



Metropolitan Transportation Authority

December 2018

MTA Board Action Items



MTA Board Meeting
2 Broadway, 20th Floor Board Room
New York, N.Y. 10004
Wednesday, 12/12/2018
10:00 AM - 12:00 PM ET

1. PUBLIC COMMENT PERIOD

2. APPROVAL OF MINUTES

MTA Regular Board Minutes - November 15, 2018

MTA Minutes - November 15, 2018 - Page 5

NYCT/MaBSTOA/SIRTOA/MTA Bus Company Regular Board Minutes - November 15, 2018

NYCTA/MaBSTOA/SIRTOA/MTA Bus Company Minutes - November 15, 2018 - Page 11

MTA Metro-North Railroad Regular Board Minutes - November 15, 2018

MTA Metro-North Minutes - November 15, 2018 - Page 16

MTA Long Island Rail Road Regular Board Minutes - November 15, 2018

MTA LIRR Minutes - November 15, 2018 - Page 21

Triborough Bridge & Tunnel Authority Regular Board Minutes - November 15, 2018

MTA B&T Minutes - November 15, 2018 - Page 38

MTA Capital Construction Regular Board Minutes - November 15, 2018

MTACC Minutes - November 15, 2108 - Page 43

3. COMMITTEE ON FINANCE

Action Items

i. Issue New Money Transportation Revenue Bonds and Bond Anticipation Notes, Dedicated Tax Fund Bond Anticipation Notes, Dedicated Tax Fund Bonds, and TBTA General Revenue and Subordinate Revenue Bonds and Bond Anticipation Notes

Authorization to Issue New Money Transportation Revenue Bonds and Bond Anticipation Notes, Dedicated Tax Fund Bonds, and Triborough Bridge and Tunnel Authority General Revenue and Subordinate Revenue Bonds and Bond Anticipation Notes - Page 46

ii. Issue Transportation Revenue Refunding Bonds, Dedicated Tax Fund Refunding Bonds, TBTA General Revenue Refunding Bonds and Subordinate Revenue Refunding Bonds

Authorization to Issue Transportation Revenue Refunding Bonds, Dedicated Tax Fund Refunding Bonds, Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds and Subordinate Revenue Bonds - Page 129

iii. Updated MTA and TBTA Refunding Policy

Authorization of Updated MTA & TBTA Bond Refunding Policy - Page 181

iv. Reimbursement Resolution for Federal Tax Purposes

Authorization of Reimbursement Resolution for Federal Tax Purposes - Page 185

v. Administrative Revisions to Advertising Policy

Administrative Revisions to Advertising Policy - Page 189

vi. Extension of Energy Services Program Agreement with NYPA

Approval of One Year Extension of Energy Services Program Agreement w/NYPA - Page 195

MTAHQ Procurements Report

MTAHQ Procurement Report - Page 197

i. Non-Competitive

MTAHQ Non Competitive Procurements - Page 200

ii. Competitive

MTAHQ Competitive Procurements - Page 202

iii. Ratifications (no items)

Real Estate Items

i. Real Estate Agenda and Staff Summaries

Real Estate Agenda and Staff Summaries - Page 212

4. COMMITTEE ON NYCT & BUS

NYCT & Bus Procurements Report

NYCT December Staff Summary and Resolution - Page 221

i. Non-Competitive (no items)

ii. Competitive (no items)

iii. Ratifications

NYCT Ratification - Page 226

5. COMMITTEE ON METRO-NORTH RAILROAD & LONG ISLAND RAIL ROAD

MNR Procurements Report

MNR Procurements - Page 228

i. Non-Competitive (no items)

ii. Competitive

MNR Competitive Procurements - Page 232

iii. Ratification (no items)

LIRR Procurements Report

LIRR Procurements - Page 235

i. Non-Competitive (no items)

ii. Competitive

LIRR Competitive Procurements - Page 239

iii. Ratifications (no items)

MTACC Procurements Report

MTA CC Procurments - Page 242

i. Non-Competitive (no items)

ii. Competitive

MTA CC Competitive - Page 246

iii. Ratification (no items)

6. COMMITTEE ON MTA BRIDGES & TUNNELS OPERATIONS

B&T Procurements Report

B&T Procurements - Page 250

i. Non-Competitive (no items)

ii. Competitive

B&T Competitive - Page 253

iii. Ratifications (no items)

7. CORPORATE GOVERNANCE COMMITTEE

Action Item

i. Public Authorities Law Required Policies

Staff Summary - Public Authorities Law Required Policies - Page 259

8. FIRST MUTUAL TRANSPORTATION ASSURANCE CO (FMTAC) (no items)

9. MTA 2019 BUDGET ADOPTION MATERIALS (Action Items) (Budget Materials available in the Exhibit Book and MTA.Info)

Next meeting: Thursday, January 24, 2019

**Metropolitan Transportation Authority
Minutes of
Regular Board Meeting
2 Broadway
New York, NY 10004
Thursday, November 15, 2018
9:00 a.m.**

The following members were present:

**Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod**

The following alternate non-voting members were also present:

**Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.**

The following members were absent:

**Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman**

Patrick Foye, MTA President, Veronique Hakim, Managing Director, Helene Fromm, Chief of Staff, Janno Lieber, MTA Chief Development Officer, Robert Foran, Chief Financial Officer, Thomas J. Quigley, General Counsel, Andrew Byford, President, NYCT, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick Fulton, President, TBTA, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, and Timothy Ellis, Acting Chief Government and Community Relations 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 SESSION.

Mr. Ellis called speakers' attention to the countdown clock and asked that each speaker observe the two minute limit and, he stated that each speaker would be notified thirty seconds before their two-minutes expired.

The following fourteen (14) speakers commented during the public speakers' session. 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.

Christopher D. Greif, NYCTRC
Lisa Daglian, Executive Director, PCAC
Janice Bartley, private citizen
Mary Parisen-Lavell, CURES
Neil Landwehr, private citizen
Councilmember Ydanis Rodriguez
Michael Walker, private citizen
H.P. Schroer, private citizen /WWI Veteran Advocacy
Arthur Piccolo, Bowling Green Association
Johanna Climenko, CIDNY
Lorlei Christie, Jobs to Move America
Senator Brad Hoylmen
Michael Howard, CIDNY
Maulin Metha, Regional Plan Association

2. ACTING CHAIRMAN FERRER'S REMARKS.

Acting Chairman Ferrer thanked the public speakers for their comments.

Acting Chairman Ferrer asked for a moment of silence in honor of William "Bill" Wheeler, MTA's long-time Director of Strategic Planning, who recently passed away unexpectedly. Acting Chairman Ferrer noted that Mr. Wheeler served the MTA for over 30 years and that he was an integral and key member of the MTA family. The Acting Chairman, on behalf of the MTA family, expressed deepest condolences to the Wheeler family.

Acting Chairman Ferrer noted that this is the third time he has served in an acting capacity. He stated that this time is different, as the stakes are higher than before. Acting Chairman Ferrer stated that while this may be a challenging time for the MTA, the MTA also has an

incredible opportunity. Mr. Ferrer stated that each of the operating agencies are gaining a forward momentum, and that at the November Committee meetings it was reported that daily performance is improving across the agencies. Acting Chairman Ferrer noted that Board members have led the way in making the MTA system more accessible to everyone, developing cost containment initiatives and reforming the procurement process in a way that the MTA has never before seen. Mr. Ferrer stated that the MTA's transformation is due, in no small part, to former Chairman Lhota's vision and his drive to change the culture at the MTA. The Acting Chairman stated that Mr. Lhota left an indelible mark on the MTA, and he is committed to continuing and accelerating the change in culture. Acting Chairman Ferrer commended the agency leadership, who he said has accomplished a noticeable turnaround at the MTA. Mr. Ferrer noted that he supports the work of Managing Director Veronique Hakim, MTA President Patrick Foye, MTA Chief Development Officer Janno Lieber, Chief Financial Officer Robert Foran, and the Presidents of the operating agencies. Mr. Ferrer also noted that the continued support of the Board Members and the public is also needed. Acting Chairman Ferrer noted that Chief Financial Officer Robert Foran will be presenting the MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022. The presentation will show that the financial situation at the MTA is serious and that the MTA needs sustainable and reliable funding sources. Acting Chairman Ferrer stated that the MTA needs to continue to "get its house in order", which requires a united Board that is willing to work towards a common goal of providing safe and reliable service that the public expects and deserves.

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

3. **MINUTES.** Upon motion duly made and seconded, the Board approved the minutes of the Regular Board Meeting held on October 24, 2018.
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. **Law Firm Panel Addition.** Approved the retention of Skadden, Arps, Slate, Meagher & Flom, LLP, effective as of August 15, 2018, and the addition of the firm to the panel of Board-approved outside counsel for matters other than personal injury.
 2. **Revisions to MTA All-Agency Investment Guidelines.** Approved the amendment to the MTA All-Agency Investment Guidelines as it relates to Commercial Paper investments.
 - 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.

1. National Industries for the Blind – Purchase of Safety Gloves – Nos 40000000001815(LIRR) and 100000000080430 (MNR). Approved the award of a non-competitive contract to the National Industries for the Blind (NYSPSP - New York State Preferred Source Program for People who are Blind), a New York State Preferred Source Vendor, for the purchase and delivery of various safety gloves used by LIRR and MNR.
2. Various Contractors – Freelance Graphic Design, Production and Printing Services – No. 09016. Approved the award of a contract extension to Creative Source, Inc. (“Creative”) and add funding to a competitively solicited miscellaneous service contract series with both Creative and L.J. Gonzer & Associates (“Gonzer”) to provide freelance graphic design, production and printing services to NYCT and the LIRR.
3. Grand Meridian Printing – Offset Printing Services – No. 1000019701-1, Modification No. 9. Approved the award of a five-month extension to a competitively solicited miscellaneous procurement contract with Grand Meridian Printing, a New York State-certified MBE firm, to provide offset printing services for the production and delivery of information for riders regarding major service changes and safety messages.
4. International Business Machines (“IBM”) – Data Center Services – No. 03A8602, Additional Service Work Order No. 135. Approved the award of Additional Service Work Order No. 135 to a miscellaneous service contract with IBM for the purchase of a refurbished z114 Mainframe, System Software and the steady-state services required to provide higher availability.

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

Metro-North Rail Road

1. Permit with Premium Outlet Partners, L.P. for use of parking spaces at the Harriman Station parking facility, Harriman, N.Y.
2. Lease agreement with Leather Spa GCT Inc., d/b/a Leather Spa for retail space MC-39 in the Graybar Passage of Grand Central Terminal, New York, N.Y.

Long Island Railroad

3. License agreement with a subsidiary entity to be created by Boingo Wireless, Inc. for an exclusive license for Licensee to design, build, operate, maintain and sublicense a wireless communication access system for the benefit of LIRR customers, along with a Wi-Fi data network, and a dark fiber network, along the Atlantic Branch right-of-way and associated stations.

4. License agreement with a subsidiary entity to be created by Boingo Wireless, Inc. for wireless communications services at the MTACC-ESA/LIRR's East Side Access station, concourse and tunnels in and to Grand Central Terminal.

New York City Transportation Authority

5. License agreement with Sajjad Ahmad (or entity to be formed in which Mr. Ahmad is the principal) for the operation of a newsstand located at Myrtle-Wyckoff Avenues subway station, mezzanine paid zone, Canarsie Line, Brooklyn, N.Y.

Metropolitan Transportation Authority

6. Purchase of Grand Central Terminal and the Harlem/Hudson Lines from Midtown Trackage Ventures, LLC, and enter into subdivision and zoning lot development documents with the Seller.
7. Single source procurement of qualified personal service contractor and creation of a new capital project in the 2015-2019 Capital Program to allow for access to and demolition of 341, 345, 347 Madison Avenue, New York, N.Y.

5. **CHIEF FINANCIAL OFFICER PRESENTATION ON MTA 2019 FINAL PROPOSED BUDGET AND NOVEMBER FINANCIAL PLAN 2019-2022.**

Acting Chairman Ferrer introduced MTA Chief Financial Officer Robert Foran and Deputy Chief Compliance Officer Monica Murray, who presented the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes, respectively. Acting Chairman Ferrer noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 12, 2018 Board meeting.

Copies of the proposed budget and plan were distributed to Board members.

Following the presentation, Acting Chairman Ferrer thanked Mr. Foran and Ms. Murray and invited Board discussion concerning the proposed budget and the financial plan. Managing Director Veronique Hakim stated that the Board has been presented with a range of fare increases. She stated that the Notice of Public Hearings must contain the high end of the potential fare increases, but the increases can be below that number. She stated that the Notice is intended to give the public notice of what the range could be. Ms. Murray noted that any potential fare and toll increases would take place, after the hearings and the Board approval of those increases.

The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

Upon motion duly made and seconded, the Board approved the staff summary authorizing Acting Chairman and his designees to take the necessary steps, including publishing any

required notices and conducting any required public hearings, in order to complete the administrative process necessary in advance of the Board's consideration of fare and toll pricing changes.

Acting Chairman Ferrer announced that a Special Finance Committee meeting will be scheduled to address Board members' questions and concerns relating to the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes. The public will receive ample notice of the meeting.

6. **ADJOURNMENT.** Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:36 a.m.

Respectfully 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
Thursday, November 15, 2018
9:00 a.m.**

The following members were present:

**Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod**

The following alternate non-voting members were also present:

**Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.**

The following members were absent:

**Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman**

Patrick Foye, MTA President, Veronique Hakim, Managing Director, Helene Fromm, Chief of Staff, Janno Lieber, MTA Chief Development Officer, Robert Foran, Chief Financial Officer, Thomas J. Quigley, General Counsel, Andrew Byford, President, NYCT, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick Fulton, President, TBTA, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, and Timothy Ellis, Acting Chief Government and Community Relations also attended the meeting.

1. ACTING CHAIRMAN FERRER CALLED THE MEETING TO ORDER

2. PUBLIC COMMENT PERIOD

There were fourteen (14) public speakers. The following speakers spoke on MTA NYC Transit/Staten Island Rapid Transit Operating Authority /MTA Bus Company matters during the public speakers session.

Christopher D. Greif, NYCTRC
Lisa Daglian, Executive Director, PCAC
Janice Bartley, private citizen
Neil Landwehr, private citizen
Councilmember Ydanis Rodriguez
Michael Walker, private citizen,
H.P. Schroer, private citizen/WWI Veteran Advocacy
Arthur Piccolo, Bowling Green Association
Johanna Climenko, CIDNY
Lorelei Christie, Jobs to Move America
Michael Howard, CIDNY
Senator Brad Hoylmen
Maulin Metha, Regional Plan Association

Please refer to the video recording of the meeting produced by the MTA and maintained in MTA records for the content of the speakers' statements.

3. ACTING CHAIRMAN FERRER'S REMARKS

Acting Chairman Ferrer asked for a moment of silence in honor of William "Bill" Wheeler, MTA's long-time Director of Strategic Planning, who recently passed away unexpectedly. Acting Chairman Ferrer noted that Mr. Wheeler served the MTA for over 30 years and that he was an integral and key member of the MTA family. The Acting Chairman, on behalf of the MTA family, expressed deepest condolences to the Wheeler family.

Acting Chairman Ferrer noted that this is the third time he has served in an acting capacity. He stated that this time is different, as the stakes are higher than before. Acting Chairman Ferrer stated that while this may be a challenging time for the MTA, the MTA also has an incredible opportunity. Mr. Ferrer stated that each of the operating agencies are gaining forward momentum, and at the November Committee meetings it was reported that daily performance is improving across the agencies and is going in the right direction. Acting Chairman Ferrer noted that Board members have led the way in making the MTA system more accessible to everyone, developing cost containment initiatives and reforming the procurement process in a way that the MTA never has before. Mr. Ferrer stated that the MTA's transformation is due, in no small part, to former Chairman Lhota's vision and his drive to change the culture at the MTA. The Acting Chairman stated that Mr. Lhota left an indelible mark on the MTA, and he is committed to continuing and accelerating the change in culture. Acting Chairman Ferrer commended the agency leadership, who he said has accomplished a noticeable turnaround at the MTA. Mr. Ferrer noted that he supports the work of Managing Director Veronique Hakim, MTA President Patrick Foye, MTA Chief Development Officer Janno Lieber, Chief Financial Officer Robert Foran, and the Presidents

of the operating agencies. Mr. Ferrer also noted that the continued support of the Board Members and the public is also needed. Acting Chairman Ferrer noted that Chief Financial Officer Robert Foran will be presenting the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022. The presentation will show that the financial situation at the MTA is serious and that the MTA needs sustainable and reliable funding sources. Acting Chairman Ferrer stated that the MTA needs to continue to “get its house in order”, which requires a united Board that is willing to work towards a common goal of providing the safe and reliable service that the public expects and deserves.

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

4. MINUTES

Upon motion duly made and seconded, the Board unanimously approved the minutes of the meeting held on October 24, 2018, of the Board of MTA NYC Transit /Staten Island Rapid Transit Operating Authority /MTA Bus Company.

5. COMMITTEE ON FINANCE

Real Estate Action Items: Upon motion duly made and seconded, the Board approved a license agreement with Sajjad Ahmad for retail space at the Myrtle-Wyckoff Avenues subway station, mezzanine paid zone, Canarsie Line, Brooklyn.

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

Action Item(s):

Fair Fares Program: Upon motion duly made and seconded, the Board authorized the Chairman or his designee to enter into an agreement with the City of New York governing the proposed Fair Fares Program, and to take such actions as may be deemed necessary or appropriate in connection with the implementation of the Fair Fares Program during its inaugural six month period. This subsidized fare program, which is to be fully paid for by the City of New York, will provide eligible low-income residents of the City of New York with half-price fares when riding on Transit subways and bus lines.

The details of the Board members’ comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

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).

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 majority vote (Schedule L 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 two-thirds 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.

7. **CHIEF FINANCIAL OFFICER PRESENTATION ON MTA 2019 FINAL PROPOSED BUDGET AND NOVEMBER FINANCIAL PLAN 2019-2022**

Acting Chairman Ferrer introduced MTA Chief Financial Officer Robert Foran and Deputy Chief Compliance Officer Monica Murray, who presented the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes, respectively. Acting Chairman Ferrer noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 12, 2018 Board meeting.

Copies of the proposed budget and plan were distributed to Board members.

Following the presentation, Acting Chairman Ferrer thanked Mr. Foran and Ms. Murray and invited Board discussion concerning the proposed budget and the financial plan. Managing Director Veronique Hakim stated that the Board has been presented with a range of fare increases. She stated that the Notice of Public Hearings must contain the high end of the potential fare increases, but the increases can be below that number. She stated that the Notice is intended to give the public notice of what the range could be. Ms. Murray noted that any potential fare and toll increases would take place after the hearings and after Board approval of those increases.

The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

Upon motion duly made and seconded, the Board authorized the Acting Chairman and his designee(s) to proceed with the steps necessary to consider the proposals for fare and toll increases, including publishing any required notices and conducting any required public hearings on such proposals, in advance of the Board's consideration of such proposals.

Acting Chairman Ferrer announced that a Special Finance Committee meeting will be scheduled to address Board members' questions and concerns relating to the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes, and noted that the public will receive ample notice of the meeting.

8. ADJOURNMENT

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:36 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 – 20th Floor
New York, NY 10004
Wednesday, November 15, 2018
9:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod

The following alternate non-voting members were also present:

Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.

The following members were absent:

Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

Patrick Foye, MTA President, Veronique Hakim, Managing Director, Helene Fromm, Chief of Staff, Janno Lieber, MTA Chief Development Officer, Robert Foran, Chief Financial Officer, Thomas J. Quigley, General Counsel, Andrew Byford, President, NYCT, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick Fulton, President, TBTA, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, and Timothy Ellis, Acting Chief, Government and Community Relations also attended the meeting.

Acting Chairman Ferrer called the meeting to order.

1. Public Speakers:

There were 14 registered public speakers, none of whom spoke on Metro-North agenda items. 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 the speakers' statements.

2. Acting Chairman Ferrer's Remarks:

Acting Chairman Ferrer thanked the public speakers for their comments.

Acting Chairman Ferrer asked for a moment of silence in honor of William "Bill" Wheeler, MTA's long-time Director of Strategic Planning, who recently passed away unexpectedly. Acting Chairman Ferrer noted that Mr. Wheeler served the MTA for over 30 years and that he was an integral and key member of the MTA family. The Acting Chairman, on behalf of the MTA family, expressed deepest condolences to the Wheeler family.

Acting Chairman Ferrer noted that this is the third time he has served in an acting capacity. He stated that this time is different, as the stakes are higher than before. Acting Chairman Ferrer stated that while this may be a challenging time for the MTA, the MTA also has an incredible opportunity. Mr. Ferrer stated that each of the operating agencies are gaining forward momentum, and at the November Committee meetings it was reported that daily performance is improving across the agencies and is going in the right direction. Acting Chairman Ferrer noted that Board members have led the way in making the MTA system more accessible to everyone, developing cost containment initiatives and reforming the procurement process in a way that the MTA never has before. Mr. Ferrer stated that the MTA's transformation is due, in no small part, to former Chairman Lhota's vision and his drive to change the culture at the MTA. The Acting Chairman stated that Mr. Lhota left an indelible mark on the MTA, and he is committed to continuing and accelerating the change in culture. Acting Chairman Ferrer commended the agency leadership, who he said has accomplished a noticeable turnaround at the MTA. Mr. Ferrer noted that he supports the work of Managing Director Veronique Hakim, MTA President Patrick Foye, MTA Chief Development Officer Janno Lieber, Chief Financial Officer Robert Foran, and the Presidents of the operating agencies. Mr. Ferrer also noted that the continued support of the Board Members and the public is also needed. Acting Chairman Ferrer noted that Chief Financial Officer Robert Foran will be presenting the MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022. The presentation will show that the financial situation at the MTA is serious and that the MTA needs sustainable and reliable funding sources. Acting Chairman Ferrer stated that the MTA needs to continue to "get its house in order", which requires a united Board that is willing to work towards a common goal of providing the safe and reliable service that the public expects and deserves.

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

3. Approval of Minutes:

Upon motion duly made and seconded, the minutes of the Regular Board Meeting held on October 24, 2018 were unanimously approved.

4. Committee on Finance:

Action Item:

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

- Approval of revisions to the MTA All-Agency Investment Guidelines.

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

MTAHQ Procurements:

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

- Approval to a non-competitive, contract for the purchase and delivery of various safety gloves in the estimated not-to-exceed amount of \$544,058 to the National Industries for the Blind (NYSPSP – New York State Preferred Source Program for People who are Blind), a New York State Preferred Source Vendor. These safety gloves will be used by LIRR (estimate \$359,097) and MNR (estimated \$184,961).

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

Real Estate:

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

- Authorization to enter into a short term permit with Premium Outlet Partners, L.P. ("Premium") at a fee of \$9,464 for use of up to 700 parking spaces in the Metro-North Harriman Station parking lot for employee parking during Premium's 2018 Thanksgiving weekend shopping event.
- Authorization for Metro-North to enter into a lease agreement with Leather Spa GCT, Inc., d/b/a Leather Spa for the operation of shoe shine, barber or hair salon services in Retail Space MC-39 at Grand Central Terminal.

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

5. Committee on Metro-North:

Procurements:

The Board was presented with the following competitive procurement recommended to it by the Committee on MTA Metro-North Railroad.

- Approval to award a contract modification in the not-to-exceed amount of \$2,004,290 to the firm Tully Construction/Richards Plumbing Joint Venture, LLC

("Tully/Richards") for the Fire Standpipe System Upgrades located in Grand Central space.

Upon motion duly made and seconded, the Board approved the foregoing procurement. The details of the above procurements are contained in staff summaries 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.

Ratification:

The Board was presented with the following ratification recommended to it by the Committee on MTA Metro-North Railroad.

- Approval of a non-competitive procurement deemed as an "Immediate Operating Need" in the not-to-exceed amount of \$516,650 to ORX Railway Corporation for the purchase of 225 axles for the Metro-North Railroad Coach Cars and M-3 Fleet.

Upon motion duly made and seconded, the Board approved the foregoing ratification. The details of the above ratification are contained in a staff summary and documentation 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. Chief Financial Officer Presentation on MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022:

Acting Chairman Ferrer introduced MTA Chief Financial Officer Robert Foran and Deputy Chief Compliance Officer Monica Murray, who presented the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes, respectively. Acting Chairman Ferrer noted that the November budget presentation was for informational purposes only and that the Board would vote on the budget materials at the December 12, 2018 Board meeting.

Copies of the proposed budget and plan were distributed to Board members.

Following the presentation, Acting Chairman Ferrer thanked Mr. Foran and Ms. Murray and invited Board discussion concerning the proposed budget and the financial plan. Managing Director Veronique Hakim stated that the Board has been presented with a range of fare increases. She stated that the Notice of Public Hearings must contain the high end of the potential fare increases. The increases can be below that number, the Notice is intended to give the public notice of what the range could be. Ms. Murray noted that any potential fare and toll increases would take place, after the hearings and the Board approval of those increases.

Upon motion duly made and seconded, the Board approved the staff summary authorizing Acting Chairman and his designees to take the necessary steps, including publishing any required notices and conducting any required public hearings, in order to complete the administrative process necessary in advance of the Board's consideration of fare and toll pricing changes.

Acting Chairman Ferrer announced that a Special Finance Committee meeting will be scheduled to address Board members' questions and concerns relating to the MTA 2019 Final Proposed Budget and November Financial Plan for 2019-2022, and the proposed 2019 Fare/Toll Changes. The public will receive ample notice of the meeting.

The details of the presentation on the proposed budget and financial plan and Board members' comments and questions with respect thereto are included in the video recording of the meeting produced by the MTA and maintained in MTA records.

7. Adjournment:

Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:36 a.m.

Respectfully submitted,



Linda Montanino
Assistant Secretary

Nov 2018 Board Minutes-FINAL
Legal/Corporate

**Minutes of the Regular Board Meeting
Long Island Rail Road Company
2 Broadway
New York, NY 10004
Thursday, November 15, 2018
9:00 a.m.**

The following members were present:

Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod

The following alternate non-voting members were also present:

Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.

The following members were absent:

Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

Patrick Foye, MTA President, Veronique Hakim, Managing Director, Helene Fromm, Chief of Staff, Janno Lieber, MTA Chief Development Officer, Robert Foran, Chief Financial Officer, Thomas J. Quigley, General Counsel, Andrew Byford, President, NYCT, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick Fulton, President, TBTA, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, and Timothy Ellis, Acting Chief, Government and Community Relations, also attended the meeting.

Acting Chairman Fernando Ferrer called the meeting to order.

1. Public Speakers

Timothy Ellis, Acting Chief, Government and Community Relations indicated that fourteen (14) public speakers had signed up to speak. After reviewing safety procedures for everyone attending the meeting, Mr. Ellis asked all speakers to observe the two (2) minute limit in fairness to others and noted the clock up front and the fact that a warning light will come on with 30 seconds to go.

One (1) of the speakers commented on matters relating to the Long Island Rail Road (“LIRR”):

Mary Parisen-Lavelle, Chair of Civics United for Railroad Environmental Solutions (“CURES”), stated that for more than a decade, her community’s objective has been to obtain the cleanest locomotives. Research shows that LIRR’s current Tier 4 locomotive procurement is not transparent or science-based. LIRR’s culture is so insular, it is having trouble taking the next step up to obtain advanced locomotive technologies that will benefit LIRR as well as the communities it serves. Ms. Parisen-Lavelle stated that LIRR President Phillip Eng should be praised for his willingness to take a fresh look at this. Ms. Parisen-Lavelle asked President Eng to do two (2) things: First, to rework the procurement so that it is open, fair, and aimed at obtaining the cleanest locomotives. In addition, since February 2018, CURES has been asking LIRR to increase the number of locomotives LIRR procures for use by New York & Atlantic Railway (“NYAR”) from two to four. \$18 million in funding has been appropriated, so there is more than enough money available for this. Second, please procure a fleet of Tier 4 Switch Duty Cycle locomotives, with few exceptions, if any. Residents and workers will never breathe Tier 4 emissions if Tier 4 Line Haul locomotives are used in switch Duty Cycle, and will be harmed. Finally, Ms. Parisen-Lavelle stated that NYAR had agreed to replace the MP-15 locomotives it currently uses, and that these must be replaced.

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. Acting Chairman’s Remarks

Acting Chairman Ferrer thanked all the public speakers for appearing. He then asked for a moment of silence in honor of the memory of William Wheeler, MTA’s long-time Director of Strategic Planning, and for thirty years an integral member of the MTA family. He extended condolences on behalf of the MTA to Mr. Wheeler’s children and family.

Acting Chairman Ferrer stated that this was his third time as Acting Chairman, but that the stakes are now higher. Nonetheless, each of the MTA's agencies is moving ahead. Our on-time performance is better. Board members have led task forces on capital project cost containment and procurement reform. We will continue the change in culture that we started.

Acting Chairman Ferrer stated that MTA has able leadership, including Veronique Hakim, Patrick Foye, Janno Lieber, Robert Foran, Andrew Byford and others, and they will continue to have my support.

Acting Chairman Ferrer stated that MTA's financial situation is serious, and that MTA needs sustainable and reliable revenue sources. This requires a united Board, to support safe and reliable service to 9 million people.

3. Approval of Minutes

Acting Chairman Ferrer asked for a motion to approve the minutes of the Regular Board Meeting of November 15, 2018. Upon motion duly made and seconded, the minutes of the Regular Board Meeting of November 15, 2018 were approved.

4. Committee on Finance

Action Items

The Board was presented with two (2) action items recommended to it by the Committee on Finance:

- To obtain Board approval of the retention of the law firm of Skadden, Arps, Slate, Meagher & Flom LLP (the "Firm") effective as of August 15, 2018, and the addition of the Firm to the panel of Board-approved outside counsel. The approval of the Firm is sought in connection with its representation of the Metropolitan Transportation Authority ("MTA") and the Long Island Rail Road ("LIRR") in connection with the creation of a new entrance to 33rd Street Concourse at Penn Station (the "33rd St. Concourse") which is adjacent to property owned by an affiliate of Vornado Realty Trust ("Vornado") and involves the negotiation, documentation and closing of the associated real estate, operational and commercial transactions with Vornado and other potential stakeholders, including the National Railroad Passenger Corporation ("Amtrak").
- To obtain approval for an amendment to the MTA All Agency Investment Guidelines as related to Commercial Paper (CP) investments. The MTA All Agency Investment Guidelines were adopted by the Board in May 2003. The MTA Treasury Department is seeking MTA Board approval to change the Commercial Paper investment rating from "the highest rating" to "the highest rating category of A1 from Standard and Poor's, P1 from Moody's, and F1+ from Fitch Rating."

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, the staff summaries 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 five (5) procurement items recommended to it by the Committee on Finance all of which related to Long Island Rail Road:

Non-Competitive Procurements:

- **National Industries for the Blind – Purchase of Safety Gloves – Contract Nos. 400000000001815 (LIRR) and 100000000080430 (MNR) – Not to Exceed \$544,058** – Board approval is sought for the award of a non-competitive contract for the purchase and delivery of various safety gloves in the estimated amount of \$544,058 to the National Industries for the Blind (NYSPSP – New York State Preferred Source Program for People who are Blind), a New York State Preferred Source Vendor. These safety gloves will be used by LIRR (estimated \$359,097) and MNR (estimated \$184,961).

- **Various – Freelance Graphic Design and Printing Services – Contract No. 09016, Base Amount = \$1,492,000, Current Contract Value = \$1,840,800, Proposed Contract Value = \$1,991,800 (adding a not-to-exceed amount of \$151,000)**
 - a. **Creative source, Inc.**
 - b. **L. J. Gonzer & Associates**
Board approval is sought to award a contract extension to Creative Source, Inc. (Creative) and add funding to a competitively solicited miscellaneous service contract with both Creative and L. J. Gonzer & Associates (Gonzer). These contacts provide freelance graphic design, production and printing services to NYC Transit and the Long Island Rail Road (LIRR).

- **Grand Meridian Printing – Offset Printing Services – Contract No 1000019701-1, Modification No. 9, Base Amount = \$50,000, Current Contract Value = \$285,000, Proposed New Contract Value = \$385,000 (adding a not-to-exceed amount of \$100,000)** – Board approval is sought to award a five-month extension to a competitively solicited miscellaneous procurement contract with Grand Meridian Printing (GMP), a New York State certified MBE firm. This contract provides offset printing services for the production and delivery of information for riders regarding major service changes and safety messages.

- **International Business Machines - Data Center Services – Purchase of a refurbished Z114 Mainframe, System Software and Related Services – Contract No. 03A8062, Additional Service Work Order No. 135, Base Amount = \$65,228,757, Current Contract Value = \$209,184,934.91, Proposed Contract Value = \$211,904,103.91 (adding a not-to-exceed amount of \$2,719,169) –** Board approval is sought to award Additional Work Service Order No. 135 (ASWO 135) to a miscellaneous service contract with International Business Machines (IBM) for an estimated amount of \$2,719,169.

IBM's services include mainframe and midrange server processing for NYCT, Business Service Center (BSC), Headquarters, Bridges and Tunnels, Long Island Rail Road (LIRR) and Metro-North Railroad (MNR). The IBM mainframe environment runs NYCT's AFC MetroCard application, TALON logistics application, MaBSTOA Pension Payroll Administration and Loan applications, MaBSTOA Family Court application, and its Capital Program Management CPICS application. The IBM mainframe also runs the LIRR Safety System application and MNR's Crew Management Application. IBM's data center also operates a midrange environment that runs the BSC PeopleSoft applications for payroll, financials, and human resource applications for all MTA Agencies.

This ASWO 135 is for the purchase of a refurbished z114 mainframe, system software and the steady-state services required to provide higher availability of AFC MetroCard Debit/Credit functionality during periods when the application is experiencing failure or scheduled maintenance.

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 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 seven (7) real estate items recommended to it by the Committee on Finance, two (2) of which related to Long Island Rail Road.

- **License Agreement for Wireless Communications Services along a Portion of the LIRR Atlantic Branch Right of Way and Associated Stations –** Agency: MTA Long Island Rail Road (“LIRR”); Licensee – A subsidiary entity to be created by Boingo Wireless, Inc. (“Boingo”); Location: Above and below ground LIRR Territory from Atlantic Terminal through Jamaica Station to just west of LIRR’s Hillside Support Facility, including the Nostrand Avenue and East New York Stations; Action Requested: Approval to enter into an exclusive licensee for Licensee to design, build, operate, maintain and sublicense a wireless communication access system for the benefit of LIRR customers, along with a Wi-Fi data network, and a dark fiber network, along the Atlantic Branch (collectively, the “Project”), at no

expense to the MTA; Compensation: Annual license fees equal to the greater of a Minimum Annual Guarantee (“MAG”) or a percentage of gross revenue share.

- **License Agreement for Wireless Communications Services at the MTACC’s/LIRR’s Grand Central Terminal East Side Access Facility** – Agencies: Metropolitan Transportation Authority (“MTA”), MTA Capital Construction (“MTACC”), and MTA Long Island Rail Road (“LIRR”); Licensee: A subsidiary entity to be created by Boingo Wireless, Inc. (“Boingo”); Location: MTACC-EAS/LIRR’s East Side Access station, concourse and tunnels in and to Grand Central Terminal; Action Requested: Approval to enter into an exclusive license for Licensee to design, build, operate, maintain and sublicense a wireless communication access (Cellular) system for the operational benefit of MTA and LIRR and its customers, along with a Wi-Fi data network, and a dark fiber network (collectively, the “Project”), at no expense to the MTA or LIRR; Term: 15 years with 2 subsequent 5-year renewal options; Compensation: Annual license fees equal to the greater of a Minimum Annual Guarantee (“MAG”) or a percentage of gross revenue share.

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.

5. LIRR Committee

Procurement Items

The Board was presented with three (3) procurement items recommended to it by the LIRR Committee, all three (3) of which were for MTA Capital Construction Company (“MTACC”):

Procurements by MTA Capital Construction Company:

Competitive Procurement:

- **Tutor Perini Corporation – Contract No. CH053, Modification No. 170 - \$2,043,800** – In accordance with Article VIII of the All-Agency General Contract Procurement Guidelines, MTACC seeks Board approval to modify the Contract to compensate the Contractor for compensable delays and associated impact costs during the period from February 18, 2015 through February 29, 2016.

Upon motion duly made and seconded, and with Board Member Charles Moerdler abstaining, 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 MTA records.

