



**Thruway
Authority**



2020 BUDGET

New York State Thruway Authority

TABLE OF CONTENTS

Board Members	4
Letter from Executive Director and Certification	6
Thruway Organization and Background	
Mission	10
History and Background	10
Organizational Structure and Organizational Chart	11
Budget Overview	
Budget At a Glance	17
Executive Summary	18
2019 Revised Financial Plan	
Comparison of Actual 2018 Expenditures to Revised 2019 Budget	29
Summary of Revised Financial Plan Changes - Revenues & Operating Expenses	30
Summary of Revised Financial Plan Changes - Capital Program	31
2019 Revised Budget - Sources and Uses of Funds	32
2020 Budget	
Comparison of Revised 2019 Budget to 2020 Budget	34
Toll, Concession and Sundry Revenues	35
Departmental Operating Expenses	36
General Charges	37
Debt Service	38
Flow of Funds - General Revenue Bond Resolution	39
Capital Program Funding Uses	40
Capital Program Funding Sources	41
Comparison of Actual 2018, Revised 2019 Budget and 2020 Budget New NY Bridge	42
2020 Budget - Sources and Uses of Funds Schedule	43
2020 Budget at the Item and Department level	44
Personnel- 2020 Budgeted fill levels by department	47
Personnel History - Aggregate Budgeted Fill Levels since 1995	48
2020 Departmental Summary and Budget Information	
Board & Executive	50
Media Relations and Communications	52
Legal	55
Audit and Management Services	58
Administrative Services	60
Information Technology	63
Finance and Accounts	66
Engineering	68
Maintenance and Operations	71
Thruway Maintenance	72
Equipment & Inventory Management	74
Traffic and Communications	75
Toll Collection	76
Long Range Financial Plan	
Long-Term Financial Plan	79
Multi-Year Capital Plan	
2020 Budget - Capital Program - Sources and Uses	83
Capital Planning Process	84
Multi-Year Capital Program - Letting Schedule	86
Appendix	
Independent Traffic Engineer's Report	95
Fund Structure/Budgeting Assumptions	
Fund Descriptions	112
Flow of Funds Chart	114
Net Revenue Requirement	115
Basis of Budgeting	115
Budget Process	115
Budget Assumptions	116
Assessment of Budgetary Risks	116
Thruway Bond Program	118

BOARD MEMBERS





New York State Thruway Authority Board of Directors

Joanne M. Mahoney, Chair, Board of Directors

George L. Miranda, Member

J. Donald Rice Jr., Member

José Holguín-Veras, Ph.D., P.E., Member

Robert L. Megna, Vice-Chair

Stephen M. Saland, Member

Heather C. Briccetti, Esq., Member

LETTER FROM EXECUTIVE DIRECTOR AND CERTIFICATION





November 2019

Honorable Liz Krueger
Chair
NYS Senate Finance Committee
State Capitol Building, Room 416
Albany, NY 12247

Honorable James L. Seward
Ranking Member
NYS Senate Finance Committee
State Capitol Building, Room 414
Albany, NY 12247

Honorable Helene E. Weinstein
Chairwoman
NYS Assembly Ways & Means Com.
923 Legislative Office Building
Albany, NY 12248

Honorable William A. Barclay
Ranking Minority Member
NYS Assembly Ways & Means Com.
444 State Capitol
Albany, NY 12248

Mr. Jeffrey Pearlman
NYS Authorities Budget Office
P.O. Box 2076
Albany, NY 12220-0076

To the Addressees:

In compliance with the provisions of the Public Authorities Law and on behalf of the Board of the New York State Thruway Authority (Authority), I am submitting a summary of the Authority's Budget for the fiscal year beginning January 1, 2020. The overall 2020 Budget represents a total financial commitment of \$1.3 billion. The 2020 Budget is one that is balanced; provides the necessary resources to maintain the current levels of maintenance, safety and service; and maximizes funding for critical infrastructure rehabilitation projects in the Authority's multi-year Capital Plan.

Our comprehensive efforts to improve our operations will continue into 2020, reflecting our long-term commitment to keep the Thruway Authority on a sound fiscal footing. The 2020 budget that has been prepared, continues our efforts to provide a balanced financial plan and makes no toll adjustments in 2020.

The 2020 Budget continues the great progress on the New NY Bridge (NNYB) project that will result in the completion of the Governor Mario M. Cuomo Bridge by providing \$72.4 million in 2020. In addition, the 2020 Budget would provide a 2020-2024 capital plan of \$2.15 billion. This includes roughly \$1.83 billion for Thruway projects and \$317.4 million for the NNYB project over the 2020-2024 capital plan.

Thanks to the hard work and dedication of our employees, we continue to operate and maintain a safe, reliable, statewide superhighway in a fiscally responsible manner. The Thruway Authority provides quality services for our customers while supporting economic growth and job creation across New York State. Under Governor Andrew Cuomo's leadership, we have instituted major initiatives and cost controls that have substantially reduced operating costs, improved services, and fostered strategic investments in our infrastructure.

Finally, none of these accomplishments would have been possible without strong support, guidance and leadership from our Chair, Joanne M. Mahoney and the dedicated members of the Thruway Authority Board of Directors. Thank you for your interest in the Thruway Authority.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew J. Driscoll". The signature is written in a cursive style with some loops and flourishes.

Matthew J. Driscoll
Executive Director



Certification of Assumptions and Method of Estimation for Budget and
Financial Plan 2020-2023 in accordance with the Comptroller's
Regulation Section 203.9 Certification

Date: November 2019

To: Board of Directors, New York State Thruway Authority

In accordance with Office of State Comptroller (OSC regulations), I certify that to the best of my knowledge and belief after reasonable inquiry, the Authority 2020 Budget is based on reasonable assumptions and methods of estimation; and the requirements of the OSC regulations have been satisfied.

A handwritten signature in blue ink that reads "Matthew Howard". The signature is written in a cursive style with a horizontal line underneath the name.

Matthew A. Howard
Chief Financial Officer

THRUWAY ORGANIZATION AND BACKGROUND



The New York State Thruway



Mission

We offer a user-fee supported highway that delivers high levels of safety and service.

History and Background

The New York State Thruway Authority, a body corporate and politic constituting a public corporation, created in 1950 by the New York State Thruway Authority Act, as amended, Title 9 of Article 2 of the Public Authorities Law, Chapter 43-A of the Consolidated Laws of the State of New York (the "Act"), is empowered, among other things, to finance, construct, operate and maintain as a toll facility, and to improve and reconstruct the New York State Thruway (the "Thruway"), subject to certain statutory limitations on the Authority's right to impose tolls on certain parts of the Thruway, including the Cross-Westchester Expressway. The Act also authorizes the Authority to issue, from time to time, negotiable bonds and notes for any corporate purpose secured by tolls, revenues, rates, fees, charges, rents and other earned income of the Authority.

Title to the real property utilized by the Authority is vested in the State, but the Authority has the right, so long as its corporate existence shall continue, to possess, use and dispose of all real property and rights therein. The Authority has the power to acquire, hold and dispose of personal property for its corporate purposes. The Authority has no taxing power.

The Act provides that the Authority consists of a Board of seven members appointed by the Governor of the State, with the advice and consent of the State Senate. Board members serve for terms of nine years each. Vacancies in the Authority occurring other than by expiration of term are filled for the remainder of the unexpired term in the manner previously stated. Pursuant to the New York State Public Officers Law, members of the Authority whose terms have expired continue to serve until a successor is appointed and qualified. The members of the Authority receive no salary but are reimbursed for their necessary expenses incurred in connection with their duties. The Chair serves in that capacity for the full term of his appointment as a member of the Authority. The members of the Authority may appoint other officers. The present members of the Board and the expiration dates of their terms of office are as follows:

<u>Name</u>	<u>Expiration of Term</u>
José Holguín-Veras.....	December 12, 2018
Joanne M. Mahoney	January 1, 2020
Robert L. Megna.....	January 1, 2017
George L. Miranda	June 23, 2026
J. Donald Rice, Jr.	June 13, 2018
Stephen M. Saland	January 1, 2023
Heather C. Briccetti.....	September 14, 2026

Thruway Facilities and Operations

The Thruway is one of the largest tolled highway systems in the United States and is a critical component in the national interstate network. The original Thruway roadway system was constructed between 1949 and 1960 and is one of the oldest components of the national interstate highway system. In 1991, State legislation made the Authority additionally responsible for the operation and maintenance of 11 miles of I-287 Cross-Westchester Expressway. (The New York State Department of Transportation (NYSDOT) remains responsible for capital improvements to this roadway.) The Thruway System is now more than 570 miles in total length and includes 134 interchanges.

