> \$59,218,756.60	
<b>Solicitation Type:</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other:		<b>This Request:</b> \$25,789,063.00	
<b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>% of This Request to Current Amount:</b> 134%	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> MTA Information Technology / Gellineau, Sidney		<b>% of Modifications (including This Request) to Original Amount:</b> ---	

### DISCUSSION:

Approval is requested to award a consolidated all-agency umbrella amendment to various non-competitive, Board-approved, miscellaneous procurement contracts with Oracle America, Inc. (Oracle) for software/ hardware support and subscription services, in the amount of \$25,789,062.00 for a period of thirty-six (36) months from May 30th, 2017 to May 29, 2020.

In May of 2007, the MTA Board approved an amendment to MTA contract 03158 to create an Enterprise License Agreement (ELA) to provide one contract that encompasses the use of PeopleSoft Financials/Human Resources software, related Oracle Database and Development tools across the agencies, and a database software license for the adaption of various Oracle software development tools. The ELA has generated savings for the MTA by seeking out and implementing operational efficiencies through the use of cost effective technology and by reducing annual licensing and maintenance costs. Under that amendment, MTA negotiated an 89.58% discount off the then-current PeopleSoft Software License, as well as five years of fixed maintenance with no yearly escalations. This All-Agency ELA was renewed on May 29, 2012 for a period of five (5) years, expiring May 29, 2017.

Since the creation of the MTA Oracle ELA, the MTA and its Agencies have purchased a variety of additional Oracle proprietary hardware and software licenses which are currently under separate support and subscription agreements, whose renewals total approximately \$13.7 million for the next three years. The newly created All-Agency Umbrella Agreement will consolidate all current existing Oracle software and hardware agreements purchased outside the current ELA and will formalize Oracle/Peoplesoft software, SUN legacy hardware, Oracle subscriptions, Oracle Siebel, Oracle Primavera, Oracle Linux, Oracle Cloud base products such as RightNow, CRM, SRM, and other Oracle products under one agreement.

The negotiated three (3) year umbrella amendment will preserve all terms and conditions from previous negotiated contracts and will ensure a 0% escalation in cost for each of the three years of the proposed extension. This favorable pricing is a result of previously negotiated terms by MTAHQ in 2007 under the base ELA contract. Furthermore, this consolidated amendment aligns contracts currently managed by the newly consolidated Information Technology Department at the MTA, captures all Oracle software licenses, hardware, and subscriptions across all MTA Agencies and co-terminates all support, and subscriptions, making it easier to manage and leverage discount and contract terms. At the end of the three year period, it is MTA HQ's intention to solicit a new contract for these services.

In connection with previous contracts awarded to the Contractor, the Contractor was found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility findings were approved by MTA Chairman/CEO in consultation with the MTA General Counsel. In addition, as a result of the review of the Contractor's responsibility since the prior award, new significant adverse information was identified and the Contractor was found to be responsible notwithstanding such new significant adverse information and such responsibility finding was subsequently approved by the MTA Interim Executive Director in consultation with the MTA Acting General Counsel.

It is recommended that the Board approve this consolidated amendment to the various contracts with Oracle America, Inc. for support and subscription services in the amount of \$25,789,063.00 for a period of thirty-six (36) months.

**LIST OF PROCUREMENTS FOR BOARD APPROVAL, MAY 2017**  
**COMPETITIVE PROCUREMENTS**

**METROPOLITAN TRANSPORTATION AUTHORITY**

*Procurements Requiring Majority Vote:*

**F. Personal Service Contracts**

Staff Summaries required for items greater than: \$100k Sole Source; \$250 other Non-Competitive, \$1 million Competitive

- |           |   |   |                                      |
|-----------|---|---|--------------------------------------|
| <b>2.</b> | <b>CH2M Hill<br/>Consulting Services<br/>Contract No. 900000000002143</b> | <b>\$1,200,000</b><br><br>(not-to-exceed) | <b><u>Staff Summary Attached</u></b> |
|-----------|---|---|--------------------------------------|

Competitively negotiated – 3 proposals - 24 months

To recommend that the Board approve the award of a competitively-negotiated, multi-agency personal services contract to CH2M Hill (“CH2M”) to provide Consulting Services for development of Crew Dispatching & Timekeeping System for New York City Transit (NYCT), Long Island Rail Road (LIRR) and Metro-North Railroad (MNR) at a not-to-exceed amount of \$1.2M. This contract will be for a period of up to two (2) years and is utilizing a previously negotiated retainer contract established by Metro-North. CH2M will gather and document the functional requirements for a system, develop a draft TSOW describing the requirements for all participating agencies, review the requirements with stakeholders and gain concurrence on accuracy and completeness of TSOW, and support the MTA’s evaluation of the proposed dispatching and timekeeping software products. The negotiated hourly rates for the different consulting roles that will be utilized range from \$119 to \$244 which are in line with the contract rate negotiated by Metro-North in 2012, and are therefore deemed fair and reasonable.

# **METROPOLITAN TRANSPORTATION AUTHORITY**

## **COMPETITIVE PROCUREMENTS**

### **J. Modifications to Miscellaneous Procurement Contracts**

(Approvals/Staff Summaries required for substantial change orders and change orders that cause original contract to equal or exceed monetary or durational threshold required for Board approval.)

- |    |   |  |                                      |
|----|---|--|--------------------------------------|
| 3. | <b>Choice Distribution, Inc.<br/>Hardware and Fastener Program<br/>Contract No. Various</b> | <b>\$12,899,411</b><br>(not-to-exceed) | <b><u>Staff Summary Attached</u></b> |
|----|---|--|--------------------------------------|

Base plus previous change orders = \$67,938,459

To recommend that the Board approve an amendment to Metro North Railroad's previously Board-approved, multi-agency, competitively awarded, miscellaneous procurement contract with Choice Distribution, Inc. (Choice) for supply of hardware and fasteners. This amendment will: (i) exercise the 2nd year option of the approved two-year option from June 1, 2017 to May 31, 2018 and (ii) add additional funding in the not-to-exceed amount of \$12,899,411. The unit prices as established in the base contract will remain the same and are deemed fair and reasonable.

# Staff Summary

## Schedule F: Personal Service Contracts

<b>Item Number:</b> <b>Dept &amp; Dept Head Name:</b> Executive/MTA IT & Wael Hibri/Sidney Gellineau <b>Division &amp; Division Head Name:</b> MTA IT, David Koehler						<b>SUMMARY INFORMATION</b> <b>Vendor Name:</b> CH2M Hill <b>Contract Number:</b> 900000000002143 <b>Description:</b> Consulting Services for Development of Crew Dispatching & Timekeeping System <b>Total Amount:</b> \$1,200,000.00 <b>Contract Term (including Options, if any):</b> Two Years <b>Option(s) Included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Renewal?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Procurement Type:</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive <b>Solicitation Type:</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: [e.g., Ride - Contract] <b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other	
<b>Board Reviews</b>							
Order	To	Date	Approval	Info	Other		
1	Finance	5/22/17	X				
2	Board	5/24/17	X				
<b>Internal Approvals</b>							
Order	Approval		Order	Approval			
1	Procurement <i>[Signature]</i>		3	DDCR <i>[Signature]</i>			
2	Legal <i>[Signature]</i>		4	CFO <i>[Signature]</i>			

### Narrative

#### I. PURPOSE/RECOMMENDATION

To recommend that the Board approve the award of a competitively-negotiated, multi-agency personal services contract to CH2M Hill ("CH2M") to provide Consulting Services for development of Crew Dispatching & Timekeeping System for New York City Transit (NYCT), Long Island Rail Road (LIRR) and Metro-North Railroad (MNR) at a not-to-exceed amount of \$1.2M. This contract will be for a period of up to two (2) years, and is utilizing a previously negotiated retainer contract established by Metro-North.

#### II. BACKGROUND

The Metropolitan Transportation Authority (MTA) needs to evaluate a crew management software to support dispatching and timekeeping at three operating Agencies. Metro-North Railroad, Long Island Rail Road and New York City Transit trains operate on fixed schedules maintained in the train scheduling systems. Crew assignments have fixed schedules generated from crew scheduling systems, and supplemented with near-term adjustments and personnel assignments in the current crew management systems which are CMS (Crew Management System) for MNR, TEAMS Transportation Assignment & Management System) at LIRR and Unified Timekeeping System (UTS) for NYCT. Dispatchers must ensure that proper personnel are available and assigned to operate trains and assignments. This is a core function of the crew management systems.

Consulting services are needed to develop a detailed Technical Scope of Work (TSOW) that will assist the MTA agencies in evaluating proposals and selecting a vendor via a subsequent RFP process for supply and delivery of a new system. Other MTA agency units with similar dispatching and timekeeping functions may also participate in requirements definition and analysis and will potentially be included during subsequent software evaluations.

### **III. Procurement Discussion**

An existing retainer contract established by Metro-North in 2012 was identified as a viable procurement vehicle to obtain the necessary consulting services. The Metro-North Contract retained seven pre-qualified consulting firms and included contract provisions to allow use by all MTA agencies. The prequalified vendors are dedicated to provide MTA and its agencies as needed consulting services to identify strategies to enhance the Railroad's financial efficiency, service delivery, strategic planning, system expansions and operations. While the prequalification process does not guarantee any consulting work, it allows firms in a particular category to competitively propose on specific tasks as required by MTA agencies. This prequalification approach is intended to streamline the process of consultant selection and retention, reducing procurement lead time, overall project time and reducing administrative costs while ensuring appropriate on-going competition.

Under the established process, MTA issued this Task Order for Crew Dispatching& Timekeeping system consulting need to all seven prequalified firms, and three proposals were received in October 2016. A selection committee comprised of representatives from Crew & Train operating departments from each of the three agencies were established and unanimously agreed to invite all three vendors for oral presentations. Upon conclusion of the oral presentations, the Selection Committee determined that CH2M Hill was the most qualified firm to perform the services required by this task order. CH2M was selected based on its qualifications in all required fields, as well as for the overall resources available to meet any additional requirements during the period of this engagement. CH2M demonstrated relevant experience in transit and rail industry for implementing best practices and methodologies in selecting crew dispatching and timekeeping software. They also showed ability to provide business analysis and needs definition facilitating the software selection process for the MTA.

Under this Task Order, CH2M will gather and document the functional requirements for a system, develop a draft TSOW describing the requirements for all participating agencies, review the requirements with stakeholders and gain concurrence on accuracy and completeness of TSOW, and support the MTA's evaluation of the proposed dispatching and timekeeping software products. The negotiated hourly rates for the different consulting roles that will be utilized range from \$119 to \$244 which are in line with the contract rate negotiated by Metro-North in 2012, and are therefore deemed fair and reasonable.

In connection with a previous contract awarded to the Contractor, the Contractor was found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel. No new SAI has been found relating to the Contractor and the Contractor has been found to be responsible.

### **III. D/M/WBE INFORMATION**

Goal requirements will remain at 10% MBE and 10% WBE as established in the base agreement.

### **IV. IMPACT ON FUNDING**

This contract will be funded through Operating Funds in an amount not-to-exceed \$1.2M

### **V. ALTERNATIVES**

Do not provide the services: This alternative is not feasible as the MTA agencies are currently on multiple software platforms that are not cost effective and increases risk. In addition, there's currently a New York State mandate that requires Metro-North to upgrade from mainframe to web-based environment.

Perform the services in-house: This alternative is not feasible. The Authority has neither the staff nor the specialized expertise to fully develop the scope necessary to meet the requirements of all three agencies.

# Staff Summary

## Schedule J: Modifications to Miscellaneous Procurement Contracts

Item Number:

Page 1 of 1

<b>Vendor Name (&amp; Location):</b> Choice Distribution, Inc.	<b>Contract Number:</b> Various	<b>AWO/Modification #</b> 3
<b>Description:</b> Hardware and Fastener Program	<b>Original Amount:</b>	\$ 40,258,495
<b>Contract Term (including Options, if any):</b> Five Year Base with Two Year Option	<b>Prior Modifications:</b>	\$ 27,680,000
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Prior Budgetary Increases:</b>	\$
<b>Procurement Type:</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Current Amount:</b>	\$ 67,938,459
<b>Solicitation Type:</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	<b>This Request:</b>	\$ 12,899,411
<b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b>	19%
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> MTAHQ Procurement, Wael Hibri, Sr. Director, MTA BSC	<b>% of Modifications (including This Request) to Original Amount:</b>	100.8%

### DISCUSSION:

To recommend that the Board approve an amendment to Metro North Railroad's previously Board-approved, multi-agency, competitively awarded, miscellaneous procurement contract with Choice Distribution, Inc. (Choice) for supply of hardware and fasteners. This amendment will: (i) exercise the 2<sup>nd</sup> year option of the approved two-year option from June 1, 2017 to May 31, 2018 and (ii) add additional funding in the not-to-exceed amount of \$12,899,411.

In April 2011, MNR solicited and the Board approved a competitively awarded, multi-agency (Metro North Railroad, New York City Transit, Long Island Rail Road, Staten Island Rapid Transit and MTA Bus) contract for five years with a two (2) year option for the provision and on-going replenishment of common hardware and fasteners (nuts, bolts, washers, lock nuts etc.) to Choice. Hardware and fasteners are required and are integral components throughout the MTA Agencies' facilities to support maintenance and repair of all types of equipment (rail cars, locomotives, subway cars, buses, maintenance vehicles, communication apparatus, etc.). As well, Choice is required to monitor and maintain on-site minimum/maximum material reorder levels and provide computerized reports detailing usage at each setup location.

The Choice contract, and existing related contracts in the Hardware and Fasteners category have been selected for transition to management under MTAHQ Procurement in support of Procurement Consolidation. Exercising year two of the previously board approved two-year option will allow MTAHQ procurement to develop a Hardware and Fasteners category strategy, execute an all agency competitive RFP in the 2<sup>nd</sup> quarter of 2018, and transition to a new supplier(s), if required.

This modification is required to add the necessary funds to continue to support the ongoing material needs for hardware and fasteners that is required for railroad cars, subway cars and buses maintenance, as well as the expansion of rail / subway shops and facilities' requirements. While the Dept. of Bus has added many new and different types/styles of buses to its fleet they are operating more buses that are past the 12 year replacement mark than anticipated. They have also implemented major in house programs on its bus fleet that have been designed to improve vehicle reliability and other projects aimed at improving customer and passenger safety. MNR has since added 405 M8 fleet railcars and LIRR's fleet of 836 M7 railcars have been coming out of warranties which impacts the contract spend.

The unit prices as established in the base contract will remain the same and are deemed fair and reasonable.

**LIST OF PROCUREMENTS FOR BOARD APPROVAL, MAY 2017**  
**PROCUREMENTS FOR RATIFICATION**

**METROPOLITAN TRANSPORTATION AUTHORITY**

*Procurements Requiring Majority Vote:*

**K. Ratifications of Completed Procurement Actions (Involving Schedules E-J)**

(Staff Summaries required for unusually large or complex items which otherwise would require Board approval)

- |   |                                       |   |
|---|---------------------------------------|---|
| <b>4. Carahsoft Technology Corporation, Inc.</b><br><b>IT Support and Services for MTA Beacon Countdown</b><br><b>Clock Project</b><br><b>Contract No. 16349-0100</b> | <b>\$2,295,000</b><br>(Not-to-exceed) | <b><i><u>Staff Summary Attached</u></i></b> |
|---|---------------------------------------|---|

Ride NY State Competitive Contract No. PT66623 – 30 months

To recommend that the Board ratify the award of a miscellaneous procurement contract award to Carahsoft Technology Corporation, riding New York State Office of General Services Contract No. PT66623 for design, implementation, and support of an open source content management system for the B - Division Countdown Clock initiative for a period of thirty months retroactively from October 2016 through April 2019 in the not-to-exceed amount of \$2,295,000.00. Carahsoft's cost proposal is in accordance with the negotiated pricing established under the New York State Agreement, which reflects a 4.5% reduction from Carahsoft's commercial price provided to other customers. In addition, Carahsoft's pricing is the same as the rates negotiated under an existing Federal General Service Administration (GSA) contract which is used by all government entities. Based on this, the rates are considered fair and reasonable.

# Staff Summary

## Schedule K: Ratification of Completed Procurement Actions (Involving Schedules E-J)

Page 1 of 1

### Item Number:

<b>Vendor Name (&amp; Location):</b> Carahsoft Technology Corporation, Inc.	<b>Contract Number:</b> 16349-0100	<b>Renewal?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Description:</b> IT Support and Services for MTA Beacon Countdown Clock Project	<b>Total Amount: \$ 2,295,000.00</b>	
<b>Contract Term (including Options, if any):</b> October 2016 through April 2019	<b>Funding Source:</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> MTA IT / CIO / Sid Gellineau	
<b>Procurement Type:</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Contract Manager:</b> Elissa I. Stewart	
<b>Solicitation Type:</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Ride of NYS OGS Contract		

### **I. PURPOSE/RECOMMENDATION:**

To recommend that the Board ratify the award of a miscellaneous procurement contract to Carahsoft Technology Corporation, riding New York State Office of General Services Contract No. PT66623 for design, implementation, and support of an open source content management system for the B - Division Countdown Clock initiative for a period of thirty months retroactively from October 2016 through April 2019 in the not-to-exceed amount of \$2,295,000.00.

### **II. DISCUSSION**

In early 2016, MTA Procurement approved a proof of concept contract to Carahsoft Technology Corporation to test the viability of using Bluetooth or Wi-Fi beacons in combination with Transit Wireless infrastructure, "internet cloud resources" and wireless LCD displays to provide countdown clocks for the MTA's B Division subway lines. The proof of concept was approved by the MTA IT steering Committee in late 2016. The Beacon Countdown Clocks are web page display content on LCD Monitors in subway stations relevant to the train, line and location including information for the next train arriving at the screen's location; "Canned" messages, emergency messages, and other notices. The Project includes design and implement an open source content management system to allow the MTA to publish to and manage the B Division Countdown Clock Displays in all 279 B Division stations and Hosting Services. Functionality will also be developed to allow the MTA to have a library of pre-staged messages to specific station platforms and displays for quick response to emergencies or public events.

Carahsoft's cost proposal is in accordance with the negotiated pricing established under the New York State Agreement, which reflects a 4.5% reduction from Carahsoft's commercial price provided to other customers. In addition, Carahsoft's pricing is the same as the rates negotiated under an existing Federal General Service Administration (GSA) contract which is used by all government entities. Based on this, the rates are considered fair and reasonable.

MTA has conducted a responsibility review and other due diligence on Carahsoft. In connection with the review of the Contractor's responsibility pursuant to the All-Agency Responsibility Guidelines, the Contractor was found to be responsible notwithstanding significant adverse information and such responsibility finding was approved by the MTA Interim Executive Director in consultation with the MTA General Counsel.

### **III. M/WBE INFORMATION**

The New York State established 0% MBE and 0% WBE participation goals under this contract.

### **IV. IMPACT ON FUNDING**

Funding is based on approved operating budget for MTAIT and will not exceed the limit approved by the Board

### **V. ALTERNATIVE**

Perform all services in-house. This alternative is not practical. MTAIT does not have the resources or the trained personnel to design and develop a content management system.

# Staff Summary



<b>Subject</b> <b>2016 – 2017 Station Maintenance Billing</b>	<b>Date</b> <b>May 3, 2017</b>
<b>Department</b> <b>Chief Financial Officer</b>	<b>Vendor Name</b>
<b>Department Head Name</b> <b>Robert E. Foran</b>	<b>Contract Number</b>
<b>Department Head Signature</b> 	<b>Contract Manager Name</b>
<b>Project Manager Name</b> <b>Patrick Kane</b>	<b>Table of Contents Ref #</b>

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	Finance	5/22		x		2	Chief of Staff	1	Legal
2	Board	5/24		x					

## Narrative

### Purpose:

To advise the Board of submission of the station maintenance billings to New York City and the counties for the period April 1, 2016 to March 31, 2017.

### Discussion:

The attached schedule provides the summary of the station maintenance use and operations billing to the counties and New York City for the period April 1, 2016 through March 31, 2017.

Current legislation provides that on or before June first of each year the MTA shall determine and certify to New York City and the counties the cost for station maintenance use and operations for the twelve month period ending the preceding March thirty-first for the stations within the municipality. The MTA bills New York City and the counties each fiscal year based on a statutorily established formula adjusted annually by the CPI-W for the New York, Northwestern New Jersey and Long Island Region. The net increase in the CPI factor for the twelve month period ending March 31, 2017 was 2.403% which results in a \$3,898,467 increase over the prior year's billed amount.

Metropolitan Transportation Authority  
Station Maintenance, Use and Operations  
March 31, 2017

COUNTY BILLED	AMOUNT BILLED 2015 - 2016	% CHANGE IN CPI	\$ INCREASE	AMOUNT BILLED 2016 - 2017
DUTCHESS	\$ 2,369,628	2.403%	\$ 56,942	\$ 2,426,570
NASSAU	28,761,250	2.403%	691,133	29,452,383
NEW YORK CITY	92,029,003	2.403%	2,211,457	94,240,460
ORANGE	490,210	2.403%	11,780	501,990
PUTNAM	926,679	2.403%	22,268	948,947
ROCKLAND	52,118	2.403%	1,252	53,370
SUFFOLK	17,727,251	2.403%	425,986	18,153,237
WESTCHESTER	19,877,184	2.403%	477,649	20,354,833
	<u>\$ 162,233,323</u>		<u>\$ 3,898,467</u>	<u>\$ 166,131,790</u>

# CPI-Urban Wage Earners and Clerical Workers (Current Ser Original Data Value

Series Id: CWURA101SA0

Not Seasonally Adjusted

Series Title: All items in New York-Northern New Jersey-Long

Area: New York-Northern New Jersey-Long Island, NY-

Item: All items

Base Period: 1982-84=100

Years: 2007 to 2017

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2007	215.793	216.771	218.510	219.791	221.396	222.322	222.237	221.905	222.174	222.624	223.716	223.873	220.926	219.097	222.755
2008	224.557	225.281	226.951	228.215	230.923	233.776	235.446	235.510	234.703	232.778	228.727	227.223	230.341	228.284	232.398
2009	227.503	228.653	229.064	229.639	230.307	231.916	232.177	232.841	233.502	233.084	233.893	233.448	231.336	229.514	233.158
2010	234.067	234.153	235.240	235.750	236.144	235.916	236.330	236.820	236.725	237.483	237.606	237.575	236.151	235.212	237.090
2011	238.396	239.750	241.667	242.697	244.316	244.601	245.265	246.025	246.877	246.297	245.546	244.586	243.835	241.905	245.766
2012	245.541	246.539	248.152	248.706	248.955	248.488	248.162	249.734	250.980	250.539	250.586	249.535	248.826	247.730	249.923
2013	250.849	252.317	252.739	252.024	252.259	252.862	253.277	253.633	254.434	252.917	253.013	253.088	252.784	252.175	253.394
2014	255.477	254.782	255.933	255.937	257.145	257.147	257.309	256.691	256.945	256.022	254.638	253.224	255.938	256.070	255.805
2015	253.159	254.044	254.358	254.699	255.946	256.383	256.054	256.038	256.386	255.932	255.385	254.441	255.235	254.765	255.706
2016	254.968	255.246	256.012	257.289	257.721	258.269	258.065	258.374	259.059	258.995	259.348	259.789	257.761	256.584	258.938
2017	261.409	262.086	262.165												

**STATION MAINTENANCE  
FOR THE YEAR 4/1/16 - 3/31/17**

	<b>BILLED AMOUNT 2015-2016</b>	<b>CHANGE IN CPI</b>	<b>INCREASED AMOUNT</b>	<b>BILL AMOUNT 2016-2017</b>
<b>DUTCHESS</b>	<b>2,369,628</b>	<b>0.02403</b>	<b>56,942</b>	<b>2,426,570</b>
<b>NASSAU</b>	<b>28,761,250</b>	<b>0.02403</b>	<b>691,133</b>	<b>29,452,383</b>
<b>NEW YORK CITY</b>	<b>92,029,003</b>	<b>0.02403</b>	<b>2,211,457</b>	<b>94,240,460</b>
<b>ORANGE</b>	<b>490,210</b>	<b>0.02403</b>	<b>11,780</b>	<b>501,990</b>
<b>PUTNAM</b>	<b>926,679</b>	<b>0.02403</b>	<b>22,268</b>	<b>948,947</b>
<b>ROCKLAND</b>	<b>52,118</b>	<b>0.02403</b>	<b>1,252</b>	<b>53,370</b>
<b>SUFFOLK</b>	<b>17,727,251</b>	<b>0.02403</b>	<b>425,986</b>	<b>18,153,237</b>
<b>WESTCHESTER</b>	<b>19,877,184</b>	<b>0.02403</b>	<b>477,649</b>	<b>20,354,833</b>
<b>GRAND TOTAL</b>	<b><u>\$ 162,233,323</u></b>		<b><u>3,898,467</u></b>	<b><u>\$ 166,131,790</u></b>
<b>MARCH 2016 CPI</b>	<b>256.012</b>			
<b>MARCH 2017 CPI</b>	<b>262.165</b>			
<b>CHANGE</b>	<b>6.153</b>			
	<b>6.153/256.012</b>			
<b>% INCREASE</b>	<b>0.02403403</b>			

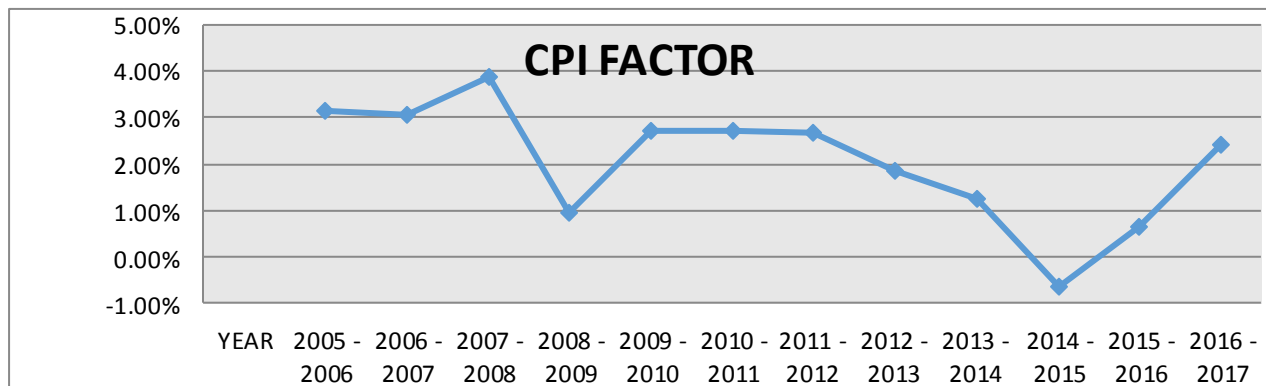
## 2016 – 2017 STATION MAINTENANCE

- CPI factor used is the Consumer Price Index for Wage Earners and Clerical Workers for the New York, Northeastern New Jersey for twelve month period  
All monies due the MTA for 2015-2016 was received

### CPI FACTOR

YEAR	CPI FACTOR		YEAR	CPI FACTOR		YEAR	CPI FACTOR
2016 - 2017	2.40%	*	2012 - 2013	1.85%		2008 - 2009	0.93%
2015 - 2016	0.65%		2011 - 2012	2.68%		2007 - 2008	3.86%
2014 - 2015	-0.62%		2010 - 2011	2.73%		2006 - 2007	3.07%
2013 - 2014	1.26%		2009 - 2010	2.70%		2005 - 2006	3.16%

\* Current Year



### BILLING

YEAR	TOTAL AMOUNT	ANNUAL INCREASE (DECREASE)		YEAR	TOTAL AMOUNT	ANNUAL INCREASE (DECREASE)
2016 - 2017	166,131,790	3,898,467	*	2010 - 2011	153,151,498	4,069,927
2015 - 2016	162,233,323	1,048,123		2009 - 2010	149,081,571	3,919,379
2014 - 2015	161,185,200	-998,076		2008 - 2009	145,162,191	1,337,569
2013 - 2014	162,183,274	2,081,081		2007 - 2008	143,824,622	5,345,302
2012 - 2013	160,165,193	2,909,352		2006 - 2007	138,479,319	4,124,687
2011 - 2012	157,255,958	4,104,460		2005 - 2006	134,354,633	4,115,555

\* Current Year

- 1998 was the last year New York City was billed on actual cost for both the LIRR and Metro North
- Legislation was enacted in 1995, and renewed in 1999 and 2004, for station maintenance billing using the CPI factor and bringing NYC onboard with this method for the second time
- Station Maintenance is billed in June and payment is due by September 1st.