Ratifications:

- **Tutor Perini Corporation – Contract No. CS179, Modification No. 89 - \$2,815,865** – In accordance with Article VIII of the All-Agency General Contract Procurement Guidelines, MTACC requests that the Board ratify a contract modification that will resolve errors and deficiencies in the Tunnel SCADA system design and the hardware specifications for associated Field Network devices.
- **Michels Corporation – Contract No. CH061A, Modification No. 21 - \$1,424,301** - In accordance with Article VIII of the All-Agency General Contract Procurement Guidelines, MTACC requests that the Board ratify a Unilateral Modification for the additional costs to recover and accelerate the Contract to ensure that critical work for the Track A approach Structure was completed by June 14, 2018.

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 summaries filed with those minutes, and in the video recording of the meeting, produced by the MTA and maintained in MTA records.

6. Presentation on MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022

Acting Chairman Ferrer introduced MTA Chief Financial Officer Robert Foran, to give a presentation on the MTA 2019 Final Proposed Budget and the November Financial Plan 2019-2022.

MTA Chief Financial Officer Foran stated that the Final Proposed Budget would be presented to the Board for approval in December and that no action on the budget is required today.

Mr. Foran also stated that the Board is being asked today to authorize hearings and solicit public input on proposed fare/toll increases, but that any proposal to adopt specific fare/toll increases would be brought back to the Board for approval.

Mr. Foran then gave the Board a presentation which highlighted the following:

- The MTA 2019 Final Proposed Budget shows (in millions) total revenues of \$16,750 and total expenses of \$16,732. The largest shares of revenue are attributable to farebox revenue (38%), followed by dedicated taxes (36%), and the largest shares of expenses are attributable to payroll (32%) and non-labor (24%).

- There is a Need for Additional Recurring Revenue. MTA projected revenues have declined significantly since the July 2017 Financial Plan. MTA is continuing its historic cost-cutting effort. 2018 and 2019 budgets will be balanced using “one-shots.” Out year deficits have increased significantly. Without additional recurring revenue in the near term, options will be service reductions, reductions in force and/or additional fare/toll increases.
- The July Financial Plan included large out-year deficits, even with fare/toll increases and substantial cost reduction proposals.
- What has changed since the July Plan? Certain changes and re-estimates over the plan period (2018-2022) improve financial results, such as lower debt service costs (\$194 million); other changes and re-estimates worsen financial results, such as lower passenger revenue projections (\$485 million). In total, re-estimates, along with other changes, are \$819 million unfavorable for the plan period.
- Highlights of the November Plan: Proposed biennial fare and toll increases of net 4% in 2019 and 2021, consistent with previous plans; Nearly \$1.9 billion in recurring savings have been identified/implemented since the February Plan; Maintains major investments from prior plans, including maintenance of the Subway Action Plan funded from Phase 1 of Congestion Pricing/FHV fees; Investments in Maintenance and Operations of \$216 million over the plan period; and Plan is balanced through 2019 using “one-shots”, and deficits for 2020, 2021 and 2022 have increased to \$510 million, \$816 million, and \$991 million, respectively.
- Additional Maintenance and Operations (\$216 million over the Plan Period)
- The November Financial Plan projects significant increases in out-year deficits.
- MTA is using “one-shots” to balance the budgets for 2018 and 2019, including (for 2018) Drawdown of the General Reserve (\$80 million in July / \$80 million in November) and reduced Committed to Capital to Offset PMT reduction (\$65 million), and (for 2019) continue non-essential spending restrictions, including the filling of non-essential vacancies (\$115 million), and 2018 favorable year-end balance (\$64 million).
- We continue to raise and achieve annual recurring savings targets.
- In 2018, Agencies identified \$2.1 billion in BRP savings, including “one-shots”, but still fall short of targets.
- Bus and Subway service guidelines, which have been reviewed and approved by the MTA Board, are used to maintain an appropriate level of service based upon actual ridership on a route. Following these guidelines, NYCT is proposing service guideline adjustments beginning in 2020 that result in savings of \$41 million

annually, with reductions of \$10 million for subway service and \$31 million for bus service.

- If remaining savings targets are not achieved, deficits will occur earlier and be larger.
- If fare and toll increases are not enacted, deficits will increase significantly.
- Addressing the deficits – Without additional recurring revenues, the MTA would need to consider significant service reductions, reductions in force and/or additional fare/toll increases.
- Implementation of draconian service reductions will have a relatively small impact on the deficit.
- Additional recurring revenues will be required to address the deficit.

Board Member Andrew Albert asked, with respect to service guidelines, whether ridership on buses was measured by farebox revenue or by observation. MTA Chief Financial Officer Foran answered that it is based on visible observations, which considers both paid and unpaid trips.

Board Member Albert asked whether, before a route is cut, alternative routes would be considered. New York City Transit (“NYCT”) President Andrew Byford responded, stating that if ridership really dropped off the table, we need to be responsible. If severe cuts took place, we would look to protect viable options.

Acting Chairman Ferrer stated that none of these outcomes would occur without Board approval.

Board Member Albert asked how many observations of ridership are done. NYCT President Byford responded, stating that the data is built up over many years.

Board Member Albert asked, with respect to subways, if a cut is made in frequency on a line, while there may be a ridership drop on one segment of the line, do we also consider that there might be an increase on a later segment. NYCT President Byford responded, stating that we consider indications like that.

Board Member David Jones noted that debt service comprises 16% of the operating budget and asked what level debt service was at five years ago. MTA Chief Financial Officer Foran responded, stating that debt service has been fairly consistent at 15-16%.

Board Member Norman Brown stated that as you cut service, you drive customers away. He asked what the effect would be if MTA expanded service. He also asked what would happen if debt service went to 20%. He stated that you might attract riders in that circumstance.

Board Member Lawrence Schwartz stated that service should be based on need; if there is no need, there should be no service. He also stated, with respect to the materials distributed to the Board on proposed fare and toll increases, that he would like to add an Option 3. He expressed his discomfort with only 2 options and stated that he asked the working group to look at various fare options and that did not happen.

Board Member Schwartz stated that he was not comfortable being asked to approve this today. He added that if we cannot talk about other options, he would like to table this matter. He asked for MTA counsel to respond to the question of whether we can have an Option 3 – an open-ended option for discussion of other alternatives for fare and toll increases.

Board Member Schwartz stated that he had one additional matter to raise: With respect to declining ridership, he expressed his desire to challenge that premise. He stated that the agencies need to do more work on this issue. He expressed a concern about fare evasion and was certain there is plenty of it. He added that between the MTA Police and staff, we should be able to figure out how much evasion takes place, and he would like to have answer before the end of the year. This could be a fare evasion problem, rather than a declining ridership problem.

MTA Chief Financial Officer Foran responded, stating that the Board will consider all options and that there is no vote today on the fare and toll increases. We are simply putting out two proposals today for public input. The Board will have lots of time to consider this, and the proposals being put forth merely establish upper limits for fare and toll increases. Mr. Foran added that we do have information on fare evasion. We have charts showing when people ride, and there has been a dramatic reduction in ridership. We are seeing significant competition from Uber and Lyft. Fare evasion is an issue, especially on buses and it might account for up to 50% of the decline. Nationwide, transit agencies are seeing declines in ridership, due in part to the rise of e-commerce and telecommuting.

MTA General Counsel Thomas Quigley noted that there are statutory deadlines that must be followed. The vote today is simply to follow the statutory process.

Board Member Schwartz stated that he wanted to make it clear: he interpreted the materials on fare and toll increases as only permitting consideration of Option 1 and Option 2. He stated that he just wanted to make it clear that there are other options. He further stated that he wanted to make sure that only the process was being authorized.

Acting Chairman Ferrer stated that the Board will have the final say on all of this. Let's look to make that clearer in the written materials.

Board Member Carl Weisbrod stated that he was troubled that the Board received this budget only today, and yet we're expected to vote on it in thirty days. We have a huge number of relevant facts which are unknown. We should have had a working committee to look at revenues. Instead, we are being asked to discuss it and vote on it in a compressed time period. Mr. Weisbrod stated that MTA Chief Financial Officer Foran referred to the use of "one-shots". We need to know what they are. This is an inappropriate way for the Board to exercise its fiduciary duties.

Acting Chairman Ferrer asked that Board members read the staff summary on fare and toll increases. It simply authorizes staff to conduct hearings and collect public input.

Board Member Weisbrod responded yes, but there are a host of things apart from the fare increase for the Board to consider. Yet we are expected to vote next month on the budget.

MTA Chief Financial Officer Foran stated that we have a July Plan with the preliminary budget. The story is essentially the same from July – we have a revenue problem. We removed or delayed things the Board objected to. That is why we have a July Plan. Mr. Foran added that we have had briefings for all the Board members, and we have a process that's been in place --- we have had discussions over the past six months.

Board Member Weisbrod acknowledged that there is a process, but stated that we are getting this today, and there are questions like fare evasion. We have been asking about that and we've never gotten answers.

Board Member Veronica Vanterpool stated that we had briefings before the July Plan was presented publicly. The budget before us is 521 pages. It is unfair to expect that we would have reviewed all of that before today.

MTA Chief Financial Officer Foran responded, stating that no vote was required at the time of the July Plan, and there has been plenty of time since then to review the budget. The document that was distributed for this meeting was prepared right before the meeting and as he previously stated, staff is prepared to help the Board with any information that it wants.

Board Member Vanterpool asked for an explanation as to why Rockland County weekend bus service was being extended. She added that the Board approved this service to the end of 2018, at a cost of about \$1 million. She expressed surprise that we are extending the service indefinitely.

Metro-North Railroad (“MNR”) Executive Vice President Susan Doering responded, stating that we are trying to accommodate requests for this service.

Board Member Vanterpool stated that she did not think MTA should be covering this expense indefinitely for a New York State Department of Transportation (“NYSDOT”) bus service. She asked Ms. Doering to provide the Board with the cost of service for the next four years of the financial plan.

Board Member Vanterpool added that she had a second question: is MTA still assuming responsibility for the toll rebate?

MTA Chief Financial Officer Foran responded, stating that the cost of the rebate on the Verrazano Narrows Bridge is \$3.5 million. The rebate has gone up, and the State picked up the difference over the past two years. MTA is not anticipating increasing its contribution.

Board Member Vanterpool indicated she had a third question: Payroll Mobility Tax (“PMT”) – when are we going to stop offsetting PMT?

MTA Chief Financial Officer Foran responded, stating it is what it is. We receive \$245 million for PMT replacement. We are reporting what we get.

Board Member Vanterpool stated that when use service guidelines, we sometimes increase headways, but they could lead to service cuts. How are we making sure we are not encouraging further ridership loss and being as efficient as we can with our limited resources?

Board Member Polly Trottenberg stated that we need to understand the issue of fare evasion. She further stated that she heard a story in a Queens subway station about people jamming machines and scamming cards from people. She added that there was a mention of “one-shots”, and that she didn’t understand them. She also added that she knew of plans to slow down the Select Bus Service (“SBS”) schedule, including what was going to be our next route, which is 96th Street. She stated that, as a Board member, she would like to know what the “one-shots” are, and their implications, and that a discussion about it would be of tremendous value.

Board Member Scott Rechler asked whether the proposed budget contained funding for the Subway Action Plan.

MTA Chief Financial Officer Foran responded, stating that the Subway Action Plan was funded with Phase I of congestion pricing. The costs and revenues are included in the budget but there is nothing in the budget in terms of the Fast Forward Plan. There may be some small operational dollars included, but nothing in terms of the capital expenditures. The budget does include the projected 2019 and 2021 fare and toll increases.

Board Member Rechler noted that, in effect, we have a \$1 billion deficit that we need to solve on a going forward basis, and this will continue until we find another source of revenue.

MTA Chief Financial Officer Foran responded in the affirmative, stating that this will require further cuts, reductions in force, or finding additional sources of revenue.

Board Member Rechler noted that MTA needs \$40 billion to advance the Fast Forward Plan, and needs to find another source of revenue for that. He further noted that the budget projections show MTA will be facing a \$1 billion deficit on top of that.

Board Member Rechler added that he was just trying to stress the severity of it and frame it in the context of our broader conversations on alternative revenue sources. He asked whether MTA’s forecasting was deficient, and whether we failed to take account of trends that should have been visible to us for years, leading to projections are inaccurate. He pointed in particular to the \$485 million projection for lower passenger revenues, and the impact of fare evasion. He asked how the Board and the public can have confidence in our forecasts if we are missing the mark in that way.

MTA Chief Financial Officer Foran responded, stating that this is a four-year forecast, and no one is going to be 100% accurate four years out. We use our best efforts to forecast accurately, but no one can guaranty that what we project is what ultimately will occur. He stated that with respect to higher overtime - \$100 million, that is over four years, so it amounts to \$25 million per year on an \$800 million base. With respect to passenger ridership, we started the Subway Action Plan last summer and that has had a material effect. We also have certain district attorneys who made it clear that they were not going to prosecute individuals for fare evasion. I think that started to change behavior. There are certain things that are going on that amount to radical changes in our operating environment. As soon as we see a trend we try to reflect it. We were reflecting these things in July, and we were reflecting these things in February. Our February Plan was significantly different from the November Plan because of changes in revenues.

MTA Chief Financial Officer Foran added that he did not think the issue was poor forecasting by MTA. Instead, several things have radically changed. An example, there has been a dramatic increase in Uber and Lyft cars on the road over and above what we saw two years ago.

Board Member Trottenberg responded that the number had quadrupled.

MTA Chief Financial Officer Foran stated that MTA loses revenue and ridership because of that.

Board Member Rechler asked about workers compensation as an issue. Is that something that is a new trend that evolved, or were we just too aggressive in our assumptions?

MTA Chief Financial Officer Foran responded, stating that we have been concerned about workers' compensation for some time. Transit has had a task force internally that is working on it. We are trying to get claims management under control. The State has a huge issue overall with workers' compensation and it is exploding.

Board Member Rechler asked whether MTA is forecasting as conservatively and as accurately as it can. We need to be sure that if we are going to ask for more tolls, our numbers are conservative and supportable.

Board Member Ira Greenberg stated, looking at page 11 of the presentation, that service guidelines will likely result in reductions in service in 2020. Many people may object to this. People can say "The trains are crowded now – where is the revenue loss? It must be due to fare evasion." With respect to fare evasion, someone must know how extensive this issue is and this needs to be made clear in December. Mr. Greenberg asked whether the proposals set out in the materials on fare and toll increases represent the limit on such increases.

MTA Chief Financial Officer Foran responded in the affirmative.

Board Member Charles Moerdler stated that it is time we appointed a working group to look at sources of revenue. There is the issue of value capture, raised by Board Members

Weisbrod, Trottenberg and Schwartz. We have not moved forward on that. There is also the issue of workers compensation which Ronnie Hakim has been working on. Doctors and lawyers are benefitting, but not employees. We must do this now as maybe it can save on some of the fare increases.

Board Member Schwartz stated that he feels MTA Chief Financial Officer Foran is doing a great job. He is not suggesting at all that Mr. Foran and his staff are not forthcoming. Mr. Schwartz stated that as Chair of the Finance Committee, he is making a commitment to be more proactive in seeking out the information the Board wants.

Board Member Weisbrod stated that he, too, wants to make clear that Mr. Foran and his staff do an excellent job. There are a lot of issues where the Board should be providing input. To do this in 3-1/2 weeks is not the best way. Since this is the last time the public will hear the budget specifics until the vote in 3-1/2 weeks, he asked if Mr. Foran could identify what the “one-shots” are.

MTA Chief Financial Officer Foran responded in the affirmative, adding that we will show you in the book where they are.

Board Member Weisbrod expressed concern that this is the last time the public will hear about it, so he asked for an explanation of what the “one-shots” are.

MTA Chief Financial Officer Foran responded, stating that we have a \$160 million reserve and we are using it to balance the budget – this is a “one-shot.” We have \$65 million of pay-as-you-go capital. We are using it right now, so we will need to sell \$65 million more of debt. With respect to vacancies at MTA, none are being filled except for operational and safety needs. We are also cutting expenditures on trips, travel, and memberships, which will result in cutting costs. We are taking \$27 million in revenue over expenses for 2017 and rolling it over. With respect to the fuel hedge, there are excess dollars being taken in. All of this is being done to balance the budget in 2018 and 2019.

Board Member Trottenberg asked where delaying Select Bus Service (“SBS”) on 96th Street in Manhattan is reflected in the budget book.

Board Member Schwartz responded, stating that there are two types of one-shots: budget balancing and meeting savings targets. We don’t always know all of the specifics on each, but we can prepare a list and have a discussion of the specifics.

Board Member Trottenberg asked how we can have that discussion before the next Board meeting and how can we have it so that the public can be informed.

Board Member Schwartz stated that we will let everyone know where to look in for this information in the budget book.

MTA Chief Financial Officer Foran stated that Volume 2, Part V of the budget materials, from page 309 to page 350, lists every single thing that MTA is doing to balance the budget. A discussion of adjustments to SBS service appears at page 340.

Board Member Trottenberg stated that the Board has received hundreds and hundreds of pages of budget documents and is being asked to vote on it next month. The Board, the press or the public will not have an opportunity to come back and debate the budget before the vote.

Acting Chairman Ferrer asked if anyone had an objection to calling a special meeting of the Finance Committee, before the next Board meeting, to discuss these issues.

Board Members Weisbrod and Schwartz each stated that this was a very constructive suggestion.

Board Member Mitchell Pally stated that while he appreciated the extra meeting, he felt very strongly that the tough choices, such as delaying SBS service, are important to people who are not in the room today. They should have input. Mr. Pally stated that he needed to have input from other stakeholders, including the Governor and the Legislature. The amount of money they provide us helps us set those priorities or not. He added that this is why he will vote in favor of the resolution to start the process, but he does not want anyone to assume that such a vote represents a statement by him or any other Board Member that what may or may not happen in December, and what may or may not happen in January is a fait accompli. He supports the call by Board Member Schwartz for more options; perhaps the staff summary should have a range calling for a fare and toll increase between zero and X percent. That would be his recommendation.

Board Member Albert noted in the case of M96 Select Bus Service, Manhattan Community Board Seven asked for a presentation on M79 Select Bus Service and how well it was doing, how many riders it has added, and how it has helped clear the roadway by virtue of the special bus lane. He stated that getting more people on the system and getting better bus ridership is a "win-win." He also stated that deferral of the M96 SBS may hurt us, given the non-successful M96 local bus.

Board Member Brown stated that the folks in Albany and at City Hall who give us money need to understand that we cannot tweak our way out of this financial situation.

7. Presentation on 2019 Fare and Toll Proposals

MTA Managing Director Veronique Hakim introduced Monica Murray, MTA Deputy Chief Compliance Officer, to give a presentation on the 2019 fare and toll proposals. Ms. Hakim noted that the proposals represent the high end; we can do anything below that or mix and match elements from the proposals.

Ms. Murray presented a series of PowerPoint slides on these proposals, including slides on:

- NYCT Fare Product and Ridership, 2017;
- New York City Transit Options;
- Railroad Fare Structure and Ridership;
- Key Elements of Commuter Rail Fare Proposals;
- B&T Toll Structure Overview; and
- NYCSC E-Z Pass Customers: 4% vs. 8% increase.

Board Member Schwartz stated that we receive federal funding. He asked whether it would be legal to have different rates for New York State residents and non-residents.

MTA General Counsel Quigley responded, stating that we will investigate that and get back to the Board.

Board Member Jones stated that 41% of users use bonus MetroCards. Does this mean that low income riders don't use them?

MTA Deputy Chief Compliance Officer Murray responded, stating that they tend to buy 7-day passes.

MTA Chief Financial Officer Foran stated that he isn't sure we can say 41% of low income users use bonus cards. We will look into it.

Board Member Albert asked whether it was listed anywhere how much the respective fare and toll options will bring in to the MTA.

MTA Chief Financial Officer Foran responded, stating that they were designed to bring in the same amount of money.

Board Member Albert asked where it is spelled out what revenue these options will bring in.

MTA chief Financial Officer Foran responded, stating that it amounted to 4% or roughly \$308 million on an annualized basis.

Board Member Pally asked how many railroad commuters paid more than \$500 for commutation tickets.

MTA Chief Financial Officer Foran responded, stating it was under 1,000 for MNR, and under 100 for LIRR.

Board Member Pally asked why MTA provides a greater E-Z Pass discount for truckers, as opposed to private cars.

Bridges and Tunnels President Cedrick T. Fulton responded, stating that he could not say for certain what the policy reason is.

MTA Chief Financial Officer Foran responded, stating that we need to look into that.

Board Member Pally stated that this seemed backwards to him. Truck tolls are not paid by individuals, but by the trucking companies.

Board Member Vanterpool noted that there is a 4.8% increase for E-Z Pass. Has this been conveyed to the State Budget Director to see if the State is on board?

MTA Chief Financial Officer Foran responded, stating that the State budget office has seen the proposal.

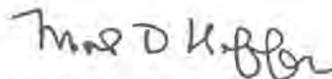
Acting Chairman Ferrer then asked for a vote on Board authorization to proceed with the steps necessary to consider proposals for fare and toll changes, including the issuance of public notices and the holding of public hearings to elicit public comment on such proposals.

Upon motion duly made and seconded, the Board approved the foregoing authorization, 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.

8. Adjournment

Acting Chairman Ferrer then asked for a motion to adjourn the meeting. Upon motion duly made and seconded, the Board voted to adjourn the meeting at 11:36 A.M.

Respectfully submitted,



Mark D. Hoffer,
Secretary

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

BOARD MINUTES

November 15, 2018

Minutes of the Regular Meeting
Triborough Bridge and Tunnel Authority
November 15, 2018

Meeting Held at
2 Broadway, 20th Floor
New York, New York 10004

9:00 a.m.

The following members were present:

Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod

The following alternate non-voting members were also present:

Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.

The following members were absent:

Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

Patrick Foye, MTA President, Veronique Hakim, Managing Director, Helene Fromm, Chief of Staff, Janno Lieber, MTA Chief Development Officer, Robert Foran, Chief Financial Officer, Thomas J. Quigley, General Counsel, Andy Byford, President, New York City Transit Authority, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick T. Fulton, President, Triborough Bridge and Tunnel Authority, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, and Timothy Ellis, Chief Government and Community Relations Officer 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 fourteen (14) 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 asking for a moment of silence for Bill Wheeler, MTA Director of Strategic Planning, who passed away unexpectedly after serving more than 30 years at the MTA. Acting Chairman Ferrer acknowledged that this is a challenging time for the MTA but he recognized that daily performance is improving and that Board Members have led in making the system more accessible, developing cost containment initiatives, and reforming procurement. He recognized that this is due in no small part to former MTA Chairman Joseph Lhota’s vision and his drive to change the culture at the MTA.

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 Minutes of Regular Meeting October 24, 2018

Upon a motion duly made and seconded, the minutes of the Regular Board Meeting held on October 24, 2018 were approved.

4. Committee on MTA Bridges and Tunnels Operations

Procurements

Commissioner Moerdler stated that there are four (4) procurements totaling \$61.7 million.

Non-Competitive Procurements

Commissioner Moerdler stated that there are no non-competitive procurements.

Competitive Procurements

Commissioner Pally stated that there are four (4) competitive procurements totaling \$61.7 million.

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

E-J Electric Installation Co.	Contract No. QM-81 TBTA is seeking Board approval under the All-Agency General Procurement Guidelines to award a competitively solicited public work contract for design-build services for upgrades at the Queens Midtown Tunnel and Hugh L. Carey Tunnel control rooms as well as the construction of backup control rooms.	\$28,822,961.00
E-J Electric Installation Co.	Contract No. HC-30/QM-91 TBTA is seeking Board approval under the	\$17,700,000.00

All-Agency General Procurement Guidelines to award a competitively solicited public work contract for design-build services for installation of fire alarm and smoke detector systems at the Hugh L. Carey Tunnel and Queens Midtown Tunnel.

Personal Service Contracts

Greenman-Pedersen, Inc. (GPI)	Contract No. PSC-18-3016 TBTA is seeking Board approval under the All-Agency Service Contract Procurement Guidelines to award a personal service contract for Construction Administration and Inspection Services for Project VN-32/VN-49, Miscellaneous Steel Repairs, Cleaning (Surface Preparation) and Overcoat Painting at the Verrazzano-Narrows Bridge.	\$8,648,727.96
BTMI Engineering, P.C./ CHA Consulting, Inc. a Joint Venture	Contract No. PSC-18-3010X TBTA is seeking Board approval under the All-Agency Service Procurement Guidelines to award a personal service contract for Design-Build Oversight for Projects HC-07, HC-64, HC-30/QM-91 and QM-81.	\$6,570,079.00

Ratifications

Commissioner Moerdler stated that there are no ratifications.

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

5. MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022

MTA Chief Financial Officer Robert Foran presented and discussed the MTA’s 2019 Final Proposed Budget and November Financial Plan for 2019 through 2022. Deputy Chief Compliance Officer and Corporate Secretary Monica A. Murray presented and discussed the fare and toll increase proposals.

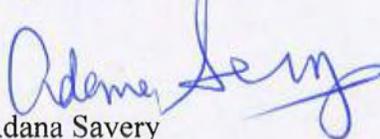
Upon a motion duly made and seconded, the Board authorized the MTA agencies to proceed with the steps necessary to consider proposals for fare and toll changes, including the issuance of public notices and the holding of public hearings to elicit public comment on such proposals.

The details of Mr. Foran’s and Ms. Murray’s presentations, and the discussions with regard to same, are contained in the minutes of the meeting of the Board of the Metropolitan Transportation Authority.

6. Adjournment

Upon a motion duly made and seconded, the Board unanimously voted to adjourn the meeting at 11:36 a.m.

Respectfully submitted,



Adana Savery
Assistant Secretary

**Regular Board Meeting
MTA Capital Construction Company
2 Broadway
New York, NY 10004
Wednesday, November 15, 2018
9:00 AM**

The following members were present:

Hon. Fernando Ferrer, Acting Chairman
Hon. Andrew Albert
Hon. Norman E. Brown
Hon. David Jones
Hon. Susan Metzger
Hon. Charles G. Moerdler
Hon. Mitchell H. Pally
Hon. Scott Rechler
Hon. Lawrence Schwartz
Hon. Polly Trottenberg
Hon. Veronica Vanterpool
Hon. Carl Weisbrod

The following alternate non-voting members were also present:

Hon. Ira Greenberg
Hon. Vincent Tessitore, Jr.

The following members were absent:

Hon. Andrew Saul
Hon. Peter Ward
Hon. Carl V. Wortendyke
Hon. Neal Zuckerman

Patrick Foye, President, MTA, Veronique Hakim, Managing Director, MTA, Helene Fromm, Chief of Staff, MTA, Janno Lieber, Chief Development Officer, MTA and President MTACC, Robert Foran, Chief Financial Officer, MTA, Thomas J. Quigley, General Counsel, MTA, Andrew Byford, President, NYCT, Phillip Eng, President, Long Island Rail Road, Susan Doering, Executive Vice President, Metro-North Railroad, Cedrick Fulton, President, TBTA, Craig Cipriano, Executive Vice President, Business Strategies and Operations, MTA Bus Operations, Monica Murray, Deputy Chief Compliance Office, MTA, Timothy Ellis, Acting Chief, Government and Community Relations, MTA, Evan Eisland, Executive Vice President, General Counsel and Secretary, MTACC, and David Cannon, Vice President, Chief Procurement Officer and Assistant Secretary, MTACC also attended the meeting.

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.

Unless otherwise indicated, these minutes reflect items concerning the business of the MTA Capital Construction Company. Refer to the other agencies' minutes of this date for items on the agendas of the Boards of the other agencies.

Acting Chairman Ferrer called the meeting to order.

Acting Chairman's Remarks

Acting Chairman Ferrer requested a moment of silence in memory of Bill Wheeler, Director of Special Project Development and Planning for the MTA who recently passed away.

The remainder of Acting Chairman Ferrer's remarks are contained in the minutes of the Regular Meeting of the Metropolitan Transportation Authority and in the minutes of the other agencies of this date.

Public Comment Periods

There were fourteen public speakers none of whom spoke on MTACC matters.

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

Approval of Minutes

Upon motion duly made and seconded, the Board approved the minutes of the Regular Board Meeting of the Metropolitan Transportation Authority and the MTA Capital Construction Company held on October 24, 2018.

Finance Committee

Real Estate

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

An exclusive license for Licensee to design, build, operate, maintain and sublicense a wireless communication access (Cellular) system for the operational benefit of MTA and LIRR and its customers, along with a Wi-Fi data network, and a dark fiber network (collectively, the "Project"), at no expense to the MTA or LIRR at the MTACC-ESA/LIRR's East Side Access station, concourse and tunnels in Grand Central Terminal (the "ESA" Facility) for a term of fifteen years with two subsequent five year renewal options.

A copy of the 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.

Long Island Rail Road Committee

Procurement

Upon motion duly made and seconded, the Board approved (Board Member Moerdler abstained) the following competitive item:

A modification to the Harold Structures Part I Contract (CH053) for the East Side Access Project to compensate the Contractor for compensable delays and associated impact costs during the period from the February 18, 2015 through February 29, 2016 in the amount of \$2,043,800.

A copy of the Resolution and the 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 ratified the following items:

1. A modification to the Systems Facility Package No. 1 Contract (CS179) for the East Side Access Project to address errors and deficiencies in the Tunnel SCADA System design and the hardware specifications for associated Field Network devices in the amount of \$2,815,865.

2. A unilateral modification to the Track A Approach Structure Contract (CH061A) for the East Side Access Project for the additional costs to recover and accelerate the Contract to ensure that critical work for the Track A Approach Structure was completed by June 14, 2018 in the amount of \$1,424,301.

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

Other MTA Business

CFO Presentation on MTA 2019 Final Proposed Budget and November Financial Plan 2019-2022

Robert Foran, MTA's Chief Financial Officer ("CFO") presented the MTA's 2019 Final Proposed Budget and November Financial Plan for 2019 - 2022. A discussion among the Board members, and Mr. Foran followed.

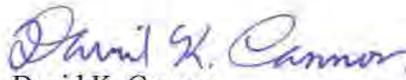
The remarks of the Board members and Mr. Foran are more fully noted in the minutes of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

A copy of the of the 2019 Final Proposed Budget and the 2019 – 2022 Financial Plan are filed with the records of the Regular Meeting of the Board of the Metropolitan Transportation Authority held on this date.

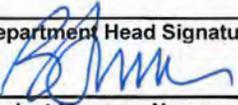
Adjournment

Upon motion duly made and seconded, the Board voted to adjourn the public meeting at 11:36 a.m.

Respectfully submitted,


David K. Cannon
Assistant Secretary

Staff Summary

Subject Authorization to Issue New Money Transportation Revenue Bonds and Bond Anticipation Notes, Dedicated Tax Fund Bond Anticipation Notes, Dedicated Tax Fund Bonds, and Triborough Bridge and Tunnel Authority General Revenue and Subordinate Revenue Bonds and Bond Anticipation Notes
Department Finance
Department Head Name Robert E. Foran, Chief Financial Officer
Department Head Signature 
Project Manager Name Patrick J. McCoy, Director, Finance 

Date December 12, 2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Comm.	12/10	X		
2	Board	12/12	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal 	2	Chief of Staff 

PURPOSE:

The MTA Finance Department is seeking MTA and TBTA Board authorization and approval of the necessary documentation to issue new money bond anticipation notes (BANs) and bonds to finance up to \$3.0 billion of capital projects set forth in approved transit and commuter capital programs, and to issue up to \$350 million of new money bonds and BANs to finance capital projects set forth in approved MTA Bridges & Tunnels capital programs. The MTA Finance Department will report to the Board on the status of the proposed debt issuance schedule, the results of each note and bond issue and planned note and bond issues.

DISCUSSION:

MTA and TBTA Board approval is sought for the following resolutions, documents and activities in connection with the issuance of bonds and/or bond anticipation notes in an aggregate principal amount necessary to finance up to \$3.35 billion of capital projects of the transit and commuter systems and MTA Bridges & Tunnels set forth in approved capital programs:

- Separate Supplemental Resolutions authorizing Transportation Revenue Bonds (TRB Bonds) and Transportation Revenue BANs (TRB BANs), including providing for the following:
 - The issuance of TRB BANs and TRB Bonds under the General Resolution Authorizing Transportation Revenue Obligations (the TRB Resolution), in one or more series from time to time, in an amount sufficient to produce net proceeds of up to \$3.0 billion (reduced by Dedicated Tax Fund (DTF) Bonds or DTF BANs) necessary to finance transit or commuter capital programs, plus applicable issuance costs and any original issue discount,
 - Issuance of such TRB BANs or TRB Bonds in competitive or negotiated public sales, by direct placement or in connection with a revolving credit or other loan agreement, and
 - The issuance of TRB Bonds under the TRB Resolution in an amount sufficient to (i) retire the TRB BANs or DTF BANs when due and (ii) to finance transit or commuter capital programs, in each case plus accrued interest and applicable issuance costs and any original issue discount.

- Separate Supplemental Resolutions authorizing DTF Bonds and DTF BANs, including providing for the following:

- o The issuance of DTF BANs under the Dedicated Tax Fund Obligation Resolution (the DTF Resolution), in one or more series from time to time, in an amount sufficient to produce net proceeds of up to \$3.0 billion (reduced by TRB Bonds or TRB BANs) necessary to finance transit or commuter capital programs, plus applicable issuance costs and any original issue discount,
 - o Issuance of such DTF BANs or DTF Bonds in competitive or negotiated public sales, by direct placement or in connection with a revolving credit or other loan agreement, and
 - o The issuance of DTF Bonds under the DTF Resolution in an amount sufficient to (i) retire the DTF BANs or TRB BANs when due and (ii) to finance transit or commuter capital programs, in each case plus accrued interest and applicable issuance costs and any original issue discount.
- Multiple Series 2019 Supplemental Resolution authorizing Triborough Bridge and Tunnel Authority General Revenue Obligations, including providing for the issuance of the following:
 - o An aggregate principal amount of up to \$350 million of Triborough Bridge and Tunnel Authority General Revenue Obligations (reduced by any bonds issued under the Triborough Bridge and Tunnel Authority Subordinate Resolution) in one or more series necessary to finance capital projects of TBTA as set forth in existing MTA Bridges & Tunnels capital programs, plus applicable issuance costs and any original issue discount, and
 - o Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the General Revenue Obligations.
 - Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution authorizing Triborough Bridge and Tunnel Authority Subordinate Revenue Obligations, including providing for the issuance of the following:
 - o An aggregate principal amount of up to \$350 million of Triborough Bridge and Tunnel Authority Subordinate Revenue Obligations (reduced by any bonds issued under the Triborough Bridge and Tunnel Authority General Revenue Bond Resolution) in one or more series necessary to finance capital projects of TBTA, as set forth in existing MTA Bridges & Tunnels capital programs plus applicable issuance costs and any original issue discount, and
 - o Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Subordinate Revenue Obligations.
 - A Supplemental Resolution authorizing Triborough Bridge and Tunnel Authority General Revenue BANs (TBTA BANs), including providing for the following:
 - o The issuance of TBTA BANs under the Triborough Bridge and Tunnel Authority General Revenue Bond Resolution (the Resolution), in one or more series from time to time, in an amount sufficient to produce net proceeds of up to \$350 million necessary to finance capital projects of MTA Bridges & Tunnels, plus applicable issuance costs and any original issue discount,
 - o Issuance of such TBTA BANs in competitive or negotiated public sales, by direct placement or in connection with a revolving credit or other loan agreement, and
 - o The issuance of TBTA Bonds in an amount sufficient to (i) retire the TBTA BANs when due and (ii) to finance capital projects of MTA Bridges & Tunnels, in each case plus accrued interest and applicable issuance costs and any original issue discount.

With respect to the above-referenced financial transactions, MTA and TBTA Board approval, as applicable, is sought:

(a) delegating authority to the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of MTA to award the obligations either pursuant to competitive bid or to members (or entities related to such firms) of the Board-approved MTA underwriting syndicate and to execute and/or deliver in each case, where appropriate:

- o Notices of Sale and bid forms,
- o Purchase Agreements with underwriters,
- o Direct Purchase Agreements,
- o Revolving Credit Agreements or other Loan Agreements,
- o Official Statements and other disclosure documents,
- o Continuing Disclosure Agreements and related filings,

- o Remarketing Agreements and Firm Remarketing Agreements,
- o Dealer and Broker/Dealer Agreements,
- o Issuing and Paying Agent and Tender Agent Agreements,
- o Credit Facilities and related Parity Reimbursement Obligations and Parity Debt,
- o Related Subordinated Contract Obligations, and
- o Investment Agreements.