The Thruway serves travelers with a variety of needs and purposes, including commuters, business travelers, recreational travelers, and commercial vehicle traffic and provides the major route of access for visitors to the State’s tourist destinations including Niagara Falls, the State Canal system, the Finger Lakes, the Adirondacks, the Catskills and New York City. The Thruway has provided a dependable roadway for these travelers, sustaining and encouraging economic growth, fostering job creation and generating tax revenues to the State and its local governments. Underscoring its importance to the state, region and nation, in 2018 Thruway customers traveled approximately 8.4 billion vehicle-miles on the highway, averaging more than 22.8 million vehicle-miles per day. Due to the extent of its maintenance activities, good infrastructure conditions and the dedication of a specialized troop of the New York State Police to patrol the Thruway System, it has remained one of the safest roadway networks in the nation.

The Thruway System is comprised of 2,840 lane miles of roadway. In addition, the Authority has maintenance responsibility for 814 bridges and also owns 27 service areas and three welcome centers located at intervals along the Thruway System, operated by three food service and two fuel concessionaires that are open 24-hours daily, 7 days a week. Routine maintenance activities are performed by Authority staff from 21 maintenance locations grouped into four divisions.

The Thruway connects the principal cities of the State from New York City to Albany, and on to Utica, Syracuse and Rochester through to Buffalo and the Pennsylvania state line. Because the Thruway corridor serves 37 of the State's 62 counties and the majority of the State's population, it is the principal artery of travel and commerce within the State. It also is an important interstate connector, joining with the Massachusetts Turnpike (I-90), Connecticut Turnpike (I-95), New Jersey's Garden State Parkway, as well as several other Interstate routes such as I-287 from New Jersey; I-90 in Pennsylvania; I-290 around the north side of Buffalo; I-390 and I-490 serving Rochester; I-81, I-481 and I-690 at Syracuse; I-790 in Utica; I-87 (the Northway), I-88, I-90, I-787, and I-890 at Albany; and I-84 at Newburgh. As a result, the Thruway is a vital link to long distance interstate travel and a high proportion of its patrons are from out-of-state.

The Thruway is comprised of two types of toll systems – a controlled (ticket) system and a barrier system. The controlled system (approximately 481 miles) makes up the largest portion of the Thruway, running from Woodbury (in the southeast corner of the State) north along I-87 to Albany, then west on I-90 to Buffalo and south of Lake Erie to the Pennsylvania border. In addition to this main stretch of the controlled system, there is a small tolled branch south and east of Albany, known as the Berkshire Spur.

On the controlled system, tolls are charged based on the actual distance traveled by the customer. Meanwhile, barrier toll plazas have a fixed toll rate for each vehicle class and payment type (*e.g.*, Cash, E-ZPass, as well as Commuter and other E-ZPass Discounts). The barrier systems are comprised of the Governor Mario M. Cuomo Bridge (formerly the Tappan Zee Bridge), Yonkers Barrier, New Rochelle Barrier, Spring Valley Barrier, Harriman Barrier and the Grand Island Bridges. Under the existing policy, toll rates across the system are based on vehicle classifications, related to the number of axles per vehicle and the height of the vehicle over the first two axles.

The Authority converted the barrier at The Governor Mario M. Cuomo Bridge to cashless tolling in April 2016. The Authority's conversion to cashless tolling of its remaining barriers (Grand Island Bridges, and the Harriman New Rochelle, Yonkers and Spring Valley Barriers) occurred during 2018. The Authority is planning to complete system-wide cashless tolling with conversion of the entire controlled system to cashless tolling by the end of 2020.

Approximately 266.4 million toll transactions occurred on the Thruway in 2018, generating more than \$736.5 million in toll revenues.

Organization

To administer its responsibilities for the Thruway and other authority projects, the Authority is organized into nine operating departments and currently supports approximately 2,201 permanent employees.

The departments are Board and Executive, Engineering, Maintenance and Operations, Administrative Services, Finance and Accounts, Legal, Media Relations & Communications, Audit and Management Services and Information Technology.

The Department of Engineering includes Asset and Innovation Management, Capital Program and Contracts Management, Program Delivery, and Transportation Planning and Environmental Services. The Department oversees the development and implementation of the Authority's long range capital programs. It has the professional capacity to design and inspect some capital projects in-house and accordingly does not have to rely solely on outside consultants.

The Department of Maintenance and Operations manages and maintains the highway, bridge and facilities infrastructure and equipment in a cost-effective manner in order to offer Thruway users high levels of safety and service. It is responsible for all toll collection activities, traffic management and travelers' services including concessions. The Department helps develop the Multi-Year Capital Program designed to preserve the condition, serviceability and safety of the roadway, bridges and facilities. The Department also continues to explore and implement innovative designs and technologies to enhance the safety and efficiency of the Thruway System. Direct field management of the maintenance and operations functions is handled through the four division offices (New York, Albany, Syracuse and Buffalo) under the auspices of the four Division Directors who report to the Chief of Staff.

The Department of Maintenance and Operations also acts as liaison with New York State Police Troop T, whose 320 members patrol the Thruway. In April 2016, the Authority resumed financial responsibility for State Police Troop T enforcement on the Thruway.

Roadway

The original 2,800 lane mile Thruway roadway system was constructed between 1949 and 1960 and is one of the oldest components of the national Interstate Highway System. In 1991, State legislation made the Authority additionally responsible for the operation and maintenance of 11 miles of I-287 Cross-Westchester Expressway. The New York State Department of Transportation (NYSDOT) remains responsible for capital improvements to this roadway. The Thruway system is now more than 570 total miles in length and includes 134 interchanges. The various sections of roadway currently maintained by the Authority are listed in the table below.

THRUWAY BY SECTION AND MILES	
SECTION	MILES
THE MAINLINE (New York - Buffalo)	426 miles
ERIE SECTION (Buffalo - Pennsylvania Line)	70 miles
NIAGARA SECTION I-190 (Buffalo - Niagara Falls)	21 miles
BERKSHIRE SECTION (Selkirk - Massachusetts Line)	24 miles
NEW ENGLAND SECTION (I-95) (Bronx - Connecticut Line)	15 miles
GARDEN STATE PARKWAY CONNECTION (Spring Valley - New Jersey)	3 miles
CROSS WESTCHESTER EXPRESSWAY (I-287) (Mainline I-87 in Tarrytown - I-95 in Rye)	11 miles
Total	570 miles

Bridges

The Authority has maintenance responsibility for 814 bridges that carry local roads and state highways over the Thruway System. The structural characteristics of these bridges vary: about 15 percent are concrete structures, either pre-stressed girder, arch, rigid frame or box culverts. The remaining 85 percent of the bridges are steel structures with asphalt overlays, reinforced concrete decks. As with the roadway, an overwhelming majority of the structures date back to the original opening of the Thruway System in the 1950s and require continual and significant repair, rehabilitation and reconstruction investments to prevent deteriorating conditions.

By far, the largest bridge on the Thruway System is the Governor Mario M. Cuomo Bridge over the Hudson River, located approximately 20 miles north of New York City. Due to its size and importance, a permanent Authority maintenance team is assigned to the Bridge.

Besides the Governor Mario M. Cuomo Bridge, the Thruway maintains and operates seven other major bridge structures. These include the Castleton-on-Hudson Bridge across the Hudson River on the Berkshire Section; the four Grand Island Bridges spanning branches of the Niagara River north of Buffalo; the mile long Niagara Viaduct, and the Byram River Bridge on the New England Section.