**MAY 2017**  
**MTA REAL ESTATE**  
**LIST OF REAL ESTATE ACTION ITEMS FOR BOARD APPROVAL**

**MTA NEW YORK CITY TRANSIT**

Lease with Jalal Mohsin Ahmed (or new legal entity to be formed) for operation of a convenience store at Kings Highway station, Brighton line, Brooklyn

**MTA METRO NORTH RAILROAD**


License agreement with the County of Westchester for operation and maintenance of a commuter parking facility at Metro-North's station in North White Plains, New York

**MTA LONG ISLAND RAIL ROAD**

Agreement to rehab and develop Moynihan station

# Staff Summary



Subject <b>LEASE AGREEMENT</b>
Department <b>REAL ESTATE</b>
Department Head Name <b>JEFFREY B. ROSEN</b>
Department Head Signature 
Project Manager Name <b>MICHAEL T. THADATHIL</b>

Date <b>MAY 22, 2017</b>
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	05/22/17	X		
2	Board	05/24/17	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

AGENCY: MTA New York City Transit ("NYCT")  
 LESSEE: Jalal Mohsin Ahmed (or new legal entity to be formed)  
 LOCATION: Kings Highway Station (Brighton Line), Brooklyn  
 ACTIVITY: Operation of a retail convenience store  
 ACTION REQUESTED: Approval of terms  
 TERM: 10 years  
 SPACE: Unit 04: 300 square feet & Unit 07: 50 square feet  
 COMPENSATION: \$62,000 in Year 1 with 3% annual escalations thereafter

<u>Year</u>	<u>Annual</u>	<u>Monthly</u>	<u>% Increase</u>	<u>Per Sq. Ft.</u>
1	\$62,000.00	\$5,166.67		\$177.14
2	\$63,860.00	\$5,321.67	3.0%	\$182.46
3	\$65,775.80	\$5,481.32	3.0%	\$187.93
4	\$67,749.07	\$5,645.76	3.0%	\$193.57
5	\$69,781.54	\$5,815.13	3.0%	\$199.38
6	\$71,874.98	\$5,989.58	3.0%	\$205.36
7	\$74,031.23	\$6,169.27	3.0%	\$211.52
8	\$76,252.17	\$6,354.35	3.0%	\$217.86
9	\$78,539.73	\$6,544.98	3.0%	\$224.40
10	\$80,895.93	\$6,741.33	3.0%	\$231.13

## COMMENTS:

MTA Real Estate issued a request for proposals ("RFP") for these retail spaces, which are located adjacent to each other at street level at the north entrance to Kings Highway Station. Unit 04 received three responsive proposals and Unit 07 received one responsive proposal. Jalal Mohsin Ahmed proposed the highest rent for each of the two retail spaces, with a combined first year rent \$62,000 (\$177psf) and 10 year present value (using a 6% discount rate) of \$515,766. The proposed rent exceeds the independent estimate of fair market value of the space obtained by MTA Real Estate from a licensed real estate broker experienced in the leasing of space in this area who was not involved directly or indirectly in the RFP process for these retail spaces.

# Staff Summary

## FINANCE COMMITTEE MEETING Jalal Mohsin Ahmed (Cont'd)

Details of the proposals for Unit 04 are listed in the following table:

Name of Proposer	First Year Rent	Present Value: Ten Year Term, 6% Discount Rate
Jalal M. Ahmed	\$50,000	\$415,940
Zafar Chaudhry	\$48,000	\$399,294
Anwar Alvi (South Nassau Property Inc.)	\$36,000	\$308,859

Details of the proposal for Unit 07 are listed in the following table:

Name of Proposer	First Year Rent	Present Value: Ten Year Term, 6% Discount Rate
Jalal M. Ahmed	\$12,000	\$99,826

Mr. Ahmed proposes to combine the two concession areas in order to operate a retail convenience store (for the sale of pre-packaged food, hot and cold deli sandwiches, coffee, cold drinks, and newspapers/magazines/candy). Mr. Ahmed will completely renovate the concession areas, which are currently vacant. He and his family have operated small convenience stores in Brooklyn for more than a decade. In addition, he is expected to open a street level NYCT retail convenience store at 1498 Sheepshead Bay Road later this year. Mr. Ahmed has sufficient financial resources to undertake the design, construction, and operation of these locations. If Mr. Ahmed chooses to form a new legal entity, then he will be required to continue to own and control such tenant entity and he will personally guarantee the entity's obligations under the lease.

The leasing of Unit 04 would have been a Policy #33 information Item but the leasing of Unit 07 requires this Staff Summary. Since one lease for the combined units with the same tenant is proposed, this Staff Summary covers the entire transaction.

Based on the foregoing, MTA Real Estate requests authorization to enter into a lease agreement with Jalal Mohsin Ahmed on the above-described terms and conditions.

# Staff Summary



Subject <b>LICENSE AGREEMENT</b>
Department <b>REAL ESTATE</b>
Department Head Name <b>JEFFREY B. ROSEN</b>
Department Head Signature 
Project Manager Name <b>ANTHONY CAMPBELL</b>

Date <b>MAY 22, 2017</b>
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	5/22/17	X		
2	Board	5/24/17	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

**AGENCY:** MTA Metro-North Commuter Railroad Company ("Metro-North")  
**LICENSEE:** County of Westchester (the "County")  
**LOCATION:** West side of right-of-way at North White Plains Station  
**ACTIVITY:** Operation and maintenance of commuter parking facility  
**ACTION REQUESTED:** Approval of terms  
**TERM:** 5 years, effective January 1, 2017, terminable upon 60 days' notice  
**PROPERTY:** Approximately 175,000 square feet along the westerly side of Metro-North's Harlem Line adjacent to station in North White Plains  
**COMPENSATION:** \$243,091 annually, payable in quarterly installments  
**ESCALATIONS:** Metro-North will receive a concurrent and proportional increase in the compensation based on any parking fee increases, which will be subject to Metro-North approval.

## COMMENTS:

The County, through its Department of Parks, Recreation and Conservation, has been operating and maintaining the Property as a commuter parking facility through successive license agreements since January 30, 1980. The Property contains approximately 388 commuter parking spaces and is operated in conjunction with the adjacent County-owned commuter parking facility. Metro-North's parking area is land-locked and requires access through the County's property to operate.

The license agreement, which renews and replaces the prior license agreement with the County for the Property, is terminable by Metro-North on 60 days' notice, with or without cause, for any or no reason and without repayment of any unamortized tenant improvement costs or any other financial penalty, and as such is governed by the MTA Real Estate Department Policies and Procedures for the Licensing of Real Property. No request for proposals is required because the property is located such that (apart from Metro-North) only a single adjacent owner can make use of the Property.

Based on the foregoing, MTA Real Estate requests authorization to enter into a license agreement with the County on the above-described terms and conditions.

# Staff Summary

Page 1 of 5

<b>Subject</b>						<b>Date</b>			
Moynihan Train Hall Phase 2						May 22, 2017			
<b>Departments</b>						<b>Vendor Name</b>			
MTA Real Estate MTA Finance									
<b>Department Head Name</b>						<b>Contract Number</b>			
Jeffrey B. Rosen Patrick J. McCoy									
<b>Department Head Signature</b>						<b>Contract Manager Name</b>			
									
<b>Division Head Name</b>						<b>Table of Contents Ref #</b>			
Bob Foran									
<b>Board Action</b>						<b>Internal Approvals</b>			
<b>Order</b>	<b>To</b>	<b>Date</b>	<b>Approval</b>	<b>Info</b>	<b>Other</b>	<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>
1	Finance	5/22	X			3	Chief of Staff 	1	Legal 
2	Board	5/24	X					2	Chief Financial Officer 

## Purpose:

To obtain MTA Board approval to enter into various agreements necessary to effectuate Phase 2 of the Moynihan Station Development Project (the "Project"), which will entail the redevelopment of the James A. Farley Post Office Building (the "Building") to include a new world-class train hall to be shared by National Railroad Passenger Corporation ("Amtrak"), the Long Island Rail Road and Metro-North Commuter Railroad (the "Train Hall"), as well as retail and office space. Such agreements are to be executed in conjunction with the financial close of the Project, and include, but are not limited to: (1) a Phase 2 Project and Force Account Agreement by and among the MTA, LIRR and New York State Urban Development Corporation d/b/a Empire State Development ("ESD") (the "Phase 2 Agreement"), (2) a lease between ESD, as landlord, and the MTA, as tenant (the "MTA Unit Lease"), relating to a condominium unit in the Building to be occupied by the MTA (the "MTA Unit"), (3) certain easement agreements, (4) a Joint Services Agreement, by and among ESD, the MTA, the United States Department of Transportation, acting by and through the Executive Director of the Build America Bureau (the "TIFIA Lender") and a PILOT trustee (the "JSA") in support of Project-related financing under the Transportation Infrastructure Financing Innovation Act ("TIFIA") that ESD is seeking to obtain from the TIFIA Lender (the "ESD Financing"), (5) a Memorandum of Understanding between the MTA, the New York State Division of the Budget (the "Division") and ESD (the "MOU") and (6) an Interagency Agreement among the MTA, LIRR, Metro-North, MTA Bus, NYCT and MaBSTOA relating to reimbursements for amounts expended under the JSA.

## Discussion:

Phase 1 of the Project included the design, construction and installation of certain improvements to the existing Penn Station, including the expansion of the West End Concourse (the "WEC"), the installation of new stairs, elevators and escalators connecting the train platforms to the WEC, and two new entrances to the WEC from Eighth Avenue (the "Eighth Avenue Entrances"). Phase 2 of the Project will include construction of the Train Hall, a platform ventilation system, new passenger circulation elements, including new connections between the Train Hall and Penn Station and from the Train Hall to the train shed, and thereby expand MTA's operations westward to ease congested commuter traffic and otherwise enhance the LIRR (and in due course Metro-North)

## Staff Summary

Page 2 of 5

customer experience.

The parties are in the process of finalizing the definitive documentation pursuant to which a joint venture of Vornado Realty Trust and The Related Companies (the “Developer”) is to undertake the construction of the Train Hall for a stipulated fixed price and acquire the right to redevelop the balance of the Building in accordance with an agreed upon condominium ownership regime of ownership (the “Condo”). Following the creation of the Condo, there will be separate Condo units for each of the MTA, Amtrak and the United States Postal Service, as well as the Developer’s retail and commercial units. Each of the unit-owners will have representation on the board of the Condo.

### Phase 2 Agreement

The Phase 2 Agreement will address the coordination of the work to be performed by the Developer (the “Phase 2 Work”) with current LIRR operations under the Building and in Penn Station. Pre-approved plans for the Phase 2 Work will be identified in a schedule attached to the Phase 2 Agreement, and MTA and LIRR will have approval rights relating to any changes to such plans to the extent they would impact LIRR operations or Train Hall construction. The Phase 2 Agreement will specify what LIRR force account services will be performed in connection with the Phase 2 Work and govern track outages and platform closures. ESD has agreed to use the current system in place at Penn Station for track outages and platform closures, pursuant to which Amtrak controls track outages and platform closures but LIRR must concur with any track outages and platform closures that affect its operations.

### MTA Unit Lease

The term of the MTA Unit Lease will be up to 99 years, to commence after substantial completion of the Train Hall work and the MTA fit-out, and is intended to be coterminous with occupancy by Amtrak (or any successor thereto) of Amtrak’s Condo unit. If the MTA were to vacate the MTA Unit, it would be required to provide ESD with at least 24 months’ prior written notice. No rent will be payable by the MTA to ESD under the MTA Unit Lease, but it will be a triple net lease, so that the MTA will be responsible for the payment of all Condo common charges associated with the MTA Unit.

Such common charges may be phased in as the Building becomes operational, and will depend on actual experience and vary over time. But it is currently estimated that the total common charges payable by Amtrak and the MTA, to be split between them in a manner consistent with the Federal Passenger Rail Investment and Improvement Act of 2008 (“PRIIA”), will be approximately \$13 million at the outset.

### Easements

A New Entrances Easement Agreement will govern the Eighth Avenue Entrances. Until the Condo is formed, the maintenance for the new entrances will be treated as if they are part of the existing Platform and Level A Lease between LIRR and Amtrak, with costs for the maintenance being apportioned 65% to Amtrak and 35% to LIRR. After the Condo is formed, maintenance responsibilities for the new entrances will revert to the Condo. Upon formation of the Condo, the MTA, LIRR and Amtrak will be granted an easement to access certain equipment in the Building necessary to maintain the WEC. The WEC is currently located partially in the Building (and owned by ESD) and partially in Penn Station (and owned by Amtrak), but the boundary of the WEC will

## Staff Summary

eventually be adjusted and included within the train shed, with ownership vesting in Amtrak, subject to the Platform and Level A Lease.

### ESD Financing

A \$100 million direct MTA contribution to the funding for Phase 2 of the Project (the “MTA Contribution”) was approved by the MTA Board on March 22, 2017. Such amount includes \$2.5 million that will be used to fund the MTA’s fit-out of the MTA Unit and any force account costs that MTA or LIRR may incur in connection with the Phase 2 Work.

It is expected that the ESD Financing, together with interest capitalized thereon, will be in an amount of approximately \$500 million. ESD’s repayment of the ESD Financing will be secured by payments-in-lieu-of-taxes (“PILOT”) and certain other payments to be made by the Developer and its retail and commercial subtenants. In order to achieve an investment grade rating on the ESD Financing as required by TIFIA, ESD has requested that MTA undertake to provide financial support to the TIFIA Lender in the event that such payments are not timely made. The MTA will enter into the JSA with the TIFIA Lender, ESD and a PILOT Trustee. The TIFIA loan will be supported by a Debt Service Reserve Fund (“DSRF”), which will be funded prior to any draw on the loan. The JSA will provide that if at any time scheduled PILOT payments are not timely made as agreed to by the Developer and its subtenants or are insufficient to pay debt service, the DSRF will be drawn upon. The MTA’s obligation would then be to then replenish the TIFIA DSRF.

If the MTA is called upon to make any DSRF replenishment payments, the MTA will be entitled to reimbursement by the Developer’s corporate parents (the “Guarantors”), pursuant to “good guy guaranties” designed to ensure that the Guarantors will in fact make the required payments unless they are prepared to walk away from their investment in the commercial units, including the \$230 million they will have paid as of financial close for the right to develop such units. These guaranties will remain in effect until the earliest to occur of the following: (a) if the Developer has not yet commenced construction of its commercial premises located outside of the Train Hall, the date that the Developer vacates and surrenders possession of such premises, or (b) if substantial completion of the core and shell of such premises has occurred, the date that the Developer vacates and surrenders possession of the Building or the applicable Guarantor no longer has an ownership interest in the Developer, or (c) after substantial completion of the Train Hall, the delivery of a replacement “good guy guaranty” from an acceptable replacement guarantor. MTA will also have recourse to any excess monies derived from a reletting of the commercial units by ESD to a new entity, and to any future excess PILOT payments.

Additionally, a Stabilization Reserve Account will be created and funded at closing using \$20 million of the MTA’s \$100 million capital contribution. This fund will be available to reimburse MTA for any DSRF replenishment payments made by MTA and/or to provide a direct source of DSRF replenishment. If any moneys remain in the Stabilization Reserve Account after the MTA has been reimbursed for any such additional advances and is no longer supporting the ESD Financing, such moneys will be transferred to ESD.

Execution of the JSA will also be conditioned on the MTA’s entering into the MOU with ESD and the Division, pursuant to which the Division will agree to consider waiving New York State-related expenses levied against the MTA in consideration of any support provided by the MTA in connection with the ESD Financing that is not reimbursed through any of the above mechanisms.

The amounts available to the MTA to make payments under the JSA will be the revenues that are available to pay operating expenses of the transit and commuter agencies after the payment of debt service on MTA’s bonds. The

## Staff Summary

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MTA, LIRR, Metro-North, MTA Bus, NYCT, and MaBSTOA will enter into an interagency agreement similar to a previous interagency agreement supporting the MTA Transportation Revenue Bonds, so that the MTA operating agencies whose revenues may be used to make payments under the JSA will be appropriately reimbursed from other available moneys when received.

### **Recommendation:**

It is recommended that the MTA Board authorize MTA and LIRR to enter into all agreements necessary to effectuate Phase 2 of the Project, including, but not limited to, the documents described above, with such additions and/or changes as the Interim Executive Director or other Authorized Officers may direct staff to negotiate, and that the MTA Board adopt the attached resolution.

## Staff Summary

BE IT RESOLVED by the MTA Board:

1. The form of each of the JSA, MOU and Interagency Agreement presented to the Board at this meeting is hereby approved in substantially the form presented. In addition, each of the Phase 2 Agreement, the MTA Unit Lease, and the Easement Agreements (collectively, with the JSA, the MOU and the Interagency Agreement, the “Project Documents”) is hereby approved provided it is consistent with the staff summary to which this resolution is attached. Each Authorized Officer (as defined below) is hereby authorized to execute and deliver by and on behalf of the signatory agency each of the Project Documents with such changes, omissions, insertions and revisions as may be approved by the officer executing such agreement, said execution being conclusive evidence of the approval and concurrence of the Board in the determinations made by such Authorized Officer. Each such Authorized Officer may exercise any authority delegated under this Resolution from time to time following, or in connection with, the execution and delivery of each of the Project Documents, as appropriate for any purposes, including, without limitation, the execution and delivery of such additional agreements, including a recognition agreement permitting lenders to enforce certain provisions of the Project Documents, and related closing certificates as the Authorized Officer determines is necessary to effectuate the transactions authorized hereby, and in order to exercise rights or remedies under any of the Project Documents.

2. In the event that ESD determines to enter into a financial agreement or transaction with an institution other than TIFIA Lender in substitution for or during its negotiation of the ESD Financing in order to finance the construction of the Project, including on an interim basis, whether pursuant to a public or private sale, the Authority is hereby authorized to execute and deliver a Joint Services Agreement and related Interagency Agreement in connection with such other financial agreement or transaction in substantially the forms of the Joint Services Agreement and Interagency Agreement presented to the Board at this meeting, with such changes therein as are necessary or desirable to conform the Joint Services Agreement and the Interagency Agreement to the terms and conditions of such financial agreement or transaction.

3. Each Authorized Officer is hereby further authorized and directed to take such further actions as may be necessary or desirable to implement the purposes and intent of the Resolution. For purposes of this Resolution, an Authorized Officer shall mean the Acting Chairman, the Interim Executive Director, the President of each agency that is a party to any of the Project Documents, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer, the Director, Finance, the Director of Budget and Financial Management, the Secretary or any Assistant Secretary, and any other person authorized by the Chairman or the President of each agency that is a party to any of the Project Documents, as appropriate, to perform the act or sign the document in question.



**SERVICE CHANGES:**

**REINSTATE X28 WEEKEND SERVICE**

**Service Issue**

In response to requests brought to NYCT by elected officials and customers residing in Seagate, Coney Island, Bensonhurst, Bath Beach, Bay Ridge, and Dyker Heights, X28 weekend service was reinstated on September 4, 2016. According to NYC Transit service guidelines, a new day of service must be implemented on a trial basis and a public hearing must be held following the initiation of the trial period. The new service was subject to a public hearing on April 4, 2017. Public comments were supportive of Saturday and Sunday service on the X28.

X28 weekend service responds to an increase in demand in Bensonhurst, Dyker Heights, and Bay Ridge for weekend access to Manhattan employment, shopping, and entertainment. There have been ongoing requests for the return of weekend transit service from customers in these neighborhoods and from elected officials.

**Recommendation**

Make permanent X28 weekend service on Saturdays and Sundays.

**Budget Impact**

The net operational cost associated with X28 weekend service is \$376,000 for Saturday service and \$348,000 for Sunday service.

**Proposed Implementation Date**

This service has been in operation since September 4, 2016.

# Staff Summary

Subject	Make Permanent X28 Weekend Service
Department	Operations Planning
Department Head Name	Peter G. Cafiero
Department Head Signature	
Project Manager Name	Sarah Wyss

Date	May 4, 2017
Vendor Name	N/A
Contract Number	N/A
Contract Manager Name	N/A
Table of Contents Ref #	N/A

Board Action					
	To	Date	Approval	Info	Other
1	Acting President		X		
2	Interim Exec. Dir.	5.17.17	X		
3	Board		X		

Internal Approvals			
Order	Approval	Order	Approval
8	Acting President 	4	VP General Counsel 
7	Acting Executive VP 	3	Director OMB 
6	Acting SVP Bus 	2	Acting VP, GCR 
5	VP Corp. Comm 	1	Chief OF 

## Purpose

To obtain approval from the MTA Board of a proposal to make X28 weekend service permanent.

## Discussion

X28 weekend service was reinstated to improve access from Seagate, Coney Island, Bensonhurst, Bath Beach, Bay Ridge, and Dyker Heights to employment, shopping, and entertainment in Manhattan. Without the service, customers in these neighborhoods seeking to access Manhattan destinations on Saturdays and Sundays must either take several buses, bus to the subway, drive, or forego their trips altogether.

The X28 is a north-south route that provides weekday express bus service between Seagate, Downtown Manhattan, and Midtown Manhattan. The X28 travels along Surf Avenue, Cropsey Avenue, 14<sup>th</sup> Avenue, 86<sup>th</sup> Street, the Gowanus Expressway, Broadway, 23<sup>rd</sup> Street, Madison Avenue, 57<sup>th</sup> Street, Fifth Avenue, Avenue of the Americas, 6<sup>th</sup> Avenue, and Church Street. The X28 operates weekdays from 5:00am to 11:30pm and previously operated Saturdays from 6:00am to 10:00pm and Sundays from 7:00am to 9:00pm.

As part of 2010 service reductions, X28 weekend service was discontinued. Recently, NYCT has seen a seven percent growth in X28 average weekday ridership, from 2,050 customers in 2014 to 2,200 customers in 2015. With the growth in weekday ridership, customer requests that NYCT has received to reinstate weekend service, and positive support at the public hearing, X28 weekend service is being permanently reinstated.

A service equity analysis, conducted in accordance with Title VI of the Civil Rights Act of 1964 and related Federal Transit Administration guidance materials, found that the X28 Saturday and

# Staff Summary

Sunday service would not result in a disproportionate impact on either minority or below-poverty populations.

## **Recommendation**

Make permanent X28 Saturday and Sunday weekend service.

## **Alternatives to the Proposed Service Change**

*Do not make experimental X28 weekend service permanent.* Does not address the requests of the community for improved weekend transit service.


## **Budget Impact**

The net operational cost associated with X28 weekend service is \$376,000 for Saturday service and \$348,000 for Sunday service.

## **Proposed Implementation Date**

This service has been in operation since September 4, 2016.

Approved:

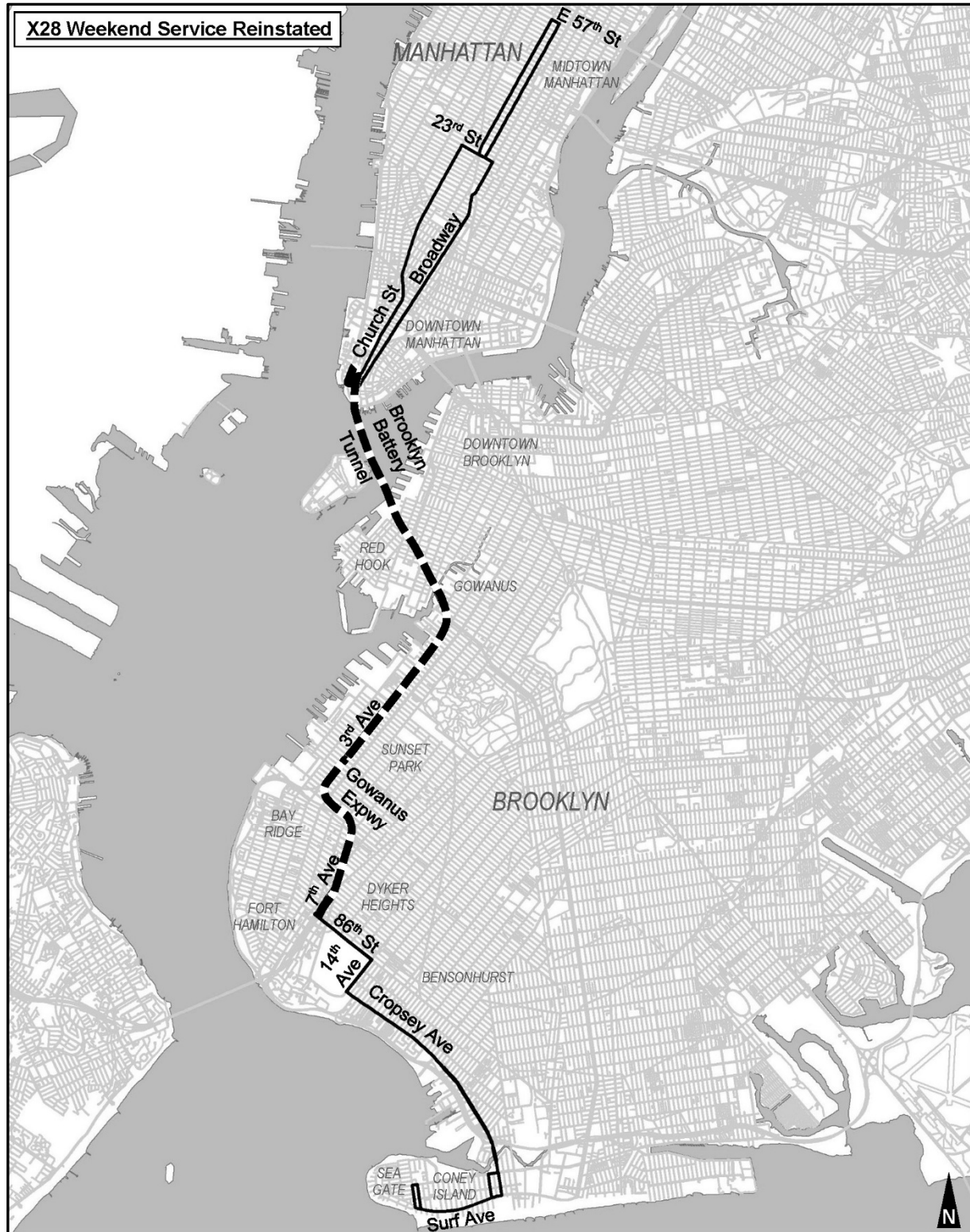


Darryl Irick  
Acting President



Veronique Hakim  
Interim Executive Director

## Attachment 1



## **Attachment 2**

### **Summary of Public Hearing and Online Comments Regarding X28 Weekend Service**

A public hearing was held on April 3, 2017 with x registered speakers and a total of y comments were submitted online via the MTA website. Below is a summary of the main comments and concerns expressed by the public.

- **X28**
  - **Multiple statements of opposition for X28 weekend service given its high cost and very small benefit**
  - **Support of weekend service as it allows senior and disabled customers to travel into Manhattan for entertainment purposes**
  - **Request to extend all weekday and weekend trips to Sea Gate**  
The ability to provide additional service to Sea Gate is limited by the availability of resources.
  - **Request to extend/right-size weekend service span and frequency to reflect to meet current service needs**
    - **To Manhattan operating until 11:00pm on Saturdays and 9:00pm on Sundays**
    - **To Brooklyn operation until 11:30pm on Saturdays and 10:30pm on Sundays**Bus service frequencies and service spans are scheduled according to MTA guidelines on ridership and demand.
  - **Request for additional weekday trip leaving Bensonhurst at 4:39am**  
The need for additional service is determined by ridership, as such, the X28 is not currently eligible for additional service.
- **X27**
  - **Request for additional weekday trip leaving 4<sup>th</sup> Avenue/Shore Road at 4:48am**
- The need for additional service is determined by ridership, as such, the X27 is not currently eligible for additional service.
- **X29**
  - **Requests to reinstate service for Coney Island residents**  
The ability to reinstate express service to Coney Island is not possible given limited resources.