Any such documents will be in substantially the form of any document previously entered into by MTA or TBTA for previous issues, with such changes as approved by any one or more of the foregoing officers.

(b) authorizing such officers to terminate, amend, supplement, replace or extend any such documents, including Credit Facilities (and related Parity Reimbursement Obligations and Parity Debt), as they shall deem advisable, and to take such other actions as may be necessary or desirable to effectuate the issuance of the new money bonds and BANs and other financial transactions set forth above, on behalf of MTA, TBTA or other MTA subsidiaries and affiliates.

ALTERNATIVES:

There are no viable funding alternatives to the bond funded portion of existing approved capital programs.

RECOMMENDATION:

The MTA and TBTA Boards approve the above-referenced resolutions and documents and all other actions described above, including the execution and delivery of such other documents, and the taking of all other actions, from time to time deemed necessary or desirable by such officers in connection therewith. The authorization to issue the bonds and bond anticipation notes and take other related actions hereunder shall continue in effect without any further action by the MTA and TBTA Boards until the adoption by the MTA and TBTA Boards of subsequent bond supplemental resolutions relating to 2020 note and bond issues (except that bonds may still be issued to refinance 2019 BANs outstanding at any time) unless (a) the MTA and TBTA Boards shall have confirmed the effectiveness of this authorization for an additional period, or (b) the MTA and TBTA Boards shall have modified or repealed this authorization.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2019
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

**MULTIPLE SERIES 2019
TRANSPORTATION REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This Multiple Series 2019 Transportation Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations”, as heretofore supplemented (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Series 2019 Bonds” shall mean the Transportation Revenue Bonds authorized by Article II of this Supplemental Resolution, subject to redesignation as hereinafter provided.

“Series 2019 Notes” shall mean the Transportation Revenue Bond Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to a Supplemental Resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2019 BONDS

Section 2.01. Principal Amount, Designation and Series. Pursuant to the Resolution and in order to finance Capital Costs, Transportation Revenue Bonds, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Bonds), the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Bonds), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2019 Bonds issued to finance Capital Costs shall not exceed \$3.0 billion at any one time Outstanding reduced by the sum of (1) the amount of Series 2019 Notes issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, (2) the amount of bonds (the “DTF Series 2019 Bonds”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018, and (3) the amount of bond anticipation notes (the “DTF Series 2019 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any Series 2019 Bonds, Series 2019 Notes, DTF Series 2019 Notes or DTF Series 2019 Bonds issued to refinance Series 2019 Notes or DTF Series 2019 Notes).

Series 2019 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title “Transportation Revenue Bonds, Series 2019” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue the Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2020 new money financings,

provided, however, the authorization to issue the Series 2019 Bonds to refinance the Series 2019 Notes shall continue in effect until all of such Series 2019 Notes have been refinanced by Series 2019 Bonds.

Section 2.02. Purposes. The purposes for which the Series 2019 Bonds are issued shall be set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, and (ii) the payment of principal of and redemption premium, if any, and interest on Outstanding Series 2019 Notes.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Series 2019 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Series 2019 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Bonds shall be numbered and lettered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Bonds shall be payable to the registered owner of each Series 2019 Bond when due upon presentation of such Series 2019 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Series 2019 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount

thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2019 Bonds.

Section 2.08. Redemption Prices and Terms. The Series 2019 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2019 Bonds, if set forth in the Certificate of Determination, the taxable Series 2019 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Bonds:

(a) to determine whether and when to issue any Series 2019 Bonds constituting Capital Cost Obligations, the amount of the Series 2019 Bonds to be applied to finance Capital Costs or other uses as provided in Section 2.02 hereof, and the amount of the proceeds of the Series 2019 Bonds estimated to be necessary to pay the Costs of Issuance of the Series 2019 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2019 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2019 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2019 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2019 Bonds shall be dated and the interest rate or rates of the Series 2019 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2019 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2019 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a

maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Bonds; provided, however, that if the Series 2019 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2019 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2019 Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, the purchase price for the Series 2019 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that, in the case of Series 2019 Bonds sold on a negotiated basis, the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Bonds;

(h) to take all actions required for the Series 2019 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2019 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2019 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2019 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to

determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2019 Bonds, and to make any changes in connection therewith;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Bonds; if any Series 2019 Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more

subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10. Sale of Series 2019 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Bonds; (ii) to sell and award all or any portion of the Series 2019 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2019 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a “Purchase Agreement”). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such

competitive sale of the Series 2019 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any direct or private placement of the Series 2019 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2019 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2019 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2019 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement

or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of the Series 2019 Bonds and for implementing the terms of the Series 2019 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Series 2019 Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2019 Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or the related Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by any Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A., shall be the Trustee under the Resolution and the Paying Agent for the Series 2019 Bonds.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2019 BOND PROCEEDS

Section 3.01. Disposition and Allocation of Series 2019 Bond Proceeds. Any proceeds of the sale of the Series 2019 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Series 2019 Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination, as follows:

1. such proceeds shall be (i) deposited in the Series 2019 Bond Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Capital Costs or the payment of principal of and redemption premium, if any, and interest on the Series 2019 Notes or (ii) otherwise applied to the payment of such amounts; and

2. the balance of such proceeds shall be (i) deposited in the Series 2019 Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Section 3.02. Unless otherwise provided in the related Certificate of Determination, the accrued interest and capitalized interest, if any, received on the sale of the Series 2019 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Series 2019 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any “Arbitrage and Use of Proceeds Certificate” or “Tax Certificate” to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer’s failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Series 2019 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Series 2019 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer’s failure to observe, or refusal to comply with, the above covenant.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2019 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES
AND RELATED SUBORDINATED INDEBTEDNESS
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES AND
RELATED SUBORDINATED INDEBTEDNESS
TRANSPORTATION REVENUE BOND SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

**ARTICLE I
DEFINITIONS AND STATUTORY AUTHORITY**

SECTION 1.01. Supplemental Resolution. This Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations”, as heretofore supplemented (the “Resolution”).

SECTION 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Noteholder”, “Holder” or “Holder of Notes”, or any similar term, means any person who shall be the registered owner of any Outstanding Series 2019 Note or Notes.

“Notice of Sale” shall mean the form of Notice of Sale to be distributed with the Preliminary Official Statement, hereinafter defined, and published in the event of a competitive sale of the Series 2019 Notes.

“Series 2019 Bonds” shall mean the Transportation Revenue Bonds, Series 2019, authorized by Article II of the Resolution and pursuant to a resolution of the Issuer adopted as of the date that this resolution is adopted.

“Series 2019 Notes” shall mean the Transportation Revenue Bond Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to this Supplemental Resolution, subject to redesignation as hereinafter provided.

SECTION 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II AUTHORIZATION OF SERIES 2019 NOTES

SECTION 2.01. Principal Amount, Designation and Series. Pursuant to the Resolution, Transportation Revenue Bond Anticipation Notes constituting Obligation Anticipation Notes under the Resolution, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Notes), the amount to be deposited in the Series 2019 Note Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Notes), shall not exceed \$3.0 billion at any one time Outstanding reduced by the sum of (1) the amount of Series 2019 Bonds issued under the Metropolitan Transportation Authority Multiple Series 2019 Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, (2) the amount of bonds (the “DTF Series 2019 Bonds”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018, and (3) the amount of bond anticipation notes (the “DTF Series 2019 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any Series 2019 Notes, Series 2019 Bonds, DTF Series 2019 Bonds or DTF Series 2019 Notes issued to refinance Series 2019 Notes or DTF Series 2019 Notes). The Series 2019 Notes may be issued in the form of a loan agreement, line of credit, revolving credit agreement or similar facility (each, a “Loan Facility”). For all purposes of this Section such Transportation Revenue Bond Anticipation Notes shall be designated as, and shall be distinguished from the Transportation Revenue Bond Anticipation Notes of all other Series by the title, “Transportation Revenue Bond Anticipation Notes, Series 2019”, with such further or different designations as may be provided in any Certificate of Determination.

The authority to issue Obligation Anticipation Notes and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization

to issue the Series 2019 Notes shall continue in effect until the adoption by the Issuer's Board of a subsequent new money note issuance supplemental resolution relating to 2020 new money financings, provided, however, the authorization to issue the Series 2019 Bonds to refinance the Series 2019 Notes shall continue in effect until all of such Series 2019 Notes have been refinanced by Series 2019 Bonds.

SECTION 2.02. Use of Proceeds. The proceeds of the Series 2019 Notes shall be used only for the purposes set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, including Costs of Issuance related to the Series 2019 Notes and (ii) the payment of the principal and interest of Outstanding Series 2019 Notes.

SECTION 2.03. Dates, Maturities, Principal Amounts and Interest; Redemption. The Series 2019 Notes shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Notes shall mature on the date or dates and in the year or years and in the principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, the Series 2019 Notes shall not be subject to redemption prior to maturity.

SECTION 2.04. Interest Payments. The Series 2019 Notes shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Notes shall be computed on the basis of twelve 30-day months and a 360-day year.

SECTION 2.05. Denominations, Numbers and Letters. Unless otherwise provided in any Certificate of Determination, the Series 2019 Notes shall be issuable in fully registered form in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Notes shall be numbered and lettered as provided in the related Certificate of Determination.

SECTION 2.06. Places of Payment and Paying Agents. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Notes shall be payable to the registered owner of each Series 2019 Note when due upon presentation of such Series 2019 Note at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Notes will be paid by check or draft mailed on the interest payment date by the Paying Agent to the registered owner at his address as it appears on the registration books or, at the option of any Holder of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Notes, by wire transfer in immediately available funds on each interest payment date to such Holder thereof upon written notice from such Holder to the Trustee, at such address as the Trustee may from time to time notify such Holder, containing the wire transfer address (which shall be in the continental United States) to which such Holder wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

SECTION 2.07. Sources of Payment

1. The principal of and interest on the Series 2019 Notes may be payable solely from (i) the proceeds of any other Series 2019 Notes, (ii) the proceeds of the Series 2019 Bonds, and (iii) the proceeds of notes or other evidences of indebtedness or any other amounts (which other amounts are not pledged under the Resolution), in each case if and to the extent such amounts may lawfully be used to make such payments. The interest on the Series 2019 Notes may also be payable from amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness.

2. There are hereby pledged to the payment of principal and interest on the Series 2019 Notes (i) the proceeds of other Series 2019 Notes issued to refinance such Series 2019 Notes, and (ii) the proceeds of the Series 2019 Bonds issued to refinance such Series 2019 Notes, and such pledge has priority over any other pledge thereof created by the Resolution, including Section 501. There is also hereby pledged to the payment of interest on the Series 2019 Notes amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness in accordance with and subject to the limitations contained in Section 506 of the Resolution. Proceeds and amounts described in clause (iii) of Section 2.07(1) hereof may be pledged to the payment of principal and interest on the Series 2019 Notes to the extent set forth in a Certificate of Determination.

SECTION 2.08. Delegation to an Authorized Officer.

1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Notes:

(a) to determine whether and when to issue any Series 2019 Notes, the amount of the Series 2019 Notes to be applied to finance Capital Costs or other uses as provided in Section 2.02 of this Supplemental Resolution and the amount of the proceeds of the Series 2019 Notes estimated to be necessary to pay the Costs of Issuance of the Series 2019 Notes;

(b) to determine the purpose or purposes for which the Series 2019 Notes are being issued, which shall be one or more of the purposes set forth in Section 2.02 hereof;

(c) to determine the principal amount of the Series 2019 Notes to be issued, which principal amount shall not exceed the amount described in Section 2.01 of this Supplemental Resolution, and whether such Series 2019 Notes shall be issued in one or more Series or subseries;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Notes; provided that the Series 2019 Notes shall mature no later than five years after the date of issuance of such Series 2019 Notes;

(e) to determine the date or dates which the Series 2019 Notes shall be dated and the interest rate or rates of the Series 2019 Notes, provided that the true interest cost (as calculated by the officers of the Issuer executing any Certificate of Determination, which calculation shall be conclusive) on the Series 2019 Notes bearing a fixed rate of

interest shall not exceed 4.00% per annum and for Series 2019 notes bearing interest at a variable interest rate shall not exceed a rate equal to SIFMA or one-month or three-month LIBOR or any short-term index generally accepted in the marketplace, in each case, plus 4.00% and any default rate or equivalent rate shall not exceed the sum of 4.00% plus either a specified prime rate or the federal funds rate;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Notes; provided, however, that if the Series 2019 Notes are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Notes) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Notes to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Notes the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine the advisability of conducting the sale of all or any portion of the Series 2019 Notes through competitive bidding or through a negotiated sale or a direct purchase transaction, and to determine the purchase price for the Series 2019 Notes to be paid by the purchasers pursuant to either a competitive bid process or by the purchasers referred to in the Purchase Agreement described in Section 2.09 of this Supplemental Resolution in the event the Series 2019 Notes are sold, in such officer's discretion, through a negotiated sale or a direct purchase transaction, which may include such original premium and original issue discount as shall be determined in the related Certificate of Determination, provided, however, that in the case of a negotiated transaction, underwriters' discount reflected in such purchase price shall not exceed \$3.50 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Notes;

(h) to determine the advisability, as compared to an unenhanced transaction, of obtaining municipal bond insurance or any other credit or liquidity facility, to determine and accept the terms and provisions and price thereof, to determine the items to be pledged to the Series 2019 Notes from those permitted by Section A-203 of the Resolution, and to determine such other matters as the officer executing any Certificate of Determination shall consider necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by bond insurers or the provider of any other credit or liquidity facility, if any, or required by the bond rating agencies in order to attain or maintain specific ratings on the Series 2019 Notes, or relating to the mechanism for the payment of insurance premium, credit or liquidity facility fees or direct purchase fees, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to implement an insurance policy or any other credit or liquidity facility with respect to the Series 2019 Notes, and to make any changes in connection therewith. Such changes may include, but are not limited to, the making of any additional covenants with Holders or other parties deemed necessary or appropriate by the officer executing any Certificate of Determination;

(i) to take all actions required for the Series 2019 Notes to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form letter of

representation with, or other form of document required by, DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in any Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Notes issuable in fully registered form; and

(j) to determine whether to issue all or any part of the Series 2019 Notes as Tax-Exempt Obligations or Taxable Obligations;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Notes;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine any other matters provided for herein, including the matters set forth in Sections 2.11 and 2.12 hereof.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Notes are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Notes by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Notes, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Notes; if any Series 2019 Notes shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Notes consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Notes, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the

form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein..

SECTION 2.09. Sale of Series 2019 Notes. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Notes through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Notes; (ii) to sell and award all or any portion of the Series 2019 Notes through a negotiated sale to the purchasers who are referred to in the note purchase agreement and who shall be selected from the then current list of approved underwriters; (iii) to sell and award all or any portion of the Series 2019 Notes through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement; or (iv) to issue all or any portion of the Series 2019 Notes in the form of a Loan Facility to any financial institution or institutions selected by the Authorized Officer. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Notes to the purchasers referred to in the preceding sentence in the case of a note purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a Loan Facility or a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the requirement that the Loan Facility issuer or direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Notes as may be approved by the Authorized Officer executing the note purchase, Loan Facility, continuing covenant or similar agreement (each, a “Purchase Agreement”). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Notes shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Notes on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Notes in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority’s financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize the use and distribution by said purchasers of a Preliminary Official Statement (the "Preliminary Official Statement"), in connection with the public offering of the Series 2019 Notes, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations of the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, said distribution being conclusive evidence of the approval of such changes, omissions, insertions and revisions. The Issuer authorizes any of said officers to deliver a certification to the effect that the Preliminary Official Statement, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of the Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of the Series 2019 Notes, said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Notwithstanding the preceding two paragraphs, however, each Authorized Officer may make public and authorize the use and distribution of a final Official Statement in connection with the public offering of the Series 2019 Notes meeting the requirements of the preceding two paragraphs and may deem such Official Statement final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute and deliver any and all documents and instruments and to do and cause to be done any and all acts necessary or proper for carrying out the Notice of Sale, the Purchase Agreement, the Continuing Disclosure Agreement, the terms of any municipal bond insurance or any other credit or liquidity facility, and the issuance, sale and delivery of the Series 2019 Notes, and for implementing the terms of the Series 2019 Notes and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

SECTION 2.10. Forms of Series 2019 Notes and Authentication Certificate.

The form of registered Series 2019 Notes, and the certificate of authentication, shall be of substantially the form and tenor provided in any Certificate of Determination.

SECTION 2.11. Appointment of Trustee, Paying Agent and other Agents.

There is hereby delegated to any Authorized Officer executing any Certificate of Determination the right and authority to appoint any trustee, paying agent, fiscal agent or other agent with respect to the Series 2019 Notes deemed advisable by such Authorized Officer and to determine the terms and provisions of any arrangements with any such parties.

SECTION 2.12. General Provisions.

As and to the extent provided in any Certificate of Determination, the provisions of Articles A-III, IV, A-IV, A-VII, A-IX and A-XI of the Resolution may apply equally to the Series 2019 Notes as though set forth in full herein but with each reference to Bonds being a reference to Series 2019 Notes, except as affected by the terms hereof and the procedures of the Securities Depository; provided that the Authorized Officer executing any Certificate of Determination may, in the alternative, set forth in any Certificate of Determination provisions relating to any such matters as deemed necessary or appropriate by such Authorized Officer.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2019 NOTE PROCEEDS

SECTION 3.01. Disposition of Series 2019 Note Proceeds. Except as otherwise provided in any Certificate of Determination, the proceeds of the sale of the Series 2019 Notes shall be deposited in the Series 2019 Note Proceeds Account which is hereby established in the Proceeds Fund and applied pursuant to the related Certificate of Determination to the payment of Capital Costs, including any Costs of Issuance and accrued interest, and the payment of principal of and interest on Outstanding Series 2019 Notes.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

SECTION 4.01. Tax Covenants Relating to the Series 2019 Notes. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Notes issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Notes issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Holders of the Series 2019 Notes, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Bondholders or the Trustee under Section 702 of the Resolution (as though such

provisions related to Series 2019 Notes rather than Bonds), and (b) neither the Holders of the Notes of any Series (other than the Owners of the Series 2019 Notes or the Trustee acting on their behalf) nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to Noteholders under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

SECTION 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in this Supplemental Resolution, all or less than all Outstanding Series 2019 Notes issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of this Supplemental Resolution, the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in this Supplemental Resolution unless (i) the Issuer has confirmed in writing that the Holders of the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Notes issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2019
DEDICATED TAX FUND BOND SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

**MULTIPLE SERIES 2019
DEDICATED TAX FUND REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

SECTION 1.01. Supplemental Resolution. This Multiple Series 2019 Dedicated Tax Fund Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “Dedicated Tax Fund Obligation Resolution”, as heretofore supplemented (the “Resolution”).

SECTION 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Series 2019 Bonds” shall mean the Dedicated Tax Fund Bonds, Series 2019, authorized by Article II of this Supplemental Resolution, subject to redesignation as hereinafter provided.

“Series 2019 Notes” shall mean the Dedicated Tax Fund Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to a Supplemental Resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

SECTION 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2019 BONDS

SECTION 2.01. Principal Amount, Designation and Series. Pursuant to the Resolution and in order to finance Capital Costs, Dedicated Tax Fund Bonds, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Bonds), the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Bonds), shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2019 Bonds issued to finance Capital Costs shall not exceed \$3.0 billion at any one time Outstanding reduced by the sum of (1) the amount of bond anticipation notes (the “TRB Series 2019 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, (2) the amount of bonds (the “TRB Series 2019 Bonds”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, and (3) the amount of bond anticipation notes (the “Series 2019 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any TRB Series 2019 Notes, Series 2019 Notes, Series 2019 Bonds or TRB Series 2019 Bonds issued to refinance Series 2019 Notes or TRB Series 2019 Notes).

Series 2019 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title “Dedicated Tax Fund Bonds, Series 2019” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue the Bonds and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent

new money bond issuance supplemental resolution relating to 2020 new money financings, provided, however, the authorization to issue the Series 2019 Bonds to refinance the TRB Series 2019 Notes and the Series 2019 Notes shall continue in effect until all of such TRB Series 2019 Notes and Series 2019 Notes have been refinanced by TRB Series 2019 Bonds and/or Series 2019 Bonds.

SECTION 2.02. Purposes. The purposes for which the Series 2019 Bonds are issued shall be set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, and (ii) the payment of principal of and redemption premium, if any, and interest on Outstanding Series 2019 Notes or the DTF Series 2019 Notes.

SECTION 2.03. Dates, Maturities, Principal Amounts and Interest. The Series 2019 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

SECTION 2.04. Interest Payments. The Series 2019 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

SECTION 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Bonds shall be numbered and lettered as provided in the related Certificate of Determination.

SECTION 2.06. Places of Payment and Paying Agents. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Bonds shall be payable to the registered owner of each Series 2019 Bond when due upon presentation of such Series 2019 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

SECTION 2.07. Sinking Fund Installments. The Series 2019 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2019 Bonds.

SECTION 2.08. Redemption Prices and Terms. The Series 2019 Bonds may also be subject to **redemption** prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2019 Bonds, if set forth in the Certificate of Determination, the taxable Series 2019 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

SECTION 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Bonds:

(a) to determine whether and when to issue any Series 2019 Bonds constituting Capital Cost Obligations, the amount of the Series 2019 Bonds to be applied to finance Capital Costs or other uses as provided in Section 2.02 hereof, and the amount of the proceeds of the Series 2019 Bonds estimated to be necessary to pay the Costs of Issuance of the Series 2019 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2019 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2019 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2019 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2019 Bonds shall be dated and the interest rate or rates of the Series 2019 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2019 Bonds issued as fixed rate

Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2019 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Bonds; provided, however, that if the Series 2019 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2019 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2019 Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, the purchase price for the Series 2019 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that, in the case of Series 2019 Bonds sold on a negotiated basis, the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Bonds;

(h) to take all actions required for the Series 2019 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2019 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2019 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2019 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding agents or any other agents or parties to ancillary arrangements

and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2019 Bonds, and to make any changes in connection therewith;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm

remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Bonds; if any Series 2019 Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

SECTION 2.10. Sale of Series 2019 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Bonds; (ii) to sell and award all or any portion of the Series 2019 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2019 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority’s financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the “Preliminary Official Statement”) in connection with each public offering or any direct or private placement of the Series 2019 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the “Official Statement”) in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2019 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2019 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2019 Bonds

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, the Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of the Series 2019 Bonds and for implementing the terms of the Series 2019 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

SECTION 2.11. Forms of Series 2019 Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2019 Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

SECTION 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by any Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A., shall be the Trustee under the Resolution and the Paying Agent for the Series 2019 Bonds.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2019 BOND PROCEEDS

SECTION 3.01. Disposition and Allocation of Series 2019 Bond Proceeds. Any proceeds of the sale of the Series 2019 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Series 2019 Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination, as follows:

1. such proceeds shall be (i) deposited in the Series 2019 Bond Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Capital Costs or the payment of principal of and redemption premium, if any, and interest on the Series 2019 Notes or (ii) otherwise applied to the payment of such amounts; and
2. the balance of such proceeds shall be (i) deposited in the Series 2019 Costs of Issuance Account, which is hereby established in the Proceeds Fund for each

such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

SECTION 3.02. Unless otherwise provided in the related Certificate of Determination, the accrued interest and capitalized interest, if any, received on the sale of the Series 2019 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

SECTION 4.01. Tax Covenants Relating to the Series 2019 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any “Arbitrage and Use of Proceeds Certificate” or “Tax Certificate” to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer’s failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Series 2019 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Series 2019 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer’s failure to observe, or refusal to comply with, the above covenant.

SECTION 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2019 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES
AND RELATED SUBORDINATED INDEBTEDNESS
DEDICATED TAX FUND BOND SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES AND
RELATED SUBORDINATED INDEBTEDNESS
DEDICATED TAX FUND BOND SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Metropolitan Transportation Authority (the “Issuer”), as follows:

**ARTICLE I
DEFINITIONS AND STATUTORY AUTHORITY**

SECTION 1.01. Supplemental Resolution. This Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Dedicated Tax Fund Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “Dedicated Tax Fund Obligation Resolution”, as heretofore supplemented (the “Resolution”).

SECTION 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Noteholder”, “Holder” or “Holder of Notes”, or any similar term, means any person who shall be the registered owner of any Outstanding Series 2019 Note or Notes.

“Notice of Sale” shall mean the form of Notice of Sale to be distributed with the Preliminary Official Statement, hereinafter defined, and published in the event of a competitive sale of the Series 2019 Notes.

“Series 2019 Bonds” shall mean the Dedicated Tax Fund Bonds, Series 2019, authorized by Article II of the Resolution and pursuant to a resolution of the Issuer adopted as of the date that this resolution is adopted.

“Series 2019 Notes” shall mean the Dedicated Tax Fund Bond Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to this Supplemental Resolution, subject to redesignation as hereinafter provided.

SECTION 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II AUTHORIZATION OF SERIES 2019 NOTES

SECTION 2.01. Principal Amount, Designation and Series. Pursuant to the Resolution, Dedicated Tax Fund Bond Anticipation Notes constituting Obligation Anticipation Notes under the Resolution, which may be issued in one or more Series and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Notes), the amount to be deposited in the Series 2019 Note Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Notes), shall not exceed \$3.0 billion at any one time Outstanding reduced by the sum of (1) the amount of bond anticipation notes (the “TRB Series 2019 Notes”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, (2) the amount of bonds (the “TRB Series 2019 Bonds”) issued under the Metropolitan Transportation Authority Multiple Series 2019 Transportation Revenue Bond Supplemental Resolution, adopted December 12, 2018, and (3) the amount of bonds issued under the Metropolitan Transportation Authority Multiple Series 2019 Dedicated Tax Fund Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any TRB Series 2019 Notes, Series 2019 Notes, TRB Series 2019 Bonds or Series 2019 Bonds issued to refinance Series 2019 Notes or TRB Series 2019 Notes). The Series 2019 Notes may be issued in the form of a loan agreement, line of credit, revolving credit agreement or similar facility (each, a “Loan Facility”). For all purposes of this Section such Dedicated Tax Fund Bond Anticipation Notes shall be designated as, and shall be distinguished from the Dedicated Tax Fund Bond Anticipation Notes of all other Series

by the title, “Dedicated Tax Fund Bond Anticipation Notes, Series 2019”, with such further or different designations as may be provided in any Certificate of Determination.

The authority to issue Obligation Anticipation Notes and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Notes shall continue in effect until the adoption by the Issuer’s Board of a subsequent new money note issuance supplemental resolution relating to 2020 new money financings, provided, however, the authorization to issue the TRB Series 2019 Bonds and the Series 2019 Bonds to refinance the TRB Series 2019 Notes and the Series 2019 Notes shall continue in effect until all of such TRB Series 2019 Notes and Series 2019 Notes have been refinanced by TRB Series 2019 Bonds and/or Series 2019 Bonds.

SECTION 2.02. Use of Proceeds. The proceeds of the Series 2019 Notes shall be used only for the purposes set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, including Costs of Issuance related to the Series 2019 Notes and (ii) the payment of the principal and interest of Outstanding Series 2019 Notes or TRB Series 2019 Notes.

SECTION 2.03. Dates, Maturities, Principal Amounts and Interest; Redemption. The Series 2019 Notes shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Notes shall mature on the date or dates and in the year or years and in the principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, the Series 2019 Notes shall not be subject to redemption prior to maturity.

SECTION 2.04. Interest Payments. The Series 2019 Notes shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in any Certificate of Determination, interest on the Series 2019 Notes shall be computed on the basis of twelve 30-day months and a 360-day year.

SECTION 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Notes shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Notes shall be numbered and lettered as provided in the related Certificate of Determination.

SECTION 2.06. Places of Payment and Paying Agents. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Notes shall be payable to the registered owner of each Series 2019 Note when due upon presentation of such Series 2019 Note at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Notes will be paid by check or draft mailed on the interest payment date by the Paying Agent to the registered owner at his address as it appears on the registration books or, at the option of any Holder of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Notes, by wire transfer in immediately available funds on each interest payment

date to such Holder thereof upon written notice from such Holder to the Trustee, at such address as the Trustee may from time to time notify such Holder, containing the wire transfer address (which shall be in the continental United States) to which such Holder wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

SECTION 2.07. Sources of Payment

1. The principal of and interest on the Series 2019 Notes may be payable solely from (i) the proceeds of any other Series 2019 Notes or TRB Series 2019 Notes, (ii) the proceeds of the Series 2019 Bonds or TRB Series 2019 Bonds, and (iii) the proceeds of notes or other evidences of indebtedness or any other amounts (which other amounts are not pledged under the Resolution), in each case if and to the extent such amounts may lawfully be used to make such payments. The interest on the Series 2019 Notes may also be payable from amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness.

2. There are hereby pledged to the payment of principal and interest on the Series 2019 Notes (i) the proceeds of other Series 2019 Notes or TRB Series 2019 Notes issued to refinance such Series 2019 Notes, and (ii) the proceeds of the Series 2019 Bonds issued to refinance such Series 2019 Notes, and such pledge has priority over any other pledge thereof created by the Resolution, including Section 501. There is also hereby pledged to the payment of interest on the Series 2019 Notes amounts available for transfer pursuant to Section 504(b) and Section 505.3 of the Resolution for the payment of Subordinated Indebtedness in accordance with and subject to the limitations contained in Section 506 of the Resolution. Proceeds and amounts described in clause (iii) of Section 2.07(1) hereof may be pledged to the payment of principal and interest on the Series 2019 Notes to the extent set forth in a Certificate of Determination.

SECTION 2.08. Delegation to an Authorized Officer.

1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Notes:

(a) to determine whether and when to issue any Series 2019 Notes, the amount of the Series 2019 Notes to be applied to finance Capital Costs or other uses as provided in Section 2.02 hereof and the amount of the proceeds of the Series 2019 Notes estimated to be necessary to pay the Costs of Issuance of the Series 2019 Notes;

(b) to determine the purpose or purposes for which the Series 2019 Notes are being issued, which shall be one or more of the purposes set forth in Section 2.02 hereof;

(c) to determine the principal amount of the Series 2019 Notes to be issued, which principal amount shall not exceed the amount described in Section 2.01 of this Supplemental Resolution, and whether such Series 2019 Notes shall be issued in one or more Series or subseries;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Notes; provided that the Series 2019 Notes shall mature no later than five years after the date of issuance of such Series 2019 Notes;

(e) to determine the date or dates which the Series 2019 Notes shall be dated and the interest rate or rates of the Series 2019 Notes, provided that the true interest cost (as calculated by the officers of the Issuer executing any Certificate of Determination, which calculation shall be conclusive) on the Series 2019 Notes bearing a fixed rate of interest shall not exceed 4.00% per annum and for Series 2019 notes bearing interest at a variable interest rate shall not exceed a rate equal to SIFMA or one-month or three-month LIBOR or any short-term index generally accepted in the marketplace, in each case, plus 4.00% and any default rate or equivalent rate shall not exceed the sum of 4.00% plus either a specified prime rate or the federal funds rate;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Notes; provided, however, that if the Series 2019 Notes are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Notes) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Notes to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Notes the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine the advisability, of conducting the sale of all or any portion of the Series 2019 Notes through competitive bidding or through a negotiated sale or a direct purchase transaction, and to determine the purchase price for the Series 2019 Notes to be paid by the purchasers pursuant to either a competitive bid process or by the purchasers referred to in the Purchase Agreement described in Section 2.09 of this Supplemental Resolution in the event the Series 2019 Notes are sold, in such officer's discretion, through a negotiated sale or a direct purchase transaction, which may include such original premium and original issue discount as shall be determined in the related Certificate of Determination, provided, however, that in the case of a negotiated transaction, underwriters' discount reflected in such purchase price shall not exceed \$3.50 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Notes;

(h) to determine the advisability, as compared to an unenhanced transaction, of obtaining municipal bond insurance or any other credit or liquidity facility, to determine and accept the terms and provisions and price thereof, to determine the items to be pledged to the Series 2019 Notes from those permitted by Section A-203 of the Resolution, and to determine such other matters as the officer executing any Certificate of Determination shall consider necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by bond insurers or the provider of any other credit or liquidity facility, if any, or required by the bond rating agencies in order to attain or maintain specific ratings on the Series 2019 Notes, or relating to the mechanism for the payment of insurance premium, credit or liquidity facility fees or direct purchase fees, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary

or appropriate to implement an insurance policy or any other credit or liquidity facility with respect to the Series 2019 Notes, and to make any changes in connection therewith. Such changes may include, but are not limited to, the making of any additional covenants with Holders or other parties deemed necessary or appropriate by the officer executing any Certificate of Determination;

(i) to take all actions required for the Series 2019 Notes to be eligible under the rules and regulations of The Depository Trust Company (“DTC”) for investment and trading as uncertificated securities, to execute and deliver a standard form letter of representation with, or other form of document required by, DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in any Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Notes issuable in fully registered form; and

(j) to determine whether to issue all or any part of the Series 2019 Notes as Tax-Exempt Obligations or Taxable Obligations;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Notes;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine any other matters provided for herein, including the matters set forth in Sections 2.11 and 2.12 hereof.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Notes are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Notes by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Notes, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm

remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Notes; if any Series 2019 Notes shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Notes consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Notes, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

SECTION 2.09. Sale of Series 2019 Notes. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Notes through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Notes; (ii) to sell and award all or any portion of the Series 2019 Notes through a negotiated sale to the purchasers who are referred to in the note purchase agreement and who shall be selected from the then current list of approved underwriters; (iii) to sell and award all or any portion of the Series 2019 Notes through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement; or (iv) to issue all or any portion of the Series 2019 Notes in the form of a Loan Facility to any financial institution or institutions selected by the Authorized Officer. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Notes to the purchasers referred to in the preceding sentence in the case of a note purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a Loan Facility or a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the requirement that the Loan Facility issuer or direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Notes as may be approved by the Authorized Officer executing the note purchase, Loan Facility, continuing covenant or similar agreement (each, a “Purchase Agreement”). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Notes shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Notes on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Notes in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority’s financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize the use and distribution by said purchasers of a Preliminary Official Statement (the “Preliminary Official Statement”), in connection with the public offering of the Series 2019 Notes, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations of the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, said distribution being conclusive evidence of the approval of such changes, omissions, insertions and revisions. The Issuer authorizes any of said officers to deliver a certification to the effect that the Preliminary Official Statement, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the “Official Statement”) in substantially the form of the Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of the Series 2019 Notes, said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Notwithstanding the preceding two paragraphs, however, each Authorized Officer may make public and authorize the use and distribution of a final Official Statement in connection with the public offering of the Series 2019 Notes meeting the requirements of the preceding two paragraphs and may deem such Official Statement final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute and deliver any and all documents and instruments and to do

and cause to be done any and all acts necessary or proper for carrying out the Notice of Sale, the Purchase Agreement, the Continuing Disclosure Agreement, the terms of any municipal bond insurance or any other credit or liquidity facility, and the issuance, sale and delivery of the Series 2019 Notes, and for implementing the terms of the Series 2019 Notes and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

SECTION 2.10. Forms of Series 2019 Notes and Authentication Certificate. The form of registered Series 2019 Notes, and the certificate of authentication, shall be of substantially the form and tenor provided in any Certificate of Determination.

SECTION 2.11. Appointment of Trustee, Paying Agent and other Agents. There is hereby delegated to any Authorized Officer executing any Certificate of Determination the right and authority to appoint any trustee, paying agent, fiscal agent or other agent with respect to the Series 2019 Notes deemed advisable by such Authorized Officer and to determine the terms and provisions of any arrangements with any such parties.