Thruway Service Areas

The Thruway's 27 Service Areas and three welcome centers offer a variety of restaurants and other services designed to serve Thruway visitors for years to come. In addition, staffed tourism information centers are located at several Service Areas (and some interchanges).

The Service Areas are fun and memorable places to stop, with buildings reflecting New York State architecture such as Adirondack lodges, Shaker meeting halls and Hudson River Valley train stations. The Thruway Service Areas offer a wide variety of food as well as competitive fuel prices. In addition, Automated Teller Machines (ATMs) are available, as are tourist information centers and kiosks, gift shops, Wireless Fidelity (Wi-Fi), travel safety information, and up-to-date weather and traffic conditions. All of the Service Areas offer family-assist restrooms, allowing people with special needs to get help from a traveling companion in total privacy. Travel Plazas are now fully accessible to travelers with special needs. Also, parents will find diaper changing areas in both men's and women's restrooms.

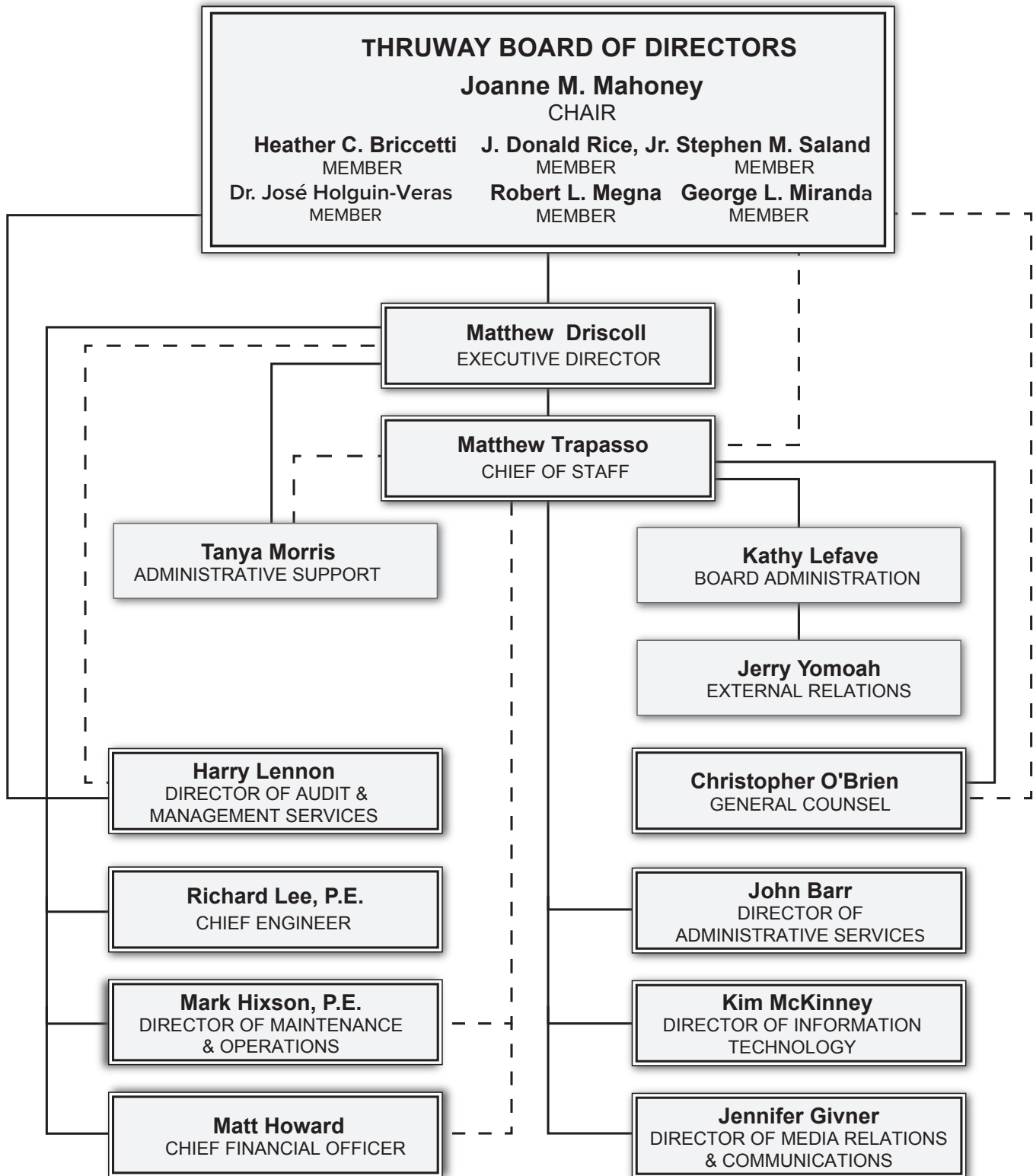
Service Areas are strategically located about every 30 to 40 miles along the Thruway. All gasoline stations at Thruway Service Areas have self-service islands. Upon request, people with disabilities and other travelers who so desire may receive full-service assistance at self-service pumps at self-serve prices.

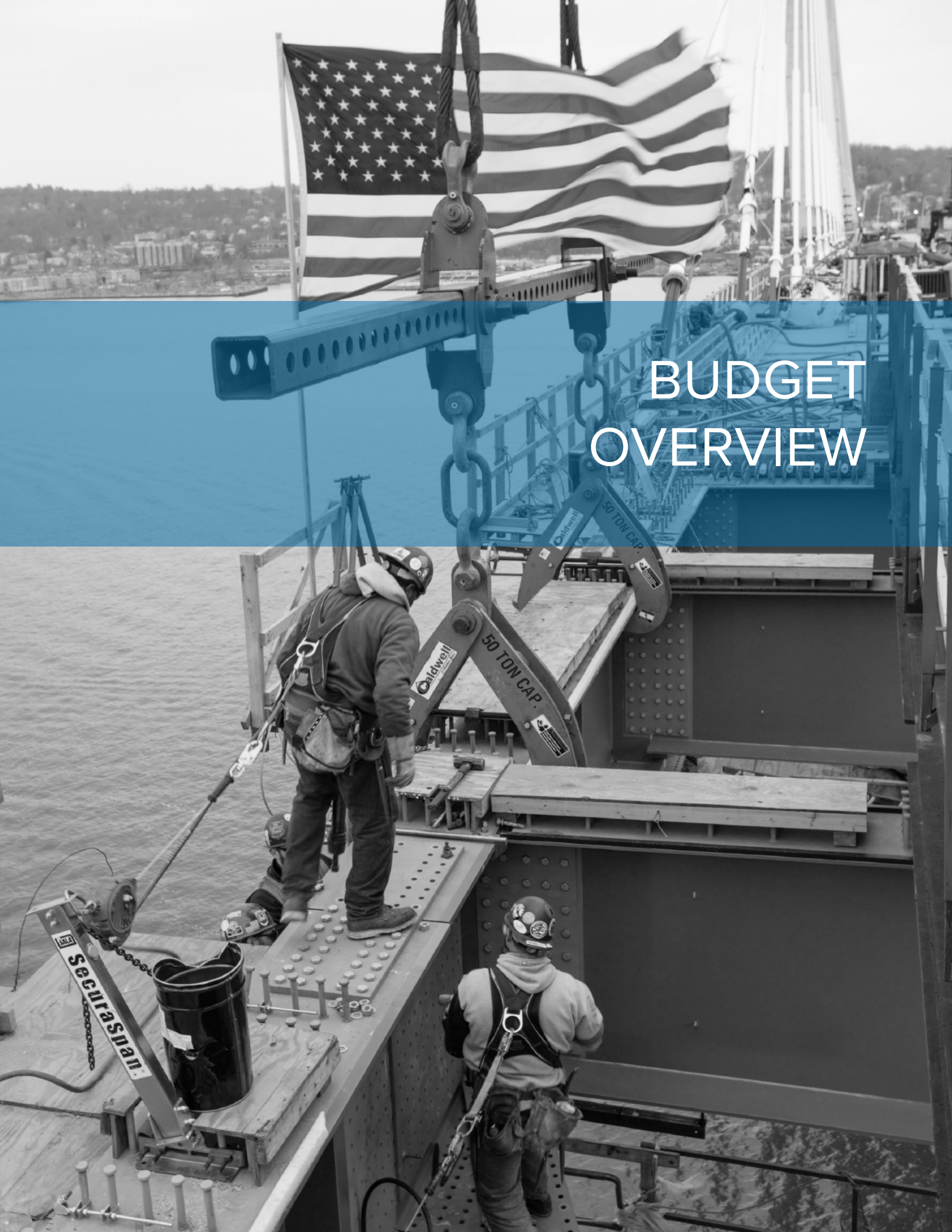
Rest Areas/Park and Ride Lots

There are conveniently located parking areas along the Thruway system where travelers are invited to stop and rest during their trips. There are emergency call boxes at these rest areas that connect directly to the Thruway Statewide Operations Center, located in the Thruway Headquarters Building.