### PROCUREMENTS

The Procurement Agenda this month includes 8 actions for a proposed expenditure of \$24.2M.

<b>Subject</b> Request for Authorization to Award Various Procurements					
<b>Department</b> Materiel – NYCT					
<b>Department Head Name</b> Stephen M. Plochochi					
<b>Department Head Signature</b> 					
<b>Project Manager Name</b> Rose Davis					
<b>Board Action</b>					
<b>Order</b>	<b>To</b>	<b>Date</b>	<b>Approval</b>	<b>Info</b>	<b>Other</b>
1	Committee	5/22/17			
2	Board	5/24/17			

May 16, 2017			
<b>Department</b> Law and Procurement – MTACC			
<b>Department Head Name</b> Evan Eisland			
<b>Department Head Signature</b> 			
<b>Internal Approvals</b>			
	<b>Approval</b>		<b>Approval</b>
	President NYCT		President MTACC
	Executive VP		President MTA Bus
X	Capital Prog. Management	X	Subways
	Law	X	Diversity/Civil Rights

**Internal Approvals (cont.)**

<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>

**PURPOSE:**

To obtain approval of the Board to award various contracts and purchase orders, and to inform the NYC Transit Committee of these procurement actions.

**DISCUSSION:**

**NYC Transit proposes to award Noncompetitive procurements in the following categories:**

Procurements Requiring Two-Thirds Vote:

	<u># of Actions</u>	<u>\$ Amount</u>
Schedule A: Noncompetitive Purchases and Public Work Contracts	4	\$ 1.7 M
<ul style="list-style-type: none"> <li>• Xtralis, Inc. \$ 1.7 M</li> <li>• Duos Technologies, Inc.</li> <li>• Electronic Interface Associates, Inc.</li> <li>• Clearsy System Engineering</li> </ul>		

SUBTOTAL 4 \$ 1.7 M

**MTA Capital Construction proposes to award Noncompetitive procurements in the following categories: NONE**

**MTA Bus Company proposes to award Noncompetitive procurements in the following categories: NONE**

**NYC Transit proposes to award Competitive procurements in the following categories:**

Schedules Requiring Majority Vote:

Schedule F: Personal Service Contracts	2	\$	7.8 M
Schedule H: Modifications to Personal/Miscellaneous Service Contracts	2	\$	14.7 M
	SUBTOTAL	4	\$ 22.5 M
	TOTAL	8	\$ 24.2 M

**MTA Capital Construction proposes to award Competitive procurements in the following categories: NONE**

**MTA Bus Company proposes to award Competitive procurements in the following categories: NONE**

**NYC Transit proposes to award Ratifications in the following categories: NONE**

**MTA Bus Company proposes to award Ratifications in the following categories: NONE**

**MTA Capital Construction proposes to award Ratifications in the following categories: NONE**

**COMPETITIVE BIDDING REQUIREMENTS:** The procurement actions in Schedules A, B, C, and D are subject to the competitive bidding requirements of PAL 1209 or 1265-a relating to contracts for the purchase of goods or public work. Procurement actions in the remaining Schedules are not subject to these requirements.

**BUDGET IMPACT:** The purchases/contracts will result in obligating funds in the amounts listed. Funds are available in the current operating/capital budgets for this purpose.

**RECOMMENDATION:** That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

## **BOARD RESOLUTION**

**WHEREAS**, in accordance with Section 1265-a and 1209 of the Public Authorities Law and the All-Agency Procurement Guidelines, the Board authorizes the award of certain noncompetitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

**WHEREAS**, in accordance with the All-Agency Procurement Guidelines, the Board authorizes the award of certain noncompetitive miscellaneous service and miscellaneous procurement contracts, certain change orders to purchase, public work, and miscellaneous service and miscellaneous procurement contracts, and certain budget adjustments to estimated quantity contracts; and

**WHEREAS**, in accordance with Section 2879 of the Public Authorities Law and the All-Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals, and authorizes the solicitation of such proposals.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. As to each action set forth in Schedule D, the Board declares competitive bidding impractical or inappropriate for the reasons specified therein, and ratifies each action for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: (i) the miscellaneous procurement contracts set forth in Schedule E; (ii) the personal service contracts set forth in Schedule F; (iii) the miscellaneous service contracts set forth in Schedule G; (iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; (v) the contract modifications to purchase and public work contracts set forth in Schedule I; and (vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

7. The Board authorizes the budget adjustments to estimated contracts set forth in Schedule L.

MAY 2017

**LIST OF NONCOMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**

**Procurements Requiring Two-Thirds Vote:**

**A. Noncompetitive Purchases and Public Work Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Noncompetitive.) Note – in the following solicitations, NYC Transit attempted to secure a price reduction. No other substantive negotiations were held except as indicated for individual solicitations.

1. Xtralis, Inc.	\$131,129	<u>Staff Summary Attached</u>
2. Duos Technologies, Inc.	\$449,210	↓
3. Electronic Interface Associates, Inc.	\$430,232	↓
4. Clearsy System Engineering	\$673,957	↓
Contract# C-32515		

Purchase of equipment to test and evaluate track intrusion detection warning systems, Phase II.

Item Number: 1–4

<b>Vendor Name (Location)</b> Xtralis, Inc. (Avon, Massachusetts) Duos Technologies, Inc. (Jacksonville, Florida) Electronic Interface Associates, Inc. (Long Island City, New York) Clearsy System Engineering (Provence, France)	<table border="1"> <tr> <td> <b>Contract Number</b>           C-32515       </td> <td> <b>Renewal?</b>   <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       </td> </tr> </table>	<b>Contract Number</b>  C-32515	<b>Renewal?</b>  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Contract Number</b>  C-32515	<b>Renewal?</b>  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Description</b> Purchase of equipment to test and evaluate track intrusion detection warning systems, Phase II	<table border="1"> <tr> <td> <b>Total Amount:</b>          Xtralis: \$131,129          Duos: \$449,210          EIA: \$430,232          Clearsy: \$673,957       </td> <td>         \$1,684,528       </td> </tr> </table>	<b>Total Amount:</b> Xtralis: \$131,129 Duos: \$449,210 EIA: \$430,232 Clearsy: \$673,957	\$1,684,528
<b>Total Amount:</b> Xtralis: \$131,129 Duos: \$449,210 EIA: \$430,232 Clearsy: \$673,957	\$1,684,528		
<b>Contract Term (including Options, if any)</b> 12 Months	<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a	<b>Requesting Dept./Div., Dept./Div. Head Name:</b>  Capital Program Management, John O'Grady		
<b>Procurement Type</b> <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Noncompetitive			
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Test and Evaluate			

**Discussion:**

It is requested that the Board declare competitive bidding impractical or inappropriate pursuant to Public Authorities Law, Section 1209, Subdivision 9(d) and approve the award of four purchase contracts for the test and evaluation of new technologies for detecting and warning of intrusions by persons or objects onto the subway tracks in station areas. Purchase contracts will be awarded to four vendors: Xtralis, Inc. ("Xtralis") in the amount of \$131,129; Duos Technologies, Inc. ("Duos") in the amount of \$449,210; Electronic Interface Associates, Inc. ("EIA") in the amount of \$430,232; and Clearsy System Engineering ("Clearsy") in the amount of \$673,957. The total amount of these purchases will be \$1,684,528.

Capital Program Management ("CPM") has conducted extensive research into various track intrusion technologies developed to improve safety in the vicinity of the track in station areas. A two-phase pilot program is underway to test and evaluate which technologies, and respective applications, provide optimal performance across various station configurations. NYC Transit's interest in track intrusion technologies was advertised on the NYC Transit website, as well as in a series of domestic and international trade publications, in an effort to attract a broad base of companies for possible pilot testing. Phase I was approved by the Board in January 2014, wherein four companies selected by CPM were awarded purchase contracts to provide track intrusion detection systems to be tested and evaluated by NYC Transit. Each of the four systems was monitored locally at the participating test station, and remotely at the Rail Control Center ("RCC"). The Phase I evaluation was completed in July 2016, and three of the four systems were found to be suitable for one or more of the various NYC Transit station configurations.

CPM identified and selected four additional companies to participate: Xtralis (Intrusion Analytics), Duos (LIDAR, or Laser Induced Differential Absorption Radar), EIA (thermal camera, lasers, video management), and Clearsy (laser pattern recognition). Each system uses different technology to create an electronic curtain that, if crossed, will trigger an audible and visual notification at the RCC. The approaching train operator will be alerted through a series of strobe lights mounted in the tunnel. Each of these four systems will be installed by in-house forces, with technical guidance from the vendors. Monitoring will again be undertaken both locally and remotely.

Procurement negotiated favorable pricing from each vendor utilizing disclosed cost data. The variation in pricing from each vendor arises from the fact that the technology, as well as the quantity and complexity of the equipment and materials utilized by each vendor, varies greatly. The proposed pricing provided by each of the four vendors was found to be fair and reasonable. Xtralis, EIA, and Clearsy are financially qualified to provide the systems. Duos did not satisfy the financial qualification requirements, however, risk is minimized as payment will not be rendered until the test and evaluation is completed. In the event the Duos system is selected for use beyond the test and evaluation phase, Duos has committed to partner with a larger financially secure firm.

In accordance with Public Authorities Law Section 1209, paragraph 9, this contract will not be awarded earlier than 30 days from the date on which the Board declares competitive bidding to be impractical or inappropriate. At the conclusion of the test and evaluation phase, NYC Transit will undertake a comparative analysis of each of the participating track intrusion technologies to determine the benefit of installing some or all of these systems across various station environments.

**MAY 2017**

**LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**

**Procurements Requiring Majority Vote:**

**F. Personal Service Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Noncompetitive; \$1M Competitive.)

- |    |                           |                           |                                      |
|----|---------------------------|---------------------------|--------------------------------------|
| 1. | <b>Origami Risk, LLC</b>  | <b>\$3,437,381 (Est.)</b> | <b><u>Staff Summary Attached</u></b> |
| 2. | <b>CorVel Corporation</b> | <b>\$4,318,663 (Est.)</b> | ↓                                    |
- Eight Proposals—Five- and ten-year contracts**  
**RFQ# 129590**

Workers' compensation claims administration system and claims examiner consultants.

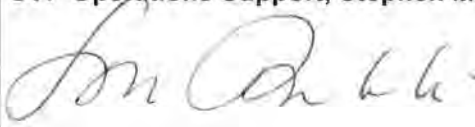
**H. Modifications to Personal Service Contracts and Miscellaneous Service Contracts Awarded as Contracts for Services**

(Approvals/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed the monetary or durational threshold required for Board approval.)

- |    |   |                     |                                      |
|----|---|---------------------|--------------------------------------|
| 3. | <b>INIT Innovations in Transportation</b> | <b>\$10,813,983</b> | <b><u>Staff Summary Attached</u></b> |
|    | <b>Contract# W32645/05L9315.5</b>         |                     | ↓                                    |
- Modification to the contract for a Paratransit Automatic Vehicle Location Monitoring System, in order to provide ongoing maintenance services, additional software licensing, and replacement modems.

- |    |                                 |                           |                                      |
|----|---------------------------------|---------------------------|--------------------------------------|
| 4. | <b>CH2M HILL New York, Inc.</b> | <b>\$3,923,607 (Est.)</b> | <b><u>Staff Summary Attached</u></b> |
|    | <b>Contract# CM-1868.6</b>      |                           |                                      |
- Modification to the contract for consulting services for the R211 subway cars, in order to provide consultant support services for additional scope of work tasks and to extend the contract term by an additional nine months from June 2017 to March 2018.

# Staff Summary

Item Number: 1-2			
Department, Department Head Name: SVP Operations Support, Stephen M. Plochochi			
			
Internal Approvals			
Order	Approval	Date	Approval
1 SJS	Materiel		
2 X	Law		
3 X	MTA-IT		
4 CC	EVP 5/14/17		
5 CC	President 5/14/17		

SUMMARY INFORMATION	
Vendor Name	Contract No.
Origami Risk, LLC and CorVel Corp.	RFQ 129590
Description	
Workers' Compensation Claims Administration System and Claims Examiner Consultants	
Total Amount	
\$3,437,381 - Origami (Est.) \$4,318,663 - CorVel (Est.)	
Contract Term (including Options, if any)	
June 1, 2017 – May 31, 2027 - Origami June 1, 2017 – May 31, 2022 - CorVel	
Option(s) included in Total Amount?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Renewal?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Procurement Type	
<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive	
Solicitation Type	
<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source	
<input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

## PURPOSE:

To obtain approval from the Board to award a 10-year competitively negotiated contract to Origami Risk, LLC ("Origami") to provide a workers' compensation claims administration system in the estimated amount of \$3,437,381 and a five-year competitively negotiated contract to CorVel Corp. ("CorVel") to provide trained claims examiner consultants in the estimated amount of \$4,318,663.

## DISCUSSION:

The NYC Transit Department of Law Workers' Compensation Division ("WCD") currently utilizes a proprietary, legacy 30-year-old workers' compensation information system ("WCIS") to manage workers' compensation cases. The WCIS is outdated, beyond its useful life, and requires replacement. The system (1) is increasingly difficult to reconfigure to reflect changes in workers' compensation law, regulations, and procedures, (2) does not allow for optimal case management, resulting in lost opportunities to ensure cost savings where appropriate, (3) requires examiners to work in two distinct, non-communicating claims systems, resulting in inefficiencies, and (4) does not permit images of external documents (such as correspondence and accident reports) to be attached to claim files. In summary, the current system is difficult to use and maintain, and does not support functions needed to better manage workers' compensation cases.

A competitive Request for Proposals ("RFP") was issued in May 2016 for a new workers' compensation claims administration system ("System"), as part of a strategic plan developed in conjunction with Marsh Consulting Services ("Marsh"), MTA's master insurance broker and risk management consultant, to improve NYC Transit's handling of workers' compensation claims. Also pursuant to the strategic plan, the RFP requested proposals for the services of third-party claims examiner consultants ("Examiners") who will be engaged in examining claims within the WCD to pattern best industry workers' compensation claims-handling practices for current employees, and assist in providing training and guidance to staff going forward to promote adherence to best practices. Marsh assisted NYC Transit in preparing the RFP and in negotiations. Extensive outreach to potential proposers was performed in conjunction with Marsh to cultivate robust competition.

# Staff Summary

The RFP allowed for submission of proposals for the System, Examiners, or both System and Examiners. Proposals were received on June 10, 2016. With respect to the first portion of the RFP, five companies proposed to furnish the System: Computer Science Corporation, Inc. (“CSC”); Origami Risk (“Origami”); PCIS, Inc. (“PCIS”); Systema Software Company (“Systema”); and Ventiv Technology, Inc. (“Ventiv”). Three companies proposed to supply NYC Transit with consulting Examiners: CorVel Corp. (“CorVel”), Pomco, Inc. (“Pomco”) and York Risk Services, Inc. (“York”). CorVel was the only company to make a proposal for the System and Examiners combined.<sup>1</sup> Several of the companies above jointly proposed a pairing of their System or Examiner component with another proposer’s complementary component. However, none of these suggested pairings were unified proposals providing for requisite centralized management and joint and several liability, and so were considered on the basis of their proposed component parts.<sup>2</sup>

Proposals were evaluated by the Selection Committee (“SC”) in accordance with the evaluation criteria in the RFP. Evaluation criteria for the System included (1) demonstrated successful use of the System for processing and managing workers’ compensation claims, (2) demonstrated successful experience of the proposer and assigned staff in configuring and/or customizing the system, (3) proposer’s plan for configuring and customizing the System and (4) price. Evaluation criteria for the Examiners included relevant experience, qualifications, and training of proposed claims examiners and price.

Based on their technical proposals and in accordance with the evaluation criteria in the RFP, the SC recommended that Origami, PCIS, Systema, and Ventiv be invited for oral presentations for the System. CSC was not invited to make an oral presentation for the System, due in part to its software lacking required features and limited ability to offer configuration and customization of the software. Based on their technical proposals, and in accordance with the evaluation criteria in the RFP, the SC recommended that CorVel, Pomco, and York be invited for oral presentations for the Examiners.

CorVel was not invited to make an oral presentation for System and Examiners because it did not demonstrate sufficient successful experience in configuring and/or customizing its system.

Following oral presentations, the SC, in accordance with the evaluation criteria in the RFP, voted to invite Origami and Ventiv to negotiations for the System, and to invite York and CorVel to negotiations for the Examiners. The SC recommended that PCIS and Systema not be invited to negotiations for the System as their technical proposals were not competitive and Systema’s price was not in the competitive range. The SC recommended that Pomco not be invited to negotiations for the Examiners because it did not demonstrate sufficient technical strength of examiner resources.

Negotiations with the remaining proposers focused on pricing and contractual terms and conditions. Interim proposals were requested from all four firms. Interim proposals were reviewed and a second round of negotiations was conducted. After the second round of negotiations, Best and Final Offers (“BAFOs”) were requested.

BAFOs were received from Origami and Ventiv for the System, and from York and CorVel for the Examiners on March 29, 2017. What follows is a summary of the initial price proposals and BAFOs.

<u>Portion</u>	<u>Proposer</u>	<u>Initial Price<sup>3</sup></u>	<u>BAFO Price</u>
System	Origami	\$4,999,752	\$3,437,381
	Ventiv	\$4,132,438	\$3,406,429
Examiners	CorVel	\$4,706,400	\$4,318,663
	York	\$4,243,117	\$4,092,278

<sup>1</sup> While CorVel proposed on the Examiners and on the System and Examiners combined, it did not propose on the System alone. CorVel’s core business is examining claims rather than developing software.

<sup>2</sup> For example, CSC submitted a narrative proposal for the System only, while Pomco submitted a narrative proposal for the Examiners only. Each proposal referenced the other and included an offer of combined pricing for both System and Examiners in the event that NYC Transit found that advantageous. Similarly, Ventiv proposed a pairing of its System with Examiners from CorVel and also a pairing of its System with Examiners from York, but in none of these proposals was common management through a joint venture or single entity offered. The Selection Committee accordingly determined that the proposed pairings of firms offered no benefit to NYC Transit and evaluated each component on a standalone basis. No proposed pairing offered pricing that was more advantageous than the sum of the component parts.

<sup>3</sup> The Examiner prices shown are for a five-year period. The term for the Examiners was reduced to five years after initial proposals.

## Staff Summary

Page 3 of 3

The SC reviewed the BAFOs in accordance with the evaluation criteria, and unanimously recommended Origami for award for the System, and unanimously recommended CorVel for award for the Examiners. For the System, Origami was unanimously determined to be the highest technically ranked proposer based on its demonstrated successful use of its claims system, experience in configuring and customizing the system, and highly experienced team for data conversion and claims migration. Origami's BAFO was \$30,952 above Ventiv's BAFO (a difference of less than 1%). Given its considerably higher technical ranking, Origami was unanimously selected as it was considered to offer the best value to NYC Transit. Origami has provided the System to such organizations as Metropolitan Atlanta Rapid Transit Authority (MARTA), South Carolina School Board Association (SCSBA), and the State of Colorado. Reference checks for Origami were positive.

For the Examiners, CorVel was unanimously evaluated as the highest technically ranked proposer due to the experience, qualifications, and training of the proposed claims examiners, experience managing claims examiners, and depth of claims examiner resources. CorVel's BAFO was 5.5% higher than York's, or \$45K per year. The SC unanimously determined that CorVel's technical superiority outweighed the difference in price and unanimously recommended CorVel for award as it considered CorVel's BAFO to offer the best value to NYC Transit. CorVel has provided workers' compensation claims management services to organizations such as Bank of America, Kellogg Company, The Gap, and to large organizations in New York State, such as Mount Sinai Health System, Saratoga County, and the New York State Insurance Fund. Reference checks for CorVel were positive.

The final prices have been found to be fair and reasonable based on adequate price competition and the competitive nature of the RFP.

A background search and review of the documents submitted by Origami and CorVel has disclosed no significant adverse information within the meaning of the All-Agency Responsibility Guidelines. Having evaluated all of the available facts, Procurement finds Origami and CorVel fully responsible for award.

### **M/W/DBE:**

The MTA Department of Diversity and Civil Rights has established goals of 0% MBE and 0% WBE on this contract due to a lack of subcontracting opportunities for M/WBEs.

### **IMPACT ON FUNDING:**

For the System, approved funding is available in MTA-IT's operating Budget under Account No. 171042, Responsibility Center No. 791601. For the Examiners, approved funding is available in the Law Department's Operating Budget under Account No. 712542, Responsibility Center No. 6312 and Function No. 930.

### **ALTERNATIVES:**

None recommended. The existing claims administration system needs replacement and the trained claims examiner consultants are needed for the reasons discussed above.

### **RECOMMENDATION:**

It is recommended that the Board approve the award as described in the "Purpose" section.

Item Number: 3

<b>Vendor Name (Location)</b> Init Innovations in Transportation, Inc. (Chesapeake, Virginia)	<table border="1"> <tr> <td><b>Contract Number</b></td> <td><b>AWO/Mod. #:</b></td> </tr> <tr> <td>05L9315 (Operating) W32645 (Capital)</td> <td>5</td> </tr> </table>	<b>Contract Number</b>	<b>AWO/Mod. #:</b>	05L9315 (Operating) W32645 (Capital)	5
<b>Contract Number</b>	<b>AWO/Mod. #:</b>				
05L9315 (Operating) W32645 (Capital)	5				
<b>Description</b> Paratransit Automatic Vehicle Location Monitoring System ongoing maintenance and support	<b>Original Amount:</b> 05L9315: \$4,998,192      \$ 16,318,278 W32645: \$11,320,086				
<b>Contract Term (including Options, if any)</b> December 23, 2005–September 14, 2021	<b>Prior Modifications:</b> 05L9315: \$8,330,620      \$ 22,450,792 W32645: \$14,120,172				
	<b>Prior Budgetary Increases:</b> 05L9315: \$717,478      \$ 717,478 W32645: \$0				
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a	<b>Current Amount:</b> 05L9315: \$13,309,759      \$ 39,486,548 W32645: \$25,440,258				
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive					
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	<b>This request:</b> \$ 10,813,983				
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amt.:</b> 27.4%				
<b>Requesting Dept./Div., Dept./Div. Head Name:</b> Department of Buses, Stephen A. Vidal	<b>% of Modifications (including This Request) to Original Amount:</b> 208.2%				

**Discussion:**

Approval of the Board is requested for a modification to Operating Contract 05L9315 to provide ongoing vehicle and fixed-end hardware and software maintenance services, and additional software licensing and replacement modems for Paratransit's Automatic Vehicle Location Monitoring ("AVLM") system, which is supplied by Init Innovations in Transportation, Inc. ("Init").

The October 2005 Board approved the award of the AVLM project via a competitively solicited Request for Proposal procurement process that resulted in two companion awards to Init, one covering the capital-funded requirements for onboard vehicle equipment and land-based software and hardware under contract W32645 in the amount of \$11,320,086; and the other covering operating-funded requirements for maintenance and data transmission charges under contract 05L9315 in the amount of \$4,998,192. Prior modifications/budget adjustments to contract 05L9315, totaling \$9,048,098, have included services and equipment to provide for the continued use of the AVLM system including software updates to enhance system performance.

NYC Transit has made a strategic business decision to leverage its investment and amortize its costs by continuing to utilize Init's AVLM system for approximately 15 years, which is the system's estimated lifespan. The estimated 15-year lifespan of the Init AVLM system coincides with approximately two lifespans of paratransit vehicles. Major onboard vehicle AVLM components and fixed-end hardware are re-installed in each new Paratransit vehicle purchase, attaining the maximum usage of the AVLM system investment.

Each AVLM-equipped Paratransit vehicle has a mobile data terminal utilizing global positioning satellites, a wireless data cellular communications network, and a geographical information system providing map functions. AVLM utilizes Init's specially designed and manufactured hardware, operating via a proprietary software application, for which only Init is capable of providing these support services. Therefore, the hardware and software maintenance for the Init AVLM system can only continue to be performed by Init for the duration of the contract term. The Init AVLM system is a subset of Paratransit's overall suite of technology systems, which includes StrataGen's scheduling software and interactive voice response systems. These systems have been adapted to communicate and share information, facilitate trip scheduling, and provide vehicle location information to maximize productivity. The AVLM system provides real-time pick-up/drop-off location data and estimated arrival times of vehicles to the Paratransit call center and the 13 dedicated primary carriers to confirm that the trips were completed.

This modification is being requested to provide ongoing vehicle and fixed-end hardware and software maintenance services, and additional software licensing and replacement modems for the AVL system, from June 2017 through September 2021, for 2,336 revenue and nonrevenue vehicles in the amount of \$9,874,129, and an upgrade from 2G to 4G LTE modems in the amount of \$939,854. This upgrade will provide greater speed of data transmission, which supports real-time applications and contributes to a better user experience. This funding will be added to the Operating Contract only.

Through a cost analysis conducted by MTA Audit and the Procurement Cost Price Unit, and as a result of negotiations, savings of approximately \$1,438,545 were achieved from Init's proposal of \$12,252,528. Init's pricing has been found to be fair and reasonable.

In advance of the contract ending in 2021, Paratransit and Procurement began an extensive outreach to the marketplace to identify competition for a replacement system. In February 2017, Procurement publicly advertised a Request for Information on the MTA website and in various trade publications to identify the existence and capabilities of providers of AVL systems to facilitate a competitive solicitation. In the event that a replacement AVL system is implemented prior to September 2021, the Init AVL system and its contract will be phased out.

Item Number: 4

<b>Vendor Name (Location)</b> CH2M HILL New York, Inc. (New York, New York)	
<b>Description</b> Consulting Services for the R211 Subway Cars	
<b>Contract Term (including Options, if any)</b> December 14, 2012–June 14, 2017	
<b>Option(s) included in Total Amount?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a
<b>Procurement Type</b>	<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive
<b>Solicitation Type</b>	<input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
<b>Requesting Dept./Div., Dept./Div. Head Name:</b> Department of Subways, Wynton Habersham	

<b>Contract Number</b> CM-1868	<b>AWO/Mod. #:</b> 6
<b>Original Amount:</b>	\$ 4,321,069
<b>Prior Modifications</b>	\$ 1,739,263
<b>Prior Budgetary Increases:</b>	\$ 640,000
<b>Current Amount:</b>	\$ 6,700,332
<b>This request:</b>	\$ 3,923,607
<b>% of This Request to Current Amount:</b>	58.6%
<b>% of Modifications (including This Request) to Original Amount:</b>	145.9%

**Discussion:**

This modification will extend the contract term for an additional nine months, from June 15, 2017 to March 14, 2018, for CH2M HILL New York, Inc. ("CH2M") to continue to provide consultant support for the Development of Specifications and Pre-award Support for the R211 Subway Cars Contract in the estimated amount of \$3,923,607.

The base contract, CM-1868, was awarded to CH2M in December 2012 as the result of a competitive Request for Proposal ("RFP") to provide consultant services for the Development of Specifications and Pre-Award Support for the R211 Subway Car contract. The scope of work includes (1) assisting NYC Transit in defining the car class deployed as a model vehicle for future subway car orders by providing support with the selection of car/train type, system/components, and overall design, as well as the development of the Technical Specifications for the R211 subway cars, (2) providing consultant support for the loan/test agreements, which includes assisting NYC Transit in the qualification of alternative suppliers for new technologies and subsystems as well as new car builders to expand the range of competition for the R211 subway car contract, (3) providing design and equipment reviews, First Article Inspection support, and the preparation of final reports, and (4) supporting NYC Transit in the RFP process for the procurement of the R211 cars by assisting with the evaluation of proposals, negotiations with prospective car builders, and Buy-America audits. To date, contract expenditures have totaled approximately \$6,097,022. The remaining contract balance is \$603,310.

There have been five previous modifications to this contract which resulted in the increase in funding in the total amount of \$2,379,263, additional scope of work tasks and the extension of the contract term through June 14, 2017, to allow for continued consultant support while Board approval is sought for this Modification No. 6.

Under this modification, the Department of Subways requests approval to (1) obtain additional funding as a result of unanticipated work requests, including additional industrial design efforts such as passenger flow and dwell time impact analyses, and the construction of an additional mock-up for an open gangway car; support for extensive industry review, which resulted in numerous revisions to the R211 Technical Specifications; additional support during the R211 RFP process, including research and responses to car builders' requests for clarification and support for additional site visits; (2) add a new subconsultant to provide additional expertise in structural analysis; and (3) be granted a nine-month extension and additional funding to transition to a new consultant, if selected, for the R211 post-award consultant services contract. The new contract for the R211 post-award consultant support is projected to be awarded in September 2017. The remainder of the contract term extension, through March 14, 2018, is required for the contract close-out.