SECTION 2.12. General Provisions. As and to the extent provided in any Certificate of Determination, the provisions of Articles A-III, IV, A-IV, A-VII, A-IX and A-XI of the Resolution may apply equally to the Series 2019 Notes as though set forth in full herein but with each reference to Bonds being a reference to Series 2019 Notes, except as affected by the terms hereof and the procedures of the Securities Depository; provided that the Authorized Officer executing any Certificate of Determination may, in the alternative, set forth in any Certificate of Determination provisions relating to any such matters as deemed necessary or appropriate by such Authorized Officer.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2019 NOTE PROCEEDS

SECTION 3.01. Disposition of Series 2019 Note Proceeds. Except as otherwise provided in any Certificate of Determination, the proceeds of the sale of the Series 2019 Notes shall be deposited in the Series 2019 Note Proceeds Account which is hereby established in the Proceeds Fund and applied pursuant to the related Certificate of Determination to the payment of Capital Costs, including any Costs of Issuance and accrued interest, and the payment of principal of and interest on Outstanding Series 2019 Notes or TRB Series 2019 Notes.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

SECTION 4.01. Tax Covenants Relating to the Series 2019 Notes. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Notes issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to

comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any “Arbitrage and Use of Proceeds Certificate” or “Tax Certificate” to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Notes issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer’s failure to observe, or refusal to comply with, the above covenant (a) the Holders of the Series 2019 Notes, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Bondholders or the Trustee under Section 702 of the Resolution (as though such provisions related to Series 2019 Notes rather than Bonds), and (b) neither the Holders of the Notes of any Series (other than the Owners of the Series 2019 Notes or the Trustee acting on their behalf) nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to Noteholders under the Resolution based upon the Issuer’s failure to observe, or refusal to comply with, the above covenant.

SECTION 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in this Supplemental Resolution, all or less than all Outstanding Series 2019 Notes issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of this Supplemental Resolution, the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in this Supplemental Resolution unless (i) the Issuer has confirmed in writing that the Holders of the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Notes issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES 2019
GENERAL REVENUE BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

Table of Contents

	Page
ARTICLE I DEFINITIONS AND STATUTORY AUTHORITY.....	1
Section 1.01 Supplemental Resolution	1
Section 1.02 Definitions.....	1
Section 1.03 Authority for this Supplemental Resolution	2
ARTICLE II AUTHORIZATION OF SERIES 2019 BONDS	2
Section 2.01 Authorized Principal Amount, Designation and Series	2
Section 2.02 Purposes	2
Section 2.03 Dates, Maturities, Principal Amounts and Interest	3
Section 2.04 Interest Payments	3
Section 2.05 Denominations, Numbers and Letters.....	3
Section 2.06 Places of Payment and Paying Agent	3
Section 2.07 Sinking Fund Installments	3
Section 2.08 Redemption Prices and Terms	3
Section 2.09 Delegation to an Authorized Officer.....	4
Section 2.10 Sale of Series 2019 Bonds	7
Section 2.11 Forms of Series 2019 Bonds and Trustee’s Authentication Certificate.....	9
Section 2.12 Appointment of Trustee and Paying Agent	9
ARTICLE III DISPOSITION OF SERIES 2019 BOND PROCEEDS.....	9
Section 3.01 Disposition of Series 2019 Bond Proceeds.....	9
ARTICLE IV TAX COVENANTS AND DEFEASANCE	9
Section 4.01 Tax Covenants Relating to the Series 2019 Bonds.....	9
Section 4.02 Defeasance	10

**MULTIPLE SERIES 2019
GENERAL REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01 Supplemental Resolution. This Multiple Series 2019 General Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing General Revenue Obligations”, as heretofore supplemented (the “Resolution”).

Section 1.02 Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Series 2019 Bonds” shall mean the General Revenue Obligations authorized by Article II of this Supplemental Resolution, subject to redesignation as hereinafter provided.

“Series 2019 Notes” shall mean the General Revenue Bond Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to a Supplemental Resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

Section 1.03 Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2019 BONDS

Section 2.01 Principal Amount, Designation and Series. Pursuant to the Resolution and in order to finance Capital Costs, General Revenue Obligations constituting Capital Cost Obligations, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Bonds), the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2019 Bonds issued to finance Capital Costs shall not exceed \$350 million at any one time Outstanding reduced by the sum of (1) the amount of bonds (the “Series 2019 Subordinate Bonds”) issued under the Triborough Bridge and Tunnel Authority Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution, adopted December 12, 2018 and (2) the amount of Series 2019 Notes issued under the Triborough Bridge and Tunnel Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness General Revenue Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any Series 2019 Bonds, Series 2019 Subordinate Bonds or Series 2019 Notes issued to refinance Series 2019 Notes).

Series 2019 Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title “General Revenue Bonds, Series 2019” or such other title or titles set forth in one or more Certificates of Determination.

The authority to issue the Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2020 new money financings.

Section 2.02 Purposes. The purposes for which the Series 2019 Bonds are issued shall be set forth in one or more Certificates of Determination and shall include the payment of all or

any part of the Capital Costs, all to the extent and in the manner provided in this Supplemental Resolution.

Section 2.03 Dates, Maturities, Principal Amounts and Interest. The Series 2019 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04 Interest Payments. The Series 2019 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Bonds shall be computed on the basis of twelve (12) 30-day months and a 360-day year.

Section 2.05 Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06 Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Bonds shall be payable to the registered owner of each Series 2019 Bond when due upon presentation of such Series 2019 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07 Sinking Fund Installments. The Series 2019 Bonds, if any, as determined in the related Certificate of Determination, shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years at the principal amount thereof as determined in the related Certificate of Determination, plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2019 Bonds.

Section 2.08 Redemption Prices and Terms. The Series 2019 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in

Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2019 Bonds, if set forth in the Certificate of Determination, the taxable Series 2019 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09 Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Bonds:

(a) to determine whether and when to issue any Series 2019 Bonds constituting Capital Cost Obligations, the amount of the Series 2019 Bonds to be applied to finance Capital Costs, and the amount of the proceeds of the Series 2019 Bonds, estimated to be necessary to pay the Costs of Issuance of the Series 2019 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2019 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2019 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2019 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2019 Bonds shall be dated and the interest rate or rates of the Series 2019 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2019 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2019 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any and the redemption terms, if any, for the Series 2019 Bonds; provided, however, that if the Series 2019 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2019 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2019 Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement or the purchase price for the Series 2019 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Bonds;

(h) to take all actions required for the Series 2019 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2019 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2019 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2019 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees,

premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2019 Bonds, and to make any changes in connection therewith;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Bonds are delivered from time to time or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Bonds; if any Series 2019 Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such

Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10 Sale of Series 2019 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Bonds; (ii) to sell and award all or any portion of the Series 2019 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2019 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a “Purchase Agreement”). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority’s financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement,

offering circular, or other disclosure document (the “Preliminary Official Statement”) in connection with each public offering or any direct or private placement of the Series 2019 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the “Official Statement”) in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2019 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2019 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2019 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of the Series 2019 Bonds and for implementing the terms of the Series 2019 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11 Forms of Series 2019 Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2019 Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or the related Certificate of Determination.

Section 2.12 Appointment of Trustee and Paying Agent. Unless otherwise provided in the related Certificate of Determination, U.S. Bank Trust National Association shall be the Trustee under the Resolution and the Paying Agent for the Series 2019 Bonds.

ARTICLE III

DISPOSITION OF SERIES 2019 BOND PROCEEDS

Section 3.01 Disposition of Series 2019 Bond Proceeds. Any proceeds of the sale of the Series 2019 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Series 2019 Bonds, or shall otherwise be applied pursuant to a Certificate of Determination as follows:

1. such proceeds shall be (i) deposited in the Series 2019 Bond Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Capital Costs or the payment of principal of and redemption premium, if any, and interest on the Series 2019 Notes or (ii) otherwise applied to the payment of such amounts; and

2. the balance of such proceeds shall be (i) deposited in the Series 2019 Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in the related Certificate of Determination, accrued interest and capitalized interest, if any, received on the sale of the Series 2019 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01 Tax Covenants Relating to the Series 2019 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of

the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any “Arbitrage and Use of Proceeds Certificate” or “Tax Certificate” to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer’s failure to observe, or refusal to comply with the above covenant (a) the Owners of the Series 2019 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer’s failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Series 2019 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer’s failure to observe, or refusal to comply with, the above covenant.

Section 4.02 Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2019 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES AND RELATED
SUBORDINATED INDEBTEDNESS
GENERAL REVENUE BOND SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

**MULTIPLE SERIES 2019 BOND ANTICIPATION NOTES AND
RELATED SUBORDINATED INDEBTEDNESS
GENERAL REVENUE BOND SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

**ARTICLE I
DEFINITIONS AND STATUTORY AUTHORITY**

SECTION 1.01. Supplemental Resolution. This Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness General Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “General Resolution Authorizing General Revenue Obligations”, as heretofore supplemented (the “Resolution”).

SECTION 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Noteholder”, “Holder” or “Holder of Notes”, or any similar term, means any person who shall be the registered owner of any Outstanding Series 2019 Note or Notes.

“Notice of Sale” shall mean the form of Notice of Sale to be distributed with the Preliminary Official Statement, hereinafter defined, and published in the event of a competitive sale of the Series 2019 Notes.

“Series 2019 Notes” shall mean the General Revenue Bond Anticipation Notes, Series 2019, authorized to be issued, in accordance with Section A-203 of the Standard Resolution Provisions, pursuant to this Supplemental Resolution, subject to redesignation as hereinafter provided.

“Series 2019 Senior Bonds” shall mean the General Revenue Obligations authorized by Article II of the Resolution and pursuant to a resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

“Series 2019 Subordinate Bonds” shall mean the Subordinate Revenue Obligations authorized by Article II of the Issuer’s “2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations” adopted on March 26, 2002, and pursuant to a resolution of the Issuer adopted as of the date that this Supplemental Resolution is adopted.

SECTION 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II AUTHORIZATION OF SERIES 2018 NOTES

SECTION 2.01. Principal Amount, Designation and Series. In accordance with the Resolution, General Revenue Bond Anticipation Notes constituting Obligation Anticipation Notes under the Resolution, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters’ discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Notes), the amount to be deposited in the Series 2019 Note Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest, or any Costs of Issuance of the Series 2019 Notes), shall not exceed \$350 million at any one time Outstanding reduced by the sum of (1) the amount of Series 2019 Senior Bonds issued under the Triborough Bridge and Tunnel Authority Multiple Series 2019 General Revenue Bond Supplemental Resolution, adopted December 12, 2018, and (2) the amount of Series 2019 Subordinate Bonds issued under the Triborough Bridge and Tunnel Authority Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any Series 2019 Notes, Series 2019 Senior Bonds or Series 2019 Subordinate Bonds issued to refinance Series 2019 Notes). The Series 2019 Notes may be issued in the form of a loan agreement, line of credit, revolving credit agreement or similar facility (each, a “Loan Facility”). For all purposes of this Section such General Revenue Bond Anticipation Notes shall be designated as, and shall be distinguished from the General Revenue Bond Anticipation Notes of all other Series by the title, “General Revenue Bond

Anticipation Notes, Series 2019”, with such further or different designations as may be provided in any Certificate of Determination.

The authority to issue Obligation Anticipation Notes and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Notes shall continue in effect until the adoption by the Issuer’s Board of a subsequent new money note issuance supplemental resolution relating to 2020 new money financings, provided, however, the authorization to issue the Series 2019 Bonds to refinance the Series 2019 Notes shall continue in effect until all of such Series 2019 Notes have been refinanced by Series 2019 Bonds.

SECTION 2.02. Use of Proceeds. The proceeds of the Series 2019 Notes shall be used only for the purposes set forth in one or more Certificates of Determination and may include (i) the payment of all or any part of the Capital Costs, including Costs of Issuance related to the Series 2019 Notes and (ii) the payment of the principal and interest of Outstanding Series 2019 Notes.

SECTION 2.03. Dates, Maturities, Principal Amounts and Interest; Redemption. The Series 2019 Notes shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Notes shall mature on the date or dates and in the year or years and in the principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination. Except as otherwise provided in any Certificate of Determination, the Series 2019 Notes shall not be subject to redemption prior to maturity.

SECTION 2.04. Interest Payments. The Series 2019 Notes shall bear interest from their date or dates, and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Notes shall be computed on the basis of twelve (12) 30-day months and a 360-day year.

SECTION 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Notes shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Notes shall be numbered and lettered as provided in the related Certificate of Determination.

SECTION 2.06. Places of Payment and Paying Agents. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Notes shall be payable to the registered owner of each Series 2019 Note when due upon presentation of such Series 2019 Note at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Notes will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Holder of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Notes, by wire transfer in immediately available funds on each interest payment date to such Holder thereof upon written notice from such Holder to the Trustee, at such address as the Trustee may from time to time notify such Holder, containing the wire transfer address

(which shall be in the continental United States) to which such Holder wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

SECTION 2.07. Sources of Payment

1. The principal of and interest on the Series 2019 Notes may be payable solely from (i) the proceeds of any other Series 2019 Notes, (ii) the proceeds of the Series 2019 Bonds, and (iii) the proceeds of notes or other evidences of indebtedness or any other amounts (which other amounts are not pledged under the Resolution), in each case if and to the extent such amounts may lawfully be used to make such payments. The interest on the Series 2019 Notes may also be payable from amounts available for transfer pursuant to Section 503(c) of the Resolution for the payment of Subordinated Indebtedness.

2. There are hereby pledged to the payment of principal and interest on the Series 2019 Notes (i) the proceeds of other Series 2019 Notes issued to refinance such Series 2019 Notes, and (ii) the proceeds of the Series 2019 Bonds issued to refinance such Series 2019 Notes, and such pledge has priority over any other pledge thereof created by the Resolution, including Section 501. There is also hereby pledged to the payment of interest on the Series 2019 Notes amounts available for transfer pursuant to Section 503(c) of the Resolution for the payment of Subordinated Indebtedness in accordance with and subject to the limitations contained in Section 507 of the Resolution. Proceeds and amounts described in clause (iii) of Section 2.07(1) hereof may be pledged to the payment of principal and interest on the Series 2019 Notes to the extent set forth in a Certificate of Determination.

SECTION 2.08. Delegation to an Authorized Officer.

1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Notes:

(a) to determine whether and when to issue any Series 2019 Notes, the amount of the Series 2019 Notes to be applied to finance Capital Costs or other uses as provided in Section 2.02 of this Supplemental Resolution and the amount of the proceeds of the Series 2019 Notes estimated to be necessary to pay the Costs of Issuance of the Series 2019 Notes;

(b) to determine the purpose or purposes for which the Series 2019 Notes are being issued, which shall be one or more of the purposes set forth in Section 2.02 hereof;

(c) to determine the principal amount of the Series 2019 Notes to be issued, which principal amount shall not exceed the amount described in Section 2.01 of this Supplemental Resolution, and whether such Series 2019 Notes shall be issued in one or more Series or subseries;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Notes; provided that the Series 2019 Notes shall mature no later than five years after the date of issuance of such Series 2019 Notes;

(e) to determine the date or dates which the Series 2019 Notes shall be dated and the interest rate or rates of the Series 2019 Notes, provided that the true interest cost (as calculated by the officers of the Issuer executing any Certificate of Determination, which calculation shall be conclusive) on the Series 2019 Notes bearing a fixed rate of interest shall not exceed 4.00% per annum and for Series 2019 notes bearing interest at a variable interest rate shall not exceed a rate equal to SIFMA or one-month or three-month LIBOR or any short-term index generally accepted in the marketplace, in each case, plus 4.00% and any default rate or equivalent rate shall not exceed the sum of 4.00% plus either a specified prime rate or the federal funds rate;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Notes; provided, however, that if the Series 2019 Notes are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Notes) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Notes to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Notes the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine the advisability of conducting the sale of all or any portion of the Series 2019 Notes through competitive bidding or through a negotiated sale or a direct purchase transaction, and to determine the purchase price for the Series 2019 Notes to be paid by the purchasers pursuant to either a competitive bid process or by the purchasers referred to in the Purchase Agreement described in Section 2.09 of this Supplemental Resolution in the event the Series 2019 Notes are sold, in such officer's discretion, through a negotiated sale or a direct purchase transaction, which may include such original premium and original issue discount as shall be determined in the related Certificate of Determination, provided, however, that in the case of a negotiated transaction, underwriters' discount reflected in such purchase price shall not exceed \$3.50 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Notes;

(h) to determine the advisability, as compared to an unenhanced transaction, of obtaining municipal bond insurance or any other credit or liquidity facility, to determine and accept the terms and provisions and price thereof, to determine the items to be pledged to the Series 2019 Notes from those permitted by Section A-203 of the Resolution, and to determine such other matters as the officer executing any Certificate of Determination shall consider necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by bond insurers or the provider of any other credit or liquidity facility, if any, or required by the bond rating agencies in order to attain or maintain specific ratings on the Series 2019 Notes, or relating to the mechanism for the payment of insurance premium, credit or liquidity facility fees or direct purchase fees, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to implement an insurance policy or any other credit or liquidity facility with respect to the Series 2019 Notes, and to make any changes in connection therewith. Such changes may include, but are not limited to, the making of any additional covenants with Holders or other parties deemed necessary or appropriate by the officer executing any Certificate of Determination;

(i) to take all actions required for the Series 2019 Notes to be eligible under the rules and regulations of The Depository Trust Company (“DTC”) for investment and trading as uncertificated securities, to execute and deliver a standard form letter of representation with, or other form of document required by, DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in any Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Notes issuable in fully registered form; and

(j) to determine whether to issue all or any part of the Series 2019 Notes as Tax-Exempt Obligations or Taxable Obligations;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Notes;

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine any other matters provided for herein, including the matters set forth in Sections 2.11 and 2.12 hereof.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Notes are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Notes by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Notes, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Notes; if any Series 2019 Notes shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Notes consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Notes, any

such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

SECTION 2.09. Sale of Series 2019 Notes. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Notes through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series 2019 Notes; (ii) to sell and award all or any portion of the Series 2019 Notes through a negotiated sale to the purchasers who are referred to in the note purchase agreement and who shall be selected from the then current list of approved underwriters; (iii) to sell and award all or any portion of the Series 2019 Notes through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement; or (iv) to issue all or any portion of the Series 2019 Notes in the form of a Loan Facility to any financial institution or institutions selected by the Authorized Officer. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Notes to the purchasers referred to in the preceding sentence in the case of a note purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a Loan Facility or a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the requirement that the Loan Facility issuer or direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Notes as may be approved by the Authorized Officer executing the note purchase, Loan Facility, continuing covenant or similar agreement (each, a “Purchase Agreement”). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Notes shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Notes on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the “Notice of Sale”), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Notes in a manner consistent with this Supplemental

Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize the use and distribution by said purchasers of a Preliminary Official Statement (the "Preliminary Official Statement"), in connection with the public offering of the Series 2019 Notes, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations of the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, said distribution being conclusive evidence of the approval of such changes, omissions, insertions and revisions. The Issuer authorizes any of said officers to deliver a certification to the effect that the Preliminary Official Statement, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized, to the extent required, to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of the Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of the Series 2019 Notes, said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Notwithstanding the preceding two paragraphs, however, each Authorized Officer may make public and authorize the use and distribution of a final Official Statement in connection with the public offering of the Series 2019 Notes meeting the requirements of the preceding two paragraphs and may deem such Official Statement final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute and deliver any and all documents and instruments and to do and cause to be done any and all acts necessary or proper for carrying out the Notice of Sale, the Purchase Agreement, the Continuing Disclosure Agreement, the terms of any municipal bond insurance or any other credit or liquidity facility, and the issuance, sale and delivery of the Series 2019 Notes, and for implementing the terms of the Series 2019 Notes and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

SECTION 2.10. Forms of Series 2019 Notes and Authentication Certificate. The form of registered Series 2019 Notes, and the certificate of authentication, shall be of substantially the form and tenor provided in any Certificate of Determination.

SECTION 2.11. Appointment of Trustee, Paying Agent and other Agents. There is hereby delegated to any Authorized Officer executing any Certificate of Determination the right and authority to appoint any trustee, paying agent, fiscal agent or other agent with respect to the Series 2019 Notes deemed advisable by such Authorized Officer and to determine the terms and provisions of any arrangements with any such parties.

SECTION 2.12. General Provisions. As and to the extent provided in any Certificate of Determination, the provisions of Articles A-III, IV, A-IV, A-VII, A-IX and A-XI of the Resolution may apply equally to the Series 2019 Notes as though set forth in full herein but with each reference to Bonds being a reference to Series 2019 Notes, except as affected by the terms hereof and the procedures of the Securities Depository; provided that the Authorized Officer executing any Certificate of Determination may, in the alternative, set forth in any Certificate of Determination provisions relating to any such matters as deemed necessary or appropriate by such Authorized Officer.

ARTICLE III

DISPOSITION AND ALLOCATION OF SERIES 2019 NOTE PROCEEDS

SECTION 3.01. Disposition of Series 2019 Note Proceeds. Except as otherwise provided in any Certificate of Determination, the proceeds of the sale of the Series 2019 Notes shall be deposited in the Series 2019 Note Proceeds Account which is hereby established in the Proceeds Fund and applied pursuant to the related Certificate of Determination to the payment of Capital Costs, including any Costs of Issuance and accrued interest, and the payment of principal of and interest on Outstanding Series 2019 Notes.

ARTICLE IV

TAX COVENANT PROVISIONS AND DEFEASANCE

SECTION 4.01. Tax Covenants Relating to the Series 2019 Notes. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Notes issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Notes issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Holders of the Series 2019 Notes, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Bondholders or the Trustee under Section 702 of the Resolution (as though such provisions related to Series 2019 Notes rather than Bonds), other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Notes then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Holders of the Notes of any Series (other than the Owners of the Series 2019 Notes or the Trustee acting on their behalf) nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to Noteholders under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

SECTION 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in this Supplemental Resolution, all or less than all Outstanding Series 2019 Notes issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of this Supplemental Resolution, the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in this Supplemental Resolution unless (i) the Issuer has confirmed in writing that the Holders of the Series 2019 Notes issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Series 2019 Notes issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES 2001
SUBORDINATE REVENUE BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

Table of Contents

	Page
ARTICLE I DEFINITIONS AND STATUTORY AUTHORITY.....	1
Section 1.01 Supplemental Resolution	1
Section 1.02 Definitions.....	1
Section 1.03 Authority for this Supplemental Resolution	2
ARTICLE II AUTHORIZATION OF SERIES 2019 BONDS	2
Section 2.01 Authorized Principal Amount, Designation and Series	2
Section 2.02 Purposes	2
Section 2.03 Dates, Maturities, Principal Amounts and Interest	2
Section 2.04 Interest Payments	3
Section 2.05 Denominations, Numbers and Letters.....	3
Section 2.06 Places of Payment and Paying Agent	3
Section 2.07 Sinking Fund Installments	3
Section 2.08 Redemption Prices and Terms	3
Section 2.09 Delegation to an Authorized Officer.....	4
Section 2.10 Sale of Series 2019 Bonds	6
Section 2.11 Forms of Series 2019 Bonds and Trustee’s Authentication Certificate.....	8
Section 2.12 Appointment of Trustee and Paying Agent	8
ARTICLE III DISPOSITION OF SERIES 2019 BOND PROCEEDS.....	9
Section 3.01 Disposition of Series 2019 Bond Proceeds.....	9
ARTICLE IV TAX COVENANTS AND DEFEASANCE	9
Section 4.01 Tax Covenants Relating to the Series 2019 Bonds.....	9
Section 4.02 Additional Covenants.....	10
Section 4.03 Defeasance	10

**MULTIPLE SERIES 2001
SUBORDINATE REVENUE BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Board of Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01 Supplemental Resolution. This Multiple Series 2001 Subordinate Revenue Bond Supplemental Resolution (the “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II, Article A-II and Article A-VIII of, a resolution adopted by the Issuer on March 26, 2002, entitled “2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations”, as heretofore supplemented (the “Resolution”).

Section 1.02 Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance of the MTA, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Series 2019 Bonds” shall mean the Subordinate Revenue Obligations authorized by Article II of this Supplemental Resolution, subject to redesignation as provided in this Supplemental Resolution.

Section 1.03 Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF SERIES 2019 BONDS

Section 2.01 Authorized Principal Amount, Designation and Series. Pursuant to the Resolution and in order to finance Capital Costs, Subordinate Revenue Obligations constituting Capital Cost Subordinate Revenue Obligations, which may be issued in one or more Series or subseries and from time to time, entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount and underwriters' discount from the principal amount (but without giving effect to any net original issue premium as determined to be advisable by an Authorized Officer in connection with the marketing of the Series 2019 Bonds), the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest, capitalized interest or any Costs of Issuance of the Series 2019 Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that the Series 2019 Bonds issued to finance Capital Costs shall not exceed \$350 million at any one time Outstanding, reduced by the sum of the (1) the amount of bonds (the "Series 2019 Senior Bonds") issued under the Triborough Bridge and Tunnel Authority Multiple Series 2019 General Revenue Bond Supplemental Resolution, adopted December 12, 2018, and (2) the amount of Series 2019 Notes issued under the Triborough Bridge and Tunnel Authority Multiple Series 2019 Bond Anticipation Notes and Related Subordinated Indebtedness General Revenue Bond Supplemental Resolution, adopted December 12, 2018 (but, for purposes of clarification, not including any Series 2019 Bonds, Series 2019 Senior Bonds or Series 2019 Notes issued to refinance Series 2019 Notes).

The authority to issue the Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Series 2019 Bonds shall continue in effect until the adoption by the Issuer Board of a subsequent new money bond issuance supplemental resolution relating to 2019 new money financings.

Section 2.02 Purposes. The purposes for which the Series 2019 Bonds are issued shall be set forth in one or more Certificates of Determination and shall include the payment of all or any part of the Capital Costs, all to the extent and in the manner provided in this Supplemental Resolution.

Section 2.03 Dates, Maturities, Principal Amounts and Interest. The Series 2019 Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Series 2019 Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04 Interest Payments. The Series 2019 Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Series 2019 Bonds shall be computed on the basis of twelve (12) 30-day months and a 360-day year.

Section 2.05 Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Series 2019 Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Series 2019 Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06 Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Series 2019 Bonds shall be payable to the registered owner of each Series 2019 Bond when due upon presentation of such Series 2019 Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Series 2019 Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Series 2019 Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07 Sinking Fund Installments. The Series 2019 Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption in part, by lot, or otherwise as determined in accordance with Section A-404 of the Resolution, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Series 2019 Bonds.

Section 2.08 Redemption Prices and Terms. The Series 2019 Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Series 2019 Bonds, if set forth in the Certificate of Determination, the taxable Series 2019 Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09 Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Series 2019 Bonds:

(a) to determine whether and when to issue any Series 2019 Bonds constituting Capital Cost Subordinate Revenue Obligations, the amount of the Series 2019 Bonds to be applied to finance Capital Costs, and the amount of the proceeds of the Series 2019 Bonds, estimated to be necessary to pay the Costs of Issuance of the Series 2019 Bonds and capitalized interest, if any;

(b) to determine the purpose or purposes for which the Series 2019 Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Series 2019 Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Series 2019 Bonds, which principal amounts (and the aggregate of all such Series and subseries) shall not exceed the principal amounts permitted by Section 2.01 of this Supplemental Resolution, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Series 2019 Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Series 2019 Bonds shall be dated and the interest rate or rates of the Series 2019 Bonds or the manner of determining such interest rate or rates; provided, however, that any Series 2019 Bonds issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Series 2019 Bonds issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Series 2019 Bonds; provided, however, that if the Series 2019 Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Series 2019 Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2019 Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Series 2019 Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Series 2019 Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Series 2019 Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement or the purchase price for the Series 2019 Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale (as hereinafter defined), in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Series 2019 Bonds;

(h) to take all actions required for the Series 2019 Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Series 2019 Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Series 2019 Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Series 2019 Bonds, (ii) the selection of remarketing agents, tender agents, calculation agents, auction agents, dealers, bidding agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof and to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature necessary or appropriate to obtain or implement a Credit Facility with respect to the Series 2019 Bonds, and to make any changes in connection therewith;

(k) to make such changes to the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Series 2019 Bonds; and

(l) to make such changes to the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects; and

(m) to determine such other matters specified in or permitted by (i) Sections 202, 203, and A-201 of the Resolution or (ii) this Supplemental Resolution, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Series 2019 Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Series 2019 Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Series 2019 Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Series 2019 Bonds; if any Series 2019 Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine one or more subseries into a single Series or subseries; or, if any Series 2019 Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Series 2019 Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10 Sale of Series 2019 Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Series 2019 Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Series

2019 Bonds; (ii) to sell and award all or any portion of the Series 2019 Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Series 2019 Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Series 2019 Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Series 2019 Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Series 2019 Bonds shall be conducted on a competitive bid basis each Authorized Officer is hereby further authorized to conduct the sale and award of the Series 2019 Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Series 2019 Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any direct or private placement of the Series 2019 Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the “Official Statement”) in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Series 2019 Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the “Continuing Disclosure Agreement”), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of the Series 2019 Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Series 2019 Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Series 2019 Bonds and for implementing the terms of each issue of the Series 2019 Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11 Forms of Series 2019 Bonds and Trustee’s Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Series 2019 Bonds, and the Trustee’s certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or the related Certificate of Determination.

Section 2.12 Appointment of Trustee and Paying Agent. Unless otherwise provided in the related Certificate of Determination, The Bank of New York Mellon, as successor in

interest to JPMorgan Chase Bank, N.A., shall be the Trustee under the Resolution and the Paying Agent for the Series 2019 Bonds.

ARTICLE III

DISPOSITION OF SERIES 2019 BOND PROCEEDS

Section 3.01 Disposition of Series 2019 Bond Proceeds. Any proceeds of the sale of the Series 2019 Bonds, other than accrued interest and capitalized interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series of subseries of the Series 2019 Bonds, or shall otherwise be applied pursuant to a Certificate of Determination as follows:

1. such proceeds shall be (i) deposited in the Series 2019 Bond Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Capital Costs or the payment of principal of and redemption premium, if any, and interest on the Series 2019 Notes or (ii) otherwise applied to the payment of such amounts; and

2. the balance of such proceeds shall be (i) deposited in the Series 2019 Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in the related Certificate of Determination, accrued interest and capitalized interest, if any, received on the sale of the Series 2019 Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01 Tax Covenants Relating to the Series 2019 Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Series 2019 Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Series 2019 Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with the above covenant (a) the Owners of the Series 2019 Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b)

neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Series 2019 Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

Section 4.02 Additional Covenants.

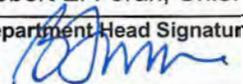
1. The Issuer covenants and agrees that it will not issue any Senior Obligations under the Senior Resolution (other than pursuant to Section 205 thereof) unless in addition to satisfying the requirements of the Senior Resolution, an Authorized Officer delivers to the trustee under the Senior Resolution a certificate demonstrating that for any period of 12 consecutive calendar months out of the 18 complete calendar months next preceding the date of authentication and delivery such issue of Senior Obligations, Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all Subordinate Revenue Obligations, Parity Debt, Senior Obligations and Senior Parity Debt.

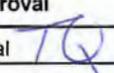
2. The Issuer covenants and agrees that in addition to complying with the provisions of Section 604 of the Resolution, the Issuer shall at all times establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the TBTA Facilities as shall always be sufficient, together with other money available therefor (including the anticipated receipt of proceeds of sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of the Issuer that will be used to pay the principal of Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of TBTA Facilities), to equal or exceed in each calendar year the greater of (a) an amount equal to the sum of amounts necessary in such calendar year (i) to pay all Operating Expenses of the Issuer, plus (ii) to pay the sum of Calculated Debt Service as defined in the Resolution and Calculated Debt Service as defined in the Senior Resolution, plus (iii) to maintain any reserve established by the Issuer pursuant to the Senior Resolution, in such amount as may be determined from time to time by an Authorized Officer in his or her judgment, or (b) an amount such that Revenues less Operating Expenses shall equal at least 1.10 times the sum of Calculated Debt Service as defined in the Senior Resolution and Calculated Debt Service as defined in the Resolution for such calendar year.

Section 4.03 Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Series 2019 Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Series 2019 Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the

Series 2019 Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

Staff Summary

Subject Authorization to Issue Transportation Revenue Refunding Bonds, Dedicated Tax Fund Refunding Bonds, Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds and Subordinate Revenue Refunding Bonds	Date December 12, 2018
Department Finance	Vendor Name N/A
Department Head Name Robert E. Foran, Chief Financial Officer	Contract Number (blank)
Department Head Signature 	Contract Manager Name (blank)
Project Manager Name Patrick McCoy, Director of Finance 	Table of Contents Ref # (blank)

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	Finance Comm.	12/10	X			1	Legal 	2	Chief of Staff 
2	Board	12/12	X						

PURPOSE:

The MTA Finance Department is seeking MTA and TBTA Board authorization and approval of the necessary documentation to issue refunding bonds, from time to time, subject, if applicable, to the Refunding Policy adopted by the Board in May, 2010, as amended from time to time, and provided that the MTA Chief Financial Officer or the MTA Director, Finance makes a determination that the refunding of such bonds or other obligations will be beneficial to the obligors thereof and/or their affiliates and subsidiaries.

Concurrently under a separate Staff Summary, the MTA Finance Department is seeking MTA and TBTA Board approval of an updated Refunding Policy, which, if approved, will apply to the issuance of refunding bonds pursuant to the resolutions discussed herein.

DISCUSSION:

MTA and TBTA Board approval is sought for the following resolutions, documents and activities in connection with the issuance of refunding bonds:

- MTA Multiple Series Transportation Revenue Refunding Bond Supplemental Resolution (2019) authorizing Metropolitan Transportation Authority Transportation Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Transportation Revenue Refunding Obligations.
- MTA Multiple Series Dedicated Tax Fund Refunding Bond Supplemental Resolution (2019) authorizing Metropolitan Transportation Authority Dedicated Tax Fund Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Dedicated Tax Fund Revenue Refunding Obligations.

- TBTA Multiple Series General Revenue Refunding Bond Supplemental Resolution (2019) authorizing Triborough Bridge and Tunnel Authority General Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the General Revenue Refunding Obligations.
- TBTA Multiple Series 2001 Subordinate Revenue Refunding Bond Supplemental Resolution (2019) authorizing Triborough Bridge and Tunnel Authority Subordinate Revenue Refunding Obligations, including providing for the issuance of the following:
 - Parity Reimbursement Obligations and other Parity Debt in an amount sufficient to secure any Credit Facilities entered into in connection with the issuance of the Subordinate Revenue Refunding Obligations.

With respect to the above-referenced financial transactions, MTA and TBTA Board approval, as applicable, is sought:

(a) delegating authority to the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance to award the obligations either pursuant to competitive bid or to members (or entities related to such firms) of the Board-approved MTA underwriting syndicate and to execute and/or deliver in each case, where appropriate:

- Notices of Sale and bid forms,
- Purchase Agreements with underwriters,
- Direct Purchase Agreements,
- Official Statements and other disclosure documents,
- Continuing Disclosure Agreements and related filings,
- Remarketing Agreements and Firm Remarketing Agreements,
- Dealer and Broker/Dealer Agreements,
- Issuing and Paying Agent and Tender Agent Agreements,
- Credit Facilities and related Parity Reimbursement Obligations and Parity Debt,
- Related Subordinated Contract Obligations,
- Verification Reports,
- Escrow Agreements, and
- Investment Agreements.

Any such documents will be in substantially the form of any document previously entered into by MTA or TBTA for previous issues, with such changes as approved by any one or more of the foregoing officers.

(b) authorizing such officers to terminate, amend, supplement, replace or extend any such documents, including existing Credit Facilities (and related Parity Reimbursement Obligations and Parity Debt), as they shall deem advisable, and to take such other actions as may be necessary or desirable to effectuate the issuance of the refunding bonds and other financial transactions set forth above, on behalf of MTA, TBTA or other MTA subsidiaries and affiliates.

ALTERNATIVES:

The Board could determine that staff seek specific approval for each refunding contemplated in advance of undertaking such refunding. This alternative is not advised as the timing of the Board cycle could result in missed market opportunities.