The Thruway Authority does offer several commuter Park and Ride lots across the System. Parking at these commuter lots is posted for a maximum stay of 16 hours, and are not designated for multiple day stays. There are no overnight or long-term parking facilities on the System.

All Department Organization Chart





BUDGET OVERVIEW

Caldwell
50 TON CAP.

Securaman



THRUWAY AUTHORITY 2020 BUDGET AT A GLANCE

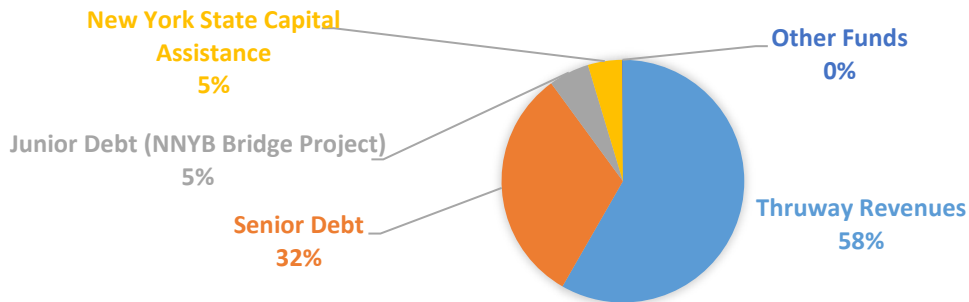
- **No Toll Increase:** The 2020 Thruway Authority budget recommends no toll increase for 2020, marking the tenth year since the last increase took effect.
- **Traffic and Toll Revenue Growth:** The 2020 Budget forecast total traffic of 269.6 million vehicles, reflecting growth of 2.4 million vehicles or 0.9 percent above revised 2019 levels. This corresponds to a toll revenue forecast of \$735.8 million reflecting a decrease of \$3.8 million or 0.5 percent below revised 2019 levels. The 2020-2023 toll revenue forecast includes an upward revision from the previous forecast submitted with the approved 2019 Budget for the years 2018-2019. However, the toll revenue forecast for 2020-2022 are revised to take into account the implementation of cashless tolling across the system by the conclusion of 2020.
- **2020 Overall Budget:** The 2020 Overall budget for the Thruway totals \$1.3 billion, which is \$33 million or 2.4 percent below revised 2019 levels. This includes \$72.4 million in spending on the New NY Bridge project leading to the construction of the Governor Mario M. Cuomo Bridge, \$371.7 million for the operating expenses of the Thruway Authority and \$533.7 million for capital projects across the Thruway system in 2020.
- **2020-2024 Capital Program:** The 2020-2024 Capital Program would provide \$2.15 billion for Thruway Authority capital projects. This includes \$317.4 million for New NY Bridge project that will result in the completion of the Governor Mario M. Cuomo Bridge and \$1.83 billion for system-wide projects on the Thruway.
- **Operating Budget:** The 2020 Thruway Authority operating budget totals \$371.7 million (with operating reserves), which is \$8.76 million or 2.4 percent above revised 2019 levels.
- **State Police Troop T Reimbursement:** The 2020 Thruway Authority operating budget provides \$66.5 million for reimbursement to the State of New York for costs associated with New York State Police Troop T patrolling the system reflecting a \$0.1 million or 0.2 percent below revised 2019 levels.

SUMMARY

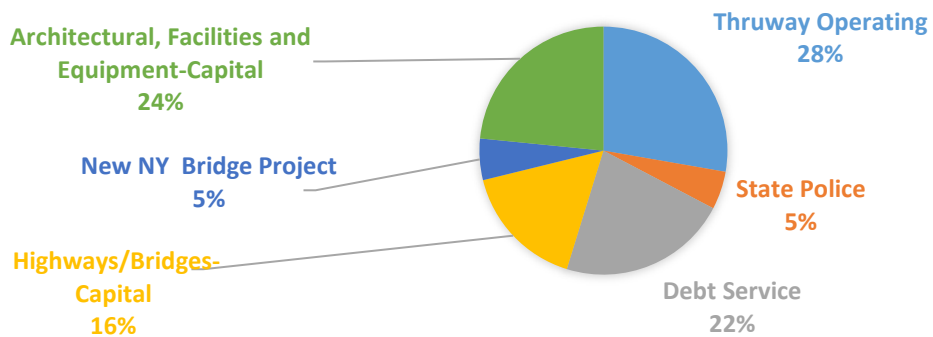
2020 Budget Summary (in \$ millions)

	Actual 2018	Revised 2019	Budget 2020	\$ Change	% Change
Operating Expenses (including Thruway and State Police)	406.24	429.54	438.20	8.66	2.0%
Retained for Working Capital	15.00	5.00	-	(5.00)	-100.0%
Debt Service	299.52	309.04	295.81	(13.24)	-4.3%
Capital Program	591.82	629.71	606.09	(23.63)	-3.8%
Total	1,312.58	1,373.30	1,340.10	(33.20)	-2.4%

2020 BUDGET: SOURCES- \$1.3 BILLION



2020 BUDGET: USES \$1.3 BILLION



- The 2020 Budget provides for an overall budget of \$1.3 billion, representing a \$33.2 million reduction or 2.4 percent decrease from revised 2019 levels.
- The 2020 Budget forecasts total traffic of 269.6 million vehicles, reflecting growth of 2.4 million vehicles or 0.9 percent above 2019. This corresponds to a toll revenue forecast of \$735.8 million, reflecting a decrease of \$3.8 million or 0.5 percent below 2019 levels.
- The 2020 Budget provides a total of \$371.7 million for operating expenses of the Thruway Authority (including provisions). This represents an increase of \$8.7 million or 2.4 percent above revised 2019 levels. The 2020 Budget also provides \$66.5 million for reimbursement to the State Police for the cost of the Troop T patrolling of the system.
- The 2020 Budget provides a total of \$606 million to support the capital program of the Thruway Authority. This represents a decrease of \$23.6 million or 3.8 percent below revised 2019 levels.
- The 2020 Budget provides a 2020-2024 Capital Program that would provide \$2.15 billion for Thruway Authority capital projects. This includes \$317.4 million for New NY Bridge project that will result in the completion of the Governor Mario M. Cuomo Bridge and \$1.83 billion for system-wide projects on the Thruway.

THRUWAY AUTHORITY REVENUE SUMMARY

Thruway Authority Revenues (in \$ millions)					
	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Tolls	736.50	739.59	735.78	(3.81)	-0.5%
Concessions	14.88	14.66	8.48	(6.18)	-42.2%
Interest	7.12	7.00	8.25	1.25	17.9%
Sundry	40.31	39.62	41.45	1.83	4.6%
Total	798.81	800.86	793.95	(6.91)	-0.9%

- The 2020 Budget forecasts total Thruway Authority revenues of \$793.95 million, a decrease of \$6.91 million or 0.9 percent below revised 2019 levels. This corresponds to a toll revenue forecast of \$735.78 million reflecting a decrease of \$3.8 million or 0.5 percent below revised 2019 levels; concessions revenues of \$8.48 million a \$6.18 million reduction due to the projected impacts of system-wide reconstruction and renovation of Thruway service areas resulting from a planned new service area operating agreement, sundry revenues of \$41.45 million and interest income of \$8.25 million.
- The Thruway toll forecast as produced by the independent traffic engineer and submitted with the 2020 budget includes upward revisions from the previous forecast submitted with the approved 2019 Budget for the years 2018-2019. However, the toll revenue forecast for 2020-2022 are

revised to reflect the implementation of cashless tolling across the system by the conclusion of 2020. A summary of these revisions in the toll revenue forecast is provided below.