CH2M's proposal was in the amount of \$4,112,181. Negotiations resulted in the final estimated price of \$3,923,607 which represents a 4.6% decrease from the initial pricing of \$4,112,181 and savings of \$188,574. Procurement and Cost Price have determined that the pricing is fair and reasonable. In connection with a previous contract awarded to CH2M, CH2M was found to be responsible, notwithstanding significant adverse information ("SAI") pursuant to the All-Agency Responsibility Guidelines, and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in December 2013. No new SAI has been found relating to CH2M and CH2M has been found to be responsible.



**Metro-North Railroad**

# **Procurements**



<b>Subject</b>	Request for Authorization to Award Various Procurements				
<b>Department</b>	Procurement and Material Management				
<b>Department Head Name</b>	Alfred Muir, Sr. Director				
<b>Department Head Signature</b>					
<b>Project Manager Name</b>					
<b>Board Action</b>					
<b>Order</b>	<b>To</b>	<b>Date</b>	<b>Approval</b>	<b>Info</b>	<b>Other</b>
1	MNR Comm. Mtg.	5-22-17	X		
2	MTA Board Mtg.	5-24-17	X		

<b>Date</b>	May 9, 2017			
<b>Vendor Name</b>	Various			
<b>Contract Number</b>	Various			
<b>Contract Manager Name</b>	Various			
<b>Table of Contents Ref #</b>				
<b>Internal Approvals</b>				
	<b>Approval</b>		<b>Approval</b>	
X	President	X	V.P. Planning	
X	Executive V.P.	X	V.P. Capital Programs	
X	Sr. V.P. Operations	X	V.P. & General Counsel	
X	V.P. Finance & IT			

<b>Internal Approvals (cont.)</b>							
<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>
—	—	—	—	—	—	—	—

**PURPOSE:**

To obtain approval of the Board to award various contracts/contract modifications and purchase orders, and to inform the MTA Metro-North Railroad Committee of these procurement actions.

**DISCUSSION:**

MNR proposes to award non-competitive procurements in the following categories:

# of Actions      \$ Amount

Schedules Requiring Two-Thirds Vote (or more, where noted)

NONE

Schedules Requiring Majority Vote

Schedule H:	Modifications to Personal/Miscellaneous Service Contracts	1	\$5,060,970
	• ARINC, Inc. \$5,060,970		
Schedule L:	Information Items/Budget Adjustments to Estimated Quantity Contracts	1	\$2,500,000
	• New York State Industries for the Disabled (NYSID) \$2,500,000		
SUB TOTAL:		2	\$7,560,970



**MNR proposes to award competitive procurements in the following categories:**

<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>			<u># of Actions</u>	<u>\$ Amount</u>
Schedule B:	Competitive Requests for Proposals (Solicitation of Purchase and Public Work Contracts)		2	TBD
	• Request to use RFP Process	TBD		
	• Request to use RFP Process	TBD		
Schedule C:	Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)		1	\$18,199,441
	• Loram Maintenance of Way, Inc.	\$18,199,441		
 <u>Schedules Requiring Majority Vote</u>				
Schedule F:	Personal Service Contracts		1	\$2,142,399
	• Bowery Residents' Committee, Inc.	\$2,142,399		
Schedule G:	Miscellaneous Service Contracts		1	\$3,929,197
	• Trapeze Software Group, Inc.	\$3,929,197		
Schedule H:	Modifications to Personal/Miscellaneous Service Contracts		1	\$19,100,000
	• Automotive Resources International (ARI)	\$19,100,000		
SUB TOTAL:			6	\$43,371,037

**MNR presents the following procurement actions for Ratification:**

<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>	NONE
<u>Schedules Requiring Majority Vote</u>	NONE
SUB TOTAL:	
TOTAL:	8 \$50,932,007

The contractors noted above and on the following Staff Summary Sheets have been found in all respects responsive and responsible, and are in compliance with State laws and regulations concerning procurements.

**BUDGET IMPACT:** The purchases/contracts will result in obligating MNR operating and capital funds in the amount listed. Funds are available in the current MNR operating/capital budgets for this purpose.

**RECOMMENDATION:** That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

## METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.

2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which it is deemed in the public interest to obtain authorization to solicit competitive proposals through a publicly advertised RFP for the reasons specified therein the Board declares it to be impractical or inappropriate to utilize a procurement process inviting sealed bids with award to the lowest responsive/responsible bidder.

3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.

4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.

5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.

6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

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METRO-NORTH RAILROAD

LIST OF NON-COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

**H. Modifications to Personal /Miscellaneous Service Contracts**

(Approvals/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed the monetary or durational threshold required for Board approval)

**1. ARINC, Inc.                      \$5,060,970 (not to exceed)                      Staff Summary Attached**

**SCADA System Upgrade to our Power Control Network System**

Approval is requested for additional funding in the not to exceed amount of \$5,060,970 for a modification to an existing miscellaneous service contract with ARINC, Inc. (ARINC) to upgrade the current proprietary Supervisory Control and Data Acquisition (SCADA) system along with a five year maintenance agreement.

The SCADA system provides MNR the ability to remotely control the application and to de-energize traction power for trains for the entire Railroad, including both third rail and overhead catenary equipment. The system monitors and controls power distribution by collecting data from field devices through remote terminal units, processing data, displaying data on workstation displays, and issuing operator-initiated and system-initiated controls that are relayed to the field. The software for this system was designed by and is proprietary to ARINC, Inc.

MNR's current SCADA system purchased in 2002 is experiencing intermittent hardware and software system compatibility errors and is in need of repair. A number of its hardware components have reached the end of their useful life. This upgrade will allow for increased system reliability and facilitate the integration with other vital safety related systems on the Railroad such as the Enhanced Emergency Protection System (EEPS), GCT Operations Control Center (OCC), and the Centralized Traffic Control (CTC) systems run by Railware, Inc. The implementation of this upgrade shall be completed in 17 months. MNR is currently reviewing long term solutions that will take advantage of new technologies in the SCADA industry while also creating greater competition through open design architecture. The implementation of that new project would coincide with the end of this contract modification to ARINC.

Negotiations for this upgrade resulted in a reduction of 6% of the overall cost (excluding maintenance) from \$4,781,252 to \$4,511,162 for a savings of \$270,090. Maintenance services in the amount of \$549,808 remains in line with current pricing including a previously negotiated 2.6% yearly escalation. The total cost is \$5,060,970 with the upgrade being completed in 17 months and maintenance for five years.

MNR completed a responsibility review of ARINC Inc. as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

Funding for the upgrade of this system is to be provided by MNR's Capital Budget with maintenance to be funded annually by MNR's Operating Budget.

**L. Information Items/Budget Adjustments to Estimated Quantity Contracts**

**2. New York State Industries for the Disabled (NYSID)      \$2,500,000      Staff Summary Attached**  
**Additional funding to MTA All-Agency Temporary Personnel Services Agreement**

Approval is requested for additional funding in the estimated amount of \$2,500,000 to an existing, negotiated and Board approved all-Agency agreement with NYSID for as-needed Temporary Personnel Services.

In November 2010, the MTA Board approved a five-year (2011 through 2015), MNR-led, all-agency personal services agreement with NYSID for as-needed and short-term temporary personnel services. Participating Agencies/Departments include: Metro-North Railroad, MTA Business Service Center, New York City Transit, Long Island Rail Road, MTA Bus Company and MTA Audit. The master agreement consolidated separate agreements that were previously held individually by the Agencies.

In December 2015, the MTA Board approved additional funding in the amount of \$2,972,000. The current overall contract value is \$35,122,000. The current values for each participating Agencies/Departments are Metro-North Railroad (\$10,080,000), MTA Business Service Center (\$5,500,000), New York City Transit (\$15,382,000), Long Island Rail Road (\$2,575,000), MTA Bus Company (\$900,000) and MTA Audit (\$485,000).

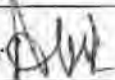
The additional requested funding totaling \$2,500,000 is broken down by agency as follows: NYCT \$1,900,000 and MNR \$600,000. The funding is to cover significant increases in temporary personnel for NYCT and to support the Passenger Count functions for MNR. Since award, MTA Agencies have had to supplement existing staff with short-term temporary personnel at larger numbers than originally anticipated increased production and as such, additional funds are required by the Agencies to cover services through the remaining contract term. This is a final modification as an All-Agency contract has been pursued by MTA Headquarters, and is expected to be presented to the Board for award by September 2017.

MNR completed a responsibility review of New York State Industries for the Disabled (NYSID) as defined in the all Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

All Board-approved pricing and terms from 2010 are in-place and will remain fixed for the remaining contract term. Personnel are utilized on an as-needed, as-requested task order basis and no services are guaranteed. Individual tasks or requests for short-term temporary personnel and related funding are approved within each agency prior to any personnel request. The alternative of hiring permanent MTA employees to perform short-term work would greatly exceed the cost of this contract. Funding is included in each Agency's Operating Budget.

## Schedule H: Modifications to Personal Service and Miscellaneous Service Contracts

Item Number: H

<b>Vendor Name (&amp; Location)</b> ARINC, Inc.	<b>Contract Number</b> 1-3664	<b>AWO/Modification #</b> 6
<b>Description</b> SCADA System Upgrade to our Power Control Network System	<b>Original Amount:</b>	\$1,377,502
<b>Contract Term (including Options, if any)</b> Five years	<b>Prior Modifications:</b>	\$1,084,190
<b>Option(s) included in Total Amount?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Prior Budgetary Increases:</b>	\$0
<b>Procurement Type</b> <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Non-competitive	<b>Current Amount:</b>	\$ 2,461,692
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other:	<b>This Request:</b>	\$ 5,060,970 (not to exceed)
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b>	206%
<b>Requesting Dept./Div. &amp; Dept./Div. Head Name:</b> Procurement & Material Management, Al Muir, Sr. Director 	<b>% of Modifications (including This Request) to Original Amount:</b>	446%

### Narrative

#### I. PURPOSE/RECOMMENDATION:

Approval is requested for additional funding in the not to exceed amount of \$5,060,970 for a modification to an existing non-competitive miscellaneous service contract with ARINC, Inc. (ARINC) to upgrade the current Supervisory Control and Data Acquisition (SCADA) system along with a five year maintenance agreement.

#### II. DISCUSSION:

The SCADA system provides MNR the ability to remotely control the application and to de-energize traction power for trains for the entire railroad, including both third rail and overhead catenary equipment. The system monitors and controls power distribution by collecting data from field devices through remote terminal units, processing data, displaying data on workstation displays, and issuing operator-initiated and system-initiated controls that are relayed to the field. The software for this system was designed by and is proprietary to ARINC, Inc.

MNR's current SCADA system purchased in 2002 is experiencing intermittent hardware and software system compatibility errors and is in need of repair. A number of its hardware components have reached the end of their useful life. This upgrade will allow for increased system reliability and facilitate the integration with other vital safety related systems on the railroad such as the Enhanced Emergency Protection System (EEPS), GCT Operations Control Center (OCC), and the Centralized Traffic Control (CTC) systems run by Railware, Inc. The implementation of this upgrade shall be completed in 17 months. MNR is currently reviewing long term solutions that will take advantage of new technologies in the SCADA industry while also creating greater competition through open design architecture. The implementation of that new project would coincide with the end of this contract modification to ARINC.

Negotiations for this upgrade resulted in a reduction of 6% of the overall cost (excluding maintenance) from \$4,781,252 to \$4,511,162 for a savings of \$270,090. Maintenance services in the amount of \$549,808 remains in-line with current pricing including a previously negotiated 2.6% yearly escalation. The total cost is \$5,060,970 with the upgrade being completed in 17 months and maintenance for five years.

MNR completed a responsibility review of ARINC Inc. as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

**Schedule H: Modifications to Personal Service and  
Miscellaneous Service Contracts**

**III. D/M/WBE INFORMATION:**

The MTA Department of Diversity and Civil Rights assigned 0% MBE/WBE Goals to this procurement due to insufficient availability of certified vendors to provide the required resources to support outreach in MNR's operating territory.

**IV. IMPACT ON FUNDING:**

Funding for the upgrade of this system is to be provided by MNR's Capital budget with maintenance to be funded annually by MNR's Operating Budgets.

**V. ALTERNATIVES:**

There are no available alternatives to ARINC proposed system upgrade and maintaining the SCADA systems. MNR does not have the resources or technical skill level necessary to maintain the SCADA systems.

**Name of Vendor:**  
New York State Industries for the Disabled  
(NYSID)

**Original Amount:** \$16,800,000

**Contract Number:** 62940

**Term of Contract:** 1/1/11-9/30/17

**Prior Modifications:** \$0

**Prior Budgetary Increases:** \$18,322,000

**Current Amount:** \$35,122,000

**This Request:** \$2,500,000

**% of This Request to Current Amount:** 7.12%

**% of Modifications (including This Request) to Original Amount:** 123.9%

### **DISCUSSION:**

Approval is requested for additional funding in the amount of \$2,500,000 to an existing, negotiated and Board approved all-Agency agreement with NYSID for as-needed temporary personnel services. Use of NYSID's services is in accordance with Section 162 of the New York State Finance Law, which provides that preferred sources shall be granted the right to provide services to New York State Agencies in order to advance social and economic goals. Under the State Finance Law, a contract award to a preferred source provider such as NYSID is exempt from New York State Statutory competitive procurement requirements provided, (i) it is capable of providing the service in the form, function and utility required and (ii) the price offered is as close to the prevailing market prices as is practicable.

This is a final modification as an All-Agency contract has been pursued by MTA Headquarters, and is expected to be presented to the Board for award by September 2017. Since the award, MTA Agencies have had to supplement existing staff with short-term temporary personnel at larger numbers than originally anticipated and as such additional funds are required by the Agencies to cover services through the completion of the contract period. The additional requested funding totaling \$2,500,000 is broken down by agency as follows: NYCT \$1,900,000 and MNR \$600,000. The funding is to cover significant increases in temporary personnel for NYCT and to support the Passenger Count functions for MNR. This funding will enable MNR Operations Planning to have sufficient resources to cover all associated costs related to Passenger Count functions including outstanding invoices. It will also ensure that NYCT has sufficient funding in place to cover all invoices and projected program costs through September 2017.

Without the support of temporary staffing retained via this contract, required business services for critical operational and administrative functions would be adversely impacted as MTA does not currently have available resources to support these functions. The negotiated rates established under the base agreement were fixed for a five year period and have been escalated for a 2.5% increase for the extended period of service and are deemed to be fair and reasonable. Services are rendered on an as-needed, as-requested task order basis and are not guaranteed. Individual tasks or requests for short-term temporary personnel and related funding are approved within each agency prior to any personnel request. Funding is included in each Agency's Operating Budget.

MNR completed a responsibility review of New York State Industries for the Disabled (NYSID) as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

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METRO-NORTH RAILROAD

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Schedules Requiring Two-Thirds Vote:

**B. Competitive Requests for Proposals (Solicitation of Purchase and Public Work Contracts)**

(Staff Summaries only required for items estimated to be greater than \$1 million)

**1. Request to use RFP Process**

**TBD**

**Automated Vehicle Location and Monitoring System (AVLM)**

Staff Summary Attached

To obtain Board approval to use the Request for Proposals (RFP) process to solicit and evaluate proposals from prospective contractors for supply, lease and delivery of an Automated Vehicle Location and Monitoring System (AVLM).

The intent of this project consists of the supply, lease and delivery of an Automated Vehicle Location and Monitoring System (AVLM) for Metro North Railroad (MNR) and Long Island Rail Road (LIRR), (the Railroads) rubber-tire vehicle fleets. Currently, both Railroads combined own/leases and operates over 1,500 rubber-tire vehicles of various types. The current five year AVLM contract will expire by the end of 2017 and the Railroads are seeking a solution for replacing and upgrading the AVLM in its entirety including all hardware, software, installation, and maintenance of such a system from the contractor. The desired system is an enhanced AVLM that not only allows the customer to locate highway vehicles, but also allows the monitoring of vehicle use and condition, immediately on line and over time to establish trends in usage and consumption of fuel. The system shall meet this need through reports generated by the system. The Railroads intend to lease these devices which are installed in each of the vehicles.

Currently, MNR does not have the available in-house design or capacity to complete the scope of the specified work. In order to assure the selection of the contractor with the necessary experience and expertise, it is in the public interest to use the RFP process to properly evaluate the technical and manufacturing capabilities of prospective proposers. The contractor will be selected based on an evaluation of technical capability, system reliability, past performance, organization resources, experience of team members, and cost. This procurement will be funded by each Agency's Operating Budget.

**2. Request to use RFP Process**

**TBD**

**Design and Construction of Empire State Trail – Beacon Line**

Staff Summary Attached

To obtain Board approval to use the Request for Proposals (RFP) process to solicit and evaluate proposals from prospective contractors to design and construct a portion of the Empire State Trail on MNR's Beacon Line.

Governor Andrew M. Cuomo has proposed completing the Hudson River Valley Greenway and Erie Canal trails by 2020 to create the Empire State Trail, the largest state multi-use trail in the nation. To

achieve this, the state will develop 350 miles of new trail in three phases to create a 750-mile pathway for hiking and biking along scenic vistas and through charming, historic communities. The Empire State Trail will span much of the state, from the New York Harbor up through the Adirondack Mountains to the Canadian border – and from the shores of Lake Erie along the historic Erie Canal to the heart of the Capital Region.

This extensive trail network will enhance community connectivity and support healthy lifestyles by providing both urban and rural communities access to endless outdoor recreational opportunities. The trails will also draw tourists from around the world to explore New York's striking landscapes and rich history, while enjoying local bed and breakfasts, hotels, restaurants, wineries, breweries, farmsteads, and cultural attractions along the way.

MNR is responsible for the portion that will utilize our Beacon Line from the Town of Southeast in Putnam County to Hopewell Junction in Dutchess County. This 18 mile segment will connect to the extensive Putnam County trail at Brewster (which continues southward to New York City) and to the Dutchess County Trail which continues from Hopewell Junction to the Walkway over the Hudson at Poughkeepsie and to trails on the west side of the Hudson River. The scope of work includes moving the existing single track to one side in select locations so that the trail is on one side and tracks on the other. The two will be separated by fencing to be constructed under this project. MNR will also protect and preserve its existing fiber-optic loop cable providing critical connectivity and resiliency for communications throughout the system. The construction of the trail will utilize part of the existing Beacon Line right-of-way, but will not impact the ability to provide rail service. MNR will seek to develop agreements with municipalities or other partners to operate and maintain the trail after construction.

In order to ensure the selection of a contractor with the necessary experience and expertise, it is in the public interest to use the RFP process to properly evaluate the technical capabilities of prospective proposers. The contractor will be selected based on an evaluation of technical capability, past performance, organization resources, and cost. This procurement will be funded with monies set aside in the New York State Budget adopted in April, 2017.

### **C. Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)**

(Staff Summaries required for items requiring Board approval)

<b>3. Loram Maintenance of Way, Inc. Railvac Track Vacuum</b>	<b>\$7,500,001 – MNR</b>	<b><u>Staff Summary Attached</u></b>
	<b><u>\$10,699,440 – LIRR</u></b>	
	<b>\$18,199,441(not to exceed)</b>	

Approval is requested to award a three year competitively bid (one bid proposal received) and negotiated public works joint procurement contract with Metro-North Railroad (MNR acting as the lead Agency) and the Long Island Rail Road (LIRR) to the firm Loram Maintenance of Way, Inc. (Loram) to provide a self-propelled specialty excavating (Railvac track vacuum), equipment and personnel for use at various points along each Railroads' operating territory. The Railvac is a powerful excavation machine that removes material through mechanical agitation and airflow. Loram shall be responsible to provide all labor, equipment; materials and supervision necessary for the safe operation of the Railvac.

In accordance with MTA all-Agency Procurement Guidelines, an advertisement was placed in the New York State Contract Reporter, New York Post, El Diario, Daily Challenge, Minority Commerce Weekly and posted on MNR's website. A work scope for this service was developed by each Railroad and

forwarded to the Procurement Department. Ten industry contractors were sent a copy of the bid contract document.

On February 17, 2017, a single bid proposal was received from Loram for each Railroad in the total amount of \$18,199,441 for both Railroads. Discussions ensued on unique terms of this agreement and contract language adjustments were negotiated. Loram confirmed they are providing both Railroads with their most favored customer pricing for the services. The hourly rates for 2017 are fixed for all of the work to be completed in 2017. The fixed rates include the furnishing of all necessary equipment and labor (operators), consumables (oil), materials, tools, permits and maintenance of equipment for the duration of the three year contract terms. All rates for the subsequent years (2018 and 2019) will be adjusted in accordance with the Consumer Price Index. MNR deemed all pricing to be fair and reasonable based on the level of efforts to perform the specified work for each Railroad.

In connection with a previous contract awarded to the contractor, the contractor was found to be responsible notwithstanding significant adverse information (SAI) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel. No new SAI has been found relating to the contractor and the contractor has been found to be responsible.

The total cost for this joint procurement is not to exceed \$18,199,441 (MNR \$7,500,001/LIRR \$10,699,440) for the duration of the three year contract. This procurement is to be funded by each Agency's Operating Budget & Federal funds, (as applicable).

#### **Schedules Requiring Majority Vote:**

##### **F. Personal Service Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M Competitive)

##### **4. Bowery Residents' Committee, Inc. \$2,142,399 (not to exceed) Staff Summary Attached** **Homeless Outreach Services**

Approval is requested to award a competitively solicited and negotiated personal service RFP process, (two proposals received) five year contract to the firm Bowery Residents' Committee, Inc. (BRC) to operate MNR's Homeless Outreach Services Program at its outlying stations and along its Right-of-Way (ROW).

The program is designed to provide outreach to homeless individuals who seek shelter primarily on MNR's property at stations other than Grand Central Terminal and along its ROW. The primary goals of this program are: (1) to maintain a safe and secure transportation environment for MNR customers and employees by offering homeless individuals alternatives for sheltering away from MNR's property and facilities; (2) to provide outreach that ensures a strong staff presence in the field to deal with homeless individuals concurrent with accessing a wide variety of services for homeless individuals with specific problems; (3) to establish procedures to ensure the lawfully collection of aggregate and individual information about the homeless population and their needs; and (4) to permanently reduce the number of people who use MNR facilities and systems for surrogate shelter.

In accordance with MTA Procurement Guidelines, an advertisement for the required services was publicly advertised in the New York State Contract Reporter, New York Post, El Diario, Daily Challenge and posted on MNR's website. RFP documents were sent to 15 firms. A pre-proposal conference was held on January 20, 2017 with one firm in attendance.

The Selection Committee which was comprised of members from the Customer Service and Stations Department, MTA PD and the Procurement and Material Management Department met with both proposers that responded to the RFP to determine their understanding of the work scope and their capability to perform the work. After technical evaluation(s) and Best and Final Offer(s), the Committee unanimously selected BRC as the firm best qualified and cost-effective to perform these services. The Committee felt that BRC's technical and cost proposal(s) conveyed a comprehensive understanding of MNR's technical requirements. With nearly 40 years of outreach experience, BRC is the largest and most successful provider of homeless outreach in the streets and transit system of New York City. Currently, BRC supports two major contracts with MTA and NYC Department of Homeless Services. Their transit outreach operations span throughout the greater metropolitan area, annually making nearly 3,300 placements of homeless men and women out of train and subway stations and into housing and other needed services.

MNR completed a responsibility review of Bowery Resident's Committee (BRC) as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

Upon subsequent negotiations by the P&MM Department, BRC further reduced their original pricing from \$2,304,382 to \$2,142,399 a savings of approximately 8%, which is deemed fair and reasonable. All pricing shall remain firm and fixed for years 1-3 with a price escalation of 2% in year 4 and pricing remaining the same in year 5. This procurement is to be funded by MNR's Operating Budget.

**G. Miscellaneous Service Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M RFP; No Staff Summary required if Sealed Bid Procurement.)

**5. Trapeze Software Group, Inc.                      \$3,929,197 (not to exceed)                      Staff Summary Attached**  
**Centralized Train Scheduling System (CTSS)**

Approval is requested to award a five-year competitively-negotiated (RFP Process, 5 proposals received, 3 short-listed) miscellaneous service contract to the firm Trapeze Software Group, Inc. (Trapeze) to provide a Centralized Train Scheduling System (CTSS) which will be capable of developing and maintaining individual train schedules, crew schedules and equipment programs/schedules. This joint procurement with Metro-North Railroad (MNR acting as the lead Agency) and the Long Island Rail Road (LIRR) is to purchase a new, unified and automated Train, Crew and Equipment Schedule Development Software System to provide all of the functions that are currently done manually in a labor intensive, time consuming process. This system is to be developed by a third party and once tested and successful at MNR, an optional task is included to develop a similar specification for Long Island Rail Road. Once the system is operational, it is expected to enable the development of multiple scheduling scenarios for analysis that will enable a greater degree of responsiveness to changing conditions and circumstances.

In accordance with MTA Procurement Guidelines, an advertisement for the above referenced services was publicly advertised on April 14, 2016 in the New York Post, New York State Contract Reporter, Daily Challenge and posted on MNR's website.

Sixteen vendors were provided the RFP and five proposals were received. The Selection Committee was comprised of members from the following agencies: MNR's Procurement & Material Management, MNR's Operations Planning and Operations Administration Department's; LIRR's Service Planning Department and HQ's Information Technology and QA & Audit Compliance Department. The Committee evaluated five proposals and short-listed three firms (Trapeze, SISCOG and Quintiq, LLC). Trapeze displayed the best overall competence for performing the scope of work as compared to the other shortlisted firms. Trapeze's cost proposal was 50.8% lower than the other firms and below the in-house estimate to perform this work. As such, the Committee unanimously selected Trapeze as the best qualified to perform the subject services. Costs were negotiated for both the base work for a CTSS for MNR at \$2,917,994 and an option on the contract to be elected after successful software implementation for LIRR at \$1,011,203.

MNR completed a responsibility review of Trapeze as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

At this time, MNR will only award the base CTSS work for \$2,917,994. This procurement is to be funded by MNR's Operating Budget.

#### **H. Modifications to Personal/Miscellaneous Service Contracts**

(Approvals/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed monetary or durational threshold required for Board approval)

##### **6. Automotive Resources International (ARI) \$19,100,000 (not to exceed) *Staff Summary Attached*** **Fleet Maintenance and Management Services**

On behalf of Metro-North Railroad (MNR), Long Island Rail Road (LIRR) and New York City Transit (NYCT) Paratransit, approval is requested to extend this multi-agency miscellaneous service contract for an additional two years from July 31, 2017 – July 31, 2019) with Automotive Resources International (ARI) in the total amount of \$19,100,000. The prior contract modifications were executed by the individual agency and were necessitated by larger than expected usage.

In 2012 under a MTA Board approved multi-agency contract, MNR on behalf of LIRR and NYCT Paratransit awarded a contract to ARI in the amount of \$34,080,000.00 for the five year period. ARI manages all aspects of vehicle repair approvals, recording repair details, payment of invoices from maintenance repair vendors who service MTA vehicles and the consolidation of monthly invoices for payment by each participating MTA agency. The estimated cost for the initial five year was \$34,080,000 as follows: MNR-\$11,000,000, LIRR-\$18,080,000 and NYCT Paratransit-\$5,000,000. Prior modifications awarded were attributed to both MNR and LIRR experiencing significant unanticipated increases in the number of vehicles required for maintenance and repair projects throughout both agencies operating territories. As part of MNR's and LIRR's plan to restore its infrastructure and maintain safe operations of the vehicles used on a daily basis, these additional efforts required the use of significantly more agency-owned vehicles than what was originally forecasted at the time of award. This will continue through the contract's additional two year extension which is now proposed.

This modification is required to allow sufficient time for the reassignment of this multi-agency master service agreement to MTA Headquarters for their initiation of an all agency consolidated fleet maintenance and management services contract. This agreement may be terminated in the event that HQ procurement is able to put in place a service contract prior to the end date of this agreement.