RECOMMENDATION:

The MTA and TBTA Boards approve the above-referenced resolutions and documents and all other actions described above, including the execution and delivery of such other documents, and the taking of all other actions, from time to time deemed necessary or desirable by such officers in connection therewith. The authorization to issue the refunding bonds and take other related actions hereunder shall continue in effect without any further action by the MTA or TBTA Boards, until the adoption by the MTA and TBTA Boards of subsequent refunding bond

Staff Summary

supplemental resolutions relating to 2020 refundings unless (a) the MTA and TBTA Boards shall have confirmed the effectiveness of this authorization for an additional period, or (b) the MTA and TBTA Boards shall have modified or repealed this authorization.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES
TRANSPORTATION REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

TABLE OF CONTENTS

Page

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution 1
Section 1.02. Definitions..... 1
Section 1.03. Authority for this Supplemental Resolution 2

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series 2
Section 2.02. Purposes 2
Section 2.03. Dates, Maturities, Principal Amounts and Interest 3
Section 2.04. Interest Payments 3
Section 2.05. Denominations, Numbers and Letters..... 3
Section 2.06. Places of Payment and Paying Agent 3
Section 2.07. Sinking Fund Installments 3
Section 2.08. Redemption Prices and Terms 4
Section 2.09. Delegation to an Authorized Officer..... 4
Section 2.10. Sale of Refunding Bonds 7
Section 2.11. Forms of Refunding Bonds and Trustee’s Authentication Certificate..... 9
Section 2.12. Appointment of Trustee and Paying Agent 9

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds..... 9

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds..... 10
Section 4.02. Defeasance 10

**MULTIPLE SERIES
TRANSPORTATION REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This Multiple Series Transportation Revenue Refunding Bond Supplemental Resolution (this “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “General Resolution Authorizing Transportation Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean the members of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the Transportation Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries, subject to redesignation as hereinafter provided.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Transportation Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries) entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest or any Costs of Issuance of the Refunding Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Transportation Revenue Refunding Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the MTA Board of a subsequent refunding bond supplemental resolution relating to 2020 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or

any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof. The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the related Certificate of Determination, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make-whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, bidding agents, calculation agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof, to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature

necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Refunding Bonds; if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine

one or more subseries into a single Series or subseries; or, if any Refunding Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Refunding Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined

by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an

Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A. shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Refunding Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination as follows:

(a) such proceeds shall be (i) deposited in the Refunding Bonds Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the refunding of any Obligations, Parity Debt or Cross Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof or (ii) otherwise applied to such refunding; and

(b) the balance of such proceeds shall be (i) deposited in the Refunding Bonds Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

METROPOLITAN TRANSPORTATION AUTHORITY

**MULTIPLE SERIES
DEDICATED TAX FUND REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

TABLE OF CONTENTS

Page

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution 1
Section 1.02. Definitions..... 1
Section 1.03. Authority for this Supplemental Resolution 2

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series 2
Section 2.02. Purposes 2
Section 2.03. Dates, Maturities, Principal Amounts and Interest 3
Section 2.04. Interest Payments 3
Section 2.05. Denominations, Numbers and Letters..... 3
Section 2.06. Places of Payment and Paying Agent 3
Section 2.07. Sinking Fund Installments 3
Section 2.08. Redemption Prices and Terms 4
Section 2.09. Delegation to an Authorized Officer..... 4
Section 2.10. Sale of Refunding Bonds 7
Section 2.11. Forms of Refunding Bonds and Trustee’s Authentication Certificate..... 9
Section 2.12. Appointment of Trustee and Paying Agent 9

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds..... 9

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds..... 10
Section 4.02. Defeasance 10

**MULTIPLE SERIES
DEDICATED TAX FUND REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Metropolitan Transportation Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This Multiple Series Dedicated Tax Fund Refunding Revenue Bond Supplemental Resolution (this “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “Dedicated Tax Fund Obligation Resolution” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean the members of the Issuer acting as such pursuant to the provisions of the Issuer Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the Dedicated Tax Fund Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries subject to redesignation as hereinafter provided.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Dedicated Tax Fund Obligations (which may be issued at one time or from time to time in any number of Series or subseries) entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest or any Costs of Issuance of the Refunding Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Dedicated Tax Fund Refunding Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the MTA Board of a subsequent refunding bond supplemental resolution relating to 2020 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or

any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the related Certificate of Determination, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, bidding agents, calculation agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof, to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature

necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Refunding Bonds; if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine

one or more subseries into a single Series or subseries; or, if any Refunding Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Refunding Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined

by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker-dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an

Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A. shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Refunding Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination as follows:

(a) such proceeds shall be (i) deposited in the Refunding Bonds Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the refunding of any Obligations, Parity Debt or Cross Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof or (ii) otherwise applied to such refunding; and

(b) the balance of such proceeds shall be (i) deposited in the Refunding Bonds Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES
GENERAL REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

TABLE OF CONTENTS

Page

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution 1
Section 1.02. Definitions..... 1
Section 1.03. Authority for this Supplemental Resolution 2

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series 2
Section 2.02. Purposes 2
Section 2.03. Dates, Maturities, Principal Amounts and Interest 3
Section 2.04. Interest Payments 3
Section 2.05. Denominations, Numbers and Letters..... 3
Section 2.06. Places of Payment and Paying Agent 3
Section 2.07. Sinking Fund Installments 3
Section 2.08. Redemption Prices and Terms 4
Section 2.09. Delegation to an Authorized Officer..... 4
Section 2.10. Sale of Refunding Bonds 7
Section 2.11. Forms of Refunding Bonds and Trustee’s Authentication Certificate..... 9
Section 2.12. Appointment of Trustee and Paying Agent 9

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds..... 90

ARTICLE

IV TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds..... 101
Section 4.02. Defeasance 101

**MULTIPLE SERIES
GENERAL REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This Multiple Series General Revenue Refunding Bond Supplemental Resolution (this “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “General Resolution Authorizing General Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the General Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries subject to redesignation as hereinafter provided.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the Resolution and in order to issue (a) Refunding Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of General Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries) entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest or any Costs of Issuance of the Refunding Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “General Revenue Refunding Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the Issuer Board of a subsequent refunding bond supplemental resolution relating to 2020 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or

any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the related Certificate of Determination, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, bidding agents, calculation agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof, to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature

necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Refunding Bonds; if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine

one or more subseries into a single Series or subseries; or, if any Refunding Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Refunding Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined

by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an

Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, U.S. Bank Trust National Association shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Refunding Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination as follows:

(a) such proceeds shall be (i) deposited in the Refunding Bonds Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the refunding of any Obligations, Parity Debt or Cross Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof or (ii) otherwise applied to such refunding; and

(b) the balance of such proceeds shall be (i) deposited in the Refunding Bonds Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

**MULTIPLE SERIES
2001 SUBORDINATE REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

Adopted December 12, 2018

TABLE OF CONTENTS

Page

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution 1
Section 1.02. Definitions..... 1
Section 1.03. Authority for this Supplemental Resolution 2

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series 2
Section 2.02. Purposes 2
Section 2.03. Dates, Maturities, Principal Amounts and Interest 3
Section 2.04. Interest Payments 3
Section 2.05. Denominations, Numbers and Letters..... 3
Section 2.06. Places of Payment and Paying Agent 3
Section 2.07. Sinking Fund Installments 3
Section 2.08. Redemption Prices and Terms 4
Section 2.09. Delegation to an Authorized Officer..... 4
Section 2.10. Sale of Refunding Bonds 7
Section 2.11. Forms of Refunding Bonds and Trustee’s Authentication Certificate..... 9
Section 2.12. Appointment of Trustee and Paying Agent 9

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds..... 10

ARTICLE IV

TAX COVENANTS, ADDITIONAL COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds..... 101
Section 4.02. Additional Covenants..... 101
Section 4.03. Defeasance 112

**MULTIPLE SERIES
2001 SUBORDINATE REVENUE REFUNDING BOND
SUPPLEMENTAL RESOLUTION**

BE IT RESOLVED by the Triborough Bridge and Tunnel Authority (the “Issuer”), as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. Supplemental Resolution. This Multiple Series Subordinate Revenue Refunding Bond Supplemental Resolution (this “Supplemental Resolution”) is supplemental to, and is adopted in accordance with Article II and Article A-VIII of, a resolution of the Issuer adopted on March 26, 2002, entitled “2001 Subordinate Resolution Authorizing General Revenue Obligations” (the “Resolution”).

Section 1.02. Definitions.

1. All capitalized terms which are used but not otherwise defined in this Supplemental Resolution shall have the same meanings, respectively, as such terms are given by Section 102 of the Resolution.

2. In this Supplemental Resolution:

“Authorized Officer” shall include the officers designated as such in the Resolution, and the Chairman, the Managing Director, the Chair of the Finance Committee, the Vice Chairman, the Chief Financial Officer or the Director, Finance, as well as any officer duly designated as “Acting” in said officer’s capacity, except that, for the purposes of any delegation set forth herein that does not expressly include any Assistant Secretary, “Authorized Officer” shall not include any Assistant Secretary of the Issuer.

“Board” shall mean, when used with respect to the Issuer, the board of the Issuer acting as such pursuant to the provisions of the Issuer Act, and when used with respect to the MTA, the members of the MTA acting as such pursuant to the provisions of the MTA Act.

“Bond Counsel” shall mean Nixon Peabody LLP, Orrick, Herrington & Sutcliffe LLP, D. Seaton and Associates, P.A., P.C., Bryant Rabbino LLP 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.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and regulations thereunder.

“Cross-Credit Obligations” shall mean indebtedness or other obligations issued or incurred by the Issuer or any other Related Entity as described in clause (iii) of the definition of “Capital Costs”, but excluding Obligations.

“Refunding Bonds” shall mean the 2001 Subordinate Revenue Bonds authorized by Article II of this Supplemental Resolution in one or more Series or subseries subject to redesignation as hereinafter provided.

Section 1.03. Authority for this Supplemental Resolution. This Supplemental Resolution is adopted pursuant to the provisions of the Issuer Act and the Resolution.

ARTICLE II

AUTHORIZATION OF REFUNDING BONDS

Section 2.01. Authorized Principal Amount, Designation and Series.

1. Pursuant to the Resolution and in order to issue (a) Refunding Subordinate Obligations, and (b) Obligations for the purpose of refunding Cross-Credit Obligations, multiple Series of Subordinate Revenue Obligations (which may be issued at one time or from time to time in any number of Series or subseries) entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not exceeding the principal amount necessary so that, after giving effect to any net original issue discount or premium and underwriters’ discount from the principal amount, the amount to be deposited in the Proceeds Account pursuant to, or otherwise applied to effectuate the purposes of, Section 2.02 and Section 3.01 of this Supplemental Resolution (exclusive of any amount deposited therein or otherwise applied pursuant to a Certificate of Determination to pay accrued interest or any Costs of Issuance of the Refunding Bonds) shall not exceed the amount or amounts determined in one or more Certificates of Determination to be necessary to effectuate the purposes set forth in Section 2.02 hereof; provided, however, that any Refunding Bonds issued pursuant to this Supplemental Resolution shall be issued in compliance with any Board policies relating to the issuance of refunding bonds as may be in effect from time to time.

2. Nothing in this Supplemental Resolution is intended to preclude the issuance of Refunding Bonds as refunding obligations in accordance with Section 203 of the Resolution.

Refunding Bonds shall be designated as, and shall be distinguished from the Obligations of all other Series by the title, “Subordinate Revenue Refunding Bonds, Series [insert calendar year of issuance]” or such other title or titles set forth in the related Certificate of Determination.

The authority to issue Obligations and take related actions granted under previous resolutions of the Issuer shall continue in full force and effect. The authorization to issue the Refunding Bonds and take other related actions hereunder shall continue in effect without any further action by the Issuer until the adoption by the Issuer Board of a subsequent refunding bond supplemental resolution relating to 2020 refundings.

Section 2.02. Purposes. The purposes for which the Refunding Bonds are issued shall be set forth in one or more Certificates of Determination and may include the refunding, restructuring or payment, including by purchasing, exchanging or tendering therefor, of all or

any portion of any Outstanding Obligations or Parity Debt or Cross-Credit Obligations deemed advisable by an Authorized Officer in accordance with Section 203 or 204 of the Resolution, as applicable.

Section 2.03. Dates, Maturities, Principal Amounts and Interest. The Refunding Bonds, except as otherwise provided in the Resolution, shall be dated the date or dates determined in the related Certificate of Determination. The Refunding Bonds shall mature on the date or dates and in the year or years and principal amount or amounts, and shall bear interest at the rate or rates per annum, if any, specified in or determined in the manner provided in the related Certificate of Determination.

Section 2.04. Interest Payments. The Refunding Bonds shall bear interest from their date or dates and be payable on such date or dates as may be determined pursuant to the related Certificate of Determination. Except as otherwise provided in the related Certificate of Determination, interest on the Refunding Bonds shall be computed on the basis of twelve 30-day months and a 360-day year.

Section 2.05. Denominations, Numbers and Letters. Unless otherwise provided in the related Certificate of Determination, the Refunding Bonds shall be issued in fully registered form without coupons in the denomination of \$5,000 or any integral multiple thereof.

The Refunding Bonds shall be lettered and numbered as provided in the related Certificate of Determination.

Section 2.06. Places of Payment and Paying Agent. Except as otherwise provided in the related Certificate of Determination, principal and Redemption Price of the Refunding Bonds shall be payable to the registered owner of each Refunding Bond when due upon presentation of such Refunding Bond at the principal corporate trust office of the Trustee. Except as otherwise provided in the related Certificate of Determination, interest on the registered Refunding Bonds will be paid by check or draft mailed on the interest payment date by the Paying Agent, to the registered owner at his address as it appears on the registration books or, at the option of any Owner of at least one million dollars (\$1,000,000) in principal amount of the Refunding Bonds, by wire transfer in immediately available funds on each interest payment date to such Owner thereof upon written notice from such Owner to the Trustee, at such address as the Trustee may from time to time notify such Owner, containing the wire transfer address (which shall be in the continental United States) to which such Owner wishes to have such wire directed, if such written notice is received not less than twenty (20) days prior to the related interest payment date (such notice may refer to multiple interest payments).

Section 2.07. Sinking Fund Installments. The Refunding Bonds, if any, determined in the related Certificate of Determination shall be subject to redemption (a) in part, by lot, (b) pro rata (in the case of taxable Refunding Bonds), or (c) otherwise as determined in accordance with Section A-404 of the Resolution, as set forth in the related Certificate of Determination, on each date in the year or years determined in the related Certificate of Determination at the principal amount thereof plus accrued interest up to but not including the date of redemption thereof, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem on each such date the principal amount of such Refunding Bonds.

Section 2.08. Redemption Prices and Terms. The Refunding Bonds may also be subject to redemption prior to maturity, at the option of the Issuer, upon notice as provided in Article A-IV of the Resolution, at any time as a whole or in part (and by lot within a maturity, or otherwise as determined in accordance with Section A-404 of the Resolution, if less than all of a maturity is to be redeemed), from maturities designated by the Issuer on and after the date and in the years and at the Redemption Prices (expressed as a percentage of principal amount) determined in the related Certificate of Determination, plus accrued interest up to but not including the redemption date. Notwithstanding the foregoing, in the case of taxable Refunding Bonds, if set forth in the Certificate of Determination, the taxable Refunding Bonds may be made subject to pro rata redemption and/or a make-whole redemption premium.

Section 2.09. Delegation to an Authorized Officer. 1. There is hereby delegated to each Authorized Officer, subject to the limitations contained in this Supplemental Resolution, the following powers with respect to the Refunding Bonds:

(a) to determine whether and when to issue any Refunding Bonds constituting Refunding Subordinate Obligations or Obligations issued to refund Cross-Credit Obligations, and to determine the amount of the proceeds of the Refunding Bonds to be applied to refunding purposes as well as the specific Obligations or Parity Debt or Cross-Credit Obligations, or portions of either to be refunded and the date or dates, if any, on which such refunded obligations shall be redeemed, and the amount of the proceeds of the Refunding Bonds estimated to be necessary to pay the Costs of Issuance of the Refunding Bonds;

(b) to determine the purpose or purposes for which the Refunding Bonds are being issued, which shall be one or more of the purposes set forth in Section 2.02 of this Supplemental Resolution;

(c) to determine the principal amounts of the Refunding Bonds to be issued for the purposes set forth in Section 2.02 of this Supplemental Resolution and whether such principal amounts constitute a separate Series or a subseries of Refunding Bonds, and to determine Accreted Values and Appreciated Values, if applicable;

(d) to determine the maturity date and principal amount of each maturity of the Refunding Bonds and the amount and due date of each Sinking Fund Installment, if any;

(e) to determine the date or dates which the Refunding Bonds shall be dated and the interest rate or rates of the Refunding Bonds or the manner of determining such interest rate or rates; provided, however, that any Obligations issued as fixed rate Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 10% per annum, any Obligations issued as fixed rate Taxable Obligations shall be subject to a maximum interest rate of not greater than 12% per annum, any Variable Interest Rate Obligations issued as Tax-Exempt Obligations shall be subject to a maximum interest rate of not greater than 15% per annum, any Variable Interest Rate Obligations issued as Taxable Obligations shall be subject to a maximum interest rate of not greater than 18% per annum and any Parity Reimbursement Obligations shall be subject to a maximum interest rate of not greater than 25% per annum, or, in each such case, such higher rate or rates as determined by the Issuer's Board;

(f) to determine the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, for the Refunding Bonds; provided, however, that if the Refunding Bonds are to be redeemable at the election of the Issuer, the Redemption Price (except in the case of taxable Refunding Bonds) shall not be greater than one hundred three percent (103%) of the principal amount of the Refunding Bonds to be redeemed, plus accrued interest thereon up to but not including the date of redemption and in the case of taxable Refunding Bonds the Redemption Price may be determined pursuant to provisions relating to pro rata redemption and/or make whole redemption;

(g) to determine whether the sale of the Refunding Bonds shall be conducted on either a negotiated or competitive bid basis and, as applicable, to determine the purchase price for the Refunding Bonds to be paid by the purchaser or purchasers referred to in one or more Purchase Agreements or a bank direct purchase agreement, or the purchase price for the Refunding Bonds to be paid by the winning bidder, if such sale is conducted by competitive bid pursuant to a Notice of Sale, in either case as such document is described in Section 2.10 of this Supplemental Resolution, which may include such original issue discount and original issue premium as shall be determined in the related Certificate of Determination; provided, however, that the underwriters' discount reflected in such purchase price shall not exceed \$10.00 for each one thousand dollars (\$1,000) principal amount of the Refunding Bonds;

(h) to take all actions required for the Refunding Bonds to be eligible under the rules and regulations of The Depository Trust Company ("DTC") for investment and trading as uncertificated securities, to execute and deliver a standard form of letter of representation with DTC and, notwithstanding any provisions to the contrary contained in this Supplemental Resolution, to include in the related Certificate of Determination such terms and provisions as may be appropriate or necessary to provide for uncertificated securities in lieu of Refunding Bonds issuable in fully registered form;

(i) to determine whether to issue all or any portion of the Refunding Bonds as Tax-Exempt Obligations, Taxable Obligations, Put Obligations, Variable Interest Rate Obligations or as any other form of Obligations permitted by the Resolution and any matters related thereto, including (i) the terms and provisions of any such Obligations, (ii) the selection of remarketing agents, tender agents, auction agents, dealers, bidding agents, calculation agents or any other agents or parties to ancillary arrangements and the terms of any such arrangements, and (iii) the methods for determining the accrual of Debt Service;

(j) to determine the advisability, as compared to an unenhanced transaction, of obtaining one or more Credit Facilities, to select a provider or providers thereof, to determine and accept the terms and provisions and price thereof, to determine such other matters related thereto as in the opinion of the officer executing the related Certificate of Determination shall be considered necessary or appropriate and to effect such determinations by making any changes in or additions to this Supplemental Resolution required by Credit Facility providers, if any, or required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds, or relating to the mechanisms for the repayment of amounts advanced thereunder or payment of fees, premiums, expenses or any other amounts, notices, the provision of information, and such other matters of a technical, mechanical, procedural or descriptive nature

necessary or appropriate to obtain or implement a Credit Facility with respect to the Refunding Bonds, and to make any changes in connection therewith;

(k) to make such changes in or from the form of this Supplemental Resolution as may be required by a Rating Agency in order to attain or maintain specific ratings on the Refunding Bonds;

(l) to make such changes in or from the form of this Supplemental Resolution as may be necessary or desirable in order to cure any ambiguities, inconsistencies or other defects;

(m) to determine whether to (i) enter into an escrow agreement or other arrangement in connection with the issuance of Refunding Bonds, including the selection of escrow agents, verification agents and the manner of determining specified matters relating to the defeasance of the refunded obligations and (ii) purchase SLGs or open market securities and the form and substance thereof and any related investment agreement, and to determine the application of any amounts released in connection with any such refunding;

(n) to determine that such Refunding Bonds comply with all Board policies relating to the issuance of refunding obligations in effect at the time of such determination; and

(o) to determine such other matters specified in or permitted by (i) Sections 202, 203, 204 and A-201 of the Resolution or (ii) this Supplemental Resolution, and to determine matters relating to the payment or defeasance of Obligation Anticipation Notes, including preparation of any documentation therefor.

2. Any Authorized Officer shall execute one or more Certificates of Determination evidencing the determinations made pursuant to this Supplemental Resolution and any such Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein. More than one Certificate of Determination may be delivered to the extent more than one Series or subseries of Refunding Bonds are delivered from time to time, or other authority is exercised under this Supplemental Resolution from time to time and each such Certificate of Determination shall be delivered to the Trustee concurrently with the authentication and delivery of the respective Series or subseries of Refunding Bonds by the Trustee or other documentation. Determinations set forth in any Certificate of Determination shall have the same effect as if set forth in this Supplemental Resolution.

3. Any such Authorized Officer may exercise any authority delegated under this Supplemental Resolution from time to time following issuance of any Refunding Bonds, as appropriate for any purposes, including to change interest rate modes or auction periods; to obtain or terminate one or more Credit Facilities, including substitute or additional Credit Facilities; to enter into one or more bank direct purchase agreements or similar instruments; to appoint new or additional agents or other parties deemed appropriate to a particular form or mode of Obligation or manner of sale; to enter into one or more remarketing agreements, firm remarketing agreements, continuing disclosure agreements or other agreements in connection with the remarketing of any Refunding Bonds; if any Refunding Bonds shall consist of multiple subseries, to change the principal amounts and number of the individual subseries or to combine

one or more subseries into a single Series or subseries; or, if any Refunding Bonds consist of a single Series or subseries, to divide such Series or subseries into two or more subseries and to determine the principal amount of such subseries. In connection with the remarketing, by negotiated sale, competitive bid or direct or private placement, of any Refunding Bonds, any such Authorized Officer is hereby authorized to make public and to authorize the use and distribution by remarketing agents or other appropriate parties of a remarketing circular (including a preliminary remarketing circular), or other disclosure document, in substantially the form most recently executed or delivered by the Issuer in connection with the remarketing of Obligations, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable. Any Authorized Officer shall execute one or more amendments to the applicable Certificate or Certificates of Determination evidencing the determinations made pursuant to this paragraph and any such amended Certificate of Determination shall be conclusive evidence of the determinations of such Authorized Officer, as stated therein.

Section 2.10. Sale of Refunding Bonds. Each Authorized Officer is hereby authorized either (i) to sell and award all or any portion of the Refunding Bonds through a competitive bidding process to purchasers meeting the requirements of one or more Notices of Sale (as hereinafter defined) to be published in order to give notice of the competitive sale of the Refunding Bonds; (ii) to sell and award all or any portion of the Refunding Bonds through a negotiated sale to the purchasers who are referred to in the bond purchase agreement and who shall be selected from the then current list of approved underwriters; or (iii) to sell and award all or any portion of the Refunding Bonds through a direct sale to the financial institution or institutions selected by the Authorized Officer who shall be referred to in the continuing covenant, direct purchase or similar agreement. Each Authorized Officer is hereby authorized to sell and award the Refunding Bonds to the purchasers referred to in the preceding sentence in the case of a bond purchase agreement, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, or, with respect to a continuing covenant, direct purchase or similar agreement, containing bank facility terms and provisions (including, without limitation, increased costs, term-out, events of default and remedies) in substantially the form set forth in a letter of credit reimbursement agreement most recently executed or delivered by the Issuer, including, if applicable, that the direct purchaser offer to the Issuer a term-out provision of no less than five years, with such revisions to reflect the terms and provisions of the Refunding Bonds as may be approved by the Authorized Officer executing the bond purchase, continuing covenant or similar agreement (each, a "Purchase Agreement"). Each Authorized Officer is hereby authorized to agree to the selection of the representative of the underwriters or the other purchasers or facility providers as referred to in the Purchase Agreement or Agreements and to execute and deliver the Purchase Agreement or Agreements for and on behalf and in the name of the Issuer with such changes, omissions, insertions and revisions as may be approved by the Authorized Officer executing the Purchase Agreement or Agreements, said execution being conclusive evidence of such approval and concurrence in the selection of the representative of the underwriters.

If it is determined that any sale of Bonds shall be conducted on a competitive bid basis, each Authorized Officer is hereby further authorized to conduct the sale and award of the Refunding Bonds on the basis of a competitive bid, pursuant to the terms of a notice of sale, including bid form (the "Notice of Sale"), in a form, including any limitations on permitted bidders and a description of the basis for determining the winning bidder or bidders, determined

by such Authorized Officer. Each Authorized Officer is hereby authorized to conduct such competitive sale of the Refunding Bonds in a manner consistent with this Supplemental Resolution and to utilize the services of the Authority's financial advisor and the services of an electronic bidding service, as such Authorized Officer shall determine, and the execution by such Authorized Officer of a letter of award shall be conclusive evidence of such award.

Each Authorized Officer is hereby authorized to make public and to authorize the use and distribution by said purchasers or other appropriate parties of a preliminary official statement, offering circular, or other disclosure document (the "Preliminary Official Statement") in connection with each public offering or any private placement of the Refunding Bonds, in substantially the form most recently executed or delivered by the Issuer in connection with the sale of Obligations, with such changes, omissions, insertions and revisions as such officer shall deem advisable. The Issuer authorizes any of said officers to deliver a certification to the effect that such Preliminary Official Statement or Official Statement, if deemed necessary or appropriate, together with such other documents, if any, described in such certificate, was deemed final as of its date for purposes of Rule 15c2-12 of the Securities and Exchange Commission as applicable.

Each Authorized Officer is hereby authorized to make public and to authorize distribution of a final official statement, offering circular or other disclosure document (the "Official Statement") in substantially the form of each Preliminary Official Statement or the most recently executed and delivered Official Statement if there is not a Preliminary Official Statement, with such changes, omissions, insertions and revisions as such officer shall deem advisable, to sign such Official Statement and to deliver such Official Statement to the purchasers of such issue of the Refunding Bonds, such execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

Each Authorized Officer is hereby authorized to execute and deliver for and on behalf and in the name of the Issuer, to the extent determined by such Authorized Officer to be necessary or convenient, a Continuing Disclosure Agreement, substantially in the form of the Continuing Disclosure Agreement most recently executed and delivered by the Issuer, with such changes, omissions, insertions and revisions as such Authorized Officer shall deem advisable (the "Continuing Disclosure Agreement"), said execution being conclusive evidence of the approval of such changes, omissions, insertions and revisions.

The proceeds of each good faith check, if any, received by the Issuer from the purchasers of each issue of Refunding Bonds under the terms of the related Purchase Agreement or Notice of Sale may be invested by the Issuer pending application of the proceeds of such good faith check for the purposes provided in Section 2.02 of this Supplemental Resolution at the time of the issuance and delivery of such Refunding Bonds.

Each Authorized Officer (including any Assistant Secretary of the Issuer) is hereby authorized and directed to execute, deliver, amend, replace or terminate any and all documents and instruments (including any remarketing agreements, dealer agreements, broker dealer agreements, tender agent agreements, or auction agency agreements, any escrow agreements, any investment agreements or arrangements, or any reimbursement agreements or documents or instruments relating to a Credit Facility deemed appropriate to a given form or mode of an

Obligation) and to do and cause to be done any and all acts necessary or proper for carrying out each Purchase Agreement or Notice of Sale, each Continuing Disclosure Agreement, the terms of any Credit Facility or other such agreement or arrangement, and the issuance, sale and delivery of each issue of the Refunding Bonds and for implementing the terms of each issue of the Refunding Bonds and the transactions contemplated hereby or thereby.

When reference is made in this Supplemental Resolution to the authorization of an Authorized Officer to do any act, such act may be accomplished by any of such officers individually.

Section 2.11. Forms of Refunding Bonds and Trustee's Authentication Certificate. Subject to the provisions of the Resolution, the form of registered Refunding Bonds, and the Trustee's certificate of authentication, shall be substantially in the form set forth in Exhibit One to the Resolution including, if necessary, any changes to comply with the requirements of DTC or the provisions of this Supplemental Resolution or any Certificate of Determination.

Section 2.12. Appointment of Trustee and Paying Agent. Unless otherwise provided by Certificate of Determination, The Bank of New York Mellon, as successor in interest to JPMorgan Chase Bank, N.A. shall be the Trustee under the Resolution and the Paying Agent for the Refunding Bonds.

ARTICLE III

DISPOSITION OF REFUNDING BOND PROCEEDS

Section 3.01. Disposition of Refunding Bond Proceeds. Any proceeds of the sale of the Refunding Bonds, other than accrued interest, if any, shall be deposited, simultaneously with the issuance and delivery of a series or subseries of the Refunding Bonds, or shall otherwise be disposed of or applied pursuant to the related Certificate of Determination as follows:

(a) such proceeds shall be (i) deposited in the Refunding Bonds Proceeds Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the refunding of any Obligations, Parity Debt or Cross Credit Obligations, or portions of any of them, in accordance with Section 2.02 hereof or (ii) otherwise applied to such refunding; and

(b) the balance of such proceeds shall be (i) deposited in the Refunding Bonds Costs of Issuance Account, which is hereby established in the Proceeds Fund for each such series or subseries, and applied to the payment of Costs of Issuance, or (ii) otherwise applied to the payment of Costs of Issuance.

Unless otherwise provided in a Certificate of Determination, the accrued interest, if any, received on the sale of the Refunding Bonds shall be deposited in the Debt Service Fund.

ARTICLE IV

TAX COVENANTS, ADDITIONAL COVENANTS AND DEFEASANCE

Section 4.01. Tax Covenants Relating to the Refunding Bonds. The Issuer covenants that, in order to maintain the exclusion from gross income for Federal income tax purposes of the interest on the Refunding Bonds issued as Tax-Exempt Obligations, the Issuer will satisfy, or take such actions as are necessary to cause to be satisfied, each provision of the Code necessary to maintain such exclusion. In furtherance of this covenant, the Issuer agrees to comply with such written instructions as may be provided by Bond Counsel. In furtherance of the covenant contained in the preceding sentence, the Issuer agrees to continually comply with the provisions of any "Arbitrage and Use of Proceeds Certificate" or "Tax Certificate" to be executed by the Issuer in connection with the execution and delivery of any Refunding Bonds issued as Tax-Exempt Obligations, as amended from time to time.

Notwithstanding any other provision of the Resolution to the contrary, upon the Issuer's failure to observe, or refusal to comply with, the above covenant (a) the Owners of the Refunding Bonds, or the Trustee acting on their behalf, shall be entitled to the rights and remedies provided to Owners or the Trustee under Section 702 of the Resolution, other than the right (which is hereby abrogated solely as to the Issuer's failure to observe, or refusal to comply with the above covenant) to declare the principal of all Obligations then Outstanding, and the interest accrued thereon, to be due and payable pursuant to Section 567 of the Issuer Act, and (b) neither the Owners of the Obligations of any Series or holders of any Parity Debt (other than the Owners of the Refunding Bonds or the Trustee acting on their behalf), nor the Trustee acting on their behalf, shall be entitled to exercise any right or remedy provided to the Owners, the Parity Debt holders or the Trustee under the Resolution based upon the Issuer's failure to observe, or refusal to comply with, the above covenant.

The provisions of the foregoing covenants set forth in this Section shall not apply to any Refunding Bonds, including any subseries thereof, which the Issuer determines pursuant to the applicable Certificate of Determination to issue as Taxable Obligations.

Section 4.02. Additional Covenants.

1. The Issuer covenants and agrees that it will not issue any Senior Obligations under the Senior Resolution (other than pursuant to Section 205 thereof) unless in addition to satisfying the requirements of the Senior Resolution, an Authorized Officer delivers to the trustee under the Senior Resolution a certificate demonstrating that for any period of 12 consecutive calendar months out of the 18 complete calendar months next preceding the date of authentication and delivery such issue of Senior Obligations, Net Revenues are at least equal to 1.10 times the Combined Maximum Annual Calculated Debt Service for all Subordinate Revenue Obligations, Parity Debt, Senior Obligations and Senior Parity Debt.

2. The Issuer covenants and agrees that in addition to complying with the provisions of Section 604 of the Resolution, the Issuer shall at all times establish, levy, maintain and collect, or cause to be established, levied, maintained and collected, such tolls, rentals and other charges in connection with the TBTA Facilities as shall always be sufficient, together with

other money available therefor (including the anticipated receipt of proceeds of sale of Obligations or other bonds, notes or other obligations or evidences of indebtedness of the Issuer that will be used to pay the principal of Obligations issued in anticipation of such receipt, but not including any anticipated or actual proceeds from the sale of TBTA Facilities), to equal or exceed in each calendar year the greater of (a) an amount equal to the sum of amounts necessary in such calendar year (i) to pay all Operating Expenses of the Issuer, plus (ii) to pay the sum of Calculated Debt Service as defined in the Resolution and Calculated Debt Service as defined in the Senior Resolution, plus (iii) to maintain any reserve established by the Issuer pursuant to the Senior Resolution, in such amount as may be determined from time to time by an Authorized Officer in his or her judgment, or (b) an amount such that Revenues less Operating Expenses shall equal at least 1.10 times the sum of Calculated Debt Service as defined in the Senior Resolution and Calculated Debt Service as defined in the Resolution for such calendar year.

Section 4.03. Defeasance. In the event the Issuer shall seek, prior to the maturity or redemption date thereof, to pay or cause to be paid, within the meaning and with the effect expressed in the Resolution, all or less than all Outstanding Refunding Bonds issued as Tax-Exempt Obligations and the provisions of Section 4.01 hereof shall then be of any force or effect, then, notwithstanding the provisions of Article A-XI of the Resolution, the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid shall not be deemed to have been paid within the meaning and with the effect expressed in Section A-1101 of the Resolution unless (i) the Issuer has confirmed in writing that the Owners of the Refunding Bonds issued as Tax-Exempt Obligations which the Issuer then seeks to pay or cause to be paid will continue, after such action, to have the benefit of a covenant to the effect of the covenant of the Issuer contained in Section 4.01 hereof or (ii) there shall have been delivered to the Trustee an Opinion of Bond Counsel to the effect that non-compliance thereafter with the applicable provisions of the Code will not affect the then current treatment of interest on the Refunding Bonds issued as Tax-Exempt Obligations in determining gross income for Federal income tax purposes.

Staff Summary

Subject Updated MTA and TBTA Bond Refunding Policy	Date December 12, 2018
Department Finance	Vendor Name N/A
Department Head Name Robert E. Foran, Chief Financial Officer	Contract Number
Department Head Signature 	Contract Manager Name
Project Manager Name Patrick McCoy, Director of Finance 	Table of Contents Ref #

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	Finance Comm.	12/10	X			1	Legal 	2	Chief of Staff 
2	Board	12/12	X						

PURPOSE:

The MTA Finance Department is seeking MTA and TBTA Board approval of an updated Bond and Other Debt Obligations Refunding Policy amending the Policy as originally adopted by the MTA Board in May 2010. This updated policy incorporates changes necessary as result of the 2017 Tax Cuts and Jobs Act which eliminated the ability for tax-exempt advance refundings. Current federal tax law permits current refundings of bonds that are within 90 days of an optional call or maturity. Additional clarifying statements on the use of variable rate bonds were also made to the policy. Staff believes that these modified requirements will provide continued flexibility in the pursuit of MTA's and TBTA's capital markets objectives in funding the capital program at the lowest possible cost.

The existing Refunding Policy establishes debt service savings criteria that must be met by proposed refundings of outstanding MTA and TBTA bonds. The updated Refunding Policy will maintain the same criteria for advance refundings (if allowed on a tax-exempt basis in the future), and provide the MTA Chief Financial Officer (CFO) and Director of Finance with needed flexibility to structure current refunding transactions achieving significant overall debt service savings or other benefits for MTA, TBTA and/or their affiliates and subsidiaries. The updated Refunding Policy will also provide express authorization with respect to refundings utilizing variable rate debt.

The updated Refunding Policy will apply to 2019 refundings authorized by the Multiple Series Refunding Bond Supplemental Resolutions for which approval is sought concurrently herewith, and to refundings authorized in future years.

DISCUSSION:

MTA and TBTA Board approval is sought for the MTA and TBTA Bond and Other Debt Obligations Refunding Policy, replacing the Refunding Policy adopted by the MTA Board on May 26, 2010.

The updated Refunding Policy will permit current refundings of outstanding MTA and TBTA fixed rate bonds, provided that the refunding of each bond to be called prior to its scheduled maturity achieves positive net present value (NPV) savings. However, the Policy provides the latitude to structure savings patterns within a refunding transaction by permitting individual maturities of bonds to be escrowed to maturity without regard to savings on an individual bond basis. Further, for current refundings, the updated Refunding Policy will lift the existing requirement that aggregate NPV savings of at least 3.0% of the par amount of the refunded bonds be achieved.