Toll Revenue Forecast (in \$ millions)			
Year	2019	2020	\$
	Original Budget	Budget	Change
2016 Actual	708.3	708.30	-
2017 Actual	731.5	731.51	-
2018 Actual	736.1	736.50	0.40
2019	739.1	739.59	0.49
2020	743.9	735.78	(8.12)
2021	709.4	713.79	4.39
2022	716.7	722.93	6.23
2023	N/A	730.37	N/A

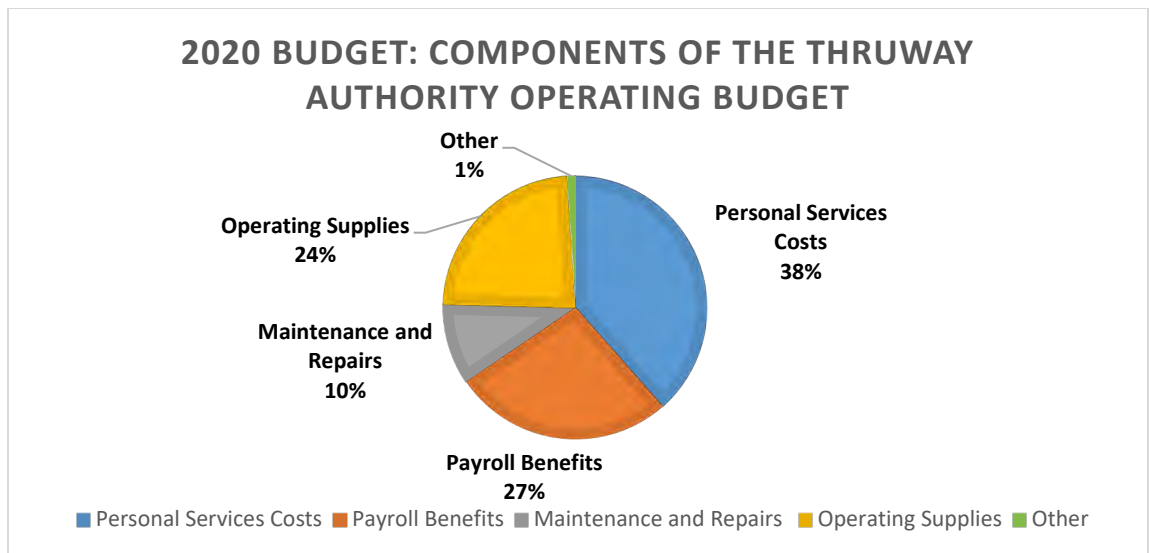
Thruway Authority Operations Summary

2020 Thruway Authority Operating Budget Summary (in \$ millions)					
	Actual	Revised	2020	\$ Change	% Change
	2018	Budget 2019	Budget		
Departmental Operating Expenses	195.97	200.94	200.39	(0.55)	-0.3%
General Charges	143.98	157.39	170.31	12.92	8.2%
Operating Reserves (Environmental and Legal)	5.04	4.60	1.00	(3.60)	-78.3%
Total	344.98	362.94	371.70	8.76	2.4%

- The 2020 Budget provides a total of \$371.7 million (with provisions for legal claims, retention incentives and environmental remediation) to support the operating expenses of the Thruway Authority. This represents an increase of \$8.76 million or 2.4 percent above revised 2019 levels. This includes \$200.4 million for departmental operations (a \$0.55 million or 0.3 percent reduction

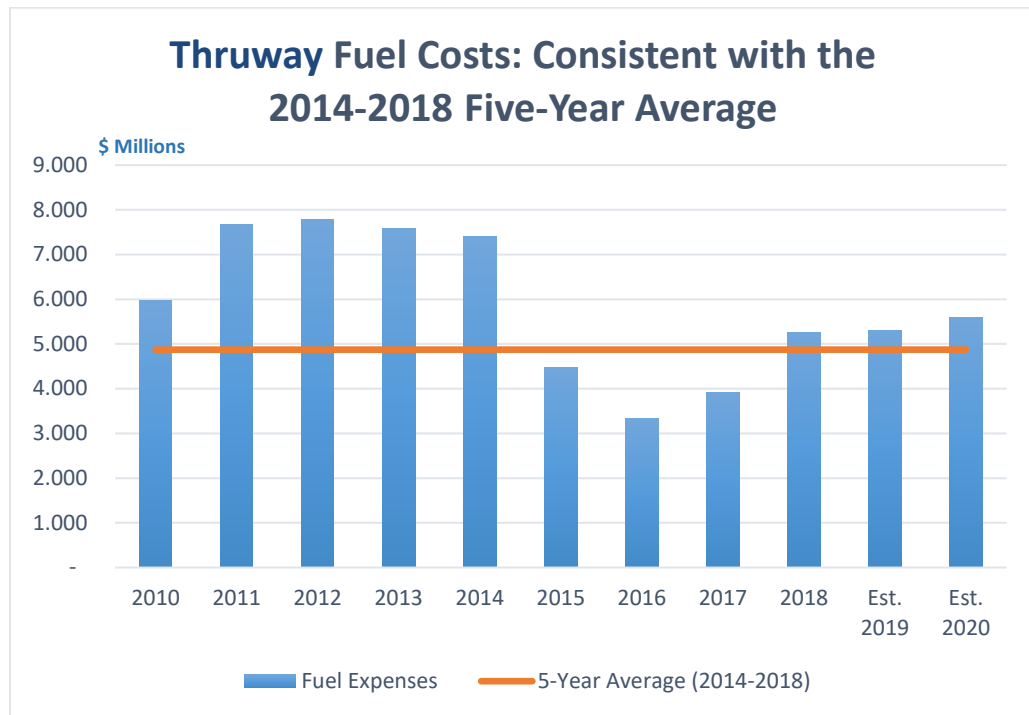
from revised 2019 levels), \$170.3 million for general charges, an increase of \$12.9 million or 8.2 percent from revised 2019 levels and \$1 million for operating reserves which reflects a \$3.6 million reduction from revised 2019 levels.

Thruway Authority 2020 Operating Budget Major Components of Annual Change	
	Amount (\$ millions)
Revised 2019 Operating Budget (excluding State Police)	362.94
Personal Services	3.18
Payroll Benefits (Workers' Comp, HI and Pensions)	4.42
Operating Supplies	5.80
Maintenance and Repairs (snow and ice, fuel, bridge & highway)	3.24
Allocations to Other Funds	(3.27)
Studies and equipment projects not capitalized	(1.02)
Provisions for Environmental Remediation, Cashless Tolling Rentention	
Incentives and Legal Claims	(3.60)
2020 Operating Budget (excluding State Police)	371.70
Year to Year Change	8.76
% Change	2.4%