MNR completed a responsibility review of Automotive Resources International (ARI) as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

The total cost for the two year contract extension is \$19,100,000 (MNR = \$6,100,000 & LIRR = \$13,000,000). NYCT Paratransit does not require additional funding for this extension period at this time. All rates and terms and conditions previously established under the current agreement shall remain the same for the two year extension period, which is deemed fair and reasonable. This procurement is to be funded by each Agency's Operating Budget.

# Staff Summary

Item Number B					
Dept. & Dept. Head Name: Procurement & Material Management, Alfred W. Muir, Sr. Director					
Division & Division Head Name: Executive Vice President, Catherine Rinaldi					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	M-N Comm.Mtg.	5-22-17	X		
2	MTA Board Mtg.	5-24-17	X		
Internal Approvals					
Order	Approval	Order	Approval		
X	President	X	V.P. & General Counsel		
X	Sr. V.P. Operations	X	V.P. Planning		
X	V. P. Capital Programs				
X	V.P. Finance & IT				

SUMMARY INFORMATION	
Vendor Name TBD	Contract Number TBD
Description Request to use the RFP process to solicit proposals for supply, lease and delivery of an Automated Vehicle Location and Monitoring System (AVLM)	
Total Amount TBD	
Contract Term (including Options, if any) TBD	
Option(s) included in Total Amount?	Yes <input checked="" type="checkbox"/> No
Renewal?	Yes <input checked="" type="checkbox"/> No
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

## Narrative

### I. PURPOSE/RECOMMENDATION:

To obtain MTA Board approval to use the Request for Proposals (RFP) process to solicit and evaluate proposals from prospective contractors for supply, lease and delivery of an Automated Vehicle Location and Monitoring System (AVLM).

### II. DISCUSSION:

The intent of this project consists of the supply, lease and delivery of an Automated Vehicle Location and Monitoring System (AVLM) for Metro North Railroad (MNR) and Long Island Rail Road (LIRR), (the Railroads) rubber-tire vehicle fleets. In advance of this requested RFP, MNR conducted an industry outreach to ensure that there was adequate competition and willingness in the vendor community to support this technology request. Currently, the Railroads combined own/lease and operate over 1,500 rubber-tire vehicles of various types. The current five year AVLM contract will expire by the end of 2017 and the Railroads are seeking a solution for replacing/upgrading the AVLM in its entirety including all hardware, software, installation, and maintenance of such a system by the contractor. The desired system is an enhanced AVLM that not only allows the customer to locate highway vehicles, but also allows the monitoring of vehicle use and condition, immediately on line and over time to establish trends in usage and consumption of fuel. The system shall meet this need through reports generated by the system. The Railroads intend to lease these devices which would be installed in each of the vehicles. The scope of work for the supply and delivery of the AVLM shall include the latest technological advancement in vehicle monitoring such as:

- The ability to collect real time data (a list of recorded data should be included in the vendor's response) from all customer highway fleet vehicles simultaneously and on a regular frequency.
- The data will include but not be limited to driver identification.
- The AVLM system shall be a Web/Internet based system that provides access to as many concurrent users as the fixed end software and hardware can accommodate. The desired configuration will run the AVLM application software from one central web server, providing access to all AVLM users and administrators throughout the railroads Internet.

- The AVL system shall include a Proximity/RFID identification reader that is compatible with existing employee Proximity/RFID identification cards, and provide the driver's identity vehicle location, vehicle diagnostics, mileage and speed.
- The system may store said data temporarily on hardware aboard the vehicle but will transfer data wirelessly.
- The user terminal shall be accessible via a web interface containing an interactive map system, tabular data display, and must include various reporting capabilities and
- Provide an administration interface or map interface which supports labeling options that allows the Railroads to determine data elements to be displayed in vehicle map labels.

In order to assure the selection of the contractor with the necessary experience and expertise, it is in the public interest to use the RFP process to properly evaluate the technical and manufacturing capabilities and responsiveness to inquiries of prospective proposers. The contractor will be selected based on an evaluation of technical capability, system reliability, past performance, organization resources, experience of team members, responsiveness to the Railroads' inquiries/questions and cost.

### **III. D/M/WBE INFORMATION:**

A Request for Goal Determination will be submitted to MTA Department of Diversity and Civil Rights for MWBE availability review and subcontracting goal assessment.

### **IV. IMPACT ON FUNDING:**

This procurement will be funded by each Railroad's Operating Budget.

### **V. ALTERNATIVES:**

MNR and LIRR do not have the available in-house capacity to complete the scope of the specified work.

# Staff Summary

<b>Item Number</b> B					
<b>Dept. &amp; Dept. Head Name:</b> Procurement & Material Management, Al Muir, Sr. Director					
<b>Division &amp; Division Head Name:</b> Executive Vice President, Catherine Rinaldi					
<b>Board Reviews</b>					
<b>Order</b>	<b>To</b>	<b>Date</b>	<b>Approval</b>	<b>Info</b>	<b>Other</b>
1	MNR Comm. Mtg.	5-22-17	x		
2	MTA Board Mtg.	5-24-17	x		
<b>Internal Approvals</b>					
<b>Order</b>	<b>Approval</b>	<b>Order</b>	<b>Approval</b>		
X	President	X	V.P. & General Counsel		
X	Sr. V.P. Operations	X	V.P. Planning		
X	V.P. Finance & IT				
X	V.P. Capital Program				

<b>SUMMARY INFORMATION</b>	
<b>Vendor Name</b> TBD	<b>Contract Number</b> Various
<b>Description</b> Request to use the RFP Process- Empire State Trail, Southeast to Hopewell Junction, New York	
<b>Total Amount</b> TBD	
<b>Contract Term (including Options, if any)</b> Various	
<b>Option(s) included in Total Amount?</b> Yes <input checked="" type="checkbox"/> No	
<b>Renewal?</b> Yes <input checked="" type="checkbox"/> No	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

## Narrative

### I. PURPOSE/RECOMMENDATION

MNR is seeking Board approval under the All Agency General Contract Procurement Guidelines to utilize the competitive Request for Proposal (RFP) process for Design/Build Services in lieu of sealed competitive bids to design and construct a portion of the Empire State Trail on the Beacon Line.

### II. BACKGROUND & DISCUSSION

Governor Andrew M. Cuomo has proposed completing the Hudson River Valley Greenway and Erie Canal trails by 2020 to create the Empire State Trail, the largest state multi-use trail in the nation. To achieve this, the state will develop 350 miles of new trail in three phases to create a 750-mile pathway for hiking and biking along scenic vistas and through charming, historic communities. The Empire State Trail will span much of the state, from the New York Harbor up through the Adirondack Mountains to the Canadian border – and from the shores of Lake Erie along the historic Erie Canal to the heart of the Capital Region.

This extensive trail network will enhance community connectivity and support healthy lifestyles by providing both urban and rural communities access to endless outdoor recreational opportunities. The trails will also draw tourists from around the world to explore New York's striking landscapes and rich history, while enjoying local bed and breakfasts, hotels, restaurants, wineries, breweries, farmsteads, and cultural attractions along the way.

MNR is responsible for the portion that will utilize our Beacon Line from the Town of Southeast in Putnam County to Hopewell Junction in Dutchess County. This 18 mile segment will connect to the extensive pre-existing Putnam County trail at Brewster (which continues southward to New York City) and to the Dutchess County Trail which continues from Hopewell Junction to the Walkway over the Hudson at Poughkeepsie and to trails on the west side of the Hudson River. The scope of work includes moving the existing single track to one side in select locations so that the trail is on one side and tracks on the other. The two will be separated by fencing to be constructed under this project. MNR will also protect and preserve its existing fiber-optic loop cable providing

critical connectivity and resiliency for communications throughout the system. The construction of the trail will utilize part of the existing Beacon Line right-of-way, but will not impact the ability to provide rail service. MNR will seek to develop agreements with municipalities or other partners to operate and maintain the trail after construction.

In order to ensure the proper selection of a designer/contractor for the design and construction of this portion of the state trail system with the necessary experience and expertise, it is in the public interest to use the RFP process to properly evaluate the technical capabilities of prospective proposers. The contractor will be selected based on an evaluation of technical capability, past performance, organization resources, and cost. MNR requests that the Board approve a resolution authorizing the use of the competitive RFP process to award design/build contracts for this project.

### **III. D/M/WBE INFORMATION**

A Request for Goal Determination will be submitted to MTA Department of Diversity and Civil Rights for MWBE availability review and subcontracting goal assessment. MTA DDCR will be consulted in order to establish MBE/WBE goals for these contracts.

### **IV. IMPACT ON FUNDING**

This procurement will be funded with monies set aside in the New York State Budget adopted in April, 2017.

### **V. ALTERNATIVES**

MNR does not have the available in-house design or construction capabilities to complete the scope of the specified work; therefore, there are no recommended alternative approaches.

# Staff Summary

<b>Item Number</b> C						<b>SUMMARY INFORMATION</b>																					
<b>Dept. &amp; Dept. Head Name:</b> Procurement & Material Management, Al Muir, Sr. Director						<b>Vendor Name</b> Loram Maintenance of Way, Inc.																					
<b>Division &amp; Division Head Name:</b> Executive Vice President – Catherine Rinaldi						<b>Contract Number</b> 100080047																					
<b>Board Reviews</b>						<b>Description</b> Specialty Excavating Services & Equipment (Railvac)																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Order</th> <th style="width: 15%;">To</th> <th style="width: 10%;">Date</th> <th style="width: 10%;">Approval</th> <th style="width: 10%;">Info</th> <th style="width: 10%;">Other</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>M-N Comm.Mtg.</td> <td>5-22-17</td> <td style="text-align: center;">x</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>MTA Board Mtg.</td> <td>5-24-17</td> <td style="text-align: center;">x</td> <td></td> <td></td> </tr> </tbody> </table>						Order	To	Date	Approval	Info	Other	1	M-N Comm.Mtg.	5-22-17	x			2	MTA Board Mtg.	5-24-17	x			<b>Total Amount</b> \$18,199,441 (MNR \$7,500,001/LIRR \$10,699,440) (not to exceed)			
Order	To	Date	Approval	Info	Other																						
1	M-N Comm.Mtg.	5-22-17	x																								
2	MTA Board Mtg.	5-24-17	x																								
<b>Internal Approvals</b>						<b>Contract Term (including Options, if any)</b> Three Years																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Order</th> <th style="width: 15%;">Approval</th> <th style="width: 5%;">Order</th> <th style="width: 15%;">Approval</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>President</td> <td>X</td> <td>V. P. &amp; General Counsel</td> </tr> <tr> <td>X</td> <td>Sr. V.P. Operations</td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>V.P. Finance &amp; IT</td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>V. P. Capital Programs</td> <td></td> <td></td> </tr> </tbody> </table>						Order	Approval	Order	Approval	X	President	X	V. P. & General Counsel	X	Sr. V.P. Operations			X	V.P. Finance & IT			X	V. P. Capital Programs			<b>Option(s) Included in Total Amount?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Order	Approval	Order	Approval																								
X	President	X	V. P. & General Counsel																								
X	Sr. V.P. Operations																										
X	V.P. Finance & IT																										
X	V. P. Capital Programs																										
						<b>Renewal?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																					
						<b>Procurement Type</b> X Competitive <input checked="" type="checkbox"/> Non-competitive <input type="checkbox"/>																					
						<b>Solicitation Type</b> RFP <input type="checkbox"/> Bid <input type="checkbox"/> X Other: <input type="checkbox"/>																					
						<b>Funding Source</b> X Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> X Federal <input type="checkbox"/> Other: <input type="checkbox"/>																					

## Narrative

### I. PURPOSE/RECOMMENDATION:

Approval is requested to award a three-year competitively bid (one bid proposal received) and negotiated public works contract to the firm Loram Maintenance of Way, Inc. (Loram) to provide self-propelled specialty excavating services (Railvac track vacuum services) on an as-needed basis. This is a joint procurement with Metro-North Railroad (MNR acting as the lead Agency) and the Long Island Rail Road (LIRR).

The Railvac track vacuum is a unique and powerful excavation machine that removes track material by way of mechanical agitation and airflow. The machine is rail mounted and designed to travel at track speeds while attached to ballast cars. The combination of a digging arm with dual engines and vacuums makes it capable of excavating compacted ballast, clay, mud, water, sand, and soil. The digging arm can work at distances of up to 15 feet from track centerline. Material is then extracted through the suction hose and deposited in the main hopper. At this time, both Railroads are seeking the above referenced service in support of the Railroads track programs.

### II. DISCUSSION:

In accordance with MTA Procurement Guidelines, an advertisement for the above referenced services was publicly advertised on December 13, 2016 in the New York Post, New York State Contract Reporter, Daily Challenge and posted on MNR's website.

The contractor is responsible to provide a self-propelled track-mounted excavating unit, all operating and supervisory personnel, material, transportation, permits, licenses, maintenance, supplies and equipment necessary to perform services based on an eight hour/40 hour work week along each Railroad's operating territory.

A work scope for this service was developed by each Railroad and forwarded to the Procurement Department. Ten industry contractors were sent a copy of the bid contract documents.

On February 17, 2017, a single bid proposal was received from Loram for each Railroad in the total amount of \$18,199,441.00 (MNR \$7,500,001.00/LIRR \$10,699,440.00). Discussions ensued on unique terms of this agreement and contract language adjustments were negotiated. Given the limited competition for these services, MNR and Loram reviewed the terms and scope of services to ensure that the Railroads were receiving the best possible pricing. Loram confirmed that they are providing both Railroads with their most favored customer pricing for the excavating services.

# Staff Summary

The hourly rates are fixed for all work to be completed in 2017. The fixed rates include the furnishing of all necessary equipment and labor (operators), consumables (oil), materials, tools, permits and maintenance of equipment for the duration of the three year contract terms. All rates for the subsequent years (2018 and 2019) will be adjusted in accordance with the Consumer Price Index. MNR deemed all pricing to be fair and reasonable based on the level of efforts to perform the specific work for each Railroad.

In connection with a previous contract awarded to the contractor, the contractor was found to be responsible notwithstanding significant adverse information (SAI) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel. No new SAI has been found relating to the contractor and the contractor has been found to be responsible.

### **III. D/M/WBE INFORMATION:**

The MTA Department of Diversity & Civil Rights (DDCR) evaluated the scope of work for possible Disadvantaged Business Enterprise (DBE) Goals. DDCR determined that no DBE goals could be established for the contracted services based on the lack of subcontracting opportunities and the absence of DBE availability in the industry.

### **IV. IMPACT ON FUNDING:**

The total cost for this joint procurement is not to exceed \$18,199,441 (MNR \$7,500,001/LIRR \$10,699,440) for the duration of the three year contract term. This project will be funded through each Agency's Operating Budget & Federal funds, (as applicable).

### **V. ALTERNATIVES:**

An alternative is not feasible as MNR and LIRR do not have adequate equipment or trained personnel to perform the requested service.

# Staff Summary

Item Number F					
Dept. & Dept. Head Name: Procurement & Material Management, Al Muir Sr. Director					
Division & Division Head Name: Executive Vice President – Catherine Rinaldi					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	M-N Comm.Mtg.	5-22-17	X		
2	MTA Board Mtg.	5-24-17	X		
Internal Approvals					
Order	Approval	Order	Approval		
X	President	X	V.P. & General Counsel		
X	Sr. V.P. Operations				
X	V.P. Finance & IT				
X	V. P. Capital Programs				

<b>SUMMARY INFORMATION</b>	
Vendor Name Bowery Residents Committee, Inc.	Contract Number 1000077840
Description Homeless Outreach Services	
Total Amount \$2,142,399	
Contract Term (Including Options, if any) Five Years	
Option(s) included in Total Amount?	Yes <input checked="" type="checkbox"/> No
Renewal?	Yes <input checked="" type="checkbox"/> No
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

## Narrative

### I. PURPOSE/RECOMMENDATION:

Approval is requested to award a competitively solicited and negotiated personal service contract RFP process, (two proposals received) five year contract to the firm Bowery Residents' Committee, Inc. (BRC) to operate MNR's Homeless Outreach Services Program at its outlying stations and along its Right-of-Way (ROW). The total cost for the five year contract term is not to exceed \$2,142,399.

### II. DISCUSSION:

The program is designed to provide outreach to homeless individuals who seek shelter primarily on MNR's property at stations other than Grand Central Terminal and its ROW. The primary goals of this program are: (1) to maintain a safe and secure transportation environment for MNR customers and employees by offering homeless individuals alternatives for sheltering away from MNR's property and facilities; (2) to provide outreach that ensures a strong staff presence in the field to deal with homeless individuals concurrent with accessing a wide variety of services for homeless individuals with specific problems; (3) to establish procedures to ensure the lawful collection of aggregate and individual information about the homeless population and their needs; (4) to permanently reduce the number of people who use MNR facilities and systems for surrogate shelter. The program will work in close cooperation with operational staff from MNR and the MTA Police Department (MTAPD) to address existing chronic homeless conditions, as well as emerging problem areas.

In accordance with MTA Procurement Guidelines, an advertisement for the required services was publicly advertised in the New York State Contract Reporter, New York Post, El Diario, Daily Challenge and posted on MNR's website. RFP documents were sent to 15 firms. A pre-proposal conference was held on January 20, 2017 with one firm in attendance. On February 24, 2017, technical and cost proposals were received from Bowery Residents' Committee (BRC) and Urban Pathways (UPC).

The Selection Committee which was comprised of members from the Customer Service and Stations Department, MTA PD and the Procurement and Material Management Department met to discuss the viability of the proposals utilizing the following criteria:

# Staff Summary

- Demonstrated understanding of the work scope
- Project plan
- Confidence level
- Cost
- Past experience and Diversity practices

The Committee met with both proposers who responded to the RFP to determine their understanding of the work scope and their capability to perform the work. After technical evaluation(s) and Best and Final Offer(s), the Committee unanimously selected BRC as the firm best qualified and cost-effective to perform these services. The Committee felt that BRC's technical and cost proposal(s) conveyed a comprehensive understanding of MNR's technical requirements. As such, BRC was found to be professionally and technically capable to provide Homeless Outreach Services for MNR. BRC is the largest provider of homeless outreach in the streets and transit system of New York City. Currently, BRC supports two major contracts with MTA and NYC Department of Homeless Services. Their transit outreach operations span throughout the greater metropolitan area, annually making nearly 3,300 placements of homeless men and women out of train and subway stations and into housing and other needed services. As part of these services, BRC shall have either a primary (i.e., direct control) or secondary (i.e. demonstrated) effective relationships with a network of public and private service providers who will accept contractor referrals and are operated and funded through resources other than MNR.

MNR's negotiations with BRC yielded additional savings, reducing their original pricing from \$2,304,382 to \$2,142,399, a savings of approximately 8%. All pricing shall remain firm and fixed for years 1-3 with a price escalation of 2% for the final two year period. The final pricing is deemed fair and reasonable.

MNR completed a responsibility review of Bowery Resident's Committee (BRC) as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

## **III.D/M/WBE INFORMATION:**

The MTA Department of Diversity and Civil Rights originally established a 15% MBE and 15% WBE goals for this contract. The goals were later revised to 0% MBE and 0% WBE due to insufficient availability of certified vendors to provide the required resources to support outreach in MNR's operating territory.

## **IV. IMPACT ON FUNDING:**

This procurement is to be funded by MNR's Operating Budget.

## **V. ALTERNATIVES:**

MNR does not have the available in-house staff with both the technical expertise and experience to perform this work.

# Staff Summary

Item Number G					
Dept. & Dept. Head Name: Procurement & Material Management, Al Muir, Sr. Director					
Division & Division Head Name: Executive Vice President, Catherine Rinaldi					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	M-N Comm.Mtg.	5-22-17	x		
2	MTA Board Mtg.	5-24-17	x		
Internal Approvals					
Order	Approval	Order	Approval		
x	President	x	V.P. Planning		
x	Sr. V.P. Operations	x	V.P. Finance		
x	V.P. & General Counsel				

SUMMARY INFORMATION	
Vendor Name Trapeze Software Group, Inc.	Contract Number
Description Centralized Train Scheduling System (CTSS)	
Total Amount \$3,929,197(not to exceed)	
Contract Term (including Options, if any) Five Years	
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Renewal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

## Narrative

### I. PURPOSE/RECOMMENDATION:

Approval is requested to award a five-year competitively-negotiated (RFP Process, five proposals received, three short-listed) miscellaneous service contract to the firm Trapeze Software Group, Inc. (Trapeze) to provide a Centralized Train Scheduling System (CTSS) which will be capable of developing and maintaining individual train schedules, crew schedules and equipment programs/schedules. This is a joint procurement with Metro-North Railroad (MNR acting as the lead Agency) and the Long Island Rail Road (LIRR), with MTA IT managing the project.

### II. DISCUSSION:

MNR operates nearly 800 scheduled trains on an average weekday. The principal scheduling process for these trains occurs twice a year, and includes: adjusting the public and employee timetables, crew books, equipment cycles, dispatching sheets and Grand Central Terminal track assignments, producing pocket versions of the new public timetable as well as holiday-specific and emergency timetables to reflect and prepare for the augmented or reduced service needed for those purposes. This is currently accomplished using a combination of Microsoft excel, third-party crew scheduling software, and an in-house developed timetable database program in which all data is entered manually. The process is constrained at each end; operational data must be collected for two months after the previous schedule goes into effect to determine what changes must be made, and at least two months must be allowed after the initial timetable is developed for approvals and production of the various standard, holiday, and emergency versions of the timetable, crew books, and equipment manipulations and development of specialized files for downstream users such as Customer Service and Communications & Signaling.

The purpose of this procurement action is to purchase a new, unified and automated Train, Crew and Equipment Schedule Development Software System to provide all of the functions described above in a seamless process. This system is to be developed by a third party, and once tested and successful at MNR, an optional task is included to develop a similar specification for Long Island Rail Road. Once the system is operational, it is expected to enable the development of multiple scheduling scenarios for analysis that will enable a greater degree of responsiveness to changing conditions and circumstances.

# Staff Summary

In accordance with MTA Procurement Guidelines, an advertisement for the above referenced services was publicly advertised on April 14, 2016 in the New York Post, New York State Contract Reporter, Daily Challenge and posted on MNR's website.

Sixteen vendors were provided the RFP and five proposals were received. The Selection Committee was comprised of members from the following agencies: MNR's Procurement & Material Management, MNR's Operations Planning and Operations Administration Departments; LIRR's Service Planning Department and HQ's Information Technology and QA & Audit Compliance Department. The Selection Committee evaluated five proposals and short-listed three firms (Trapeze, SISCOG and Quintiq, LLC). Trapeze displayed the best overall competence for performing the scope of work as compared to the other shortlisted firms. In addition, Trapeze's technical proposal was the most comprehensive and they demonstrated the versatility of their proposed software package. Trapeze's cost proposal was 50.8% lower than the other firms and below the in-house estimate to perform this work. As such, the Committee unanimously selected Trapeze as the best qualified to perform the subject services. Costs were negotiated for both the base work for a CTSS for MNR at \$2,917,994 and an option on the contract to be elected after successful software implementation for LIRR at \$1,011,203. The option pricing reflects the economies received by completing the MNR design in advance of LIRR. At this time, MNR will only award the base CTSS work for \$2,917,994.

MNR completed a responsibility review of Trapeze as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

Approval is requested to award a five year, competitively solicited miscellaneous service contract in the not to exceed amount of \$3,929,197.

### **III. D/M/WBE INFORMATION:**

The MTA Department of Diversity and Civil Rights (DDCR) established 15% MBE/15% WBE goal for this project and Trapeze has met the pre-award submission requirements for this contract.

### **IV. IMPACT ON FUNDING:**

This procurement will be funded by each Railroad's Operating Budget. As we are only awarding the base contract at this time, it will be funded by the MTA IT Budget.

### **V. ALTERNATIVES:**

MNR does not have the available in-house staff with the expertise to develop and implement the software required to support crew/train/equipment scheduling.

## Schedule H: Modifications to Personal Service and Miscellaneous Service Contracts

Item Number: H

<b>Vendor Name (&amp; Location)</b> Automotive Resources International (ARI)	<b>Contract Number</b> 1000009713	<b>AWO/Modification #</b> 7
<b>Description</b> Fleet Maintenance and Management Services	<b>Original Amount:</b> \$34,080,000.00	
<b>Contract Term (including Options, if any)</b>  Five year	<b>Prior Modifications:</b> \$14,625,740.00 (MNR-\$4,625,740, LIRR-\$10,000,000)	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Prior Budgetary Increases:</b> \$	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Current Amount:</b> \$48,705,740	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	<b>This Request:</b> \$19,100,000	
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b> 39.2 %	
<b>Requesting Dept./Div. &amp; Dept./Div. Head Name:</b> Procurement & Material Management, Al Muir, Sr. Director	<b>% of Modifications (including This Request) to Original Amount:</b> 99 %	

### Discussion:

On behalf of Metro-North Railroad (MNR), Long Island Rail Road (LIRR) and New York City Transit (NYCT) Paratransit, approval is requested to extend this multi-agency miscellaneous service contract for an additional two years from July 31, 2017 – July 31, 2019) with Automotive Resources International (ARI) in the total amount of \$19,100,000. The prior contract modifications were executed by the individual agency and were necessitated by larger than expected usage.

In 2012 under a MTA Board approved multi-agency contract, MNR on behalf of LIRR and NYCT Paratransit awarded a contract to ARI in the amount of \$34,080,000 for a five year period. ARI manages all aspects of vehicle repair approvals, recording repair details, payment of invoices from maintenance repair vendors who service MTA vehicles and the consolidation of monthly invoices for payment by each participating MTA agency. The estimated cost for the initial five years was \$34,080,000 and was allocated as follows: MNR-\$11,000,000, LIRR-\$18,080,000 and NYCT Paratransit-\$5,000,000. Prior modifications awarded were attributed to both MNR and LIRR experiencing significant unanticipated increases in the number of vehicles required for maintenance and repair projects throughout both agencies operating territories. These additional efforts required the use of significantly more agency-owned vehicles than what was originally forecasted at the time of award. This will continue through the contract's additional two year extension which is now proposed.

This modification is required to allow sufficient time for the reassignment of this multi-agency master service agreement to MTA Headquarters for their initiation of an all agency consolidated fleet maintenance and management services contract. This agreement may be terminated in the event that HQ procurement is able to put in place a service contract prior to the end date of this agreement.

MNR completed a responsibility review of ARI as defined in the All Agency Responsibility Guidelines in connection with this award recommendation, which yielded no significant adverse information.

The total cost for the two year contract extension is \$19,100,000 (MNR = \$6,100,000 & LIRR = \$13,000,000). NYCT Paratransit does not require additional funding for this extension period at this time. All rates and terms and conditions previously established under the current agreement shall remain the same for the two year extension period, which is deemed fair and reasonable. This procurement is to be funded by each Agency's Operating Budget.

**LONG ISLAND RAIL ROAD**

**PROCUREMENTS**

**FOR**

**BOARD ACTION**

**May 24, 2017**

# Staff Summary



Subject : Request for Authorization to Award Various Procurements						Date May 24, 2017			
Department Procurement and Logistics									
Department Head Name Dennis L. Mahon, Chief Procurement and Logistics Officer									
Department Head Signature 									
<b>Board Action</b>						<b>Internal Approvals</b>			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	LI Committee	5.22.17				1	President <i>PRN</i>		
2	MTA Board	5.24.17				2	Executive VP <i>EMP</i>		

## PURPOSE:

To obtain approval of the Board to award various contracts and purchase orders, and to inform the Long Island Rail Road Committee of these procurement actions.

## DISCUSSION:

LIRR proposes to award Non-Competitive Procurements in the following categories:		<u># of Actions</u>	<u>\$ Amount</u>
Schedule E	Miscellaneous Procurement Contracts	1	\$4,159,700
SUBTOTAL:		1	\$4,159,700

LIRR proposes to award Competitive Procurements in the following categories:		<u># of Actions</u>	<u>\$ Amount</u>
<u>Schedules Requiring Two-Thirds Vote</u>			
Schedule B:	Competitive Requests for Proposals (Solicitation)	1	\$TBD
Schedule C:	Competitive Requests for Proposals (Award)	1	\$10,561,860
SUBTOTAL:		2	\$10,561,860

LIRR proposes to award Ratifications in the following categories:		<u># of Actions</u>	<u>\$ Amount</u>
Schedule D:	Ratification of Completed Procurement Actions	1	\$1,297,387
		1	\$1,297,387
TOTAL:		4	\$16,018,947

**BUDGET IMPACT:**

The purchases/contracts will result in obligating LIRR operating and capital funds in the amounts listed. Funds are available in the current operating budget for this purpose.