The Internal Revenue Code, as amended in 2017, does not permit advance refundings of outstanding debt with tax-exempt bonds. The updated Refunding Policy will permit advance refundings of outstanding MTA and TBTA fixed rate in accordance with applicable law should this valuable tool be allowed in the future. There is no prohibition against advance refunding of bonds with taxable bonds, however, and it is possible that future tax legislation will lift or relax the current bar against advance refundings with tax-exempt bonds. Accordingly, to the extent permitted by applicable law, the Refunding Policy will allow advance refundings if (a) the aggregate NPV savings is at least 3.0% of the par amount of the refunded bonds, and (b) the refunding of each bond to be called prior to its scheduled maturity achieves minimum NPV savings determined by reference to a sliding scale that takes into account the number of years from the refunding to the first call date and the number of years from the call date to the maturity date of the bond. These criteria are unchanged with respect to advance refundings, with the clarification that the NPV savings requirement for each individual maturity of the refunded bonds does not apply to bonds escrowed to maturity as part of an overall savings pattern.

The updated Refunding Policy states expressly, for the avoidance of doubt, that it does not restrict the refunding of either fixed or variable rate bonds with new variable rate debt. This is in accord with current practice under the existing Refunding Policy, which states that it applies to the issuance of fixed rate bonds for the purpose of refunding fixed rate bonds. The updated Refunding Policy also confirms that it does not restrict the CFO or the Director of Finance in structuring the savings pattern of any refunding, provided the requirements described above are met.

Finally, the updated Refunding Policy retains the following provisions of the existing Policy:

- The arbitrage yield and actual escrow investments are to be utilized in calculating refunding savings.
- The State Bond Issuance Charge (BIC), unless expressly waived, is to be included as a cost of issuance in calculating refunding savings.
- SLGS, when available, are to be used to fund refunding escrows, with Treasury and other open-market securities to be considered as an alternative when the arbitrage yield cannot be met with SLGS or the SLGS window is not open. This is consistent with MTA's and TBTA's bond resolutions.

ALTERNATIVES:

The Board could determine that staff seek specific approval for each refunding contemplated in advance of undertaking such refunding. This alternative is not advised as the timing of the Board cycle could result in missed market opportunities.

The Board could determine that the existing Refunding Policy remain in effect without change, allowing staff to seek approval for specific refundings that cannot be structured within the existing Policy. This alternative is not advised as the timing of the Board cycle could result in missed market opportunities.

RECOMMENDATION:

The MTA and TBTA Boards approve the updated Refunding Policy. The updated Refunding Policy will apply to 2019 refundings authorized by the Multiple Series Refunding Bond Supplemental Resolutions for which approval is sought concurrently herewith, and shall continue in effect without any further action by the MTA or TBTA Boards, until the MTA and TBTA Boards shall have modified or repealed the Refunding Policy.

BOND AND OTHER DEBT OBLIGATIONS REFUNDING POLICY

WHEREAS, The Metropolitan Transportation Authority has a large portfolio of outstanding bonds and other debt obligations; and

WHEREAS, The Metropolitan Transportation Authority desires to achieve the lowest possible interest cost for such bonds; and

WHEREAS, The Metropolitan Transportation Authority desires, from time to time, to benefit from favorable capital market conditions to undertake refundings of the outstanding bonds and other obligations; and

WHEREAS, The Metropolitan Transportation Authority has determined that in order to provide guidance in the issuance of refunding bonds, a refunding policy ("Refunding Policy") is desirable; and

WHEREAS, such refunding bonds must be authorized by the Board in accordance with a supplemental resolution for each of the MTA and TBTA credits; therefore

BE IT RESOLVED by the Metropolitan Transportation Authority that, except as otherwise provided by separate action of the Authority relating to a particular refunding, the Refunding Policy as set forth below shall be adopted and shall apply to all refundings of bonds or other debt obligations described therein hereafter.

**Metropolitan Transportation Authority
and Triborough Bridge and Tunnel Authority
Bond and Other Debt Obligations Refunding Policy**

This bond and other debt obligations refunding policy establishes conditions precedent to any issuance of fixed rate bonds for the purposes of refunding fixed rate bonds previously issued by the MTA or any of the Related Entities.

1. A current refunding is permitted if, at the time of final pricing, the refunding of each bond to be called prior to its scheduled maturity achieves positive net present value (NPV) savings.
2. An advance refunding that complies with applicable law is permitted if, at the time of final pricing, (a) the aggregate NPV savings is at least 3.0% of the par amount of the refunded bonds, and (b) the refunding of each bond to be called prior to its scheduled maturity achieves NPV savings (expressed as a percentage of the par amount of such refunded bond) of at least the following amount:

		Years to Call		
		0 to 2	3 to 7	8 plus
Years From Call to Maturity	0 to 5	0.5%	1.0%	2.0%
	6 to 10	1.0%	2.5%	4.0%
	11 to 15	3.0%	4.0%	5.0%
	16 plus	4.0%	5.0%	5.5%

3. The arbitrage yield of the refunding issue must be utilized in calculating NPV savings.
4. Actual escrow investments must be used in calculation of refunding savings at the time of pricing.

Additional Criteria and Instructions

1. In the evaluation of refunding opportunities, the State Bond Issuance Charge (BIC), unless expressly waived, shall be included as a cost of issuance in calculating NPV savings, both in the aggregate and for individual bonds.
2. If it is possible to meet the arbitrage yield in a refunding escrow with SLGS, they should be used. In the event SLGS could provide a yield higher than the arbitrage yield, as many rolling 0 percent SLGS as possible should be used to blend down the arbitrage yield. If the arbitrage yield cannot be met with SLGS or the SLGS window is not open, Treasury securities and other open market securities can be considered, consistent with the investment restrictions in the applicable bond resolution.
3. This policy does not restrict (a) the refunding of either fixed or variable rate debt with new variable rate debt, (b) the refunding of variable rate debt with new fixed rate debt, including the refunding of debt in a short-term fixed rate mode with long-term fixed rate debt, or (c) changes in interest rate modes in variable rate debt. Any such refundings may be undertaken if the Chief Financial Officer (CFO) or the Director of Finance, as the designee of the CFO, determines that it is in the best interest of the MTA to do so.
4. This policy does not restrict the CFO or the Director of Finance in structuring the savings pattern of any refunding, provided the above requirements are met.

Staff Summary



Subject MTA and TBTA Reimbursement for Federal Tax purposes	Date December 12, 2018
Department Chief Financial Officer	Vendor Name
Department Head Name Robert E. Foran, Chief Financial Officer	Contract Number
Department Head Signature 	Contract Manager Name
Project Manager Name Josiane Codio, Director of Treasury	Table of Contents Ref #

Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
	Finance Comm.	12/10	X			1	Legal	2	Chief of Staff
	Board	12/12	X						

To obtain MTA and TBTA adoption of the annexed reimbursement resolutions, which are required by Federal tax law to preserve the ability to finance certain capital projects on a tax-exempt basis.

PURPOSE:

As it has in the past, the Metropolitan Transportation Authority (the "MTA") intends to finance the MTA's transit and commuter capital improvement program, including MTA Bus Company and Staten Island Rapid Transit Operating Authority, and Triborough Bridge and Tunnel Authority ("TBTA" or "MTA Bridges and Tunnels") intends to finance the MTA Bridges and Tunnels' bridge and tunnel capital improvement program.

It is important that MTA and MTA Bridges and Tunnels preserve the ability to finance capital projects in these capital improvement programs on a tax-exempt or tax-advantaged basis. To maintain the ability of MTA and MTA Bridges and Tunnels to finance capital projects in the capital improvement programs on such tax-exempt or tax-advantaged basis, consistent with Federal tax law, the MTA and TBTA Boards periodically adopt reimbursement resolutions. Federal tax law requires that official action that sets forth the issuer's intent to spend tax-exempt bond proceeds on a project must be taken by an issuer that wants to reimburse itself from tax-exempt bond proceeds for capital project costs that were funded from another source of revenue. Copies of the 2019 reimbursement resolutions submitted for Board adoption are attached hereto.

For purposes of the attached reimbursement resolutions, (i) in the case of MTA, the Project refers to the capital programs approved by the Metropolitan Transportation Authority Capital Program Review Board (CPRB), including, particularly, the 2000-2004 Transit and Commuter Capital Program, the 2005-2009 Transit and Commuter Capital Program, the 2010-2014 Transit and Commuter Capital Program, and the 2015-2019 Transit and Commuter Capital Program, and (ii) in the case of TBTA, the Project refers to the capital programs approved by the TBTA Board, including, particularly, the 2000-2004 TBTA Capital Program, the 2005-2009 TBTA Capital Program, the 2010-2014 TBTA Capital Program, the 2015-2019 TBTA Capital Program, and the security projects authorized to be constructed and/or installed at the TBTA bridges and tunnels.

ALTERNATIVES:

There is no alternative to preserve the ability to finance certain capital projects on a tax-exempt or tax-advantaged basis under Federal tax law.

RECOMMENDATION:

Staff Summary



The MTA and TBTA Boards approve the above-referenced resolutions. This authorization shall continue in effect until the adoption in 2019 by the MTA and TBTA Boards of subsequent reimbursement resolutions.

RESOLUTION

WHEREAS, Metropolitan Transportation Authority (“MTA”) intends to finance the MTA’s transit and commuter capital improvement program, including MTA Bus Company and Staten Island Rapid Transit Operating Authority, as more fully described in the accompanying staff summary and capital program documents referenced therein (the “MTA Project”);

WHEREAS, MTA desires to finance the MTA Project through the issuance of tax-exempt debt or tax-advantaged debt, if available, and other sources as described in the approved capital programs, including moneys derived from affiliates and subsidiaries, and expects to reimburse expenditures made from such other sources with proceeds of such tax-exempt or tax-advantaged debt;

NOW THEREFORE, BE IT:

RESOLVED, that the statements contained in this Resolution with respect to the reimbursement of the expenditures described in this resolution are intended to be statements of official intent as required by, and in conformance with, the provisions of Treasury Regulation Section 1.150-2(e); and

RESOLVED, that the expenditures in connection with the MTA Project to be reimbursed pursuant to this Resolution have been incurred and paid not more than 60 days prior to the date hereof or will be incurred and paid after the date hereof in connection with the MTA Project; and

RESOLVED, that the MTA reasonably expects that the maximum principal amount of tax-exempt or tax-advantaged debt (including bonds, commercial paper and bond anticipation notes) to be issued by MTA subsequent to the date hereof to pay MTA Project expenditures in 2019 (whether directly or as a reimbursement) is \$3.0 billion (plus associated financing costs); and

RESOLVED, that this Resolution shall take effect immediately.

December 12, 2018

RESOLUTION

WHEREAS, Triborough Bridge and Tunnel Authority (“MTA Bridges and Tunnels”) intends to finance the MTA Bridges and Tunnels’ bridge and tunnel capital improvement program, as more fully described in the accompanying staff summary and capital program documents referenced therein (the “Project”);

WHEREAS, MTA Bridges and Tunnels desires to finance the Project through the issuance of tax-exempt debt or tax-advantaged debt, if available, and other sources as described in the approved capital programs, including moneys derived from the Metropolitan Transportation Authority and its affiliates and subsidiaries, and expects to reimburse expenditures made from such other sources with proceeds of such tax-exempt or tax-advantaged debt;

NOW THEREFORE, BE IT:

RESOLVED, that the statements contained in this Resolution with respect to the reimbursement of the expenditures described in this resolution are intended to be statements of official intent as required by, and in conformance with, the provisions of Treasury Regulation Section 1.150-2(e); and

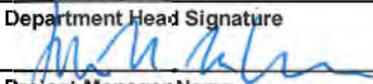
RESOLVED, that the expenditures in connection with the Project to be reimbursed pursuant to this Resolution have been incurred and paid not more than 60 days prior to the date hereof or will be incurred and paid after the date hereof in connection with the Project; and

RESOLVED, that MTA Bridges and Tunnels reasonably expects that the maximum principal amount of tax-exempt or tax-advantaged debt (including bonds, commercial paper and bond anticipation notes) to be issued by MTA Bridges and Tunnels subsequent to the date hereof to pay MTA Bridges and Tunnels Project expenditures in 2019 (whether directly or as a reimbursement) is \$350 million (plus associated financing costs); and

RESOLVED, that this Resolution shall take effect immediately.

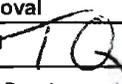
December 12, 2018

Staff Summary

Subject MTA ADVERTISING POLICY
Department CHIEF DEVELOPMENT OFFICER
Department Head Name JOHN N. LIEBER
Department Head Signature 
Project Manager Name FREDERICKA CUENCA

Date December 10, 2018
Vendor Name N/A
Contract Number N/A
Contract Manager Name N/A
Table of Contents Ref. # N/A

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee		X		
2	Board		X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal 		
2	Chief Development Officer 		
	Chief of Staff 		

PURPOSE:

To obtain Board approval of conforming administrative changes to the MTA's Advertising Policy.

DISCUSSION:

The Advertising Policy include a process for reviewing advertising proposed for display in or on the MTA property. The proposed modifications reflect the MTA's current management responsibilities as well as a revised process, which provides for an initial review by a three-person committee; an advertiser's objection to the Committee's decision would be heard and decided by the Chief Development Officer. Previously, both the initial review and the final determination were by the the Director of Real Estate, a position which no longer exists. The new process not only addresses this change in organization, it also provides for a more robust review process by a committee in the first instance and an opportunity for a separate review on appeal.

A mark-up of the Advertising Policy showing the proposed revisions is attached.

RECOMMENDATION:

It is recommended that the Board approve and adopt the annexed MTA Advertising Policy.

MTA ADVERTISING POLICY

I. PURPOSE

- A. To establish uniform, reasonable, and viewpoint-neutral standards for the display of advertising in and on the facilities, vehicles and other property (together “Property”) of the Metropolitan Transportation Authority and its affiliated and subsidiary agencies (together “MTA”).
- B. To convert the MTA’s Property from a designated public forum into a limited public forum by excluding advertising of a political nature after the Effective Date.

II. SCOPE

This policy applies to all advertisements proposed to be displayed in and on the Property on or after the Effective Date set forth below.

III. OBJECTIVE

The MTA’s mission is to provide safe, reliable, and efficient public transportation and crossings within its service area. The MTA’s transportation operations are funded by a combination of federal, state, and local funds, including grants and taxes, as well as fare box and toll revenue. Advertising revenues are an important supplemental source of revenue that supports the MTA’s transportation operations. The MTA’s purpose in allowing paid advertising to be displayed in and on the Property is to maximize such supplemental revenue to support transportation operations.

By accepting paid advertising for display in and on the Property, the MTA is acting in a proprietary capacity as a provider of public transportation and crossings seeking to maximize advertising revenue to support its transportation operations. Starting from the Effective Date, the MTA does not intend that the advertising permitted to be displayed in and on the Property be created, designated, or used as a public forum for expressive activities or general discourse or opinions. In furtherance of the MTA’s purpose of maximizing advertising revenue, the MTA in its proprietary capacity is limiting advertisements it will accept for display in and on the Property to paid commercial advertising, certain public service announcements that will help build goodwill for the MTA among its riders and the public, and governmental messages. The MTA retains control over the advertising that it will allow to be displayed in and on the Property by subjecting all proposed advertisements to the Advertising Standards below. MTA expressly intends that the advertising permitted to be displayed in and on the Property be a limited public forum.

In establishing and enforcing these Advertising Standards, the MTA seeks to fulfill the following goals and objectives:

- Maximize advertising revenue
- Maximize ridership and fare revenue
- Maintain a secure and orderly operating environment

- Maintain a safe and welcoming environment for all MTA employees and customers, including minors, who use MTA’s subways, buses, commuter trains and crossings
- Minimize the extraordinary resources and executive attention that have been expended to resolve disputes relating to the permissibility of certain political advertisements, thus unnecessarily diverting the organization from performing its mission
- Avoid identification of MTA with, and the appearance of MTA endorsement of, the advertisements of non-MTA parties displayed in or on the Property, including the associated messages, products, services, or events being proposed or promoted

IV. ADVERTISING STANDARDS

A. Permitted Advertising

The MTA may display advertisements that fall under one or more of the following categories:

1. Commercial advertising. Paid advertisements that propose, promote, or solicit the sale, rent, lease, license, distribution, or availability of, or some other commercial transaction concerning, goods, products, services, or events for the advertiser’s commercial or proprietary interest, or more generally promote an entity that engages in such activities.

2. Governmental advertising. Notices or messages from the MTA that promote the MTA or any of its functions or programs, and also paid notices or messages of the United States government, the State of New York and its agencies, the City of New York and its departments, or of any of the County governments within the Metropolitan Commuter Transportation District that advance specific governmental purposes.

3. Public service announcements. Public service announcements not otherwise prohibited under Section IV.B of this Policy, which are sponsored by either a government entity or a nonprofit corporation that is exempt from taxation under Section 501(c)(3) of the Internal Revenue Code, and which are directed to the general public and relate directly to:

- Prevention or treatment of illnesses;
- Promotion of safety or personal well-being;
- Education or training;
- Art or culture;
- Provision of children and family services;
- Provision of services and programs that provide support to low income citizens, senior citizens, or people with disabilities; or
- Solicitation by broad-based contribution campaigns that provide funds to multiple charitable organizations active in the above-listed areas.

B. Prohibited Advertising

Notwithstanding the foregoing, the MTA will not accept any advertisement for display in or on the Property if it falls within one or more of the following categories:

1. Promotes or opposes a political party, or promotes or opposes any ballot referendum or the election of any candidate or group of candidates for federal, state, judicial, or local government offices.
2. Is political in nature, including but not limited to advertisements that either:
 - a. Are directed or addressed to the action, inaction, prospective action or policies of a governmental entity, except as permitted in Sections IV.A.2–IV.A.3 of this Policy; or
 - b. Prominently or predominately advocate or express a political message, including but not limited to an opinion, position, or viewpoint regarding disputed economic, political, moral, religious or social issues or related matters, or support for or opposition to disputed issues or causes.
3. Is false, misleading, or deceptive.
4. Promotes unlawful or illegal goods, services, or activities, or involves other unlawful conduct.
5. Implies or declares an endorsement by the MTA of any service, product, or point of view.
6. Encourages or depicts unsafe behavior with respect to MTA’s transportation operations, such as failure to comply with normal safety precautions in awaiting, boarding, riding upon or debarking from MTA vehicles, or is otherwise directly adverse to the commercial, administrative or operational interests of the MTA as a business.
7. Depicts or describes in a patently offensive manner sexual or excretory activities so as to satisfy the definition of obscene material as contained in New York Penal Law § 235.00, as such provision may be amended, modified, or supplemented from time to time.
8. Contains material, which, if sold or loaned to a minor for monetary consideration with knowledge of its character and content, would give rise to a violation of New York Penal Law § 235.21, which prohibits the dissemination of indecent material to minors, as such provision may be amended, modified, or supplemented from time to time.
9. Contains material, which, if displayed with knowledge of its character and content, would give rise to a violation of New York Penal Law § 245.11, which prohibits the public display of offensive sexual material, as such provision may be amended, modified, or supplemented from time to time.
10. Promotes tobacco or any tobacco-related product or any alcohol product.

11. Contains an image of a person who appears to be a minor in sexually suggestive dress, pose, or context.

12. Contains material the display of which the MTA reasonably foresees would imminently incite or provoke violence or other immediate breach of the peace, and so harm, disrupt, or interfere with safe, efficient, and orderly transit operations.

13. Contains material that demeans or disparages an individual or group of individuals. For purposes of determining whether an advertisement contains such material, the MTA will determine whether a reasonably prudent person, knowledgeable of the MTA's ridership and using prevailing community standards, would believe that the advertisement contains material that is abusive to, or debases the dignity of, an individual or group of individuals.

14. Contains sexually explicit material that appeals to the prurient interest in sex or is so violent, frightening, or otherwise disturbing as to reasonably be deemed harmful to minors.

15. Promotes an escort service or sexually oriented business.

C. **Additional Provisions Relating to Advertisements**

To avoid identification of the MTA with messages or images contained within advertisements displayed in and on the Property and to avoid the appearance of MTA endorsement of goods, products, services, events by advertisers, advertisements shall readily and unambiguously identify the person, corporation, or entity paying for the advertisement. An advertiser may, at the MTA's discretion, be required to include in the advertisement a statement explicitly identifying the person, corporation, or entity paying for the advertisement. An advertiser may also, at the MTA's discretion, be required to incorporate additional language to avoid the appearance of MTA endorsement.

V. REVIEW OF ADVERTISING PROPOSED FOR DISPLAY IN OR ON THE PROPERTY

1. Before accepting an advertisement for display in or on the Property, the advertising contractor shall review such proposed advertisement to determine whether the advertisement complies with the Advertising Standards.

2. If the advertising contractor determines that a proposed advertisement does not, or may not, comply with the Advertising Standards it shall promptly notify the Advertising Review Committee appointed by the MTA Chairman ~~Director of MTA Real Estate (or a designee)~~ in writing of its determination and the reason for its determination.

3. If the Advertising Review Committee ~~Director of Real Estate~~ determines, following receipt and consideration of such recommendation, that a proposed advertisement does not comply with the Advertising Standards, the advertiser shall be notified by the advertising contractor. The advertising contractor, in consultation with the Advertising Review Committee (or a designee), ~~Director of Real Estate~~, may discuss with the advertiser revisions to the advertisement to try to bring the advertisement into compliance with the Advertising Standards,

and the advertiser may submit a revised advertisement to the advertising contractor for review by the Advertising Review Committee.

43. If the advertiser and the advertising contractor do not reach agreement with regard to a revision of the advertisement, or the Advertising Review Committee Director of Real Estate determines that no appropriate revision would bring the advertisement into compliance with the Advertising Standards, or the advertiser chooses not to submit a revised advertisement, the advertiser may request a final determination from the MTA -Chief Development Officer. Director of Real Estate. The MTA Chief Development Officer (or a designee) , Director of Real Estate, in reaching a final determination, may consult with the advertising contractor, or with the MTA General Counsel, and the the MTA Chairman and Chief Executive Officer, or with any other individuals, and may consider any materials submitted by the advertiser. The MTA Chief Development Officer Director of Real Estate shall advise the advertiser and the advertising contractor of the final determination in writing.

VI. SEVERABILITY

If any section, subsection, sentence, clause, phrase or other portion of this Policy is, for any reason, declared invalid, in whole or in part, by any court of competent jurisdiction, such portion shall be deemed severable, and such invalidity shall not affect the validity of the remaining portions of this Policy, which remaining portions shall continue in full force and effect.

VII. EFFECTIVE DATE

This Advertising Policy is effective as of December __, 2018. October 25, 2017.

Staff Summary

Schedule F: Personal Service Contracts

Item Number:					
Dept & Dept Head Name: Chief Financial Officer/Environmental Sustainability					
Division & Division Head Name: Bob Foran					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	Finance	12/10/18	X		
2	Board	12/12/18	X		
Internal Approvals					
Order	Approval	Order	Approval		
1	Legal				
2	CFO				
3	Chief of Staff				

SUMMARY INFORMATION	
Vendor Name: NYPA	Contract Number:
Description: Energy Services Program Agreement	
Total Amount:	
Contract Term (including Options, if any): One (1) Year Extension	
Option(s) included in Total Amount?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Renewal – two (2) one-year renewals	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Procurement Type: <input type="checkbox"/> Competitive <input checked="" type="checkbox"/> Non-competitive	
Solicitation Type: <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: [e.g., Ride - - Contract]	
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 Board approval for an extension of the Energy Services Program Agreement between the New York Power Authority (NYPA) and the MTA.

II. DISCUSSION
NYPA supplies electric energy, capacity and ancillary services for the MTA in Con Edison territory. In March of 2005 the MTA entered into a long-term agreement with NYPA containing supplemental terms and conditions to the original 1976 Application for Electric Service, and providing for NYPA’s continuing supply of energy and capacity to the MTA through December 31, 2017 (the “2005 LTA”). At that time, the MTA and NYPA also entered into the Energy Services Program Agreement (“ESP Agreement”) in order to identify and finance energy efficiency and clean energy technology projects at MTA facilities and to implement such projects that were economically feasible. The ESP Agreement was tied to the 2005 LTA and was set to expire on December 31, 2017, as well. In December of 2017, the MTA extended both the 2005 LTA and the ESP Agreement through December 31, 2018 to maintain the continuity of electricity supply and energy efficiency services until new agreements between the Parties were executed.

In September of 2018, the MTA entered into a new long-term agreement with NYPA. However, negotiations for a new Energy Services Program Agreement are still on-going. Therefore, to enable the orderly continuation and completion of these negotiations, and the efficient transition to the new Energy Services Program Agreement, the MTA is requesting an extension of the 2005 ESP Agreement for one more year, through December 31, 2019. This extension will be null and void upon the execution of a new Energy Services Program Agreement.

III. D/M/WBE INFORMATION

No DBE/WBE goals were established by the MTA DDCR for this contract.

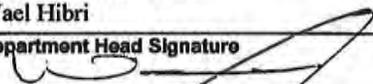
IV. IMPACT ON FUNDING

There will be no impact. The extension will carry forward the terms and conditions established under the 2005 ESP Agreement.

V. ALTERNATIVES

The alternative would be to postpone development of new energy-efficiency projects, which have been of benefit to the MTA and its Agencies.

Staff Summary

Subject Request for Authorization to Award Various Procurements
Department MTA Business Service Center
Department Head Name Wael Hibri
Department Head Signature 
Division Head Name David N. Ross

Date December 7, 2018
Vendor Name Various
Contract Number Various
Contract Manager Name Various
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance	12/10/2018	X		
2	Board	12/12/2018	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:

Schedules Requiring Majority Vote:

Schedule H: Modifications to Personal Service/Miscellaneous Service Contracts	1	\$	4,372,560
SUBTOTAL	1	\$	4,372,560

MTAHQ proposes to award Competitive procurements in the following categories:

Schedules Requiring Two-Thirds Vote:

Schedule C: Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)	1	\$	63,816,683
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Schedules Requiring Majority Vote:

Schedule F: Personal Service Contracts	2	\$	3,585,285
SUBTOTAL	3	\$	67,401,968
TOTAL	4	\$	71,774,528

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.

PROCUREMENTS

The Procurement Agenda this month includes 4 actions for a proposed expenditure of \$72M.

BOARD RESOLUTION

METROPOLITAN TRANSPORTATION AUTHORITY

WHEREAS, in accordance with Section 1265-a and Section 120 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 works 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.

DECEMBER 2018

LIST OF NON-COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

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.)

- | | | | |
|----|---|---|---|
| 1. | <p>CBRE, Inc.</p> <p>Property Management Services</p> <p>Contract No. 15326-0100, Modification No. 4</p> <p>Base Amount = \$28,213,442</p> <p>Current Contract Value = \$39,569,338</p> <p>Proposed New Contract Value = \$43,941,898</p> | <p>\$4,372,560</p> <p><small>(not-to-exceed)</small></p> | <p><u>Staff Summary Attached</u></p> |
|----|---|---|---|

Board approval is sought to modify a competitively negotiated, personal services contract with CBRE, Inc. (CBRE) for property management services, adding MTA locations that were not included with the original authorization. Additionally, Board approval is sought to add locations in subsequent contract years subject to MTA Board approval of the MTA Financial Plans for such years. CBRE was selected through a competitive RFP and was to manage seven MTA properties including 2 Broadway. Since award of this contract, several additional locations were added, all based on a determination that doing so would reduce cost of management and provide operating efficiencies. The additional locations are: 2055 Sunrise Highway, Merrick New York (MTA Police-Merrick Substation), 1-15 Grumman Road, Bethpage, New York (MTA Police District 2 Headquarters); 341-345-347 Madison Avenue, New York, New York 10017, 14 Perin Lane, Stormville, New York, 24 South MacQuesten Parkway, Mount Vernon New York, 110 West Suffolk Avenue, Central Islip, New York, and 2460 2nd Ave, New York, New York. The fees and payroll costs paid to CBRE are consistent with analogous properties it manages in the region and the additional payroll expenses for the various staffing positions are below the existing contractual salary matrix for titles of similar qualifications. Also, the management of the Madison Ave campus was absorbed by existing CBRE staff already on this account, so the MTA will not be incurring additional salary costs. 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 Interim Executive Director with the MTA Acting General Counsel. No new SAI has been found relating to the Contractor and the Contractor has been found to be responsible.

Staff Summary

Schedule H: Modifications to Personal Service & Miscellaneous Service Contracts

Item Number: 1

Page 1 of 1

Vendor Name (& Location): CBRE, Inc.	Contract Number: 15326-0100	AWO/Modification # 4
Description: Property Management Services	Original Amount:	\$28,213,442.00 (in Year 1)
Contract Term (including Options, if any): Eight (8) Years (May 1, 2016 to April 30, 2024)	Prior Modifications:	Not Applicable
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prior Budgetary Increases:	Not Applicable
Procurement Type: <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	Current Amount:	\$39,569,338.00 (in year 3)
Solicitation Type: <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other:	This Request:	\$4,372,560.00
Funding Source: <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:	% of This Request to Current Amount:	11.1%
Requesting Dept/Div & Dept/Div Head Name: Finance / Robert Foran & Real Estate David Florio	% of Modifications (including This Request) to Original Amount:	15.5%

PURPOSE:

Board approval is sought to modify a competitively negotiated, personal services contract with CBRE, Inc. (CBRE) for property management services, adding MTA locations that were not included with the original authorization. Additionally, Board approval is sought to add locations in subsequent contract years subject to MTA Board approval of the MTA Financial Plans for such years.

DISCUSSION:

CBRE was selected through a competitive RFP and was to manage seven MTA properties including 2 Broadway. The services they oversee include general maintenance, cleaning, security and safety, maintenance and operation of building systems, landscaping and capital project implementation. CBRE uses a combination of personnel on its own payroll, subcontractors procured by CBRE and contractors procured directly by MTA Procurement. In call cases, subcontractors engaged by CBRE are procured following MTA-approved procurement processes and guidelines, and are subject to oversight by MTA Real Estate. The base contract is for sixty months ending April 30, 2021. There are two renewal options that, if exercised, would add three years combined.

Since award of this contract, several additional locations were added, all based on a determination that doing so would reduce cost of management and provide operating efficiencies. The additional locations are: 2055 Sunrise Highway, Merrick New York (MTA Police-Merrick Substation), 1-15 Grumman Road, Bethpage, New York (MTA Police District 2 Headquarters); 341-345-347 Madison Avenue, New York, New York 10017, 14 Perin Lane, Stormville, New York, 24 South MacQuesten Parkway, Mount Vernon New York, 110 West Suffolk Avenue, Central Islip, New York, and 2460 2nd Ave, New York, New York.

The additional locations increase monthly contract expenditures by about 11% and, since the work is analogous, it wouldn't make sense to conduct a separate procurement to cover them. In all cases, MTA will be able to reduce internal (mostly staff) costs by amounts in excess of what will be paid to CBRE. For example, adding the Madison Avenue properties saves about \$194k annually vis-a-vis the cost for having MTA personnel manage them. Similarly, the two MTA Police locations save over \$150K vis-à-vis the cost of having MTA personnel manage them. The fees and payroll costs paid to CBRE are consistent with analogous properties it manages in the region and the additional payroll expenses for the various staffing positions are below the existing contractual salary matrix for titles of similar qualifications. Also, the management of the Madison Ave campus was absorbed by existing CBRE staff already on this account, so the MTA will not be incurring additional salary costs.

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 Interim Executive Director with the MTA Acting General Counsel. No new SAI has been found relating to the Contractor and the Contractor has been found to be responsible.

DECEMBER 2018

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Two-Thirds Vote:

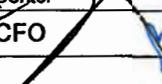
C. Competitive Requests for Proposals (Award of Purchase and Public Work Contracts)
(Staff Summaries required for items requiring Board approval)

- | | | | |
|----|--|--|--------------------------------------|
| 2. | Hilti, Inc.
All-Agency Procurement of
Maintenance, Repair and Operating
Supplies & Related Products and Services
Contract No. 11751-0100
Competitively negotiated – 12 proposals – 3 years with 2 one-year options | \$63,816,683
(not-to-exceed) | <u>Staff Summary Attached</u> |
|----|--|--|--------------------------------------|

Board approval is sought to award the Proprietary Tools category of a competitively negotiated All-Agency Procurement of Maintenance, Repair and Operating Supplies & Related Products and Services (collectively, MRO) to Hilti, Inc. (Hilti) in the not-to-exceed amount of \$63,816,683, which includes a 10% contingency. The contract period is three years commencing January 1, 2019 with two one-year options to be exercised at MTA’s sole discretion. Additional category awards will be presented for Board approval following completion of negotiations. The MTA and its agencies currently purchase Maintenance, Repair and Operating Supplies products via a multitude of contracts. This all-agency RFP will achieve savings for contractors and the MTA by combining the volumes of the entire MTA and its agencies to achieve cost effective pricing, reduce administrative and overhead costs through the use of e-commerce best practices for cataloguing, ordering and delivery systems, and by standardizing products across MTA agencies. Following a competitive Request For Proposal Process, Proposals for the Hilti Proprietary Items category were received from three firms, Hilti, Colonial Hardware Corp. and Tanner Bolt and Nut, Inc. Tanner’s proposal was incomplete, thus deemed non-responsive and disqualified. While both Hilti and Colonial were considered technically qualified and proceeded to negotiations, Colonial’s cost proposal was 41.9% higher than the MTA’s estimate and the firm decided not to submit a BAFO because they could not provide pricing in the competitive range. The Selection Committee unanimously determined that Hilti, Inc. provided the best value to the MTA for its proprietary items based on their significant resources and pricing. MTA estimated the value of this contract to be \$55,234,590 based on current usage. Through negotiations, Hilti’s original price of \$59,722,415 was reduced to \$58,015,167, a savings of \$1,707,248 or 2.8%. Hilti’s best and final offer is 5% or \$2,780,577 more than MTA’s estimate, but it provides a 40% catalog discount and the following cost avoidance elements: (i) firm pricing based on Hilti’s July 2018 product list through December 2019 while other customers have been subject to 6% increases due to tariffs & raw material costs; (ii) pricing held at 2016 levels for a building mortar product that is heavily used across by multiple MTA agencies (over \$3 million annually); and (iii) an annual escalation cap of 6%. Based on the above, the negotiated pricing is considered fair and reasonable. MTA has conducted a responsibility review and other due diligence on Hilti and has deemed the firm to be responsible for award.

Staff Summary

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

Item Number: 2					
Dept & Dept Head Name: MTAHQ Procurement - David Ross					
Division & Division Head Name: BSC – Wael Hibri 					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	Finance	12/10/18			
2	Board	12/12/18			
Internal Approvals					
Order	Approval	Order	Approval		
1	Business Services Center 	3	DDCR 		
2	CFO 	4	Legal 		

SUMMARY INFORMATION	
Vendor Name: Hilti Inc.	Contract Number: 11751-0100
Description: All-Agency Procurement of Maintenance, Repair and Operating (MRO) Supplies & Related Products and Services	
Total Amount: \$63,816,683	
Contract Term (Including Options, if any): 36 months with two (2) one year options	
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

Board approval is sought to award the Proprietary Tools category of a competitively negotiated All-Agency Procurement of Maintenance, Repair and Operating Supplies to Hilti, Inc. in the not-to-exceed amount of \$63,816,683, which includes a 10% contingency. The contract period is three years commencing January 1, 2019 with two one-year options to be exercised at MTA's sole discretion. Additional category awards will be presented for Board approval following completion of negotiations.

II. DISCUSSION

The MTA and its agencies currently purchase Maintenance, Repair and Operating Supplies & Related Products and Services (collectively, MRO) products via a multitude of contracts. This all-agency RFP will combine the volumes of the entire MTA and its agencies to achieve cost effective pricing, reduce administrative and overhead costs through the standardization of some commodities and through the use of e-commerce best practices for cataloguing, ordering and delivery systems.

A Request for Proposals (RFP) was publicly advertised and letters advising potential proposers of the RFP's availability were sent to 127 firms including 23 M/WBE firms. Vendors were invited to submit proposals for any number of the following categories: Electrical, Material Handling, Building Supplies, Industrial Supplies, Security & Safety, Hand/Power Tools (subcategories: Hilti Proprietary Items and Snap-On Proprietary Items), Fluid Power, Hardware. Proposers were required to provide all product requirements, either with the same or functionally equivalent items within each category. In all, twelve proposals were received for the 11 categories with between 2 to 7 proposals in each. Three proposals were received for the category that is the subject of this Staff Summary, the Hilti Proprietary Items category.