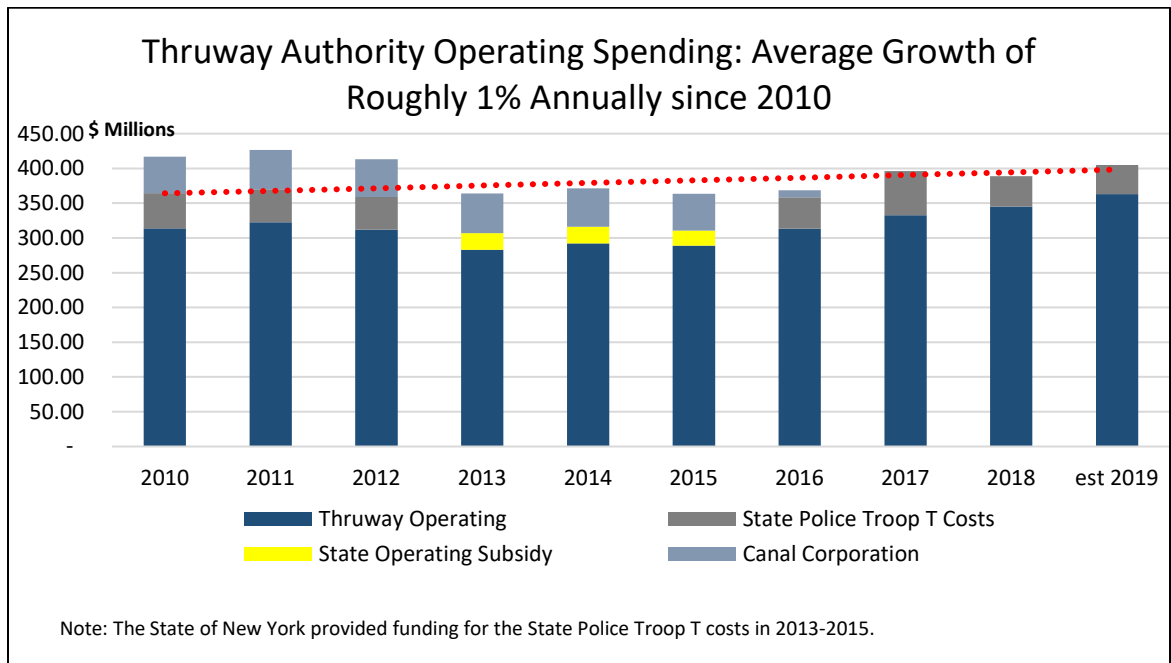
- Major components of the \$8.76 million annual change in the Thruway Authority Operating Budget include the following:
 - An increase in Personal Services costs of \$3.18 million or 2.0 percent from 2019 levels. This increase supports baseline personal services and overtime costs. Further, the budgeted personal services costs incorporate \$7.5 million in salary savings resulting from continued efforts to maintain base level headcount at prior year levels.

- A net increase of \$4.4 million for employee benefits or 4.1 percent from 2019 levels. This includes an increase of \$2.5 million for health insurance costs; an increase of \$602,000 in pension costs associated with employer contribution rate requirements recently announced by the New York State and Local Retirement System; a \$241,000 increase associated with contribution costs for the Employee Benefit Fund and, a \$900,000 increase in Workers' Compensation Insurance costs based on recent projections for determining premium costs.
- An increase of \$5.8 million in operating supplies. This reflects an increase of 7.1 percent from 2019 levels. This includes an additional \$8.3 million associated with E-ZPass account management and Tolls by Mail administrative costs associated with the conversion cashless tolling at the toll barrier plazas (Governor Mario M. Cuomo Bridge, Grand Island Bridges, Harriman, Yonkers, Spring Valley and New Rochelle and system-wide in the 4th quarter).
- A \$3.24 million or 9.7 percent increase in maintenance and repair costs. This includes \$4.5 million to support fuel expenses which are budgeted at a level consistent with the five-year average (the graph below includes the combined Thruway and State Police fuel expenses included in the 2020 Budget).



- The 2020 Budget also includes a reduction of \$1 million in non-capitalized project costs resulting from one-time costs related to the installation of a municipal water service connection to the Malden Service Area and additional equipment expenses associated with the opening of the Governor Mario M. Cuomo Bridge and new facilities located at the bridge.

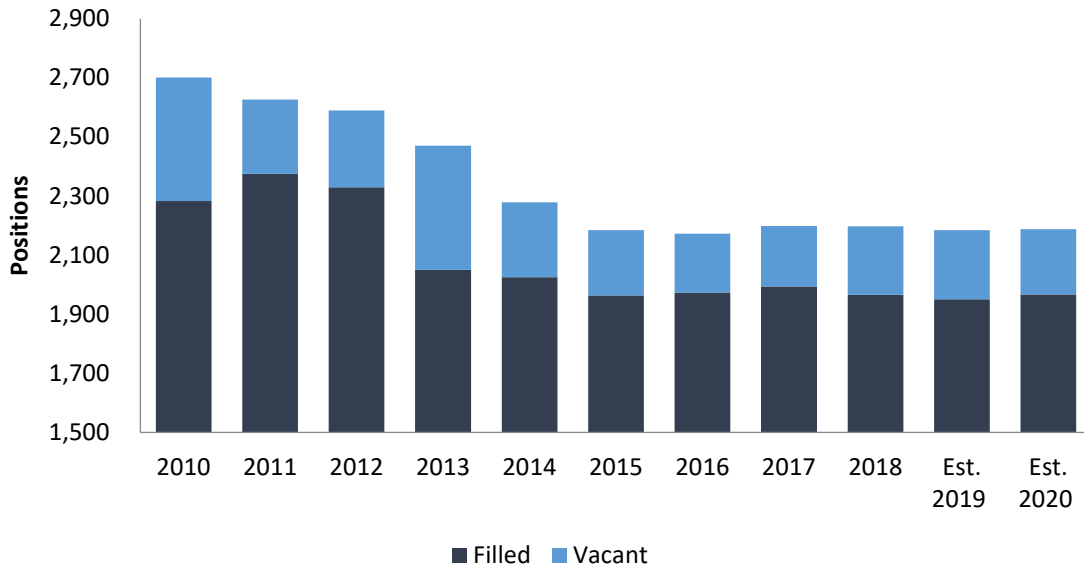
- Savings of \$3.2 million resulting from increased allocations to capital and other funds based on the level of work included in the 2020 capital plan and is consistent with levels set for such allocations in prior years.
- The 2020 Budget provides \$1 million for provisions for Environmental Remediation and Legal Claims reflecting a \$3.6 million reduction from revised 2019 levels. This reduction is the result of the establishment of an employee retention incentive reserve fund established in the revised 2019 budget to support the conversion to cashless tolling for the period of 2018-21.
- Since 2010, the Thruway Authority has operated at reduced levels and limited operating spending growth. In fact, for the period 2010-2019 annual growth of Thruway Authority operating expenses averaged roughly one percent annually (see figure below).



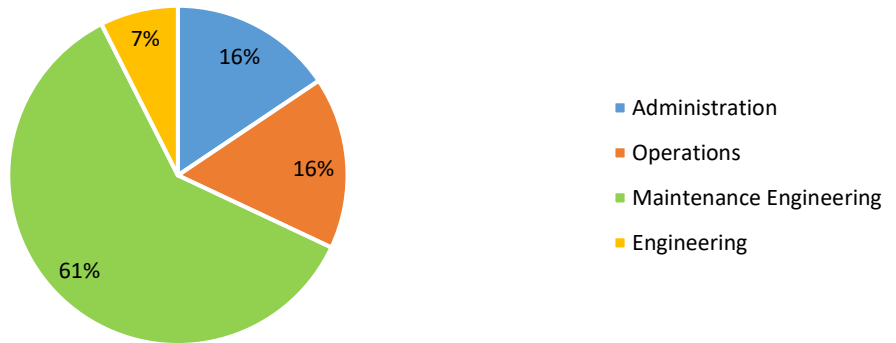
- The 2020 budget provides for 2,188 budgeted positions. This level is roughly 513 positions or 19 percent lower than the budgeted positions in 2010.