**RECOMMENDATION:**

That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

## METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 1209 of the Public Authorities law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain change orders to procurement, public work, and miscellaneous procurement contracts; and

WHEREAS, in accordance with Section 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in the annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.
2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which it is deemed in the public interest to obtain authorization to solicit competitive proposals through a publicly advertised RFP for the reasons specified therein the Board declares it to be impractical or inappropriate to utilize a procurement process inviting sealed bids with award to the lowest responsive/responsible bidder.
3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.
4. The Board ratifies each action taken set forth in Schedule D for which ratification is requested.
5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.
6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.

**MAY 2017**

**MTA LONG ISLAND RAIL ROAD**

**LIST OF NON-COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**

*Procurements Requiring Majority Vote*

**Schedule E: Miscellaneous Procurement Contracts**

(Staff Summaries required for all items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M Competitive)

- 1. Maryland Transit Administration \$4,159,700** *Staff Summary Attached*  
**Non-Competitive Lease Agreement**  
**Contract No. TBD**

LIRR seeks board approval to award a non-competitive Inter-Governmental lease agreement with Maryland Transit Administration (MTA), a modal division of the Maryland Department of Transportation, for the lease of between 8-21 passenger coach cars in the Not to Exceed amount of \$ 4,159,700 covering a three year term (one year base plus two one-year options). These cars will be put into service during the summer months, in order to increase overall seating capacity on the Montauk branch.

## Schedule E: Miscellaneous Procurement Contracts

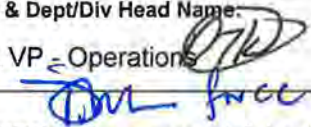
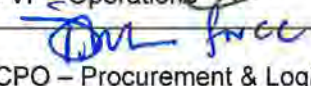
(Staff Summaries required for all items greater than: \$100K Sole Source;  
\$250K Other Non-Competitive; \$1M Competitive)



Long Island Rail Road

Item Number: 1

<b>Vendor Name (&amp; Location)</b> Maryland Transit Administration (Maryland-TA) 6 St. Paul St., Baltimore, MD 21202
<b>Description</b> Lease of (8-21) Passenger Coach cars for Summer Service
<b>Contract Term (including Options, if any)</b> May 16, 2017 – October 31, 2019
<b>Option(s) included in Total Amount?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Procurement Type</b> <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Non-competitive
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Inter-Governmental Lease Agreement

<b>Contract Number</b> TBD	<b>Renewal?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Total Amount:</b>	\$ 670,000 (Base) \$ 3,489,700 (Options) \$ 4,159,700 (Total)
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Dave Kubicek, Sr. VP - Operations 	
<b>Contract Manager:</b> Cynthia Carter, DCPO – Procurement & Logistics 	

### Discussion:

LIRR seeks board approval to award a non-competitive Inter-Governmental lease agreement with Maryland Transit Administration (“Maryland-TA”), a modal division of the Maryland Department of Transportation, for the lease of between 8-21 passenger coach cars in the Not to Exceed amount of \$ 4,159,700 covering a three year term (one year base plus two one-year options). These cars will be put into service during the summer months, in order to increase overall seating capacity on the Montauk branch.

Pursuant to an extensive direct outreach of regional commuter railroads, LIRR located this equipment, performed inspection and testing, and determined it to be compliant with FRA 49 CFR, operational and in good condition, having come off of lease to Southeastern Pennsylvania Transportation Authority (“SEPTA”) earlier this year. Due to the compatibility of this equipment with LIRR’s infrastructure, only minor wiring adjustments (i.e. modifications to the speed settings, boards and components) will be required in order to run with Diesel Electric (“DE”)/Dual Mode (“DM”) locomotives. LIRR plans to modify cab cars to operate on the head end, adding 8 cars to service in the first year and increasing the number of cars to be leased to a maximum of twenty one in option years 2018 and 2019. MTA will provide training to LIRR train operators, maintenance personnel as well as to a LIRR Trainer in order to ensure proper operation, maintenance and troubleshooting practices are followed and ordinary repairs are performed responsibly. Under the agreement, LIRR is responsible for all routine repairs and maintenance, in accordance with the original equipment manufacturer’s standards, including normal running repairs. LIRR will order any required specialized parts from Maryland-TA and MTA will transport and invoice LIRR for the cost of parts at the end of the term.

Leasing this equipment is cost effective as it enables LIRR to meet the demand of its seasonal customers, while avoiding long term fleet investments under current budgetary constraints. Leasing also affords LIRR time to re-assess long term fleet needs, deferring to such time that the diesel fleet is ready for replacement, and until such time that other initiatives impacting future capacity (ESA, Main Line Second Track and Main Line Expansion and ) are implemented.

MTA’s lease price of \$15,570 per car per month, is fair and reasonable based on their certification that they are offering their “Most Favored Customer” rate and the same rate charged to SEPTA and AMTRAK earlier this year. Option years reflect a 0% escalation factor. Also included in this request is \$1,000/month per car for spare parts, which will be provided on an as-needed basis by Maryland-TA. Maryland-TA will invoice parts to LIRR at their cost plus shipping and handling and no further mark-ups, which is also fair and reasonable.

This lease agreement is exempt from MBE/WBE goals as there are no opportunities to subcontract work out.

This work will be reimbursed from LIRR’s Operating budget.

**MAY 2017**

**MTA LONG ISLAND RAIL ROAD**

**LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**

*Procurements Requiring Two-Thirds Vote*

**Schedule B: Competitive Requests for Proposals (Solicitation of Purchase and Public Work Contracts)**

(Staff Summaries only required for items estimated to be greater than \$1 million)

- |           |   |              |                                      |
|-----------|---|--------------|--------------------------------------|
| <b>2.</b> | <b>TBD</b><br><b>Competitive RFP</b><br><b>Contract No. TBD</b> | <b>\$TBD</b> | <i><u>Staff Summary Attached</u></i> |
|-----------|---|--------------|--------------------------------------|

LIRR requests MTA Board approval to adopt a resolution declaring that competitive bidding is impractical or inappropriate and that it is in the public's best interest to use the Request for Proposal (RFP) procurement method pursuant to Section 1265-a of the Public Authorities Law to award a construction contract for the replacement of Meadowbrook Substation. The Meadowbrook Substation will be the first of many substations to be replaced under the 2015-2019 Capital Program, which provides for \$81M for the replacement of traction power substations that are beyond their useful life.

*Procurements Requiring Two-Thirds Vote*

**Schedule C: Competitive Request for Proposals (Award of Purchase and Public Work Contracts)**

(Staff Summaries only required for items requiring Board approval)

- |           |  |                     |                                      |
|-----------|--|---------------------|--------------------------------------|
| <b>3.</b> | <b>Railroad Construction Company, Inc.</b><br><b>Competitive RFP</b><br><b>Contract No. 6242</b> | <b>\$10,561,860</b> | <i><u>Staff Summary Attached</u></i> |
|-----------|--|---------------------|--------------------------------------|

LIRR requests MTA Board approval to award a Firm Fixed Price contract to Railroad Construction Company, Inc. ("RCC"), in the amount of \$10,561,680 to provide Design-build Services for Replacement of Buckram Road Bridge. The new bridge will be single-span with an increased NYSDOT required vertical clearance, thereby significantly reducing the probability of bridge strikes and increasing safety.

## Staff Summary



Long Island Rail Road

Page 1 of 2

Item Number: 2					
Dept & Dept Head Name: Procurement & Logistics, Dennis Mahon					
Department Head Signature & Date					
Division & Division Head Name: Program Management, Paul Dietlin					
Division Head Signature & Date					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	LI Committee	5.22.17			
2	MTA Board	5.24.17			
Internal Approvals					
Order	Approval	Order	Approval		
6	President	3	SVP Engineering		
5	Executive VP	2	VP & CFO		
4	SVP Operations	1	VP, Gen Counsel & Sec'y		

SUMMARY INFORMATION	
Vendor Name	Contract Number
TBD	TBD
Description	
Replacement of Meadowbrook Substation	
Total Amount	
\$TBD	
Contract Term (including Options, if any)	
TBD	
Options(s) included in Total Amount: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Renewal? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Procurement Type	
<input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-Competitive	
Solicitation Type	
<input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source	
<input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	

**I. PURPOSE/RECOMMENDATION:**

LIRR requests MTA Board approval to adopt a resolution declaring that competitive bidding is impractical or inappropriate and that it is in the public's best interest to use the Request for Proposal (RFP) procurement method pursuant to Section 1265-a of the Public Authorities Law to award a contract to replace the Meadowbrook Substation which is operating beyond its useful life.

**II. DISCUSSION:**

LIRR's 2015-2019 Capital Program includes \$81 million for the replacement of traction power substations that are past their useful life. Under this substation procurement, Meadowbrook Substation will be the first substation replaced under the current capital program. The contractor will design, fabricate, deliver, install, integrate and test the modular substation including building enclosures, equipment, cabling and supervisory control systems. LIRR Forces will connect the substation to the LIRR power and communications infrastructure by installing conduit, cable, switches and terminations.

The utilization of the RFP process will allow the LIRR to better assess which contractors are capable of performing the work within the project's schedule and afford the opportunity to negotiate terms and conditions as well as the price. Additionally, the RFP process gives LIRR the ability to evaluate criteria other than cost alone, such as past performance and work experience with similar traction power replacement projects, technical approach, qualifications of key personnel and safety records. The MTA Board has previously authorized use of the RFP process in connection with a number of power substation projects, including the LIRR's Babylon, Floral Park, Inwood, Hempstead, Merrick, Lindenhurst, Nassau Boulevard, Little Neck, Bellaire, Long Beach, Hillside and Kew Gardens Substations.

**III. D/M/WBE INFORMATION:**

Goals for this Contract will be determined by the MTA Office of Civil Rights and Diversity.

## Staff Summary



Long Island Rail Road

Page 2 of 2

### **IV. IMPACT ON FUNDING:**

Funding for this project is included in the LIRR portion of the MTA's 2015-2019 Capital Program budget.

### **V. ALTERNATIVES:**

The alternative is to use the Invitation for Bid (IFB) procurement method. The IFB procurement method does not allow the LIRR the opportunity to negotiate costs or select a contractor based upon past experience, technical capability and/or proposed work completion schedule. In addition, the IFB process does not allow for meaningful dialogue with the contractor until after award, thereby preventing the LIRR from negotiating improvements to the construction schedule and incorporating more efficient means and methods into the contract.

## Staff Summary



Long Island Rail Road

Page 1 of 3

Item Number: 3					
Dept & Dept Head Name: Procurement & Logistics; Dennis L. Mahon					
Department Head Signature & Date					
Division & Division Head Name: Department of Program Management, Paul Dietlin					
Division Head Signature & Date					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	LI Committee	5.22.17			
2	MTA Board	5.24.17			
Internal Approvals					
Order	Approval	Order	Approval		
6	President	3	SVP Engineering		
5	Executive Vice President	2	Vice President & CFO		
4	SVP Operations	1	VP, Gen'l Counsel & Sec'y		

SUMMARY INFORMATION	
Vendor Name Railroad Construction Company, Inc. ("RCC")	Contract Number 6242
Description Design-Build Services for the Replacement of Buckram Road Bridge	
Total Amount \$10,561,860.00	
Contract Term (including Options, if any) 560 consecutive calendar days	
Options(s) included in Total Amount:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Renewal?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-Competitive	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	
Funding Source <input type="checkbox"/> Operating <input type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	

**I. PURPOSE/RECOMMENDATION**

Pursuant to a competitive Request For Proposal (RFP), Long Island Rail Road ("LIRR") requests MTA Board approval to award a Firm Fixed Price contract to Railroad Construction Company, Inc. ("RCC"), in the amount of \$10,561,680.00 to provide Design-Build Services for Replacement of Buckram Road Bridge project.

**II. DISCUSSION**

Buckram Road Bridge is located in Locust Valley, Nassau County on the Oyster Bay Branch at Mile Post 30, Bridge Number: 67-O-300. The bridge was built in 1889 and carries one (1) track and has three spans with a bridge length of 134 feet. The bridge spans over Buckram Road. When the bridge was constructed over a century ago, vehicular traffic consisted of horse-drawn vehicles and some early automobiles. The bridge was not at all designed for today's traffic environment and is subject to approximately 2 bridge strikes per year, which has resulted in cumulative structural damage over the years. The new structure will be a single-span bridge with an increased NYSDOT required vertical clearance of 14'-0", thereby significantly reducing the probability of bridge strikes and increasing safety. The new single span ballasted deck bridge will reduce overall maintenance cost.

A conceptual design was completed under a separate contract. This contract requires the Design-Build Contractor to advance the design from approximately the 30% level to the 100% Final Design level. The Contractor shall assume the full responsibility of the Designer of Record. Upon approval of the final design, the Contractor shall provide all services, labor, material, equipment, and facilities required to complete the Work identified in the Contract Documents. The Contractor will be provided with one (1) fifty two (52) hour weekend outage for the removal of the existing and installation of the new bridge. The MTA Board approved the use of the RFP process at its April 2016 meeting to procure this Design-Build contract. On October 27, 2016, LIRR publicly advertised the RFP. Addenda 1 through 2 were issued to answer vendor queries and extend due date of proposals. On December 20, 2016, six (6) proposals were received from the following firms: 1) Kiewit, 2) Halmar, 3) GPI, 4) Bove Industries, 5) Tully, 6) Railroad Construction Inc.

## **Staff Summary**



On January 12, 2017, the LIRR Technical Evaluation Committee (“TEC”) met to evaluate the six (6) technical proposals using the following evaluation criteria: Technical Approach; Company and Project Team / Key Personnel Qualifications; and Demonstrated Ability to Meet Schedule. At the conclusion of the technical evaluation, the TEC invited Railroad Construction Company Inc. and Kiewit, to come in for oral presentations as their proposals conformed the most to LIRR requirements.

On February 13, 2017, oral presentations were conducted where RCC and Kiewit had an opportunity to further clarify their proposals and answer LIRR questions. Both firms demonstrated an acceptable approach to the work, utilized effective means and methods, and met the RFP’s experience requirements. At the conclusion of these presentations, the LIRR reconvened and evaluated both firms’ technical capabilities. The LIRR concluded that RCC demonstrated a better understanding of the project and offered a superior approach to the work based on an alternative foundation & retaining wall design, which provides the LIRR with significant project support cost savings.

On March 30, 2017, a meeting was held with RCC to verify their prices, and ensure they fully understood the LIRR’s work scope and requirements. Negotiations were held with RCC, and the parties agreed that the BAFO amount of \$10,561,680.00 is fair and reasonable. This amount was \$5,705,926.00 below LIRR’s internal cost estimate of \$16,317,606.00. Although RCC’s BAFO was approximately \$900K higher than Kiewit, the alternative foundation & retaining wall design offers significant project support cost savings along with a major risk reduction for impacting train service.

RCC’s proposal offers significant advantages to the LIRR, such as the elimination of two 12 – hour weekend outages for utility relocation. This will result in a project cost saving of \$143,100 in flagging, bussing and Project support personnel. The alternative design will result in a reduction of 720 flagperson days of protection. The design will allow the construction to be completed without the need for large equipment located at track level within the fouling envelope. By reducing the required flag protection by 3 flagpersons per day, this will provide a project cost savings of \$956,232. The contractors twenty (20) day overall project schedule reduction will provide for an additional \$82,000 in project cost savings, by reducing the project management services (this includes: Resident Engineer/Inspector and Project support personnel). The alternative foundation design allows for more bridge components to be constructed prior to the weekend outage. This will provide the LIRR Track Department seven additional hours during the weekend outage to complete 1,800 linear feet of track reconstruction (required to raise the bridge to meet NYSDOT under clearance of 14’-0”). The additional seven hours ensures train service will be restored by Monday morning rush hour.

RCC has a team of top professionals who will be able to address the specific needs of this bridge replacement project. RCC has in-depth knowledge in the structural and civil engineering and design for all types of facilities, including but not limited to: bridges, transportation facilities, maintenance facilities, and commercial buildings. RCC has the qualifications and capacity to perform this work as demonstrated by the successful completion of similar LIRR projects, including the replacement of the Colonial Road Bridge

In connection with the responsibility review, RCC was found to be responsible with no significant adverse information pursuant to the All-Agency Responsibility Guidelines.

## Staff Summary



Long Island Rail Road

Page 3 of 3

### **III. D/M/WBE INFORMATION**

This contract has a 17% DBE goal, RCC has agreed to submit a plan that would meet the contract's goal requirements.

The final plan is subject to review and approval by DDCR. An award will not be issued until approval by DDCR. Railroad Construction Company, Inc. has achieved its MWDBE goals on previous MTA contracts.

### **IV. IMPACT ON FUNDING**

This contract will be federally funded and is included in the LIRR Capital Budget and in the MTA Capital Program.

### **V. ALTERNATIVES**

LIRR does not have the ability to undertake the Design-Build Services for the Replacement of the new Buckram Road Bridge with in-house forces.

**MAY 2017**

**MTA LONG ISLAND RAIL ROAD**

**LIST OF RATIFICATIONS FOR BOARD APPROVAL**

*Procurements Requiring Majority Vote*

**Schedule D: Ratification of Completed Procurement Actions**

(Ratifications are to be briefly summarized with staff summaries attached only for unusually large or especially significant items)

- 4. Plasser American Corp.                      \$1,297,387                      *Staff Summary Attached***  
**Emergency Procurement**  
**Contract No. 400000000001448**

LIRR requests MTA Board ratification of an award a Firm Fixed Price contract to Plasser American Corp. in the amount of \$1,297,387 to provide for purchase of a Track Stabilizer. This equipment will replace LIRR's TC826 Track Stabilizer which was damaged beyond repair as a result of a collision and derailment which occurred in New Hyde Park in early October, 2016.

## Staff Summary



Item Number: 4

<b>Vendor Name (&amp; Location)</b> Plasser American Corp. (Chesapeake, VA)
<b>Description</b> Track Stabilizer Purchase
<b>Contract Term (including Options, if any)</b> May 8, 2017 – May 7, 2023
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-Competitive
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input type="checkbox"/> Other:

<b>Contract Number</b> 400000000001448	<b>Renewal?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Total Amount:</b> \$1,297,387.00	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> John Hasley- Engr-Track Operations, LIRR-ENGINEERING	
<b>Contract Manager :</b> Jack Latterner Jack Latterner – Sr. Manager- MOW , Procurement & Logistics	

**Discussion:**

Pursuant to a Declaration of Emergency approved by LIRR's President on February 28, 2017, waiving formal competitive bidding pursuant to Article III-A of the all-Agency Procurement guidelines, Long Island Rail Road requests MTA Board ratification of a contract award to Plasser American Corporation (Plasser) for a Track Stabilizer in the total, Firm Fixed Price amount of \$1,297,387.00.

In early October 2016, the TC826 Track Stabilizer was damaged beyond repair as a result of a collision and derailment which occurred in New Hyde Park. The details of the derailment were presented to the board during the October 2016 Metro-North/LIRR Committee Meeting. LIRR does not have a spare or back-up unit.

The Track Stabilizer is one of a three-part track surfacing equipment consist that performs track restoration work associated with Capital and Maintenance projects. The stabilizer is essential to track surfacing operations in order to ensure safe and efficient restoration of track to service and must be replaced in time to support the 2017 track program and planned track outages. Stabilizers are also required for snow removal operations. Without stabilizers, surfacing would not be considered complete and trains would have to operate at reduced speeds and added inspections would be required. The 2017 Track program does not have the allotted time to support such additional measures.

A competitive Invitation to Bid (IFB) was sent to the only two known, qualified suppliers of this equipment. Plasser submitted the lowest responsive and responsible bid, with a price of \$1,297,387.00. The second bid was submitted by R.E.L.A.M (an authorized HARSCO distributor), with a price of \$1,350,231.38. Plasser has certified that the price bid for this equipment is based on their Most Favored Customer rates for similar equipment, and their bid price was 7% lower than LIRR's internal estimate of \$1,400,000, therefore the price is deemed fair and reasonable.

LIRR Engineering representatives conducted on-site testing and inspection at Plasser's manufacturing plant. The unit was found compliant with LIRR's specifications and thereby accepted. Due to the fact that Plasser was in process of completing a large order for another railroad, they were able to prioritize LIRR's need and expedite delivery to May 1, 2017.

Also included in the bid price is a one year warranty and start-up training.

**Staff Summary**



In connection with the responsibility review, RCC was found to be responsible with no significant adverse information pursuant to the All-Agency Responsibility Guidelines.

Funding for the unit is provided in the 2015-2019 MTA Capital Program.

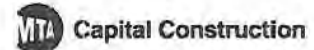
**LONG ISLAND RAIL ROAD COMMITTEE**

**MTA BOARD**

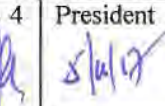
**PROCUREMENT PACKAGE**

**MAY 2017**

Staff Summary



<b>Subject</b> Request for Authorization to Award Various Procurements					
<b>Department</b> Law and Procurement					
<b>Department Head Name</b> Evan M. Eisland					
<b>Department Head Signature</b> 					
<b>Board Action</b>					
<b>Order</b>	<b>To</b>	<b>Date</b>	<b>Approval</b>	<b>Info</b>	<b>Other</b>
1	Long Island Rail Road Committee	5/22/17	X		
2	Board	5/24/17	X		

<b>Date:</b> May 9, 2017			
<b>Vendor Name</b> Various			
<b>Contract Number</b> Various			
<b>Contract Manager Name</b> Various			
<b>Internal Approvals</b>			
	<b>Approval</b>		<b>Approval</b>
4	President 	3	Executive Vice President 
2	Vice President, Program Controls 	1	Chief Procurement Officer 

**PURPOSE**

To obtain the approval of the Board to award various modifications and, to inform the Long Island Rail Road Committee of these procurement actions.

**DISCUSSION**

MTA Capital Construction proposes to award Competitive Procurements in the following category:

<u>Schedules Requiring Majority Vote:</u>	<u># of Actions</u>	<u>\$ Amount</u>
Schedule H Modifications to Personal Service and Miscellaneous Service Contracts	1	\$ 937,133
Schedule I Modifications to Purchase and Public Work Contracts	1	\$ 4,900,000
<b>SUBTOTAL</b>	<b>2</b>	<b>\$ 5,837,133</b>

MTA Capital Construction proposes to award Ratifications in the following category:

<u>Schedules Requiring Majority Vote:</u>	<u># of Actions</u>	<u>\$ Amount</u>
Schedule K Ratifications of Completed Procurement Actions	2	\$ 3,138,228
<b>SUBTOTAL</b>	<b>2</b>	<b>\$ 3,138,228</b>
<b>TOTAL</b>	<b>4</b>	<b>\$ 8,975,361</b>

**Budget Impact:**

The approval of the modifications and ratifications will obligate MTA Capital Construction capital funds in the respective amounts listed. Funds are available in the capital budget for this purpose.

**Recommendation:**

That the modification and ratifications be approved as proposed. (The items are included in the resolution of approval at the beginning of the Procurement Section.)

**MTA Capital Construction Company**

**BOARD RESOLUTION**

**WHEREAS**, in accordance with Section 1265-a and 1209 of the Public Authorities Law and the All Agency Procurement guidelines, the Board authorizes the award of certain non-competitive purchase and public works contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

**WHEREAS**, in accordance with the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous service and miscellaneous procurement contracts, certain change orders to purchase, public work, and miscellaneous service and miscellaneous procurement contracts;

**WHEREAS**, in accordance with Section 2879 of the Public Authorities Law and the All-Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts and certain change orders to service contracts.

NOW, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.
2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.
3. As to each request for proposals (for purchase and public work contracts set forth in Schedule C for which a recommendation is made to award the contract), the Board authorizes the execution of said contract.
4. As to each action set forth in Schedule D, the Board declares competitive bidding impractical or inappropriate for the reasons specified therein, and ratifies each action for which ratification is requested.
5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; v) the contract modifications to purchase and public work contracts set forth in Schedule I; vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.
6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.
7. The Board authorizes the budget adjustments to estimated contracts set forth in Schedule L.

May 2017

**LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**

**Procurements Requiring Majority Vote:**

**Schedule H. Modification To Personal Service and Miscellaneous Service Contracts Awarded as Contracts for Services**  
(Approval/Staff Summaries required for substantial change orders and change orders that cause the original contract to equal or exceed the monetary or duration threshold required for Board approval)

- |    |   |                   |                                      |
|----|---|-------------------|--------------------------------------|
| 1. | <b>Parsons Brinckerhoff/STV/Parsons<br/>Transportation Group, Joint Venture<br/>Contract No. 98-0040-01R<br/>Modification No. 141</b> | <b>\$ 937,113</b> | <b><u>Staff Summary Attached</u></b> |
|----|---|-------------------|--------------------------------------|

In accordance with Article XI of the All-Agency General Contract Guidelines, MTACC seeks Board approval to modify the Contract to increase the Guaranteed Maximum Cost by \$937,113 in order to prepare final designs for work associated with the implementation of a Positive Train Control (PTC) system in the ESA tunnels.

**Schedule I. Modification To Purchase and Public Work Contracts**  
(Staff Summaries required for individual change orders greater than \$750K. Approval without Staff Summary required for change orders greater than 15% of the adjusted contract amount which are also at least \$250K)

- |    |  |                     |                                      |
|----|--|---------------------|--------------------------------------|
| 2. | <b>Tutor Perini Corporation<br/>Contract No. CS179<br/>Modification No. 41</b> | <b>\$ 4,900,000</b> | <b><u>Staff Summary Attached</u></b> |
|----|--|---------------------|--------------------------------------|

In accordance with Article VIII of the All-Agency General Contract Guidelines, MTACC seeks Board approval to modify the Contract to add the requirement to furnish and install permanent cable trough covers for the ESA tunnel benches. This is a scope and budget transfer.

**Item Number: 1**

<b>Vendor Name (&amp; Location)</b> Parsons Brinckerhoff/STV/Parsons Transportation Group, JV (NY, NY)	<b>Contract Number</b> 98-0040-01R	<b>AWO/Modification #</b> 141
<b>Description</b> East Side Access General Engineering Consultant Services		
<b>Contract Term (including Options, if any)</b> December 2017	<b>Original Amount:</b>	\$ 140,000,000
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<b>Prior Modifications:</b>	\$ 339,061,416
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Prior Budgetary Increases:</b>	\$ -0-
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: Modification	<b>Current Amount:</b>	\$ 479,061,416
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>This Request</b>	\$ 937,113
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> East Side Access/William Goodrich	<b>% of This Request to Current Amount:</b>	0.20%
	<b>% of Modifications (including This Request) to Original Amount:</b>	243%

**Discussion:**

This Contract is for engineering, design and construction phase services for the East Side Access (ESA) Project. In accordance with Article XI of the MTA All-Agency Service Contract Procurement Guidelines, Board approval is requested to modify the Contract to increase the Guaranteed Maximum Cost by \$937,113 in order to prepare final designs for work associated with the implementation of a Positive Train Control (PTC) system in the ESA tunnels.

The Rail Safety Improvement Act of 2008 requires Long Island Rail Road to implement a PTC system. The ESA Project does not include any work related to a PTC System. Accordingly, LIRR has requested that MTACC add the PTC system to the scope of work being performed within the ESA tunnels. Under this Modification, the Consultant will revise the design documents for contracts VS086 Tunnel Signal Equipment, CS086 Tunnel Signal Installation, and CS179 System Package 1, to incorporate the installation of LIRR furnished PTC equipment in the ESA tunnels.

The Consultant submitted a cost proposal of \$1,401,257 for this modification while the MTACC estimate was \$877,788. Negotiations were held and the parties agreed to a cost of \$937,113. LIRR will provide the funds to pay for this work.

In connection with previous contracts awarded to Parsons Brinckerhoff and STV, both members of the Consultant joint venture, those consultants were found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility findings were approved by the MTA Chairman/CEO in consultation with the MTA General Counsel (with regard to Parsons Brinckerhoff in January 2007 and with regard to STV in May 2008). No new SAI has been found relating to these Consultants and they have both been found to be responsible.