A single selection committee was used for all categories and it included representatives from NYCT, LIRR, MTAHQ, MNR, and MTA Bus. The evaluation criteria included: capabilities, experience, cost, and diversity. Proposals for the Hilti Proprietary Items category were received from Hilti, Inc., Colonial Hardware Corp., and Tanner Bolt and Nut, Inc. Tanner's proposal was incomplete, thus deemed non-responsive and disqualified. While both Hilti and Colonial were considered technically qualified and proceeded to negotiations, Colonial's cost proposal was over 40% higher than the MTA's estimate. Ultimately, Colonial decided not to submit a BAFO because they could not provide pricing in the competitive range. The selection committee recommended award to Hilti, Inc. based on both price and their significant resources.

MTA has conducted a responsibility review and other due diligence on Hilti and has deemed the firm to be responsible for award.

MTA estimated the value of this contract to be \$55,234,590 based on current usage. Through negotiations, Hilti's original price of \$59,722,415 was reduced to \$58,015,167, a savings of \$1,707,248 or 2.8%. Hilti's best and final offer is 5% or \$2,780,577 more than MTA's estimate, but it provides a 40% catalog discount and the following cost avoidance elements: (i) firm pricing based on Hilti's July 2018 product list through December 2019 while other customers have been subject to 6% increases due to tariffs & raw material costs; (ii) pricing held at 2016 levels for a building mortar product that is heavily used across by multiple MTA agencies (over \$3 million annually); and (iii) an annual escalation cap of 6%. Based on the above, the negotiated pricing is considered fair and reasonable

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights (DDCR) has established 15%MBE and 15%WBE goals on this contract. Hilti, Inc. has requested a total waiver of the M/WBE goals due to the lack of subcontracting opportunities, but has demonstrated good faith effort towards meeting these goals. Hilti, Inc. has not completed any MTA contracts with MWDBE goals; therefore, no assessment of the firm's MWDBE performance can be determined at this time.

IV. IMPACT ON FUNDING

The total cost for this contract is \$63,816,683 for Hilti, Inc. and will be funded by various agencies' operating budgets.

V. ALTERNATIVES

Procure MRO supplies and services on an as-needed basis. This alternative is not recommended as it would result in an opportunity lost for the MTA to improve buying efficiencies and identify potential cost savings.

DECEMBER 2018

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

F. Personal Service Contracts

(Staff Summaries required for items greater than: \$100K Sole Source; \$250K Other Non-Competitive, \$1M Competitive)

- | | | | |
|----|---|-------------------------------------|--------------------------------------|
| 3. | Guidehouse LLP
Contact Center Assessment
Contract No. 0009000010
Competitively negotiated – 10 proposals – 6 months | \$758,551
(not-to-exceed) | <u>Staff Summary Attached</u> |
|----|---|-------------------------------------|--------------------------------------|

Board approval is sought to award a competitively negotiated personal service contract to Guidehouse LLP (“Guidehouse” formerly known as “Pricewaterhouse Coopers Public Sector LLP”) for a Contact Center Assessment on for New York City Transit (“NYCT”), Bridges & Tunnels (“B&T”), Long Island Rail Road (“LIRR”) and Metro North Railroad (“MNR”) agencies. The consultant will assess the potential opportunity for external customer facing contact center service improvements and cost savings. The proposed contract term is six months for a fixed fee of \$758,551. Currently, each MTA Agency maintains its own call center(s), with separate infrastructure, software, processes and locations, leaving the potential for duplicative costs and disparate experiences for customers. The proposed assessment would review operations and make recommendations to improve efficiency and enhance the customer experience. Following a competitive Request for Proposal process, Guidehouse LLP was selected as the lowest price proposal. The proposed fully-loaded hourly rates used by Guidehouse to arrive at the fixed fee are inclusive of any expenses and ranged from \$130 for Business Analyst to \$399 for Engagement Partner levels. The rates used by Guidehouse are equal to or lower than those on a recent competitively awarded contract to Pricewaterhouse Coopers Public Sector LLP for IV&V services under contract 9000004. As a result of these analyses, and based on their having offered fixed fee pricing that is well below the pricing offered by either of the other vendors in the competitive range, Guidehouse’s proposed fixed fee of \$758,551 is determined to be fair and reasonable. A responsibility review revealed no significant adverse information regarding the firm within the All-Agency Responsibility Guidelines.

Staff Summary

Schedule F: Personal Service Contracts

Item Number: 3						SUMMARY INFORMATION	
Dept & Dept Head Name: Business Service Center (BSC) / Wael Hibri						Vendor Name: Guidehouse LLP	
Division & Division Head Name: Governance and Administration / Joseph Vartolone						Contract Number: 0009000010	
Board Reviews						Description: Contact Center Assessment	
Order	To	Date	Approval	Info	Other	Total Amount: \$758,551	
1	Finance	12/10/18	X			Contract Term (Including Options, if any): 6 months (1/2/2019 – 6/30/2019)	
2	Board	12/12/18	X			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	
Internal Approvals						Procurement Type: <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Order	Approval	Order	Approval				
1	Procurement	4	Legal				
2	Business Service Center	5	CFO				
3	DBA						
Funding Source: <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:						Solicitation Type: <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input type="checkbox"/> Other: [e.g., Ride -- Contract]	

Narrative

I. PURPOSE/RECOMMENDATION

Board approval is sought to award a competitively negotiated personal service contract to Guidehouse LLP (“Guidehouse” formerly known as “Pricewaterhouse Coopers Public Sector LLP”) for a Contact Center Assessment on for New York City Transit (“NYCT”), Bridges & Tunnels (“B&T”), Long Island Rail Road (“LIRR”) and Metro North Railroad (“MNR”) agencies. The consultant will assess the potential opportunity for external customer facing contact center service improvements and cost savings. The proposed contract term is six months for a fixed fee of \$758,551.

II. DISCUSSION

Currently, each MTA Agency maintains its own call center(s), with separate infrastructure, software, processes and locations, leaving the potential for duplicative costs and disparate experiences for customers. The proposed assessment would review operations and make recommendations to improve efficiency and enhance the customer experience.

A Request for Proposals (“RFP”) was publicly advertised and letters advising potential proposers of the RFP’s availability were distributed to twenty-two vendors. Ten proposals were received. The selection committee members (SCM) included representatives from MTA Headquarter and all four agencies, all with expertise in managing contact centers. The evaluation criteria were: (i) project approach (ii) experience and expertise of the project team (iii) proposer qualifications (iv) cost and (v) diversity practices.

Proposals were received from ten proposers and IBM Corp (“IBM”), Praxidia USA (“Praxidia”) and Guidehouse LLP were determined to be the most technically qualified based on their ability to demonstrate specific contact center subject matter expertise. The committee also felt that these three vendors offered the strongest overall project approach, technological expertise and experience performing organizational assessments in the public sector.

From a total score perspective, IBM was ranked highest by one SCM, and Praxidia and Guidehouse were each scored highest by two. The SCM who scored IBM highest scored Praxidia as second highest, so Praxidia was scored higher than Guidepost by a majority of the committee. Noting that the difference in technical scores ascribed to Praxidia vis-à-vis Guidepost were modest, particularly in relation to the over 65% price differential, Procurement was unable to determine the Praxidia's pricing to be fair and reasonable. Accordingly, Procurement sought input from the evaluation committee. The committee, in turn, committee unanimously determined that any modest technical advantage of the higher-cost proposer (Praxidia) was not worth the extra cost, and recommended Guidehouse for award.

Contract Cost and Terms

Proposer	Initial Proposal	Best and Final Offer
Guidehouse	\$775,191	\$758,551
IBM	\$3,426,704	\$2,956,739
Praxidia	\$1,462,618	\$1,273,213

The proposed fully-loaded hourly rates used by Guidehouse to arrive at the fixed fee are inclusive of any expenses and ranged from \$130 for Business Analyst to \$399 for Engagement Partner levels. The rates used by Guidehouse are equal to or lower than those on a recent competitively awarded contract to Pricewaterhouse Coopers Public Sector LLP for IV&V services under contract 9000004. As a result of these analyses, and based on their having offered fixed fee pricing that is well below the pricing offered by either of the other vendors in the competitive range, Guidehouse's proposed fixed fee of \$758,551 is determined to be fair and reasonable.

A responsibility review revealed no significant adverse information regarding the firm within the All-Agency Responsibility Guidelines.

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights (DDCR) has established 15% MBE, 15% WBE and 6% SDVOB goals on this contract. Guidehouse LLP submitted an MWBE utilization plan to achieve 30% MWBE and 6% SDVOB goals on this contract. Guidehouse has not completed any MTA contracts; therefore, no assessment of the firm's MWDBE performance can be determined at this time.

IV. IMPACT ON FUNDING

The total cost for this contract is for a fixed fee of \$758,551 and will be funded by the MTA's operating budget.

V. ALTERNATIVES

1. Perform services in-house – This alternative is not practical, since the MTA does not have the specialized expertise or bandwidth in the existing workforce for this project. Hiring full and part time employees, including associated overhead costs would not be cost effective. This project is managed best by an independent outside firm capable of providing recommendations, which are unbiased and supported by market expertise.
2. Do not approve award – This would result in opportunity lost for the MTA to improve customer service and identify potential cost savings. This alternative is not recommended.

DECEMBER 2018

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

- | | | | |
|-----------|--|--------------------|--------------------------------------|
| 4. | Seibold Security Inc. | \$2,826,734 | <u>Staff Summary Attached</u> |
| | Maintenance of Security System | (not-to-exceed) | |
| | At Ridgewood and Maspeth | | |
| | Contract No. 60000000022555 | | |
| | Competitively negotiated – 3 proposals – 60 months | | |

Board approval is sought to award a competitively negotiated personal services contract to Seibold Security Inc. (Seibold) for preventive and remedial maintenance of security systems at the Consolidated Revenue Center (CRF) located in Ridgewood, NY and the Disaster Recovery (DR) site in Maspeth, NY. These services are vital to operate and maintain critical revenue processing operations for NYCT. The contract will include an initial three-year term for \$1,975,234 and two one-year renewal options for \$851,500, totaling a full contract value of \$2,826,734 over five years. NYCT Revenue Control requested this all-inclusive contract to service and maintain electronic intrusion detection and access control systems, CCTV systems, audio/video intercom systems, and uninterruptible power supplies, which constitute the security systems at the CRF. The contract will also provide for training of the CRF's armed security guards on the operation of these systems. This multi-year maintenance contract will replace an expiring contract. Following a competitive RFP process, The Selection Committee ultimately determined that Seibold was the most technically qualified. Seibold also offered the lowest total price of the three vendors. Seibold's price for five years is \$2,826,734 and 44% less than Securitas' best and final offer. Their monthly rates will remain the same for the full term of the contract. MTA has conducted a responsibility review and other due diligence on Seibold and deemed it to be responsible for award.

Staff Summary

Schedule F: Personal Service Contracts

Item Number: 4					
Dept & Dept Head Name: Office of the Executive Vice President, Division of Revenue Control, Alan F. Putre					
Division & Division Head Name: Revenue Security Operations /Robert Jestic					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	Finance	12/10/18			
2	Board	12/12/18			
Internal Approvals					
Order	Approval	Order	Approval		
1	Procurement	3	CFO		
2	Legal	4	DDCR		

SUMMARY INFORMATION	
Vendor Name: Seibold Security Inc.	Contract Number: 60000000022555
Description: Maintenance of Security Systems at Ridgewood and Maspeth	
Total Amount: \$2,826,734	
Contract Term (including Options, if any) January 1, 2019 – December 31, 2023	
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

Board approval is sought to award a competitively negotiated personal services contract to Seibold Security Inc. (Seibold) for preventive and remedial maintenance of security systems at the Consolidated Revenue Center (CRF) located in Ridgewood, NY and the Disaster Recovery (DR) site in Maspeth, NY. These services are vital to operate and maintain critical revenue processing operations for NYCT. The contract will include an initial three-year term for \$1,975,234 and two one-year renewal options for \$851,500, totaling a full contract value of \$2,826,734 over five years.

II. DISCUSSION

NYCT Revenue Control requested this all-inclusive contract to service and maintain electronic intrusion detection and access control systems, CCTV systems, audio/video intercom systems, and uninterruptible power supplies, which constitute the security systems at the CRF. The contract will also provide for training of the CRF's armed security guards on the operation of these systems. This multi-year maintenance contract will replace an expiring contract.

III. PROCUREMENT PROCESS

A Request for Proposals was publicly advertised and sent to 13 firms, and proposals were received from Seibold Security, Securitas, and Boss Systems. The incumbent, Kratos Public Safety and Security, did not propose as they were recently acquired by Securitas. The Selection Committee included representatives from NYCT Revenue Security Operations and proposals were evaluated based on demonstrated understanding of RFP requirements, relevant expertise/experience of MTA's security equipment, preventive and remedial maintenance processes, project approach, scalability, methodology, staffing and price.

Boss Systems was disqualified after oral presentations as having limited amount of staff and requisite knowledge to support the complex and urgent demands required of the RFP. Seibold and Securitas were invited back for negotiations and asked to provide best and final offers. The Selection Committee ultimately determined that Seibold was the most technically qualified. Seibold also offered the lowest total price of the three vendors. MTA has conducted a responsibility review and other due diligence on Seibold and deemed it to be responsible for award.

Seibold's price for five years is \$2,826,734 and 44% less than Securitas' best and final offer. Their monthly rates will remain the same for the full term of the contract.

Seibold will supply one full-time residential service technician on-site at the CRF, as well as provide scheduled preventive maintenance; repair/replace equipment as needed; system upgrades; technical support and training; and, task order work as needed.

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights (DDCR) has established 0% goals for MBE, WBE and SDVOB due the lack of certified firms in the marketplace capable of providing the security maintenance services required for this contract.

IV. IMPACT ON FUNDING

Operating funds will be allocated by NYCT.

V. ALTERNATIVES

1. Perform all services in-house. This alternative is not feasible. The MTA and its agencies do not have the resources or the expertise to perform these services.

2. Do not approve award of the contract. This is not practical. Ensuring security of revenue processing is vital to NYCT. Extending the agreement with Securitas is not acceptable since it has not been responsive to MTA's needs over the last year.

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December 2018
MTA REAL ESTATE
LIST OF REAL ESTATE ACTION ITEMS FOR BOARD APPROVAL

MTA METRO-NORTH RAILROAD

Acquisition of property from HPH Fleetwood LLC for commuter parking at the Fleetwood Station in Mount Vernon, New York

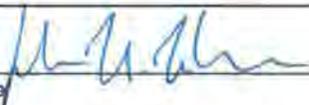
MTA NEW YORK CITY TRANSIT

Proposed Board policy on protective leasing in connection with the acquisition of property for the Canarsie tunnel rehabilitation

License agreement with MCU for automated teller machines at various NYCT employee facilities

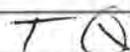
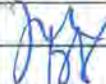
Option to renew lease with Jomat LLC for employee parking in Brooklyn, New York

Staff Summary

Subject ACQUISITION OF PROPERTY IN MOUNT VERNON, NY
Department REAL ESTATE
Department Head Name JOHN N. LIEBER
Department Head Signature 
Project Manager Name ANTHONY CAMPBELL

Date DECEMBER 10, 2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	MNR Committee	12/12/18		X	
2	Finance Committee	12/10/18	X		
3	Board	12/12/18	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal 		
2	Chief Development Officer 		
3	Chief Financial Officer 		
4	Chief of Staff 		

AGENCY: MTA Metro-North Railroad ("Metro-North")
 SELLER: HPH Fleetwood LLC ("HPH")
 LOCATION: MacQuesten Parkway, Mount Vernon, NY

ACTIVITY: Acquisition of the fee simple title to the Property, as is
 ACTION REQUESTED: Authorization to acquire property
 PROPERTY: Approximately .53 acres of land with improvements consisting of Section 165.21 Block 1052 Lot 2.1, Section 165.21 Block 1052 Lot 2.3 and Section 165.22 Block 1052 Lot 4 (collectively referred to as the "Property")

PURCHASE PRICE: \$2,500,000

COMMENTS:

Metro-North seeks to acquire the Property to provide parking for commuters at the Fleetwood Station (the "Station"). The Property is currently operating as a surface parking lot with approximately 125-130 spaces supporting Metro-North's Harlem Line commuters. The Property has been identified as an important location to preserve for Metro-North's current parking facility needs and for future development as there is a limited capacity of unimproved real estate located near the Station.

Based upon the fair market value appraisal obtained by MTA Real Estate, the Purchase Price being paid, after negotiations with HPH, is below the appraised value for the Property.

Metro-North's Environmental Compliance and Services Department completed an environmental site assessment and it was determined that no remedial action is necessary. The purchase of this Property is exempt from SEQRA under section 1266(11) of the Public Authorities Law, as it involves an expansion of an existing transportation use on a contiguous property of less than 10 acres.

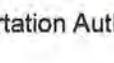
Based on the foregoing, MTA Real Estate requests authorization for Metro-North to enter into a contract of sale for the purchase of the Property and to acquire the Property on the above terms and conditions.

Staff Summary

Subject BOARD POLICY ON PROTECTIVE LEASING FOR CANARSIE TUNNEL REHABILITATION
Department REAL ESTATE
Department Head Name JOHN N. LIEBER 
Department Head Signature
Project Manager Name ANGELA SZU

Date DECEMBER 10, 2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/10/18	X		
2	Board	12/12/18	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal		
2	Chief Development Officer		
3	Chief Financial Officer		
4	Chief of Staff		

AGENCY: MTA New York City Transit ("NYCT")/The Metropolitan Transportation Authority ("MTA")
 PROPERTY: Various
 ACTIVITY: Protective leasing of voluntarily vacated commercial properties
 ACTION REQUESTED: Approval of proposed policy on protective leasing

COMMENTS:

This is a request for Board authorization to negotiate and enter into protective lease agreements for purposes of securing vacant commercial parking spaces in support of the Canarsie Tunnel Rehabilitation Project (the "Project").

The Project is a federally assisted project, and all entities receiving Federal financial assistance for public programs and projects, that require acquisition of real property, must comply with the policies and provisions set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act (the "URA") and related federal regulations. The URA was passed by Congress to promote uniformity and fairness when a transit agency must acquire property or displace persons and businesses. In accordance with the URA, which considers relocations that exceed one year as permanent displacements, MTA/NYCT must provide all eligible displaced persons and businesses with relocation advisory assistance. Non-business commercial occupants that are relocated as a result of the Project may be entitled to benefits such as moving and related costs and fixed payment, and business occupants may be entitled to additional benefits such as re-establishment costs. The URA also requires that the MTA provide general relocation information notices to property occupants at least 90 days in advance of the Project's need of the property. Occupants may, but are not required to, vacate when a suitable location has been secured prior to the end of the 90-day advance notice period.

In support of the Project's plan, the MTA/NYCT will be acquiring property interests for additional storage capacity required by the temporary bus fleet expansion. One of the properties will be used by NYCT as a receiving site for bus fleet deliveries, scheduled to begin prior to end of the 90-day window. As commercial occupants begin to vacate, parking areas become available to the open market prior to NYCT's official occupancy. Therefore, it is prudent for MTA/NYCT to rent the voluntarily vacated parking areas to ensure vacancy at the end of the 90-day window and eliminate the need to relocate any additional occupants that park on the site during the 90-day window. Since MTA Real Estate's fast track URA compliant relocations and NYCT's bus fleet acceptance will be simultaneously implemented in the months leading up to the L train tunnel closure, it will be impractical to secure Board approval prior to every protective lease transaction. This arrangement, when implemented, will be in a form approved by the Legal Department, provide market rate compensation to be determined on a case by case basis, and be limited to space designated for acquisition for the Project or to provide replacement space for persons or businesses displaced by the Project.

Staff Summary

FINANCE COMMITTEE MEETING

BOARD POLICY ON PROTECTIVE LEASING FOR CANARSIE TUNNEL REHABILITATION (Cont'd.)

Page 2 of 2

Any agreements entered into pursuant to this procedure will be reported to the Finance Committee in chart form the following month.

BOARD RESOLUTION

WHEREAS, MTA New York City Transit (“NYCT”) will require property for additional bus storage and as a receiving site for new bus fleet deliveries necessitated by a temporary bus fleet expansion to support alternative bus service during the Canarsie Tunnel Reconstruction Project (the “Project”);

WHEREAS, the Project must comply with the policies and provisions set forth in the Uniform Relocation Assistance and Real Property Acquisition Policies Act (the “URA”) and related federal regulations, which considers relocations that exceed one year as permanent displacements, and requires that the NYCT provide general relocation information notices to property occupants at least 90 days in advance of the Project’s need of the property;

WHEREAS, property occupants may voluntarily vacate prior to the end of the 90-day advance notice period;

WHEREAS, it is in the best interests of NYCT to have the ability to rent any voluntarily vacated property to ensure vacancy at the end of the 90-day window and eliminate the need to relocate any additional occupants that park on the property during the 90-day window for properties designated for acquisition for the Project or to provide replacement property for persons or businesses displaced by the Project;

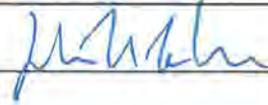
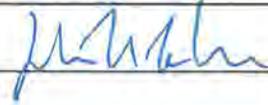
WHEREAS, NYCT’s ability to secure the vacated properties on a fast track basis and to comply with the URA will make it impractical to seek Board approval prior to entering into every protective leasing transaction and, as such, the Board is adopting this Resolution to provide approval in advance for any and all such protective leasing transactions entered into for properties designated for acquisition for the Project or to provide replacement property for persons or businesses displaced by the Project,

NOW, THEREFORE BE IT

RESOLVED, that the Board hereby authorizes the MTA’s Director, Real Estate Transactions and Operations or designated staff member to negotiate and enter into license or other rental agreements on behalf of MTA New York City Transit’s Canarsie Tunnel Reconstruction Project for the purpose of securing commercial parking spaces which have been voluntarily vacated prior to MTA’s acquisition, each such agreement to be in a form approved by MTA Legal, provide for market rate compensation to be determined on a case by case basis by MTA Real Estate and be limited to space designated for acquisition for the Project or to provide replacement space for persons or businesses displaced by the Project. The Director, Real Estate Transactions and Operations will report each agreement entered into pursuant to this resolution to the Finance Committee, in chart form including location, term, rent, and the nature of the leased space (e.g. commercial; industrial), the month following its execution or shortly thereafter.

This Resolution will take effect immediately upon its adoption.

Staff Summary

Subject LICENSE AGREEMENT AT VARIOUS NYCT EMPLOYEE FACILITIES
Department REAL ESTATE
Department Head Name JOHN N. LIEBER 
Department Head Signature 
Project Manager Name ARTURO ESPINOZA

Date DECEMBER 10, 2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/10/18	X		
2	Board	12/12/18	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal		
2	Chief Development Officer		
3	Chief Financial Officer		
4	Chief of Staff		

AGENCY: MTA New York City Transit ("NYCT")
 LICENSEE: Municipal Credit Union ("MCU")
 LOCATION: Twelve NYCT employee facilities throughout New York City
 ACTIVITY: Operation of automated teller machines ("ATMs")
 ACTION REQUESTED: Authorization to enter into a license agreement covering all twelve locations
 TERM: 5 years, terminable at will by NYCT on 60 days' notice, at no cost
 COMPENSATION:

Year	Total Annual Compensation	Total Monthly Compensation	% Increase
1	\$43,100.00	\$3,592.00	%
2	\$44,033.00	\$3,669.42	2.16%
3	\$44,993.99	\$3,749.50	2.18%
4	\$45,983.81	\$3,831.98	2.20%
5	\$47,003.32	\$3,916.94	2.22%

COMMENTS:

The MTA Real Estate Department was approached by NYCT employees and managers at several NYCT facilities requesting the installation of an MCU ATM at their respective employee-reporting locations citing the existing placement of MCU ATMs at 207 Street Yard and Coney Island Yard, where a majority of employees are MCU members.

The existing licenses with MCU for ATMs at all existing locations have expired (and are on month-to-month holdovers) and the new agreement will cover all of the expired locations plus the new locations indicated on the chart below. MTA Real Estate issued non-competitive solicitations in the form of a Request For Proposals throughout 2018 to MCU for all of the existing locations and new locations requested by NYCT. MCU's offers matched the suggested annual compensation amounts stated in the solicitations.

Staff Summary

FINANCE COMMITTEE MEETING LICENSE AGREEMENT AT VARIOUS NYCT EMPLOYEE FACILITIES (Cont'd.)

A summary of MCU's offers by location is listed below:

Facility Location	Borough	Suggested Annual Compensation	MCU's Offer	Annual Escalation
Kingsbridge Depot	Bronx	\$3,500	\$3,500	0%
Fresh Pond Depot	Queens	\$1,800	\$1,800	0%
Jackie Gleason Depot	Brooklyn	\$4,000	\$4,000	0%
Consolidated Revenue Facility*	Queens	\$1,200	\$1,200	0%
Rail Control Center*	Manhattan	\$1,500	\$1,500	0%
Grand Avenue Depot	Queens	\$1,250	\$1,250	3%
Zerega Depot	Bronx	\$1,250	\$1,250	3%
207 St Yard	Manhattan	\$3,100	\$3,100	3%
Coney Island Yard	Brooklyn	\$6,500	\$6,500	3%
Transit Adjudication Bureau	Brooklyn	\$1,250	\$1,250	3%
Westchester Yard*	Bronx	\$1,250	\$1,250	3%
Livingston Plaza	Brooklyn	\$16,500	\$16,500	3%

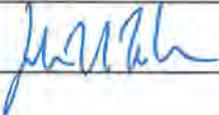
*denotes new location

There are a limited and fixed number of employees at each location, many of whom would not be likely to patronize another bank's ATM due to transaction fees. The compensation amounts offered by MCU are in line with the independent valuation of the existing ATMs and were found to be fair and reasonable. In addition, MCU ATMs are part of the NYCE system. Employees who are not members will also have access to the ATM at their location, albeit for a transaction fee.

The license agreement will include a 60-day, at will, termination provision and will be prepared in a form approved by MTA Legal.

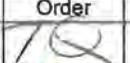
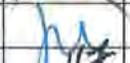
Based on the foregoing, MTA Real Estate requests authorization for NYCT to enter into a license agreement with Municipal Credit Union on the above-described terms and conditions.

Staff Summary

Subject OPTION TO RENEW LEASE FOR EMPLOYEE PARKING IN BROOKLYN
Department REAL ESTATE
Department Head Name JOHN N. LIEBER
Department Head Signature 
Project Manager Name MICHAEL DANIELS

Date DECEMBER 10, 2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	12/10/18	X		
2	Board	12/12/18	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Legal		
2	Chief Development Officer		
3	Chief of Staff		
4	Chief Financial Officer		

AGENCY: MTA New York City Transit Authority ("NYCT")

LESSOR: JOMAT LLC, Successor in interest to It's A Middle, LLC

LOCATION: West 13th Street, Brooklyn near former PS 248

CURRENT USE: Parking spaces to support adjacent 24/7 training facility

ACTION REQUESTED: Authorization to exercise renewal option

TERM: 5/1/2019 - 4/30/24

PROPERTY: Paved lot of approximately of 1,800 sq. ft. (approximately 10 parking spaces) consisting of Block 7114, Lot 52

COMPENSATION:

5/1/19 - 4/30/20	\$7,309.34
5/1/20 - 4/30/21	\$7,418.98
5/1/21 - 4/30/22	\$7,530.26
5/1/22 - 4/30/23	\$7,643.22
5/1/23 - 4/30/24	\$7,757.87

REAL ESTATE TAXES: Exempt

REPAIRS AND MAINTENANCE: Tenant's responsibility

COMMENTS:

MTA Real Estate Department, on behalf of NYCT, submitted a Staff Summary to the June, 2014 Board for approval of a lease between It's A Middle, LLC, the predecessor in interest to JOMAT LLC, and NYCT for parking spaces. That Staff Summary omitted the option to renew the lease, which provides for a 1.5% increase in rent. MTA Real Estate determined, at that time, the increase was market. The option to renew the lease must be exercised no later than 90-days before the expiration of the lease (i.e. by the end of January 2019). At this time NYCT has indicated its need to continue to use the premises for parking.

Based on the foregoing, MTA Real Estate requests authorization for NYCT to exercise the option to renew the lease for a term of 5-years. All remaining terms and conditions continue unchanged.

Staff Summary

Subject LEASE
Department REAL ESTATE
Department Head Name JEFFREY B. ROSEN
Department Head Signature 
Project Manager Name MICHAEL DANIELS

Date JUNE 23, 2014
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref. #

Board Action					
Order	To	Date	Approval	Info	Other
1	Finance Committee	06/23/14	X		
2	Board	06/25/14	X		

Internal Approvals			
Order	Approval	Order	Approval
		1	Legal 
3	Chief of Staff 		
2	Chief Financial Officer 		

AGENCY: MTA New York City Transit Authority ("NYCT")

LESSOR: IT'S A MIDDLE, LLC

LOCATION: Brooklyn, Block 7114, Lot 52 (West 13th Street, near former PS 248)

CURRENT USE: Parking spaces to support adjacent 24/7 training facility

ACTION REQUESTED: Approval of lease terms

TERM: 5/1/2014 – 4/30/2019

SPACE: Paved lot of approximately of 1,800 sq. ft. containing approximately 10 parking spaces

COMPENSATION: 5/1/14 – 4/30/15 \$6,783.84 per annum
 5/1/15 – 4/30/16 \$6,886.68 per annum
 5/1/16 – 4/30/17 \$6,990.00 per annum
 5/1/17 – 4/30/18 \$7,094.88 per annum
 5/1/18 – 4/30/19 \$7,201.32 per annum

REAL ESTATE TAXES: Will file with the City of New York for a tax exemption, because NYCT will occupy 100% of the premises. To date, as a month to month tenant, NYCT was not responsible for taxes.

REPAIRS AND MAINTENANCE: Tenant responsibility

COMMENTS:

Due to limited parking in the surrounding area, NYCT has leased the parking lot, adjacent to NYCT's Subways Learning Center ("Learning Center"), for parking since 1994, currently via a month-to-month agreement. The new Lessor has requested that the month-to-month arrangement be replaced with a five-year term lease. MTA Real Estate's brokerage consultant has confirmed that the proposed rent is well within the market range for the property's size and use.

The Learning Center is open 24/7 with classes daily and nightly during the week, and classes on weekends. The Learning Center is utilized by NYCT's Infrastructure, Rapid Transit Operations, Stations, Car Equipment and Supply Logistics groups. Track safety and track flagging courses are the primary courses given at this school, but the facility is also utilized by the NYC Police Department's human resources testing section in relation to transit functions.

Based on the foregoing, MTA Real Estate requests authorization to enter into a lease on the above-described terms and conditions.

Procurement

Steve Plochochi, Senior Vice President



This set of before and after photos from the Sea Beach Renewal project at the Bay Pkwy station depicts the structural and concrete repairs that have taken place to improve this station. The Additional Work Order (AWO) included in this month's agenda enhances similar work being performed at the 8 Av station in Brooklyn on the Sea Beach N line by providing structural modifications required to include a new elevator.

PROCUREMENTS

The Procurement Agenda this month includes 1 action for a proposed expenditure of \$1.1M.

Subject	Request for Authorization to Award Various Procurements				
Department	Procurement & Supply Chain – NYCT				
Department Head Name	Stephen M. Plochochi				
Department Head Signature					
Project Manager Name	Rose Davis				
Board Action					
Order	To	Date	Approval	Info	Other
1	Committee	12/10/18			
2	Board	12/12/18			

December 4, 2018			
Department			
Department Head Name			
Department Head Signature			
Internal Approvals			
	Approval		Approval
	President NYCT		President MTACC
	Operations Support		President MTA Bus/Buses
X	Capital Prog. Management	X	Subways
	Law		Diversity/Civil Rights

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval

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: None

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: None			
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			
MTA Bus Company proposes to award Ratifications in the following categories: None			
MTA Capital Construction proposes to award Ratifications in the following categories: None			
NYC Transit proposes to award Ratifications in the following categories:			
<u>Schedules Requiring Two-Thirds Vote:</u>			
Schedule K: Ratification of Completed Procurement Actions		1	\$ 1.1 M
	SUBTOTAL	1	\$ 1.1 M
	TOTAL	1	\$ 1.1 M
 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 Sections 1265-a and 1209 of the Public Authorities Law and the All-Agency General Contract Procurement Guidelines, the Board authorizes the award of certain noncompetitive purchase and public work contracts, and the solicitation and award of requests for proposals in regard to purchase and public work contracts; and

WHEREAS, in accordance with the All-Agency Service Contract Procurement Guidelines and General Contract 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 Service Contract Procurement Guidelines, 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.

DECEMBER 2018

LIST OF RATIFICATIONS FOR BOARD APPROVAL

Procurements Requiring Majority Vote:

K. Ratification of Completed Procurement Actions (Involving Schedule E-J)

(Staff Summaries required for items requiring Board approval.)

- | | | |
|--|--------------------|--------------------------------------|
| 1. John P. Picone, Inc. | \$1,054,000 | <u>Staff Summary Attached</u> |
| Contract# A-36090.275 | | |
| Modification to the contract for the renewal of six stations and line structure repair on the Sea Beach line, in order to perform platform foundation work required to incorporate a new Americans with Disabilities access elevator on the southbound platform at the 8th Avenue Station. | | |

Schedule K: Ratification of Completed Procurement Actions



Item Number: 1

Vendor Name (Location) John P. Picone, Inc. (Lawrence, New York)
Description Renewal of Six Stations and Line Structure Repair on the Sea Beach Line, Borough of Brooklyn
Contract Term (including Options, if any) December 30, 2014–December 28, 2018
Option(s) included in Total Amt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> n/a
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Noncompetitive
Solicitation Type <input type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input type="checkbox"/> Federal <input type="checkbox"/> Other:
Requesting Dept./Div., Dept./Div. Head Name: Capital Program Management, John O’Grady

Contract Number A-36090	AWO/Mod. # 275
Original Amount:	\$ 188,761,000
Prior Modifications:	\$ 13,611,880
Prior Budgetary Increases:	\$ 0
Current Amount:	\$ 202,372,880
This Request:	\$ 1,054,000
% of This Request to Current Amt.:	0.5%
% of Modifications (including This Request) to Original Amount:	7.8%

Discussion

This retroactive modification is for platform foundation work required to incorporate a new Americans with Disabilities Act (“ADA”) elevator on the southbound platform at the 8th Avenue Station (Sea Beach line). This is one of several modifications that will provide ADA elevators on the northbound and southbound platforms for this station.

The base contract provides for the renewal of six stations along the Sea Beach line in Brooklyn: 8th Avenue, Fort Hamilton Parkway, New Utrecht, 18th Avenue, 20th Avenue, and Bay Parkway. The work includes concrete repairs; repair of steel structural members; replacement of all interior/exterior stairs, windows, and doors; replacement/upgrade of existing electrical, security, and signal systems; demolition and replacement of platform columns, tunnel arches, parapets, canopies, and concrete platform slabs; construction of four new ADA elevators at New Utrecht Station; and construction of an ADA-compliant ramp at the 8th Avenue station’s northbound platform. (This has since changed to an elevator.)

The original Federal Transit Administration– (“FTA”) approved intent of the project was to provide ADA-compliant access for the 8th Avenue station’s southbound platform. During the design phase of the project it was determined that ADA-compliant access would block an adjoining property, and thus ADA southbound access was not part of the original contract. However, an agreement with the owner has been reached in principle which allows the reincorporation of ADA-compliant access for the southbound platform. This work requires several additional contract modifications. The other changes will relocate the roadway to the adjoining property; provide an ADA elevator; and reconfigure new stairs and the control house passageway above this new foundation work. It is anticipated that the additional modifications will be submitted to the Board in the future.

This modification provides for platform foundation work, additional support beams, and a widened section of the southbound platform slab. The work includes additional hand excavation to facilitate spall repair to front platform support beams; removal of existing footings, rear platform support beam, and associated excavation; furnish and installation of new concrete footings, and steel support beams to support the modified stairs and control house passageway; and installation of a new wider section of concrete platform with reinforcement. John P. Picone, Inc.’s (“Picone”) revised proposal was net \$1,392,824; NYC Transit’s revised estimate was net \$960,287. Negotiations resulted in the agreed-upon lump-sum price of \$1,054,000. Savings of \$338,824 were achieved. This price is found to be fair and reasonable.