Thruway Authority Budgeted Positions 2010-2020

513 budgeted positions or 19 percent below 2010 levels



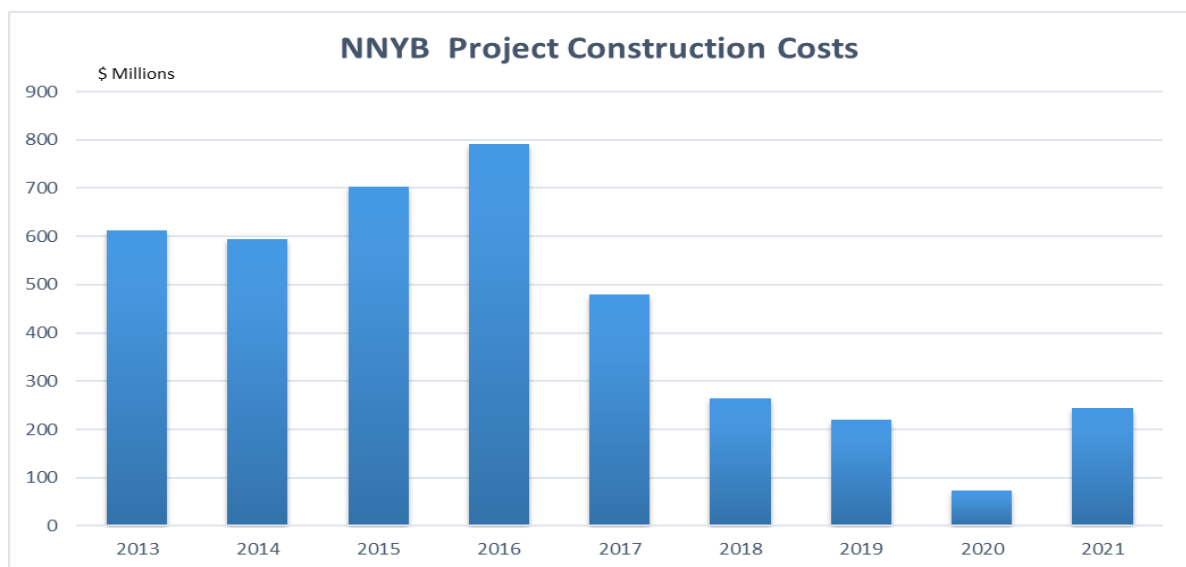
2020 Thruway Authority- Percentage of Budgeted Staffing by Function



CAPITAL PROGRAM

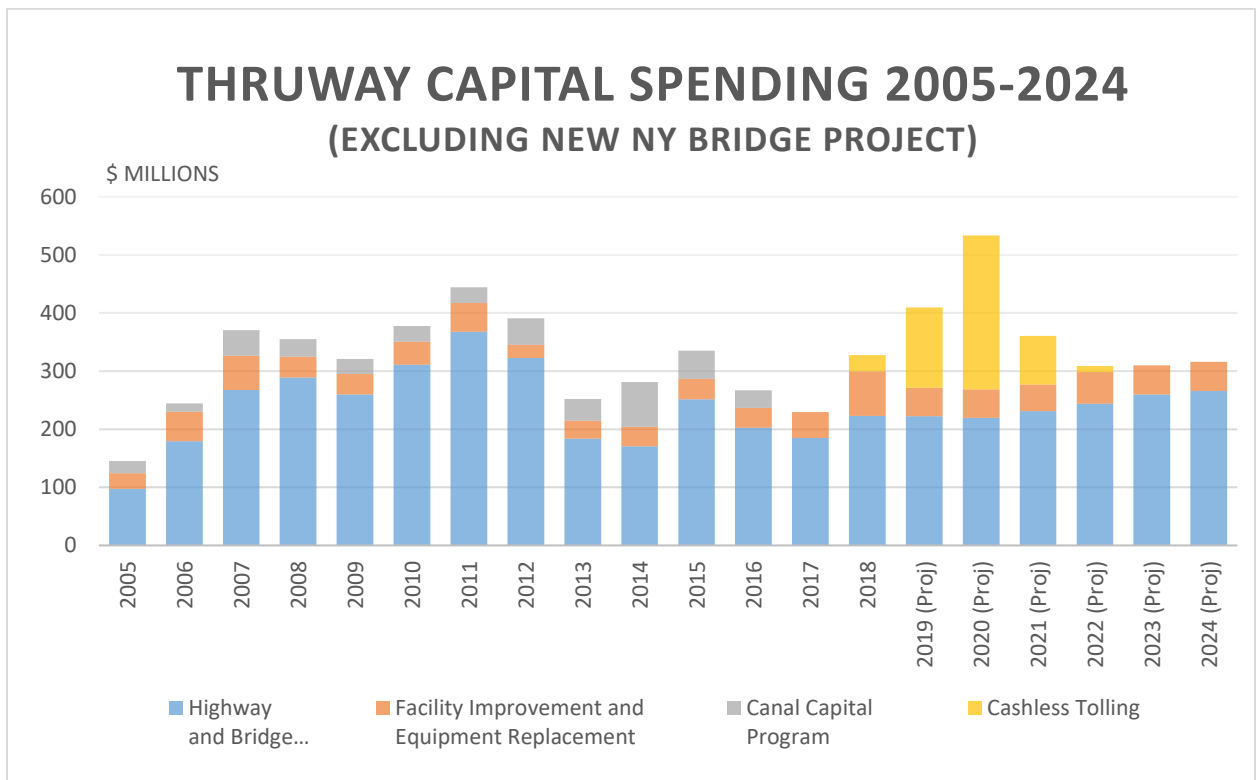
2020 Budget					
Capital Program Funding Uses (in \$ millions)					
	2018	2019	2020	\$	%
	Actual	Revised	Budget	Change	Change
Highway & Bridge	222.91	222.07	219.71	(2.36)	-1.1%
Architectural (Facilities)	44.31	15.81	10.67	(5.14)	-32.5%
Equipment & Systems and ITS	60.42	171.81	303.29	131.49	76.5%
NYSP Equipment and Facilities	0.04	0.03	0.03	-	0.0%
Sub Total - Thruway	327.67	409.71	533.70	123.99	30.3%
New NY Bridge Project	264.15	220.00	72.39	(147.62)	-67.1%
TOTAL	591.82	629.71	606.09	(23.63)	-3.8%

- The 2020 Budget provides a total of \$606.1 million to support the capital program of the Thruway Authority. This represents a decrease of \$23.6 million or 3.8 percent below Revised 2019 levels.
- The 2020 Budget estimates spending of \$72.39 million in capital program funding for the NNYB project in 2020, a reduction of \$147.62 million or 67.1 percent below Revised 2019 levels.
- The 2020 Budget would provide a 2020-2024 capital plan of \$2.15 billion. Over the course of the multi-year plan this includes \$1.83 billion for Thruway projects and roughly \$317 million for NNYB project in the 2020-2024 capital plan.



- The 2020 Budget has incorporated the roughly \$2 billion provided for the Thruway Stabilization Program in 2015 and 2016. This includes \$1.285 billion appropriated in 2015 and \$700 million appropriated in the enacted 2016 State Budget.

- From 2015 to 2018 the Thruway Authority disbursed \$1.52 billion in Thruway Stabilization Funding. This includes \$1.01 billion in support of the NNYB project and a projected \$510.3 million for system-wide maintenance and repair projects.
- The revised 2019 budget projects that \$397.6 million in 2019 capital spending will be supported by Thruway Stabilization Program funds. This includes \$177 million for the NNYB project and \$220.6 million for system-wide maintenance and repair projects.
- The 2020-2024 capital plan projects that \$61.2 million in system-wide projects will be supported by Thruway Stabilization Program funds.



Debt Service

2020 Budget Debt Service Expenses (in \$ millions)					
	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Senior Debt Service	220.30	229.48	248.80	19.32	8.4%
Junior Debt Service	79.22	53.43	47.01	(6.43)	-12.0%
Junior Indebtedness Anticipation Notes	-	26.13	-	(26.13)	-100.0%
TOTAL	299.52	309.04	295.81	(13.24)	-4.3%

- The 2020 Budget provides a total of \$295.81 million to support debt service expenses of the Thruway Authority. This represents a decrease of \$13.24 million or 4.3 percent below Revised 2019 levels.