**Item Number: 2**

<b>Vendor Name (&amp; Location)</b> Tutor Perini Corporation (Peekskill, NY)		<b>Contract Number</b> CS179	<b>AWO/Modification #</b> 41
<b>Description</b>  Systems Facilities Package No. 1 for the East Side Access Project			
<b>Contract Term (including Options, if any)</b> 75 Months		<b>Original Contract Amount:</b> \$ 333,588,000	
		<b>Original Option Amounts:</b> \$ 216,800,000	
		<b>Original Board Approved Amount:</b> \$ 550,388,000	
		<b>Prior Modifications:</b> \$ 8,201,055	
		<b>Exercised Options:</b> \$ 204,700,001	
<b>Option(s) included in Total Amount?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<b>Current Amount:</b> \$ 546,489,056	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive			
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: Modification		<b>This Request</b> \$ 4,900,000	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>% of This Request to Current Amount:</b> 0.90%	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> East Side Access/William Goodrich		<b>% of Modifications (including This Request) to Original Amount:</b> 2.38%	

The work under this contract includes the design, procurement and installation of communication, fire detection, tunnel ventilation, facility power, signal power, tunnel lighting and SCADA systems for the East Side Access (ESA) project. In accordance with Article VIII of the All-Agency General Contract Guidelines, MTACC seeks Board approval to modify the contract to add the requirement to furnish and install permanent cable trough covers for the ESA tunnel benches. This is a scope and budget transfer.

Permanent cable trough covers were originally included in CM005, CM006 and CQ032 Contracts. The covers protect the signal and communication cables that run within the cable troughs located in the ESA tunnel benches. They also serve as walkways for maintenance and operations personnel, as well as a means of emergency egress from the tunnel for passengers and operators. The original design specified that the covers were to be made of polymer concrete, however, a 2010 revision to the National Fire Protection Association (NFPA) Code rendered the specified product non-compliant.

The CQ032 Contractor advanced a design of an approvable trough cover, but fabrication and installation of the new design would delay the completion dates of the CQ032 Contract as well as the CM005 and CM006 Contracts. In addition it would have delayed the CM007 Contractor's access to the Grand Central Terminal caverns. To resolve these issues, MTACC deleted the requirement to furnish and install the permanent trough cover work from the CQ032, CM005 and CM006 contracts and is transferring the work to the CS179 Contractor who is mobilized and on-site. A credit totaling \$1,374,933 was received for removing the work from these three Contracts.

The internal estimate for this work was \$5,217,670, while the Contractor's Proposal was \$8,066,956. Negotiations were held and the parties agreed to a cost of \$4,900,000 which is considered fair and reasonable. The difference between the current cost and the credit is primarily attributable to the higher cost of the material for the new covers and the required hardware.

In connection with previous contracts awarded to Tutor Perini Corporation, they were found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility findings were approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in February 2017. No new SAI has been found relating to TPC and they were found to be responsible.

May 2017

**LIST OF RATIFICATIONS FOR BOARD APPROVAL**

**Procurements Requiring Majority Vote:**

**Schedule K. Ratification of Completed Procurement Actions (Involving Schedule E-J)**  
**(Staff Summaries required for items requiring Board Approval)**

3. **Parsons Brinckerhoff/STV/Parsons**                      \$ 1,819,778                      **Staff Summary Attached**  
**Transportation Group, Joint Venture**  
**Contract No. 98-0040-01R**  
**Modification No. 142**

In accordance with Article XI of the MTA All-Agency Service Contract Procurement Guidelines, MTACC request that the Board ratify a modification to the Contract to increase the Guaranteed Maximum Cost by \$1,819,778 in order to revise the final design of the Mid-Day Storage Yard (MDSY).

4. **Harold Structures Joint Venture**                      \$ 1,318,450                      **Staff Summary Attached**  
**Contract No. CH057A**  
**Modification No. 30**

In accordance with Article XI of the MTA All-Agency Service Contract Procurement Guidelines, MTACC request that the Board ratify a modification to remove obstructions interfering with the work and to revise the required support of excavation and excavation methodologies to protect existing structures.

**Item Number: 3**

<b>Vendor Name (&amp; Location)</b> Parsons Brinckerhoff/STV/Parsons Transportation Group, JV (NY, NY)	
<b>Description</b> East Side Access General Engineering Consultant Services	
<b>Contract Term (including Options, if any)</b> December 2017	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> East Side Access/William Goodrich	

Contract Number	AWO/Modification #
98-0040-01R	142
<b>Original Amount:</b>	\$ 140,000,000
<b>Prior Modifications:</b>	\$ 339,061,416
<b>Prior Budgetary Increases:</b>	\$ -0-
<b>Current Amount:</b>	\$ 479,061,416
<b>This Request</b>	\$ 1,819,778
<b>% of This Request to Current Amount:</b>	0.38%
<b>% of Modifications (including This Request) to Original Amount:</b>	243%

**Discussion:**

This Contract is for engineering, design and construction phase services for the LIRR East Side Access (ESA) project. In accordance with Article XI of the MTA All-Agency Service Contract Procurement Guidelines, MTACC requests that the Board ratify a modification to the Contract to increase the Guaranteed Maximum Cost by \$1,819,778 in order to revise the final design of the Mid-Day Storage Yard (MDSY).

This Modification will revise the design documents for Contracts CQ033 - Mid Day Storage Yard and VQ033 - Mid Day Storage Yard Signal Central Instrument Location and Supervisory Control System, and for force account package FQL33A. These design documents are being revised to (i) incorporate changes in track alignments within the Mid Day Storage Yard (MDSY), (ii) add redundant processors in MDSY Central Instrument Locations (CILs); and (iii) implement a construction cost savings measure.

The track alignment changes will eliminate the need to use certain special track-work components to allow for the use of standard spare parts and to facilitate future maintenance. The addition of redundant processors will provide increased reliability in the event of a signal processor failure. The last item is the elimination of two switch cross-overs which were identified during LIRR review of the CQ033 Final Design, and during a joint LIRR and MTACC cost savings initiative.

The Consultant submitted a cost proposal of \$2,307,608 for this modification while the MTACC estimate was \$ 1,786,456. Negotiations were held and the parties agreed to a cost of \$1,819,778, which is considered fair and reasonable.

In order to include as many of these revisions as possible in the CQ033 Contract which was awarded in April 2017, the President approved a retroactive memorandum and on October 25, 2016, the Consultant was directed to proceed with a portion of the work up to a not-to-exceed amount of \$400,000. On December 30, 2016, the scope of work was revised to include the work for the redundant processors, and the not-to-exceed amount was increased to \$800,000. Authorization to proceed with the remainder of the work under this modification will be given upon Board ratification of this modification and to the extent required, a modification will be made to the CQ033 and VQ033 contracts to incorporate the remaining revisions.

In connection with previous contracts awarded to Parsons Brinckerhoff and STV, both members of the Consultant joint venture, those consultants were found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility findings were approved by the MTA Chairman/CEO in consultation with the MTA General Counsel (with regard to Parsons Brinckerhoff in January 2007 and with regard to STV in May 2008). No new SAI has been found relating to these Consultants and they have both been found to be responsible.

**Item Number 4**

<b>Vendor Name (&amp; Location)</b> Harold Structures Joint Venture (Secaucus, NJ)	<b>Contract Number</b> CH057A	<b>AWO/Modification #</b> 30
<b>Description</b> Harold Structures Part 3A for the ESA Project	<b>Original Amount:</b> \$ 104,300,000	
<b>Contract Term (including Options, if any)</b> 26 Months	<b>Prior Modifications:</b> \$ 13,487,786	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Prior Budgetary Increases:</b> \$ -0-	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Current Amount:</b> \$ 117,787,786	
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	<b>This Request</b> \$ 1,318,450	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b> 1%	
<b>Requesting Dept./Div. &amp; Dept./Div. Head Name:</b> East Side Access/William Goodrich, P.E.	<b>% of Modifications (including This Request) to Original Amount:</b> 14%	

**Discussion:**

This Contract is for the construction of a jacked shield tunnel, approach structures, pump station, direct fixation track and electrical systems for the Westbound Bypass Structure to be located along the mainline tracks at F Interlocking and Harold Interlocking. Contract work also includes the installation of catenary and signal bridges along the Westbound Bypass alignment. In accordance with Article IX of the All-Agency Procurement Guidelines, MTACC requests that the Board ratify a modification to remove obstructions interfering with the work and to revise the required support of excavation and excavation methodologies to protect existing structures.

A portion of the Westbound Bypass East Approach and an adjacent storm sewer cannot be constructed as designed because of existing utilities and structures not shown on the Contract Drawings that are interfering with the required excavation. The obstructions include a substation rack and its foundation, an existing retaining wall, three wooden poles carrying active fiber optic lines, and an existing utility bridge with active utilities. These obstructions were originally planned to be decommissioned and then removed under previous contracts but were not decommissioned in time and so the work was removed from those prior contracts. They must now be removed as part of this Contract in order to progress the work. In addition, this modification adds a revised support of excavation for the Westbound Bypass East Approach structure and for the installation of the storm sewer and more cautious excavating methodologies, including hand excavation, in order to ensure that Tunnel D is protected during this excavation. This protection was not included in the original design.

The Contractor submitted a cost proposal of \$1,595,024 for this work while the MTACC's project estimate was \$1,200,937. Negotiations were held, and the parties agreed to a cost of \$1,318,450 for the direct cost which is considered fair and reasonable. To the extent that this modification is the result of design errors and omission, MTACC intends to seek compensation for any resulting damages from the designer. In addition, this modification includes a 242 calendar extension to substantial completion, from October 30, 2017 to June 29, 2018, as a result of the issues addressed herein. The issue as to whether this delay is compensable to the contractor has been reserved pending an evaluation of concurrent Contractor delays.

In order to not delay this work, on January 25, 2017, the President approved a retroactive memorandum authorizing the removal of the obstructions to proceed up to the not-to-exceed amount of \$516,000. In addition, on April 18, 2017, the President approved a retroactive memorandum authorizing the support of excavation work to proceed up to the not-to-exceed amount of \$317,426. Authorization to proceed with the remainder of the Work under this modification will be given upon Board ratification of this modification.

In connection with previous contracts awarded to the joint venture partners who form GCT Constructors Joint Venture, both John P. Picone Inc. ("JPP") and Schiavone Construction Company, LLC ("Schiavone") were found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility findings were approved by the MTA Chairman/CEO in consultation with the MTA General Counsel in December 2014. No new SAI has been found relating to JPP or Schiavone and they have both been found to be responsible.



# Bridges and Tunnels

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## Procurements May 2017



# Staff Summary

<b>Subject:</b>	Request for Authorization to Award Various Procurements
<b>Department:</b>	Procurement
<b>Department Head Name</b>	M. Margaret Terry
<b>Department Head Signature</b>	<i>Julia R. Christ For NMT</i>
<b>Project Manager Name</b>	Various

<b>Date</b>	05/09/2017
<b>Vendor Name</b>	
<b>Contract Number</b>	
<b>Contract Manager Name</b>	
<b>Table of Contents Ref #</b>	

Board Action					
Order	To	Date	Approval	Info	Other
1	President	05/09/17	<i>[Signature]</i>		
2	MTA B&T Committee	05/22/17			
3	MTA Board	05/24/17			

Internal Approvals			
Order	Approval	Order	Approval
	President		VP Operations
	Executive Vice President		VP & Chief Engineer
	SVP & General Counsel		VP & Chief Procurement Officer <i>B/S</i>
	VP & Chief Financial Officer <i>[Signature]</i>		

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval
	Chief Financial Officer		Chief Technology Officer		Chief Health & Safety Officer		Chief EEO Officer
	Chief Security Officer		Chief Maintenance Officer		MTA Office of Civil Rights		

## PURPOSE:

To obtain approval of the Board to award various contracts and purchase orders, and to inform the MTA B&T Committee of these procurement actions.

## DISCUSSION:

MTA B&T proposes to award Non-Competitive procurements in the following categories: None

MTA B&T proposes to award Competitive procurements in the following categories:

### Schedules Requiring Majority Vote:

	# of Actions	\$ Amount
Schedule F: Personal Service Contracts	1	\$ 8.398M
Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts	2	\$ 2.732M
Schedule I: Modifications to Purchase and Public Works Contracts	4	\$15.334M

<b>SUBTOTAL</b>	<b>7</b>	<b>\$ 26.464M</b>
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MTA B&T presents the following procurement actions for Ratification: None

<b>TOTAL</b>	<b>7</b>	<b>\$ 26.464M</b>
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## BUDGET IMPACT:

The purchases/contracts will result in obligating MTA B&T and Capital funds in the amount listed. Funds are available in the current MTA B&T operating/capital budgets for this purpose.

## RECOMMENDATION:

That the purchases/contracts be approved as proposed. (Items are included in the resolution of approval at the beginning of the Procurement Section.)

The legal name of MTA Bridges and Tunnels is Triborough Bridge and Tunnel Authority.

**MTA BRIDGES & TUNNELS**  
**TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY**

**WHEREAS**, in accordance with §559 and §2879 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive purchase and public work contracts, and the solicitation and award of request for proposals in regard to purchase and public work contracts; and

**WHEREAS**, in accordance with §2879 of the Public Authorities Law and the All Agency Procurement Guidelines, the Board authorizes the award of certain non-competitive miscellaneous procurement contracts, and certain changes orders to procurement, public work, and miscellaneous procurement contracts; and

**WHEREAS**, in accordance with § 2879 of the Public Authorities Law and the All Agency Guidelines for Procurement of Services, the Board authorizes the award of certain service contracts, and certain change orders to service contracts; and

**NOW**, the Board resolves as follows:

1. As to each purchase and public work contract set forth in annexed Schedule A, the Board declares competitive bidding to be impractical or inappropriate for the reasons specified therein and authorizes the execution of each such contract.
2. As to each request for proposals (for purchase and public work contracts) set forth in Schedule B for which authorization to solicit proposals is requested, for the reasons specified therein, the Board declares competitive bidding to be impractical or inappropriate, declares it is in the public interest to solicit competitive request for proposals and authorizes the solicitation of such proposals.
3. As to each request for proposals (for purchase and public work contracts) set forth in Schedule C for which a recommendation is made to award the contract, the Board authorizes the execution of said contract.
4. The Board ratifies each action set forth in Schedule D for which ratification is requested.
5. The Board authorizes the execution of each of the following for which Board authorization is required: i) the miscellaneous procurement contracts set forth in Schedule E; ii) the personal service contracts set forth in Schedule F; iii) the miscellaneous service contracts set forth in Schedule G; iv) the modifications to personal/miscellaneous service contracts set forth in Schedule H; the contract modifications to purchase and public work contracts set forth in Schedule I; and vi) the modifications to miscellaneous procurement contracts set forth in Schedule J.
6. The Board ratifies each action taken set forth in Schedule K for which ratification is requested.
7. The Board authorizes the budget adjustments to estimated contracts set forth in Schedule L.

**LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**  
**MAY 2017**

**MTA BRIDGES & TUNNELS**

**Procurements Requiring Majority Vote:**

**F: Personal Service Contracts**

(Staff Summaries required for items greater than: \$100K Sole Source; \$250K Other Non-Competitive; \$1M Competitive)

- |   |                        |                                      |
|---|------------------------|--------------------------------------|
| 1. <b>Henningson, Durham &amp;<br/>Richardson, P.C.</b> | <b>\$ 8,397,955.51</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. PSC-16-3003</b>                         |                        |                                      |

3yr, 4mo. Contract- Competitive RFP

B&T is seeking Board approval under the All Agency Service Contract Procurement Guidelines to award a competitively solicited personal service contract, Study for Project TN-55, Replacement of the Bronx and Queens Approach Viaducts and Structural Rehabilitation at the Throgs Neck Bridge to Henningson, Durham & Richardson, P.C. (HDR).

**H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts Awarded as Contracts for Services**

(Approvals/Staff Summaries required for substantial change orders and change orders that cause original contract to equal or exceed monetary or durational threshold required for Board approval)

- |                                 |                        |                                      |
|---------------------------------|------------------------|--------------------------------------|
| 1. <b>LiRo Engineers, Inc.</b>  | <b>\$ 1,534,519.00</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. PSC-15-2967</b> |                        |                                      |

3yr, 3mo. Contract- Competitive RFP

B&T is seeking Board approval under the All Agency Service Contract Procurement Guidelines to amend Contract PSC-15-2967, Construction Administration and Inspection Services for Project TN-60, Dehumidification System for the Main Cable Splays and Elimination of Water Infiltration into the Anchorages at the Throgs Neck Bridge (TNB) for additional services and funding to support the implementation of Open Road Tolling (ORT) and other priority initiatives being performed under Project TN-60 at the TNB.

- |                                   |                        |                                      |
|-----------------------------------|------------------------|--------------------------------------|
| 2. <b>Greenman-Pedersen, Inc.</b> | <b>\$ 1,197,480.44</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. PSC-15-2966</b>   |                        |                                      |

3yr, 8mo. Contract- Competitive RFP

B&T is seeking Board approval under the All Agency Service Contract Procurement Guidelines to amend Contract PSC-15-2966 in order to provide additional construction administration and inspection services for Projects BW-14/BW-84C, Various Structural Repairs and Removal of Tuned Mass Damper and Inspection of Select Main Cable Panels at the Bronx-Whitestone Bridge (BWB) in connection with the implementation of Open Road Tolling (ORT) and other priority initiatives being performed under Projects BW-14/BW-84C at the BWB.

**LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL**  
**MAY 2017**

**I: Modifications to Purchase and Public Works Contracts**

(Approvals/Staff Summaries required for individual change orders greater than \$750K. Approvals without Staff Summaries required for change orders greater than 15% of previous approved amount which are also at least \$250K)

- |  |                        |                                      |
|--|------------------------|--------------------------------------|
| <b>1. Tully Construction Co., Inc.</b> | <b>\$ 8,277,806.00</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. BB-28S</b>             |                        |                                      |

3yr, 4mo. Contract- Competitive RFP

B&T is seeking Board Approval under the All Agency General Contract Procurement Guidelines to amend a public work contract, Contract BB-28S, in order to: fabricate, furnish and install architectural enhancements that include tower structures to transform the plazas and coordinate with the new Open Road Tolling (ORT) gantries, related equipment and reconfigured roadway; and fabricate light beacon fixtures for remaining B&T facilities.

- |                                    |                        |                                      |
|------------------------------------|------------------------|--------------------------------------|
| <b>2. Kiska Construction, Inc.</b> | <b>\$ 3,500,000.00</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. MP-03/MP-16</b>    |                        |                                      |

3yr. Contract- Competitive Bid

B&T is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend public work Contract MP-03/MP-16 for long lead time fabrication and delivery of tower structures to transform the plazas' appearances and coordinate with the new Open Road Tolling (ORT) gantries, related equipment and reconfigured roadway for the Marine Parkway-Gil Hodges Memorial Bridge (MPB) and Cross Bay Veterans Memorial Bridge (CBB).

- |                                    |                        |                                      |
|------------------------------------|------------------------|--------------------------------------|
| <b>3. Judlau Contracting, Inc.</b> | <b>\$ 3,039,643.33</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. QM-40S</b>         |                        |                                      |

3yr., 3mo. Contract- Competitive RFP

B&T is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend public work Contract QM-40S for: (i) various civil, structural, electrical, architectural and temporary signage modifications to Project QM-40S, Sandy Restoration and Mitigation; (ii) additional ORT related plaza demolition and civil construction work; (iii) perform initial prototype architectural and lighting enhancements as well as additional plaza removals for the Queens-Midtown Tunnel.

- |                                    |                      |                                      |
|------------------------------------|----------------------|--------------------------------------|
| <b>4. 2 Saab Construction Inc.</b> | <b>\$ 516,058.63</b> | <b><u>Staff Summary Attached</u></b> |
| <b>Contract No. QMM-346</b>        |                      |                                      |

1yr. Contract- Competitive Bid

B&T is seeking the Board's approval under the All-Agency General Contract Procurement Guidelines to modify Contract No. QMM-346 for additional work associated with the restoration and cleaning of the Manhattan Exit Plaza Walls of the Queens Midtown Tunnel.

# Staff Summary

Page 1 of 2

<b>Item Number 1 (Final)</b>						<b>SUMMARY INFORMATION</b>																															
<b>Dept &amp; Dept Head Name:</b> Engineering & Construction Department, Joe Keane, P.E. <div style="text-align: center; font-size: 1.2em; color: blue;">Joe Keane</div>						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"> <b>Vendor Name</b>   Henningson, Durham &amp; Richardson, P.C. </td> <td style="width: 30%; padding: 5px;"> <b>Contract Number</b>   PSC-16-3003 </td> </tr> </table>		<b>Vendor Name</b>  Henningson, Durham & Richardson, P.C.	<b>Contract Number</b>  PSC-16-3003																												
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<b>Division &amp; Division Head Name:</b> Engineering & Construction Department, Aris Stathopoulos, P.E.						<b>Description:</b> Study for Project TN-55, Replacement of the Bronx and Queens Approach Viaducts and Structural Rehabilitation of the Throgs Neck Bridge																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6">Board Reviews</th></tr> <tr> <th>Order</th><th>To</th><th>Date</th><th>Approval</th><th>Info</th><th>Other</th></tr> <tr> <td>1</td><td>President</td><td>5/2/17</td><td style="text-align: center;">(Signature)</td><td></td><td></td></tr> <tr> <td>2</td><td>MTA B&amp;T Committee</td><td>5/22/17</td><td style="text-align: center;">(Signature)</td><td></td><td></td></tr> <tr> <td>3</td><td>MTA Board</td><td>5/24/17</td><td></td><td></td><td></td></tr> </table>						Board Reviews						Order	To	Date	Approval	Info	Other	1	President	5/2/17	(Signature)			2	MTA B&T Committee	5/22/17	(Signature)			3	MTA Board	5/24/17				<b>Total Amount</b> \$8,397,955.51	
Board Reviews																																					
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Internal Approvals																																					
Order	Approval	Order	Approval																																		
1	Chief Financial Officer (Signature)	4	Executive Vice President (Signature)																																		
2	General Counsel mmt	5	President (Signature)																																		
3	Chief Procurement Officer																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; padding: 5px;"> <b>Option(s) included in Total Amount?</b> </td> <td style="width: 20%; padding: 5px;"> <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No </td> </tr> <tr> <td style="padding: 5px;"> <b>Renewal?</b> </td> <td style="padding: 5px;"> <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No </td> </tr> </table>						<b>Option(s) included in Total Amount?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Renewal?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive																											
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<b>Renewal?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																																				
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:						<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:																															

## Narrative

### I. PURPOSE/RECOMMENDATION

B&T is seeking Board approval under the All Agency Service Contract Procurement Guidelines to award a competitively solicited personal service contract, Study for Project TN-55, Replacement of the Bronx and Queens Approach Viaducts and Structural Rehabilitation to Henningson, Durham & Richardson, P.C. (HDR) in the negotiated amount of \$8,397,955.51 for a duration of three (3) years, four (4) months.

### II. DISCUSSION

B&T requires the services of an engineering consultant firm to provide professional engineering services and expertise to assist B&T in developing an overall strategy to determine feasible traffic and structural improvements at the Throgs Neck Bridge (TNB) that will be implemented as part of the future reconstruction of the TNB approach. The Study will produce a Master Plan with conceptual designs that address: the reconstruction of the Bronx and Queens Approach Viaducts and existing Cross Island Parkway (CIP) Ramps; determine the potential capacity improvements and other associated modifications to the existing TNB/CIP Ramps to improve traffic safety and flow. The study will take into consideration the relocation/replacement of utilities and substations and potential relocation of the Lower Garage. The selected Consultant shall produce design briefs with recommended alternatives for each item in the scope of services.

The service requirements were publicly advertised. Five (5) firms submitted qualification information for review and evaluation by the selection committee and all five firms were chosen to receive the Request For Proposal (RFP). The firms are: AECOM USA, Inc. (\$7,290,204.48); Ammann & Whitney (\$11,398,842.00); HDR (\$8,796,678.00); Parsons

## Staff Summary

Transportation Group of New York (\$8,244,954.27); and WSP|Parsons Brinckerhoff (\$6,992,575.57). The proposals were evaluated against established criteria set forth in the RFP, including technical work proposed, depth of understanding of the Project, qualifications of the firm for specific personnel proposed and cost.

The selection committee unanimously recommended that negotiations be conducted with HDR. HDR demonstrated the most extensive expertise in bridge/viaduct design, traffic modeling and analysis and MPT, geotechnical, environmental, safety, project management and master planning experience required to perform this study as compared to the other proposers. HDR's team includes project leaders and technical experts with extensive experience with master planning, permitting and executing major bridge rehabilitations. HDR demonstrated experience with new viaduct design and construction over water as well as their successful efforts in the required areas of permitting and regulatory coordination.

The other proposers did not fully demonstrate all the technical aspects required for this study that include: master planning experience; geotechnical experience and bridge work over active waterways, as compared to HDR. The unsuccessful proposers provided fewer potential structural alternatives than HDR. Furthermore, two proposers' man-hours were significantly lower (24% and 40%) than the estimated man-hours, which indicated that they may not have fully accounted for the scope and level of effort required for the study.

Finally, through negotiation HDR's cost proposal is in excess of \$900,000 below the Engineer's Estimate. This demonstrates a strong understanding of the effort and efficiency required to perform this study. Based on the foregoing, HDR offered the most comprehensive, well organized technical approach at a reasonable cost.

HDR submitted a cost proposal in the amount of \$8,796,678.00. The Engineer's estimate is \$9,326,495.93. Negotiations resulted in B&T and HDR agreeing to the amount totaling \$8,397,955.51, which is approximately 10% lower than the estimate. The negotiated amount totaling \$8,397,955.51 is considered most advantageous to B&T and is fair and reasonable. HDR is considered a responsible consultant.

### **III. D/M/WBE INFORMATION**

The MTA Department of Diversity and Civil Rights has established goals of 15% MBE and 15% WBE for this contract. HDR has achieved their M/WBE goals on previous MTA contracts.

### **IV. IMPACT ON FUNDING**

Funding is available in the 2015-2019 Capital Program under Study for Project TN-55, Replacement of the Bronx and Queens Approach Viaducts and Structural Rehabilitation of the Throgs Neck Bridge as follows: Task D03695 \$5,397,955.51; Task D03697 \$3,000,000.00.

### **V. ALTERNATIVES**

There are no recommended alternatives. B&T does not possess the resources required to perform these services.

## Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts

### Item Number 2 (Final)

<b>Vendor Name (&amp; Location)</b> LiRo Engineers, Inc. (Syosset, NY)		<b>Contract Number</b> PSC-15-2967	<b>AWO/Modification #</b>
<b>Description</b> Construction Administration and Inspection Services for Project TN-60, Dehumidification System for the Main Cable Splays and Elimination of Water Infiltration into the Anchorages at the Throgs Neck Bridge (TNB)			
<b>Contract Term (including Options, if any)</b> December 21, 2015 - March 20, 2019			
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive		<b>Original Amount:</b> \$4,552,375.00	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:		<b>Prior Modifications:</b> None	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>Prior Budgetary Increases:</b>	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.		<b>Current Amount:</b> \$4,552,375.00	
		<b>This Request:</b> \$1,534,519.00	
		<b>% of This Request to Current Amount:</b> 33.7%	
		<b>% of Modifications (including This Request) to Original Amount:</b> 33.7%	

### Discussion:

B&T is seeking Board approval under the All Agency Service Contract Procurement Guidelines to amend Contract PSC-15-2967, Construction Administration and Inspection Services for Project TN-60, Dehumidification System for the Main Cable Splays and Elimination of Water Infiltration into the Anchorages at the Throgs Neck Bridge with LiRo Engineers, Inc. (LiRo), for additional services and funding to support the implementation of Open Road Tolling (ORT) and other priority initiatives are to be performed under Project TN-60 at the TNB in the negotiated amount of \$1,534,519.

In December 2015 subsequent to Board approval the subject contract was awarded to LiRo in the amount of \$4,552,375 for a duration of three (3) years, three (3) months. The scope of services required LiRo to provide construction administration and inspection services necessary to assist B&T's Engineering and Construction Department in the oversight under Project TN-60, Dehumidification System for the Main Cable Splays and Elimination of Water Infiltration into the Anchorages at the TNB. The required services include: i) pre-construction; (ii) construction administration and inspection and (iii) project closeout.