The SVP, Capital Program Management approved a retroactive waiver and the SVP, Procurement & Supply Chain authorized a partial payment up to \$599,238, and on October 12, 2018, Picone commenced work. The contract’s substantial completion date of December 28, 2018, is not changed by this modification. An extension of time associated with other modifications is being negotiated.

In connection with a previous contract awarded to Picone, Picone was found to be responsible notwithstanding significant adverse information (“SAI”) 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 Picone and Picone has been found to be responsible.



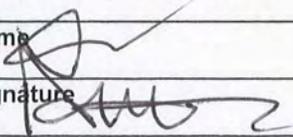
Metro-North Railroad

Procurements

Subject Request for Authorization to Award Various Procurements

Department Procurement and Material Management

Department Head Name Al Muir, Sr Director

Department Head Signature 

Project Manager Name

Date December 3, 2018

Vendor Name Various

Contract Number Various

Contract Manager Name Various

Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	M-N Comm Mtg.	12-10-18	X		
2	MTA Board Mtg.	12-12-18	X		

Internal Approvals			
	Approval		Approval
X	President	X	V.P. Capital Programs
X	Executive V.P.	X	V.P. & General Counsel
X	Sr. V.P. Operations		
X	V.P. Finance & IT		

Internal Approvals (cont.)							
Order	Approval	Order	Approval	Order	Approval	Order	Approval
—	—	—	—	—	—	—	—

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:

	<u># of Actions</u>	<u>\$ Amount</u>
<u>Schedules Requiring Two-Thirds Vote (or more, where noted)</u>	NONE	
<u>Schedules Requiring Majority Vote</u>	NONE	
SUB TOTAL:		

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) (Award of Purchase and Public Work Contracts)	1	TBD
	<ul style="list-style-type: none"> • Request to Use the RFP Process 	TBD	

Schedules Requiring Majority Vote

	SUB TOTAL:	1	TBD
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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:	1	TBD

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.

Staff Summary

Item Number B					
Dept. & Dept. Head Name: Procurement & Material Management, Al Muir, Sr. Director					
Division & Division Head Name: Executive Vice President, Susan Doering					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	MNR Comm. Mtg.	12-10-18	x		
2	MTA Board Mtg.	12-12-18	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				

SUMMARY INFORMATION	
Vendor Name TBD	Contract Number TBD
Description Request to use the RFP Process - Replacement of Third Avenue Bridge in Mount Vernon, NY	
Total Amount TBD	
Contract Term (including Options, if any) Various	
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"/> 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:	

Narrative

I. PURPOSE/RECOMMENDATION

MTA Metro-North Railroad (Metro-North) requests that the Board adopt a resolution declaring that competitive, sealed bidding is impractical or inappropriate and that it is therefore in the public interest to use the competitive Request for Proposal (RFP) process, pursuant to Public Authorities Law Section 1265-a, to solicit proposals for the design, demolition and construction for the replacement of the superstructure and rehabilitation of the substructure of the 3rd Avenue Bridge (NH 13.66) for the Metro-North Railroad (MNR).

II. BACKGROUND & DISCUSSION

Metro-North has identified the Third Avenue Bridge located on the New Haven Line in Mt. Vernon, NY as an immediate need for replacement along with the rehabilitation of its substructure. These repairs and improvements shall include but are not limited to:

- The Design-Builder will be required to develop the design to the final level, and assume the responsibility of Designer of Record;
- Demolition and removal of existing bridge elements including all bridge mounted utilities immediately adjacent to the bridge approaches;
- Excavate and demolish upper portion of both existing abutments. Provide and install new concrete bridge seats, tie-backs and all related work, including wing walls and utilities;
- Provide and install new bridge superstructure, including reinforced concrete deck;
- Install new pavement, curbs, driveways and sidewalks, including tie-in/meeting of existing roadway.

The RFP process will give Metro-North the ability to evaluate terms other than price alone, such as technical approach, contractor and design professional qualifications and past performance. Metro-North will work with the design-build team and develop an innovative approach to construction of this bridge which will accelerate the delivery of this critical replacement project.

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights (DDCR) will be consulted in order to establish DBE goals.

IV. IMPACT ON FUNDING

This procurement will be funded by the 2015-2019 MNR Capital Program and the City of Mt. Vernon.

V. ALTERNATIVES

The alternative is to use the sealed competitive bidding process. This alternative is not recommended, as it would require Metro-North to first obtain 100% designs of the work to be implemented, thereby losing the advantages of Design/Build construction and possibly causing a delay in this critical replacement project.

LONG ISLAND RAIL ROAD

PROCUREMENTS

FOR

BOARD ACTION

December 12, 2018

Staff Summary



Subject : Request for Authorization to Award Various Procurements						Date December 12, 2018			
Department Procurement and Logistics									
Department Head Name Dennis L. Mahon, Chief Procurement and Logistics Officer									
Department Head Signature 									
Board Action						Internal Approvals			
Order	To	Date	Approval	Info	Other	Order	Approval	Order	Approval
1	LI Committee	12.10.18				X	President		VP & CFO
2	MTA Board	12.12.18				X	Executive VP		VP, Gen. Counsel & Secy
							Sr. VP-Operations		
							Sr. VP-Engineering		

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 # of Actions \$ Amount

Schedules Requiring Two-Thirds Vote None

LIRR proposes to award Competitive Procurements in the following # of Actions \$ Amount

Schedules Requiring Two-Thirds Vote
 Schedule C: Competitive Requests for Proposals (Award) 1 \$5,449,854
 SUBTOTAL: 1 \$5,449,854

LIRR proposes to award Ratifications in the following categories: # of Actions \$ Amount

None

TOTAL: 1 \$5,449,854

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.

DECEMBER 2018

MTA LONG ISLAND RAIL ROAD

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

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)

- | | | | |
|-----------|------------------------------|---------------------------|--------------------------------------|
| 1. | Ansaldo STS USA, Inc. | \$5,152,854 | <i><u>Staff Summary Attached</u></i> |
| | Competitive RFP | + 297,000 (option) | |
| | Contract No. 6288 | \$5,449,854 | |

Long Island Rail Road (LIRR) requests MTA Board approval to award a Public Works contract to Ansaldo STS USA, Inc. in the amount of \$5,152,854 to design, furnish and deliver manufactured signal equipment for the LIRR's new Beaver Interlocking and Johnson Avenue Yard, associated with Phase I of the Jamaica Capacity Improvements (JCI) project. This contract also contains an option for hardware warranty in the additional amount of \$297,000, to be exercised at LIRR's sole discretion.

Staff Summary



Item Number: 1					
Dept & Dept Head Name: Procurement & Logistics, Dennis Mahon Department Head Signature & Date <i>[Signature]</i> 12/10/18					
Division & Division Head Name: Department of Program Management, Paul Dietlin Division Head Signature & Date <i>[Signature]</i> 12/10/18					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	LI Committee	12/10/18			
2	MTA Board	12/12/18			
Internal Approvals					
Order	Approval	Order	Approval		
6	President <i>[Signature]</i>	3	Sr. VP/Engineering <i>[Signature]</i>		
5	Executive VP <i>[Signature]</i>	2	VP & CFO <i>[Signature]</i>		
4	Sr. VP/Operations <i>[Signature]</i>	1	VP, Gen'l Counsel & Sec'y <i>[Signature]</i>		

SUMMARY INFORMATION	
Vendor Name Ansaldo STS USA, Inc. (ASTS)	Contract Number 6288
Description: Jamaica Capacity Improvements Phase-I, Design, Furnish and Delivery of Wired Signal Instrument Huts and Cases for Beaver Interlocking and Johnson Yard	
Total Amount: \$5,152,854 (Base) + \$297,000 (Option) = \$5,449,854	
Contract Term (including Options, if any): 1 Year, 2 Months Base + Option TBD	
Options(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 type="checkbox"/> Operating <input type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	

I. PURPOSE/RECOMMENDATION

Long Island Rail Road (LIRR) requests MTA Board approval to award a Public Works contract to Ansaldo STS USA, Inc. in the amount of \$5,152,854 to design, furnish and deliver manufactured signal equipment for the LIRR's new Beaver Interlocking and Johnson Avenue Yard, associated with Phase I of the Jamaica Capacity Improvements (JCI) project. This contract also contains an option for hardware warranty in the additional amount of \$297,000, to be exercised at LIRR's sole discretion.

II. DISCUSSION

Under the contract, Ansaldo STS USA, Inc. (ASTS) will progress the existing 30% design to 100% design, furnish and deliver wired signal instrument huts, battery huts, and signal cases, including the vital and non-vital software necessary for the functionality of the equipment being provided. The manufactured equipment will be utilized in both Johnson Avenue Yard (located south of the existing Jamaica Station, requiring signalization to facilitate opening day JCI Phase I Platform F operational requirements) and Beaver Interlocking (new interlocking to be installed on the Atlantic Branch east of Jamaica Station, being constructed as part of the JCI Phase I project to facilitate universal Jamaica Station-track access).

The MTA Board granted approval to issue the Request for Proposal (RFP) method to solicit qualified firms that are capable of designing, furnishing and delivering the signal huts at its September 2017 meeting. On June 21, 2018, LIRR publicly advertised the RFP for this project in the New York State Contract Reporter, New York Post, and on the MTA website.

A single proposal was received, from ASTS. Other prospective proposers who initially had expressed interest advised thereafter that they had workload issues; did not believe they could meet the technical requirements; or preferred to serve in a subcontracting capacity. LIRR conducted a technical evaluation of the proposal

Staff Summary



submitted by ASTS. It was determined that ASTS demonstrated an acceptable approach to the work, utilized effective means and methods, and met the RFP's experience requirements. Therefore, LIRR entered into negotiations with ASTS, addressing various cost-savings initiatives and scope clarifications. As a result, ASTS's best and final offer reduced the proposed price by \$592,146.00 (10.3%), resulting in a final negotiated price of \$5,152,854 for the Base work and \$297,000 for an additional option for hardware warranty. ASTS's final price was reviewed by DPM Estimating and was compared to past competitively bid pricing for similar work and deemed acceptable.

In connection with a previous contract awarded to Ansaldo, Ansaldo¹ 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 Managing Director in consultation with the MTA General Counsel in November 2017. No new SAI has been found relating to Ansaldo and Ansaldo has been found to be responsible.

III. D/M/WBE INFORMATION

The MTA Department of Diversity and Civil Rights (DDCR) has established a 20% DBE goal for this project. Ansaldo STS, USA Inc. has submitted a plan that could meet the goal. The approval of the plan is subject to review and approval by DDCR. Ansaldo has achieved its previous MWDBE goals on previous MTA contracts.

IV. IMPACT ON FUNDING

Funding for this project is included in the LIRR's 2010-2014 Capital Program Budget.

V. ALTERNATIVES

There are no alternatives, since LIRR does not have the ability to undertake the design and fabrication of these customized signal huts with in-house forces.

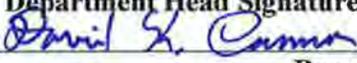
¹ The SAI relates to conduct of the ultimate parent, Hitachi Ltd., and not directly to Ansaldo nor its immediate parent, Ansaldo STS, Spa.

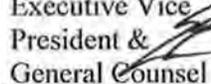
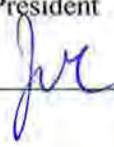
PROCUREMENT PACKAGE
December 2018

PROCUREMENTS

The Procurement Agenda this month includes three actions for a proposed expenditure of \$3,477,717

Staff Summary

Subject						Request for Authorization to Award Various Procurements					
Department						Procurement					
Department Head Name						David K. Cannon					
Department Head Signature											
Board Action											
Order	To	Date	Approval	Info	Other						
1	MNR and LIRR Joint Committee	12/10/18	X								
2	Board	12/12/18	X								

Date: December 5, 2018			
Vendor Name Tutor Perini Corporation			
Contract Number Various			
Contract Manager Name Various			
Internal Approvals			
	Approval		Approval
2	Executive Vice President & General Counsel 	3	President 
1	Vice President & Chief Financial Officer 		

PURPOSE

To obtain the approval of the Board to award the 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 I Modifications to Purchase and Public Work Contracts	3	\$ 3,477,717
TOTAL	3	\$ 3,477,717

Budget Impact:

The approval of the modifications will obligate MTA Capital Construction capital funds in the amounts listed. Funds are available in the capital budget for this purpose.

Recommendation:

That the modifications 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.

December 2018

LIST OF COMPETITIVE PROCUREMENTS FOR BOARD APPROVAL

Procurements Requiring Two-Thirds Vote:

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)

Tutor Perini Corporation		<u>Staff Summary Attached</u>
1. Contract No. CS179 Modification No. 158	\$ 952,717	↓
2. Contract No. CS179 Modification No. 159	\$ 975,000	↓

In accordance with Article VIII of the All Agency General Contract Procurement Guidelines, MTACC requests that the Board approve changes to the design of the Tunnel Ventilation Control System (TVCS).

3. Tutor Perini Corporation	\$ 1,550,000	<u>Staff Summary Attached</u>
Contract No. CQ033		
Modification No. 29		

In accordance with Article VIII of the All Agency General Contract Procurement Guidelines, MTACC requests that the Board approve a Modification which will allow for access to the Arch Street Yard and Shop while the Work of this contract proceeds, by accelerating and resequencing select portions of trackwork and by installing, new traction power jumpers and ductbanks.

Item Numbers 1 and 2

Page 1 of 2

Vendor Name (& Location) Tutor Perini Corporation (Peekskill, New York)	Contract Number CS179	AWO/Modification 158 & 159
Description Systems Facilities Package No. 1	Original Amount: \$ 333,588,000	
Contract Term (including Options, if any) 75 Months	Prior Modifications: \$ 25,975,157	
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Exercised Options: \$ 216,800,001	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	Current Amount: \$ 576,363,158	
Solicitation Type <input checked="" type="checkbox"/> RFP <input type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	This Request \$ 1,927,717	
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	% of This Request to Current Amount: 0.3%	
Requesting Dept/Div & Dept/Div Head Name: East Side Access, Rob Troup	% of Modifications (including This Request) to Original Amount: 8.4%	

Discussion:

This Contract provides the systems for the East Side Access (“ESA”) project, including the fire detection, tunnel ventilation, facility power, signal power, tunnel lighting and SCADA systems. In accordance with Article VIII of the All-Agency General Contract Procurement Guidelines, MTACC requests that the Board approve the following changes to the design of the Tunnel Ventilation Control System (TVCS).

As part of the operations of the ESA project, LIRR requires the ability to receive and display the status of facility power substation breakers so that LIRR operations personnel at Grand Central Terminal (GCT) can monitor the status of facility power on a real-time basis. The transmission of the real-time statuses of the facility power substation (FPSS) circuit breakers to the ESA Control System is a critical requirement to ensuring the correct and safe operation of the tunnel fans. In 2008, a technical working group, including participants from LIRR, the Project Management Team and the General Engineering Consultant (GEC) determined that the ESA Control System at GCT, which will be used by LIRR to monitor facility power electrification, should receive indications regarding the status of facility power substation breakers directly from the breakers, and not to have the information regarding the status of the breakers passed on to the ESA Control System from an intermediate network, to address concerns concerning the security of access to this information.

However, when the CS179 Contract was awarded in April 2014, its specifications provided that the circuit breaker indications were to be passed on to the ESA Control System over a network interface from the ESA Power SCADA Network, rather than received directly to the ESA Control System from the breakers. Subsequently, in a January 2016 Concurrence, signed by representatives of the LIRR and MTACC, it was agreed that the specifications should be revised so that the ESA Control System can receive these indications directly from the breakers as originally determined in 2008. The design provided in proposed Modifications 158 and 159 provides for the necessary changes to conform to this requirement.

In addition, Modifications 158 and 159 will add additional input/output (I/O) points to the Tunnel Ventilation Control System field controllers at various facilities to meet Contract requirements for monitoring fan temperature, fan circuit conditions, and vibrational shock. These inputs were omitted from the Contract Drawings, which appears to be an omission by the GEC. The work includes both software changes and the addition of cable and conduit at various ESA facilities.

The Work added under modification 158 is for the programming and testing required to implement the aforementioned changes. This includes reconfiguring the ESA Control System headend and Tunnel Ventilation Control System field controllers, additional local testing, updating test documents, updating workstation displays, and procuring and installing additional I/O modules in the Tunnel Ventilation Control Panels. The Work added under modification 159 is for the procurement, installation, and testing of all additional cable, conduit, and miscellaneous hardware required to provide connectivity from the Tunnel Ventilation Control Panels to the FPSS circuit breakers and TVCS Instrument Panels. The added Work was separated into two Modifications to permit, if possible, earlier commencement of the programming and software configuration.

These modifications appear to be the result of design errors or omissions on the part of the GEC and have been referred to the Project's Cost Recovery Panel as such.

Modification 158

The Contractor's proposal for the modification 158 work was in the amount of \$1,859,478. MTACC's estimate was in the amount of \$866,750. Negotiations were held and the parties agreed to a cost of \$952,717 for the direct costs of the work (inclusive of contract stipulated markups) which is deemed to be fair and reasonable. The Contractor has also asserted a claim for time impacts and has sought \$188,251 in overhead costs in excess of the negotiated direct costs. MTACC has not agreed to pay any compensation in connection with these claims. In order to advance the Work without delay, MTACC seeks approval to issue this Modification to provide for the payment of the negotiated direct costs and to address time impacts and additional overhead separately, without prejudice to MTACC's defenses to such claims.

Modification 159

The Contractor's proposal for the modification 159 work was in the amount of \$1,281,421. MTACC's estimate was in the amount of \$866,750. Negotiations were held and the parties agreed to \$975,000 for the direct costs of the work (inclusive of contract stipulated markups) which is deemed to be fair and reasonable. The Contractor has also asserted a claim for time impacts and has sought \$120,144 in overhead costs in excess of the negotiated direct costs. MTACC has not agreed to pay any compensation in connection with these claims. In order to advance the Work without delay, MTACC seeks approval to issue this Modification to provide for the payment of the negotiated direct costs, and to address time impacts and additional overhead separately, without prejudice to MTACC's defenses to such claims.

In connection with previous contracts awarded, the Tutor Perini Corporation was found to be responsible, notwithstanding significant adverse information ("SAI") 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 significant adverse information has been found relating to Tutor Perini Corporation. Therefore, Tutor Perini Corporation has been determined to be responsible.

Schedule I Modifications to Purchase and Public Work Contracts

Item Number 3

Vendor Name (& Location) Tutor Perini Corporation	
Description Mid-Day Storage Yard for the East Side Access Project	
Contract Term (including Options, if any) 1,217 Days	
Option(s) included in Total Amount? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Procurement Type <input checked="" type="checkbox"/> Competitive <input type="checkbox"/> Non-competitive	
Solicitation Type <input type="checkbox"/> RFP <input checked="" type="checkbox"/> Bid <input checked="" type="checkbox"/> Other: Modification	
Funding Source <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Capital <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Other:	
Requesting Dept/Div & Dept/Div Head Name: East Side Access, Rob Troup	

Contract Number CQ033	AWO/Modification # 29
Original Amount:	\$ 291,503,430
Prior Modifications:	\$ 18,676,647
Options:	\$ 1,873,570
Current Amount:	\$ 310,180,077
This Request	\$ 1,550,000
% of This Request to Current Amount:	0.5%
% of Modifications (including This Request) to Original Amount:	5.8 %

Discussion:

This Contract is for the demolition and removal of the existing catenary structures, railroad buildings and Montauk Cutoff Bridge and Ramp and the construction of the Mid-Day Storage Yard (“MDSY”) in the Harold Interlocking. In accordance with Article VIII of the All Agency General Contract Procurement Guidelines, MTACC requests that the Board approve a Modification which will allow for access to the Arch Street Yard and Shop while the Work of this Contract proceeds, by accelerating and resequencing select portions of trackwork and by installing new traction power jumpers and ductbanks.

The CQ033 Contract requires that access to the Arch Street Yard and Shop be maintained throughout the duration of the Work. The Contract requires that the track currently used for access be demolished after an alternate route is installed. However, the alternate route contemplated by the Contract cannot be installed as specified because Amtrak forces are not available to relocate catenary wires in the path of the specified alternate route.

This modification involves creating an alternative access route to Arch Street by resequencing the installation of track. Track that was not to be built until later in the Contract, the installation of which does not require the relocation of catenary wires by Amtrak forces, will be built now in order to provide access to Arch Street while the current track is demolished. The track that was originally intended to be constructed to provide access to Arch Street will then be installed later in the Contract.

If this plan is not implemented, then the CQ033 Substantial Completion date may be delayed by up to 12 months and the Project may incur the associated impact costs. In contrast, an ESA schedule analysis shows that the projected August 2021 Substantial Completion date can be reduced to January 2020 or earlier by implementing this mitigation plan.

In connection with this Modification, the Contractor submitted a cost proposal of \$1,868,145 while the MTACC project estimate was \$1,666,990. After negotiations, both parties agreed to a cost of \$1,550,000, which is considered fair and reasonable. The work is not expected to cause any delay to Substantial Completion of CQ033.

In connection with previous contracts awarded, the Tutor Perini Corporation was found to be responsible, notwithstanding significant adverse information (“SAI”) 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 in February 2017. No new significant adverse information has been found relating to Tutor Perini Corporation. Therefore, Tutor Perini Corporation has been determined to be responsible.

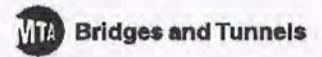


Bridges and Tunnels

Procurements December 2018



Staff Summary



Subject: Request for Authorization to Award Various Procurements
Department: Procurement
Department Head Name M. Margaret Terry <i>MMT</i>
Department Head Signature
Project Manager Name Various

Date 12/04/2018
Vendor Name
Contract Number
Contract Manager Name
Table of Contents Ref #

Board Action					
Order	To	Date	Approval	Info	Other
1	President	12/04/2018			
2	MTA B&T Committee	12/10/2018			
3	MTA Board	12/12/2018			

Internal Approvals			
Order	Approval	Order	Approval
	President <i>[Signature]</i>		VP & Chief Financial Officer <i>[Signature]</i>
	Executive Vice President <i>[Signature]</i>		VP Operations
	VP & Chief of Staff <i>[Signature]</i>		VP & Chief Engineer
	SVP & General Counsel <i>[Signature]</i>		VP & Chief Procurement Officer <i>BB</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:

<u>Schedules Requiring Two-Thirds Vote:</u>	<u># of Actions</u>	<u>\$ Amount</u>
Schedule C: Competitive Requests for Proposals (Award of Purchase and Public Works Contracts)	2	\$123.33M
SUBTOTAL	2	\$123.33M
MTA B&T presents the following procurement actions for Ratification: None		
TOTAL	2	\$123.33M

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
DECEMBER 2018

MTA BRIDGES & TUNNELS

Procurements Requiring Two-Thirds Vote:

C: Competitive Requests for Proposals (Award of Purchase and Public Works Contracts)
(Staff Summaries required for items requiring Board approval)

- | | | |
|--|------------------------|--------------------------------------|
| 1. Navillus Tile, Inc. dba,
Navillus Contracting
Contract No. HC-07 | \$70,750,000.00 | <u>Staff Summary Attached</u> |
|--|------------------------|--------------------------------------|

3yr. Contract- Competitive RFP

B&T 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 ventilation system rehabilitation and installation of a fixed fire suppression prototype system at the Hugh L. Carey Tunnel (HCT).

- | | | |
|--|------------------------|--------------------------------------|
| 2. D’Onofrio General Contractors Corp.
Contract No. | \$52,583,000.00 | <u>Staff Summary Attached</u> |
|--|------------------------|--------------------------------------|

2yr. 6 months Contract- Competitive RFP

B&T 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 Replacement of Fender Systems and Scour Protection at Cross Bay Veterans Memorial Bridge (CBB) and Replacement of Fender Systems at Marine Parkway-Gil Hodges Memorial Bridge (MPB).

Staff Summary

Item Number: 1 (Final)					
Dept & Dept Head Name: Joe Keane, P.E., V.P. Chief Engineer <i>Joe Keane</i>					
Division & Division Head Name: Romolo DeSantis, P.E. <i>Romolo DeSantis</i>					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	President	12/03/18			
2	MTA B&T Committee	12/10/18			
3	MTA Board	12/12/18			
Internal Approvals					
Order	Approval	Order	Approval		
1	Vice President & Chief Financial Officer <i>Joe Keane</i>	4	Executive Vice President		
2	Sr. Vice President & General Counsel <i>MMT</i>	5	Vice President, Chief of Staff <i>Joe Keane</i>		
3 <i>BB</i>	Vice President & Chief Procurement Officer	6	President <i>Joe Keane</i>		

SUMMARY INFORMATION	
Vendor Name: Navillus Tile, Inc. dba, Navillus Contracting	Contract Number HC-07
Description: Design-Build Services for Ventilation System Rehabilitation and Fixed Fire Suppression System at the Hugh L. Carey Tunnel	
Total Amount \$70,750,000 – Contract Award \$ 300,000 – Stipend Total	
Contract Term (including Options, if any) Three (3) years	
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"/> 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:	

Narrative

I. PURPOSE/RECOMMENDATION

B&T 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 ventilation system rehabilitation and installation of a fixed fire suppression system at the Hugh L. Carey Tunnel (HCT) to Navillus Tile, Inc. dba, Navillus Contracting (Navillus) for a period of three (3) years in the negotiated amount of \$70,750,000. In accordance with the MTA Design-Build Best Practice Guidance and in order to enhance competition and defray proposal costs, this solicitation included stipends in the amount of \$75,000 to be paid to each unsuccessful proposer whose proposal met defined proposal standards. Accordingly, approval is also requested to pay stipends totaling \$300,000 to the four unsuccessful proposers.

II. DISCUSSION

In July 2016, the Board authorized B&T to enter into a competitive Request for Proposal (RFP) process for design-build (D-B) services to perform upgrades at HCT to rehabilitate the ventilation system including, replacement of ventilation fan motors, fire hardening of components and installation of a prototype fire suppression system. The Work requires the design and construction services for the following: replacement of the original 104 ventilation fan motors with new high efficiency motors; reconfigure exhaust fan chambers to fire harden critical areas to minimize potential damage to critical ventilation systems and installation of a fixed fire suppression system prototype (FFSS) to maximize life safety capabilities in the tunnel and minimize damage to critical ventilation systems in the event of a fire.

(rev. 10/20/18)

Staff Summary

The service requirements were publicly advertised and eight (8) firms submitted qualification information. Based on a review of their qualifications, five (5) firms were deemed qualified to receive the RFP and all five firms submitted proposals: Hugh Carey Tunnel Services, JV (Judlau Contracting/E-J Electric) (\$104,000,000); John P. Picone, Inc. (\$101,000,000); Navillus (\$77,000,000); Skanska USA Civil Northeast Inc. (\$74,500,000) and TAP Electrical Contracting/Forte Construction Corp, JV (\$98,440,000). The proposals and oral presentations were evaluated against established criteria set forth in the RFP including proposed price, technical approach, D-B experience, key personnel, schedule, and management approach.

In accordance with the MTA Design-Build Best Practice Guidance, Technical Proposals were evaluated by the Selection Committee (SC) prior to evaluation of the cost proposals. The SC unanimously recommended Navillus as the highest rated firm based on several factors. Navillus provided the highest rated technical proposal with specific detail regarding their research, evaluation and recommendation for the fan motor manufacturer, FFSS prototype and project integrator. They provided particular attention to the Programmable Motor Protector (PMP) upgrades, Supervisory Control and Data Acquisition system (SCADA) and removable partition scopes for the Project. Navillus' motor designs are at an advanced stage compared to those of the other proposers, which has a positive impact on the project schedule. Navillus expanded on their technical proposal at the evaluation meeting by providing additional information with motor and FFSS data, catalog cuts and additional analyses.

The other shortlisted firms provided responsive proposals, which were viewed as technically acceptable but did not display the depth of understanding shown by Navillus. The price proposals of the other shortlisted firms, other than Skanska were deemed not competitive and therefore not in B&T's best interest. Skanska proposed the lowest price, however Skanska's proposal did not make specific recommendations to B&T for the fan motor and fixed fire suppression system manufacturers. They also omitted sections of the FFSS. Skanska's proposal was deemed less complete as compared to Navillus and therefore not in B&T's best interest.

Navillus submitted a proposal in the amount of \$77,000,000. The Engineer's estimate is \$69,907,371. The Contract includes allowances totaling \$1,500,000. Negotiations were conducted with Navillus, which included discussion of technical requirements, design assumptions, and construction approach. Through negotiations and as a result of scope refinement, B&T and Navillus agreed to the negotiated contract amount totaling \$70,750,000, which is 1.2% above the estimate and is fair and reasonable. The negotiated Navillus proposal is deemed the best value and in B&T's best interest. Navillus is considered a responsible contractor.

III. D/M/WBE INFORMATION

MTA Department of Diversity and Civil Rights has assigned goals of 15% MBE, 15% WBE and 6% SDVOB to this contract. Navillus has not completed any MTA contracts with goals; therefore, no assessment of the firm's MWBE performance can be determined at this time.

IV. IMPACT ON FUNDING

Funding is available in the 2015-2019 Capital Program under project: D704HC07/D03612 in the amount of \$70,750,000. The four Design-Build Stipends totaling \$300,000 are funded under the 2015-2019 Capital Program under Project D704HC07.

V. ALTERNATIVES

There are no recommended alternatives. The Authority does not possess the resources required to perform these services

Staff Summary

Item Number: 2 (Final)					
Dept. & Dept. Head Name: <i>Joe Keane</i> Engineering and Construction, Joe Keane, P.E., V.P.					
Division & Division Head Name: <i>Romolo DeSantis</i> Engineering and Construction, Romolo DeSantis, P.E.					
Board Reviews					
Order	To	Date	Approval	Info	Other
1	President	12/03/18			
2	MTA B&T Committee	12/10/18			
3	MTA Board	12/12/18			
Internal Approvals					
Order	Approval	Order	Approval		
1	V.P. & Chief Financial Officer <i>[Signature]</i>	4	Executive Vice President		
2	SVP & General Counsel <i>[Signature]</i>	5	V. P. & Chief of Staff <i>[Signature]</i>		
3	V.P. & Chief Procurement Officer <i>[Signature]</i>	6	President <i>[Signature]</i>		

SUMMARY INFORMATION	
Vendor Name D'Onofrio General Contractors Corp.	Contract Number CB-18
Description: Design-Build Services for Replacement of Fender Systems and Scour Protection at CBB and Replacement of Fender Systems at MPB	
Total Amount \$52,583,000 – Award \$ 225,000 - Stipends	
Contract Term (including Options, if any) Two (2) Years, Six (6) Months	
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"/> 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:	

Narrative

I. PURPOSE/RECOMMENDATION

B&T 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 Replacement of Fender Systems and Scour Protection at Cross Bay Veterans Memorial Bridge (CBB) and Replacement of Fender Systems at Marine Parkway-Gil Hodges Memorial Bridge (MPB) for a period of two (2) years, six (6) months in the negotiated amount totaling \$52,583,000.00. In accordance with the MTA Design-Build Best Practice Guidance and in order to enhance competition and defray proposal costs, this solicitation included stipends to be paid to each unsuccessful proposer in the amount of \$75,000 whose proposal met a defined standard. Accordingly, approval is also requested to pay stipends totaling \$225,000 to the three unsuccessful proposers.

II. DISCUSSION

In July 2016, the Board authorized B&T to enter into a competitive Request for Proposal (RFP) process for design-build (D-B) services at CBB and MPB. The work requires the design and construction services for replacement of fender systems and scour protection at CBB and replacement of fender systems at MPB.

(rev. 4/07/10)

Staff Summary

The D-B requirements are as follows:

CBB – (i) Removal and replacement of existing timber fender systems at Piers 3 and 6; (ii) installation tri-timber dolphin fenders; (iii) navigational lighting, signs, access walkways and railings for the existing fender system; and (iv) subsurface debris removal prior to placement of pier scour protection countermeasures at various Piers.

MPB – (i) Removal and replacement of existing timber fender system at Piers 11, 12/13, 14/15, and 16; (ii) new timber facing at the concrete cofferdam cells (iii) installation of timber walkways, steel ladders from pier top to timber walkways, navigational lighting, and signs; and (iv) removal of submarine cable chutes.

The service requirements were publicly advertised; ten D-B teams submitted qualification information and based on a review of their qualifications, five teams were deemed qualified to receive the RFP. Four teams submitted proposals: D'Onofrio General Contractors Corp. (D'Onofrio) [\$55,483,000], Weeks Marine, Inc. [\$65,988,900], Trevcon Construction Co., Inc. (Trevcon) [\$69,795,000] and Posillico Civil, Inc. (Posillico) [\$100,680,000]. The proposals were evaluated against established criteria set forth in the RFP, including proposed price, D-B technical approach, key personnel and management approach, and oral presentations.

The Selection Committee unanimously recommended D'Onofrio as the highest rated firm based on several factors, including submission of the proposed lowest price. Although all four D-B teams proposed technically acceptable proposals, D'Onofrio's approach demonstrated the greatest understanding of the RFP. D'Onofrio proposed an efficient and less disruptive method of bringing the existing concrete cofferdam fender systems at the MPB into compliance with current design standards by utilizing piles. Their proposal contained significant consideration for the geotechnical conditions by allowing sufficient time for design and final permitting approvals. In addition, their proposed new fender systems do not encroach beyond the permitted limits of the existing fender systems, which minimizes the potential risk associated with obtaining permit modifications.

Both Weeks and Posillico proposed design and construction approaches limiting the number of piles required and thus limiting disruptions to the bay's eco-system. Their technical solutions met the requirements of the RFP, but the price proposals were much higher than that of D'Onofrio and deemed not in B&T's best interest. Trevcon proposed a modified configuration of the fender systems at CBB and MPB, which presented greater risks to secure permit modifications for their proposed fender systems. Trevcon's price proposal is approximately \$14.3M higher than D'Onofrio and deemed not in B&T's best interest. Also, Trevcon submitted an alternate fender proposal, which extended beyond the permitted existing footprint and the price was approximately \$4.0M above D'Onofrio's, which also was deemed not in B&T's best interest.

D'Onofrio submitted a proposal in the amount of \$55,483,000. The Engineer's Certified Estimate is \$48,047,743. The Contract includes allowances totaling \$2,100,000. Negotiations were conducted with D'Onofrio, which included discussion of the technical requirements, design assumptions, and construction approach. Through negotiations and as a result of scope refinement, B&T and D'Onofrio agreed to the negotiated contract amount totaling \$52,583,000, which is 9.4% above the estimate and is considered fair and reasonable. The negotiated D'Onofrio proposal is deemed the best value and in B&T's best interest. D'Onofrio is considered a responsible contractor.

III. D/M/WBE INFORMATION

MTA Department of Diversity and Civil Rights has assigned goals of 15% MBE and 15% WBE to this contract. D'Onofrio has not completed any MTA contracts with goals; therefore, no assessment of the firm's MWBE performance can be determined at this time.

IV. IMPACT ON FUNDING

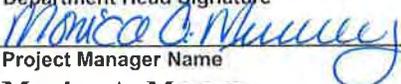
Funding in the amount of \$52,583,000 is available in the 2015–2019 Capital Program under Project CB-18/D03581 and in the amount of \$225,000 for stipends under Project CB-18.

Staff Summary

V. ALTERNATIVES

There are no recommended alternatives. The Authority does not possess the resources required to perform these services.

Staff Summary

Subject Public Authorities Law Required Policies
Department Corporate Compliance
Department Head Name Lamond W. Kearse / Monica A. Murray
Department Head Signature 
Project Manager Name Monica A. Murray

Date December 10, 2018
Vendor Name N/A
Contract Number N/A
Contract Manager Name N/A
Table of Contents Ref # N/A

Board Action					
Order	To	Date	Approval	Info	Other
1	Governance	12/10/18	X		
2	Board	12/12/18	X		

Internal Approvals			
Order	Approval	Order	Approval
1	Corporate Compliance		
2	Legal		
3	Chief of Staff		

Purpose:

To obtain Board approval for revisions to certain existing policies of the MTA and its Agencies, in order to comply with Public Authorities Law Section 2824 ("PAL 2824").

Discussion:

PAL 2824 requires formal Board adoption of certain policies. Corporate Compliance has provided an exhibit book that includes the relevant policies for your review.

Recommendation:

It is recommended that the Board approve the policies contained in the exhibit book.