As part of the New York Crossings initiative B&T is embarking on full implementation of cashless all-electronic ORT at B&T facilities. The implementation requires necessary civil, structural and electrical infrastructure construction work to install ORT gantries prior to the installation of E-ZPass tag readers, cameras, system software and integration that were performed by others.

B&T determined that the most reliable means to accomplish the expedited implementation of these initiatives at the TNB was to amend the ongoing Project TN-60 contract whereby efficiencies could be realized to include mobilization cost savings, early commitment for long lead items, enhanced coordination and overall reduction of project schedule. At this time, it is necessary that B&T amend the Contract to include the scope for ORT gantry and toll equipment building installations and toll booth demolition under Contract PSC-15-2967 in order to provide the additional funding for LiRo's ongoing construction administration and inspection services. Additional funding for subsequent phases of work may be included in future requests to the Board.

LiRo submitted a proposal in the amount of \$1,827,900. The Engineer's estimate is \$1,598,008. Negotiations resulted in B&T and LiRo agreeing to an amount of \$1,534,519. The negotiated amount is 3.9% below the estimate and is considered fair and reasonable. This increase to the Contract will be funded via 2015-2019 Capital Program under Project D703/TN63/D04057.

## Schedule H: Modifications to Personal Service Contracts and Miscellaneous Service Contracts

Item Number: 3(Final)

<b>Vendor Name (&amp; Location)</b> Greenman-Pedersen, Inc. (Babylon, NY)		<b>Contract Number</b> PSC-15-2966	<b>AWO/Modification#</b>
<b>Description</b> Construction Administration and Inspection Services for Projects BW-14/BW-84C, Various Structural Repairs and Removal of Tuned Mass Damper and Inspection of Select Main Cable Panels at the Bronx-Whitestone Bridge			
<b>Contract Term (including Options, if any)</b> October 6, 2015 – June 5, 2019			
<b>Option(s) included in Total Amount</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive		<b>Original Amount:</b> \$6,410,168.14	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:		<b>Prior Modifications:</b> \$0.00	
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>Prior Budgetary Increases:</b> \$0.00	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.		<b>Current Amount:</b> \$6,410,168.14	
		<b>This Request:</b> \$1,197,480.44	
		<b>% of This Request to Current Amount:</b> 18.7%	
		<b>% of Modifications (including This Request) to Original Amount:</b> 18.7%	

### Discussion:

B&T is seeking Board approval under the All Agency Guidelines for Procurement of Services to amend this Contract with Greenman-Pedersen, Inc. (GPI) to provide additional construction administration and inspection services for Projects BW-14/BW-84C, Various Structural Repairs and Removal of Tuned Mass Damper and Inspection of Select Main Cable Panels at the Bronx-Whitestone Bridge (BWB) in connection with the accelerated implementation of Open Road Tolling (ORT) at the BWB in the amount of \$1,197,480.44.

In October 2015 pursuant to Board approval the subject contract was awarded to GPI in the agreed amount of \$6,410,168.14 for a duration of three (3) years, eight (8) months to perform complete construction administration and inspection services (CA & I) for Projects BW-14/BW-84C. CA & I tasks include: (i) pre-construction services; (ii) construction inspection and administration with confirmatory testing requirements and (iii) post construction and close-out services. The construction Scope of Work includes: structural steel and concrete repairs; main cable opening, inspection and testing; suspender rope inspection, testing and replacements; removal of the tuned mass damper and appurtenances; electrical transformer installation; replacement of roadway lighting and anchorage interior lighting with LED lighting; painting of bridge tower interiors, including lead abatement and abrasive blast surface preparation; painting of the main cable, suspender ropes and other locations; abatement of asbestos and lead containing materials and maintenance and protection of traffic.

As part of the New York Crossings initiative B&T is embarking on full implementation of cashless all-electronic ORT at B&T facilities. The implementation requires necessary civil, structural and electrical infrastructure construction work to install ORT gantries prior to the installation of E-ZPass tag readers, cameras, system software and integration that were performed by others.

B&T determined that the most reliable means to accomplish the expedited implementation of this initiative at the BWB was to amend Contract BW-14/BW-84C where efficiencies are being realized to include mobilization cost savings, early commitment for long lead items, enhanced coordination and overall reduction of project schedule. At this time, it is necessary that B&T amend the Contract to include the scope for ORT gantry and toll equipment building installations and toll booth demolition under Contract PSC-15-2966 in order to provide the additional funding for GPI's ongoing construction administration and inspection services.

GPI submitted a proposal totaling \$1,197,480.44, which is 1.5% below the Engineer's estimate of \$1,215,824.00. During negotiation the scope and proposal were discussed and B&T accepted GPI's proposal in the amount of \$1,197,480.44, which is fair and reasonable. Funding in the amount of \$1,197,480.44 is available in the 2015-2019 Capital Program under Project D703/BW63/D04044.

In connection with a previous contract awarded to GPI, the firm was found to be responsible notwithstanding significant adverse information pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with B&T's General Counsel on November 20, 2014. No new SAI has been found relating to GPI and it has been found to be responsible.

## Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 4 (Final)

<b>Vendor Name (&amp; Location)</b> Tully Construction Co., Inc., Flushing, New York	<b>Contract Number</b> BB-28S	<b>AWO/Modification #</b>
<b>Description</b> Sandy Restoration and Project BB-28/BB-54, Rehabilitation of the Tunnel and Brooklyn Plaza at the Hugh L. Carey Tunnel	<b>Original Amount:</b>	\$282,454,276.12
<b>Contract Term (including Options, if any)</b> December 12, 2014 – March 31, 2018	<b>Prior Modifications:</b>	\$38,196,048.91
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Prior Budgetary Increases:</b>	\$0.00
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Current Amount:</b>	\$320,650,325.03
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	<b>This Request:</b>	\$8,277,806.00
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b>	2.6%
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.	<b>% of Modifications (including This Request) to Original Amount:</b>	16.5%

### Discussion:

B&T is seeking Board Approval under the All Agency General Contract Procurement Guidelines to amend a public work contract, Contract BB-28S, with Tully Construction Co., Inc. (Tully) to: fabricate, furnish and install tower structures as architectural enhancements to transform the plazas and coordinate with the new Open Road Tolling (ORT) gantries, related equipment and reconfigured roadway; and fabricate light beacon fixtures for remaining B&T facilities in the negotiated amount totaling \$8,277,806.00, which includes the ratification of funding in an amount totaling \$3,164,455.

The Contract was awarded to Tully in December 2014 in the amount of \$282,454,276.12 subsequent to a competitive RFP process and Board approval. The Scope of Work required to restore the Hugh L. Carey Tunnel (HCT) to a pre-storm state of good repair includes system replacements as follows: tunnel pumping; electrical; lighting; communications, monitoring and control systems; tunnel structural and civil repairs; tunnel wall tile, ceiling panels, polymer panels, curbs and gutters; and tunnel ventilation building rehabilitation as well as asbestos and incidental lead abatement and maintenance and protection of traffic. Also, Capital Program Projects BB-28, Ph. II and BB-54 scopes include fire line replacements and rehabilitation of the Brooklyn Plaza. Amendments to date total \$38,196,048.91, inclusive of ORT amendments totaling \$6,201,544.14. B&T is accelerating the substantial completion of the Project, which is now scheduled for March 31, 2018.

As part of the New York Crossings initiative, B&T is embarking on full implementation of cashless all-electronic ORT at B&T facilities. The implementation required necessary civil, structural and electrical infrastructure construction work to install ORT gantries prior to the installation of E-ZPass tag readers, cameras, system software and integration that were performed by others. Additionally, architectural enhancements that include: foundations; tower structures; mesh; beacon light fixtures and LED lighting upgrades, which are complementary and integral to the plaza modernization and the ORT gantry system have commenced in order to complete the transformation of the B&T tunnel plazas. Similar improvements are being implemented at all other B&T facilities in order to modernize the toll plazas in concert with the delivery of ORT. The remaining work for related ORT and other toll plaza improvement initiatives are being finalized and shall be presented to the Board for approval in subsequent procurement actions.

The architectural work includes the fabrication and installation of foundations and tower structures (inclusive of light beacon fixtures) to modernize the plazas at the HCT. Tully submitted proposals totaling \$6,314,843.28. The estimates total \$3,948,376. Negotiations resulted in B&T and Tully agreeing to an amount totaling \$5,113,351 (inclusive of \$642,833 for materials previously ratified by the Board). The negotiated amount is considered fair and reasonable. The estimates did not account for work being performed during nights and continuously on weekends at premium time, which increased the pricing for the installation and construction work. Furthermore, limited tunnel tube closures and access during the week and on weekends impact the Contractor's ability to work efficiently.

Fabricated beacon light fixtures at all B&T facilities are to provide a uniform appearance; therefore, B&T is purchasing the fixtures for all B&T facilities under Contract BB-28S. This decision insures uniformity of materials, welding and fabrication techniques and consistent placement for lenses and LED lights. Tully submitted a proposal in the amount of \$3,329,557. The estimate is \$3,235,677. Negotiations resulted in the Authority and Tully agreeing to an amount totaling \$3,164,455, which is 2.2% below the estimate and is fair and reasonable. B&T authorized Tully to commence the fabrication and B&T is seeking the Board's ratification for this work.

The negotiated total amount of the amendment is \$8,277,806 and is considered fair and reasonable.

Funding for the proposed towers and architectural enhancements at the HCT in the amount of \$5,113,351 is available in the 2015-2019 Capital Program under Project D703HC63 Task D04012 (Gateway Towers). Funding for facility wide beacon fabrication totaling \$3,164,455 is as follows: D703QM63, Task D04090 (\$630,351.85); D703RK63, Task D04091 (\$630,351.85); D703CB63, Task D04095 (\$317,291.89); D703HH63, Task D04088 (\$317,291.89); D703MP63, Task D04096 (\$317,291.88); D703VN63, Task D04092 (\$317,291.88); D703TN63, Task D04094 (\$317,291.88); and D703BW63, Task D04062 (\$317,291.88). This action modifies B&T's 2015-2019 Capital Program to reflect the new D703HH63 project. The strategy for funding these initiatives will be through a combination of efficiencies generated from other projects including eliminating planned toll plaza work that did not assume open road tolling as the means of toll collection. No critical state of good repair work is affected as a result of these programmatic modifications.

## Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 5 (Final)

<b>Vendor Name (&amp; Location)</b> Kiska Construction, Inc., Long Island City, New York		<b>Contract Number</b> MP-03/MP-16	<b>AWO/Modification #</b>
<b>Description</b> Electrical and Mechanical Rehabilitation, Friction Mitigation, Miscellaneous Steel Repairs, Painting and Fire Standpipe Installation at the Marine Parkway-Gil Hodges Memorial Bridge		<b>Original Amount:</b> \$98,500,000.00	
<b>Contract Term (including Options, if any)</b> December 11, 2015 – December 10, 2018		<b>Prior Modifications:</b> \$15,468,199.74	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Prior Budgetary Increases:</b> \$0.00	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive		<b>Current Amount:</b> \$113,968,199.74	
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input type="checkbox"/> Other:		<b>This Request:</b> \$3,500,000 (MPB-\$1,750,000; CBB-\$1,750,000)	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>% of This Request to Current Amount:</b> 3.1%	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.		<b>% of Modifications (including This Request) to Original Amount:</b> 19.3%	

### Discussion:

B&T is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend public work Contract MP-03/MP-16 with Kiska Construction, Inc. (Kiska) for long lead time fabrication and delivery of tower structures to transform the plazas' appearances and coordinate with the new Open Road Tolling (ORT) gantries, related equipment and reconfigured roadway for the Marine Parkway-Gil Hodges Memorial Bridge (MPB) and Cross Bay Veterans Memorial Bridge (CBB) in the negotiated amount totaling \$3,500,000 (inclusive of \$1,000,000 authorization to commence fabrication for the long lead time items).

The Contract was awarded to Kiska in December 2015 in the amount of \$98,500,000 subsequent to competitive bidding with a duration of three (3) years. The Scope of Work requires the following: replacement of lift span motors and drives, PLCs, droop cables and barrier gates; other lift span electrical upgrades; mechanical replacements and upgrades for the machinery room; installation of new auxiliary counterweight ropes; installation of new fire line system and hydrants; architectural upgrades and repairs; various structural steel and grid deck repairs; furnish and install structural health monitoring system; rope socket enhancements; abatement of asbestos and lead containing materials; painting and maintenance and protection of traffic. Four amendments totaling \$15,468,199.74 have been issued, inclusive of \$14,295,000 for phased ORT, civil, structural, electrical and toll booth demolition work at the MPB and CBB.

As part of the New York Crossings initiative, B&T is embarking on full implementation of cashless all-electronic ORT at B&T facilities. The implementation required necessary civil, structural and electrical infrastructure construction work to install ORT gantries prior to the installation of E-ZPass tag readers, cameras, system software and integration that were performed by others. Additionally, architectural enhancements that include: foundations; tower structures; mesh; beacon light fixtures and LED lighting upgrades, which are complementary and integral to the plaza modernization and the ORT gantry system have commenced in order to complete the transformation of the B&T bridge plazas. Similar improvements are being implemented at all other B&T facilities in order to modernize the toll plazas in concert with the delivery of ORT. The remaining work for related ORT and other toll plaza improvement initiatives are being finalized and shall be presented to the Board for approval in subsequent procurement actions.

The fabrication and delivery of architectural tower structures to modernize the plazas at the MPB and CBB require the expedited placement of fabrication orders and deposits to ensure the timely delivery of materials in order to meet the installation schedules. Kiska submitted a proposal in the amount of \$4,625,861.35. The Engineer's estimate is \$3,378,723.09. Negotiations resulted in B&T and Kiska agreeing to an amount totaling \$3,500,000, which is 3.6% above the estimate and is fair and reasonable.

Funding for the proposed towers and architectural enhancements at the Rockaway Crossings in the amount of \$3,500,000 is available in the 2015-2019 Capital Program (Project D703/AW65). Funds are being reallocated in the 2015-2019 Capital Program to establish funding in Project D703/MP63/D04024 (\$1,750,000) and Project D703/CB63/D04027 (\$1,750,000). The strategy for funding these initiatives will be through a combination of efficiencies generated from other projects including eliminating planned toll plaza work that did not assume open road tolling as the means of toll collection. No critical state of good repair work is affected as a result of these programmatic modifications.

(rev. 3/16/07)

## Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 6 Final)

<b>Vendor Name (&amp; Location)</b> Judlau Contracting, Inc, College Point, New York		<b>Contract Number</b> QM-40S	<b>AWO/Modification #</b>
<b>Description</b> Sandy Restoration and Mitigation and Projects QM-40/QM-18, Rehabilitation of the Tunnel and Manhattan Exit Plaza at the Queens Midtown Tunnel		<b>Original Amount:</b> \$236,500,000.00	
<b>Contract Term (including Options, if any)</b> April 23, 2015 – July 9, 2018		<b>Prior Modifications:</b> \$36,473,053.40	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>Prior Budgetary Increases:</b> \$0.00	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive		<b>Current Amount:</b> \$ 272,973,053.40	
<b>Solicitation Type</b> <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:		<b>This Request:</b> \$3,039,643.33	
<b>Funding Source</b> <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:		<b>% of This Request to Current Amount:</b> 1.1%	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.		<b>% of Modifications (including This Request) to Original Amount:</b> 16.7%	

### Discussion:

B&T is seeking Board approval under the All Agency General Contract Procurement Guidelines to amend public work Contract QM-40S with Judlau Contracting, Inc. (Judlau) for: (i) various civil, structural, electrical, architectural and temporary signage modifications to Project QM-40S, Sandy Restoration and Mitigation; (ii) additional Open Road Tolling (ORT) related plaza demolition and civil construction work; (iii) perform initial prototype architectural and lighting enhancements as well as additional removals to commence the transformation of the plazas in the negotiated amount totaling \$3,039,643.33, which includes the ratification of funding in the amount totaling \$1,100,298.32.

The Contract was awarded to Judlau in April 2015 in the amount of \$236,500,000 (inclusive of incentives totaling \$6,460,000) subsequent to a competitive RFP process and Board approval. The Scope of Work required the contractor to restore the Queens Midtown Tunnel (QMT) to a pre-storm state of good repair including system replacements as follows: tunnel electrical; lighting; communications; monitoring and control systems; mid-river pump room; tunnel structural and civil repairs; tunnel wall tile; ceiling panels; polymer panels; catwalk, curbs and gutters; and tunnel ventilation building rehabilitation as well as asbestos and incidental lead abatement and maintenance and protection of traffic. Additionally Project QM-18 includes the rehabilitation of the Manhattan Exit Plaza. Amendments to date total \$36,473,053.40, inclusive of ORT amendments totaling \$10,954,000. B&T is accelerating the substantial completion of the Project, which is now scheduled for July 9, 2018.

As part of the New York Crossings initiative, B&T is embarking on full implementation of cashless all-electronic ORT at B&T facilities. The implementation required necessary civil, structural and electrical infrastructure construction work to install ORT gantries prior to the installation of E-ZPass tag readers, cameras, system software and integration that were performed by others. Additionally, architectural enhancements that include: foundations; tower structures; mesh; beacon light fixtures and LED lighting upgrades, which are complementary and integral to the plaza modernization and the ORT gantry system have commenced in order to complete the transformation of the B&T tunnel plazas. Similar improvements are being implemented at all other B&T facilities in order to modernize the toll plazas in concert with the delivery of ORT. The remaining work for related ORT and other toll plaza improvement initiatives are being finalized and shall be presented to the Board for approval in subsequent procurement actions.

For work referenced in item (i) of the first paragraph of this Staff Summary, Judlau submitted proposals for various civil, structural, electrical and temporary signage modifications to Project QM-40S, Sandy Restoration and Mitigation work for the following: additional construction signs requested by local community groups; replacement of concrete above the light trench that for reasons of safety required removal; installation of inner duct in asbestos containing transite ducts; upgrades to the E-box enclosures; replacement of security switch materials; electrical modifications to tunnel way finding lights and additional wall tile removals. Judlau submitted proposals totaling \$1,453,097.33. The Engineer's estimates total \$1,149,096.95. Negotiations resulted in B&T and Judlau agreeing to the negotiated amount totaling \$1,230,255, which is 7.1% above the Engineer's estimate and is fair and reasonable.

For items (ii) and (iii) of the same paragraph for initial architectural enhancements and removals that include: installation of prototype architectural mesh above the gantries; prototype lighting; removals of signage and structures; demolition of the Queens Emergency Garage and associated plaza wall restoration. Judlau submitted proposals totaling \$2,156,718.22. The Engineer's estimates total \$1,842,117.10. Negotiations resulted in B&T and Judlau agreeing to an amount totaling \$1,809,388.33 which is 1.8% below the Engineer's estimate and is fair and reasonable. In order to meet the expedited schedule for this work, B&T authorized Judlau to commence the work and B&T is seeking ratification in the amount of \$1,100,298.32.

The funding for this work in the total amount of \$3,039,643.33 is available as follows; in the 2010-2014 Capital Program, way finding lighting and MPT signage, Project D601QM40 (\$99,650.20); in the 2015-2019 Capital Program, Queens Emergency Garage Demo and plaza wall restoration and Architectural enhancements, Project D703QM63, Task(s) D03914 (\$217,500.00), D04087 (\$1,344,090.01) and D04011 (\$465,298.32) for the total amount of \$2,026,888.33; and the Sandy Capital Program, Project ED010240, Task E02057 (\$562,954.60) for concrete replacement, Project ED010240 Task E04339 (\$217,258) for tile removal and signs, Project ED040281, Task E02189 (\$117,339.60) for E-box modification and signs, Project ED020203, Task E02121 (\$690.90) for signs, and Project ED050203, Task E02308 (\$14,861.70) for signs for the total amount of \$913,104.80. The strategy for funding these initiatives will be through a combination of efficiencies generated from other projects including eliminating planned toll plaza work that did not assume open road tolling as the means of toll collection. No critical state of good repair work is affected as a result of these programmatic modifications.

In connection with a previous contract awarded to the Judlau, Judlau was found to be responsible notwithstanding significant adverse information (SAI) pursuant to the All-Agency Responsibility Guidelines and such responsibility finding was approved by the MTA Chairman/CEO in consultation with the MTA General Counsel. In addition, as a result of the review of Judlau's responsibility since the prior contract award, new SAI was identified and Judlau was found to be responsible notwithstanding such new SAI and such responsibility finding was subsequently approved by the TBTA President in consultation with the TBTA General Counsel on February 21, 2017.

## Schedule I: Modifications to Purchase and Public Works Contracts

Item Number: 7 (Final)

<b>Vendor Name (&amp; Location)</b> 2 Saab Construction Inc., Brooklyn, NY	<b>Contract Number</b> QMM-346	<b>AWO/Modification #</b>
<b>Contract Title</b> Queens Plaza Wall Restoration and Emergency Garage Envelope Repair at the Queens Midtown Tunnel Facility	<b>Original Amount:</b> \$1,268,243.13	
<b>Contract Term (including Options, if any)</b> August 9, 2016 – August 8, 2017	<b>Prior Modifications:</b> \$0.00	
<b>Option(s) included in Total Amount?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Prior Budgetary Increases:</b> N/A	
<b>Procurement Type</b> <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	<b>Current Amount:</b> \$1,268,243.13	
<b>Solicitation Type</b> <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input type="checkbox"/> Other:	<b>This Request:</b> \$516,058.63	
<b>Funding Source</b> <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	<b>% of This Request to Current Amount:</b> 40.7%	
<b>Requesting Dept/Div &amp; Dept/Div Head Name:</b> Engineering & Construction, Joe Keane, P.E.	<b>% of Modifications (including This Request) to Original Amount:</b> 40.7%	

### Discussion:

B&T is seeking the Board's approval under the All Agency General Contract Procurement Guidelines to modify the Contract with 2 Saab Construction Inc. for additional work associated with the restoration and cleaning of the Manhattan Exit Plaza Walls of the Queens Midtown Tunnel in the negotiated amount of \$516,058.63.

On August 9, 2016, Contract QMM-346 was awarded to 2 Saab Construction Inc. (2 Saab) under the Small Business Mentoring Program for furnishing all labor, material, equipment, superintendence and all items necessary for the restoration of the Queens Plaza Walls and Emergency Garage Envelope Repairs at the Queens Midtown Tunnel Facility for a duration of twelve (12) months, in an amount not-to-exceed \$1,268,243.13.

After conduit and utility removals in the area of Manhattan Exit Plaza Walls, B&T determined that concrete rehabilitation and wall cleaning was required in order to maintain the location in a state of good repair. The Manhattan Exit Plaza work required concrete restoration, re-pointing of the granite and power wash cleaning.

2 Saab submitted a proposal in the amount of \$530,598.87. The Engineer's estimate is \$527,452.23. Negotiations resulted in B&T and 2 Saab agreeing to an amount of \$516,058.63. The negotiated amount is 2.1% below the estimate and is fair and reasonable. 2 Saab was granted authorization to proceed in the not-to-exceed amount of \$100,000 so as to avoid any scheduling conflicts with the ongoing plaza construction work.

Funding for this amendment is available in the 2017 Major Maintenance Programs under Project R706AW94 / R03173.

# Staff Summary

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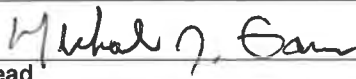
**Subject:** 2017 Title VI Program

**Department**

Diversity and Civil Rights

**Department Head Name**

Michael J. Garner

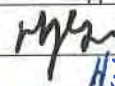


**Department Head Signature**

**Project Manager/Division Head**

Joyce D. Brown, MHLR

**Date**
**Board Action**

Order	To	Date	Approval	Info	Other
1	Diversity Committee	5/22/17	x		
2	Board	5/24/17	x		

**Internal Approvals**

Order	Approval	Order	Approval
1	Diversity & Civil Rights		
2	Legal		
3	Chief of Staff		

**Purpose:**

To obtain Board approval for the 2017 consolidated Title VI Program update.

**Discussion:**

As required under Federal Transit Administration ("FTA") Circular 4702.1b, the Title VI Program refers to a document developed by the Metropolitan Transportation Authority ("MTA") to demonstrate compliance with FTA Title VI requirements, which ensure non-discrimination on the basis of race, color, national origin, minority or low-income status for MTA and its affiliated agencies and subsidiaries ("MTA Agencies"), which includes: the New York City Transit Authority and its subsidiaries, the Manhattan and Bronx Surface Transit Operating Authority and the Staten Island Railway; the Long Island Rail Road Company; Metro-North Commuter Railroad Company; MTA Bus Company; and MTA Capital Construction.

As a recipient of FTA funds, MTA Agencies must submit an updated Title VI Program to the FTA every three years. MTA's next program submission is due June 1, 2017.

Under the requirements of 4702.1b, the Title VI Program must be approved by the MTA Board of Directors before submission to the FTA.

**Recommendation:**

It is the recommendation that the Board approve the MTA's 2017 consolidated Title VI Program update, in satisfaction of the requirements of the FTA Title VI Circular.

## BOARD RESOLUTION

WHEREAS, Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d ~~et seq~~ ("Title VI"), the U. S. Department of Transportation ("DOT") regulations, 49 CFR Part 21, and the Federal Transit Administration ("FTA") Circular 4702.1B prohibit discrimination on the basis of race, color or national origin by recipients of federal financial assistance in administering the benefits of their programs; and

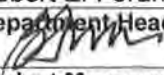
WHEREAS, as a recipient of federal funds, MTA is required to comply with the requirements of Title VI, the applicable DOT regulations, and the FTA Circular; and

WHEREAS, pursuant to FTA Circular 4702.1B, MTA is required to submit its Title VI Program to the MTA Board for approval; and

WHEREAS, the MTA Board has been briefed on the contents of MTA's Title VI program;

Now, THEREFORE IT IS RESOLVED that the Board approves MTA's consolidated Title VI Program as described in the attached Staff Summary and related documents.

## Staff Summary

<b>Subject</b> FMTAC Annual Meeting
<b>Department</b> Finance
<b>Department Head Name</b> Robert E. Foran, Chief Financial Officer
<b>Department Head Signature</b> 
<b>Project Manager/Division Head</b> Phyllis Rachmuth, Director, Risk and Insurance Management

<b>Date</b> May 10, 2017
<b>Vendor Name</b>
<b>Contract Number</b>
<b>Contract Manager Name</b>
<b>Table of Contents Ref #</b>

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance	5/22/17		X	
2	Board	5/24/17		X	

Internal Approvals			
Order	Approval	Order	Approval
3	Chief of Staff 	2	Legal 
1	Chief Financial Officer 		

### Purpose:

To provide information concerning the First Mutual Transportation Assurance Company's (FMTAC's) 2016 activities and operations to board members in connection with the May 24, 2017 annual FMTAC Board meeting.

### Discussion and Background:

The monthly MTA board meeting of May 24, 2017 will also be the annual board meeting of MTA's captive insurer, the First Mutual Transportation Assurance Company. For informational purposes, the FMTAC Board Book is being distributed to board members in advance of the meeting.

The FMTAC Board Book contains the Annual Meeting Newsletter (Section 1), which provides a summary update on the activities of FMTAC for the year ended December 31, 2016; historical comparative balance sheet and income statement summaries (Section 2); the FMTAC Audited Financial Statements for the years ended December 31, 2016 and 2015 (Section 3); and the Statement of Actuarial Opinion prepared by Milliman, Inc. setting forth the independent actuary's determination that the reserves recorded by FMTAC for the year ended December 31, 2016 meet the requirements of the captive insurance laws of the State of New York and make reasonable provision for unpaid loss and loss adjustment expense obligations of FMTAC (Section 4).

Also included in the FMTAC Board Book is the regulatory compliance checklist for 2017 (Section 5), a Report on Investments (Section 6), and materials describing the captive manager advisers (Marsh Captive Solutions) and FMTAC's investment managers (Goldman Sachs Asset Management) and actuaries (Milliman, Inc.) (Section 7). An informational presentation concerning FMTAC's 2016 operations and activities will be on the agenda of the Finance Committee meeting of May 22, 2017.

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