2019 REVISED
FINANCIAL
PLAN

Actual 2018 vs. Revised 2019 Budget

	Actual 2018	Revised 2019	Amount of Change
<u>SOURCES:</u>			
Thruway Revenues	789,250,946	799,719,000	10,468,054
Prior Year Reserve Balances	16,287,027	152,856,579	136,569,552
Senior Debt	0	0	0
Junior Debt	2,968,517	12,790,000	9,821,483
Federal Funds	0	0	0
Other Funds	56,055,078	10,380,571	(45,674,507)
Thruway Stabilization Program Funds	448,023,346	397,554,768	(50,468,578)
Total Sources	1,312,584,914	1,373,300,918	60,716,004
Total Sources - New NY Bridge Project	264,267,154	220,157,495	(44,109,659)
Total Sources - Net of New NY Bridge Project	1,048,317,760	1,153,143,423	104,825,663
<u>USES:</u>			
Operating Expenses:			
Thruway Operating	339,944,093	358,335,420	18,391,327
State Police Operating	61,260,430	66,606,922	5,346,492
Sub Total	401,204,523	424,942,342	23,737,819
Provisions for Claims, Env Remediation & Cashless Tolling Transition	5,038,287	4,600,000	(438,287)
Total	406,242,810	429,542,342	23,299,532
Retained for Working Capital	15,000,000	5,000,000	(10,000,000)
Debt Service:			
Senior Debt	220,302,475	229,479,761	9,177,286
Junior Debt	79,219,033	53,434,467	(25,784,566)
JIAN Interest	0	26,130,468	26,130,468
Total	299,521,508	309,044,696	9,523,188
Capital Program:			
Thruway Capital - Highways and Bridges	222,912,144	222,067,096	(845,048)
Thruway Capital - New NY Bridge	264,146,021	220,000,000	(44,146,021)
Thruway Capital - Architectural & Facilities	44,309,819	15,810,164	(28,499,655)
Thruway Capital - Equipment & Systems/ITS	60,415,226	171,806,620	111,391,394
Thruway Capital - SP Equipment/Facilities	37,386	30,000	(7,386)
Total	591,820,596	629,713,880	37,893,284
Total Uses	1,312,584,914	1,373,300,918	60,716,004
Total Uses - New NY Bridge Project	264,267,154	220,157,495	(44,109,659)
Total Uses - Net of New NY Bridge Project	1,048,317,760	1,153,143,423	104,825,663

**2019 Revised Financial Plan
New York State Thruway Authority
(in millions)**

2019 Budget - Revenues	798.5	
Revised Financial Plan Adjustments:		
Toll Revenues	0.5	Increase in commercial revenue offset by decrease in passenger revenue
Concession Revenue	(0.3)	Lower restaurant revenue
Interest Earnings	3.5	Higher balances and rates
Sundry Revenues	(1.4)	Decrease in AET violations and E-ZPass fees, offset by increase in E-ZPass violations and rental income
2019 Revised Budget - Revenues	<u>800.9</u>	
2019 Budget - Thruway Operating Expenses	361.9	
Revised Financial Plan Adjustments:		
Allocations (Salaries and Benefits)	3.0	Decrease in personal service and fringe benefit allocations due to fewer capital and technology projects
Snow and Ice Control	1.5	Increase based on YTD spending and more storms early in 2019
Highway and Bridge Operating Contracts	1.2	Based on bids received and timing of payments
Employee Benefit Fund	(0.3)	Lower enrollment
Fuel	(0.3)	Lower than projected fuel prices
Pensions	(0.3)	Based on estimated billing received from Retirement system
Workers' Compensaton	(2.0)	Based on decreased premium costs
Health Insurance	(2.8)	Based on actual premiums and enrollment
Personal Services	(3.3)	Salary savings due to vacancies
Miscellaneous	(0.3)	Miscellaneous adjustments to various accounts
2019 Revised Thruway Operating Budget	<u>358.3</u>	

2019 Revised Financial Plan
New York State Thruway Authority
(in millions)

2019 Budget - Capital Program	913.2
Revised Financial Plan Adjustments:	
New NY Bridge Project	(181.5)
Thruway Capital	(101.9)
2019 Revised Budget - Capital Program	<u><u>629.7</u></u>

2019 Budget - Capital Program Explanations	913.2
Revised Financial Plan Adjustments:	

New NY Bridge Project

Timing Differences	(181.5)	Based on updated spending and project schedule
		(181.5)

Thruway Capital

Contract Bids and Projects completed under Contract value	(7.4)	Bid savings and projects closed out lower than contract value
Revised Letting Estimates	(15.5)	Some schedules were adjusted for condition and other reasons.
Design Funding not spent	(7.2)	
Syracuse Design-Build Litigation	(9.7)	Reduction from Syracuse Design-Build Contract that was not awarded due to litigation
Capital Program Adjustments	(14.0)	Adjustments made to reduce overall program to accommodate other priorities
Timing Differences	(48.1)	Contractors spent more in 2018 than expected, thus reducing 2019 cash flow. Also, some contractors spending less in 2019 than originally projected.
		(101.9)

2019 Revised Capital Program Budget	<u><u>629.7</u></u>
--	----------------------------

2019 Revised Budget - Consolidated Budget Schedule

Use of Funds		Source of Funds							
Category	Amount	2019 Thruway Revenues	Prior Year Reserve Balances	Senior Debt	Junior Debt	Federal Funds	Thruway Stabilization Program Funds (1)	Other Funds	Total
Thruway and Canal									
Thruway Operating	358,335,420	358,335,420	0	0	0	0	0	0	358,335,420
Provision for Claims	0	0	0	0	0	0	0	0	0
Provision for Environ. Rem.	500,000	500,000	0	0	0	0	0	0	500,000
Provision for Cashless Tolling Transition	4,100,000	4,100,000	0	0	0	0	0	0	4,100,000
Senior Debt Service	229,479,761	229,479,761	0	0	0	0	0	0	229,479,761
Junior Debt Service	53,434,467	53,434,467	0	0	0	0	0	0	53,434,467
JIAN Interest Expense	26,130,468	0	13,340,468	0	12,790,000	0	0	0	26,130,468
Capital Program	629,713,880	111,706,375	110,072,166	0	0	0	397,554,768	10,380,571	629,713,880
Highways/Bridges	222,067,096	0	15,000,000	0	0	0	206,745,058	322,038	222,067,096
Architectural (Facilities)	15,810,164	15,810,164	0	0	0	0	0	0	15,810,164
Equipment & Systems/ITS	171,806,620	87,896,211	60,000,000	0	0	0	13,851,876	10,058,533	171,806,620
State Police Equipment/Facilities	30,000	0	30,000	0	0	0	0	0	30,000
New NY Bridge	220,000,000	8,000,000	35,042,166	0	0	0	176,957,834	0	220,000,000
State Police - Troop T	66,606,922	42,162,977	24,443,945	0	0	0	0	0	66,606,922
Working Capital	5,000,000	0	5,000,000	0	0	0	0	0	5,000,000
Grand Total	1,373,300,918	799,719,000	152,856,579	0	12,790,000	0	397,554,768	10,380,571	1,373,300,918

(1) Represents a portion of the \$1.285 billion included in the enacted 2015-16 New York State Budget, as well as a portion of the \$700 million included in the enacted 2016-17 New York State Budget.

EXIT 4

Smith St
Fillmore Ave



2020
BUDGET

EXIT

4



Revised 2019 Budget vs. 2020 Budget

	2019 Revised	2020 Budget	Change from Revised
<u>SOURCES:</u>			
Thruway Revenues	799,719,000	781,238,000	(18,481,000)
Prior Year Reserve Balances	152,856,579	0	(152,856,579)
Senior Debt	0	423,988,039	423,988,039
Junior Debt	12,790,000	72,385,000	59,595,000
Federal Funds	0	0	0
Other Funds	10,380,571	1,288,694	(9,091,877)
Thruway Stabilization Program Funds	397,554,768	61,200,286	(336,354,482)
Total Sources	1,373,300,918	1,340,100,019	(33,200,899)
Total Sources - New NY Bridge Project	220,157,495	72,520,515	(147,636,980)
Total Sources - Net of New NY Bridge Project	1,153,143,423	1,267,579,504	114,436,081
<u>USES:</u>			
Operating Expenses:			
Thruway Operating	358,335,420	370,697,000	12,361,580
State Police Operating	66,606,922	66,506,237	(100,685)
Sub Total	424,942,342	437,203,237	12,260,895
Provisions for Claims, Env. Remediation & Cashless Tolling Transition	4,600,000	1,000,000	(3,600,000)
Total	429,542,342	438,203,237	8,660,895
Retained for Working Capital	5,000,000	0	(5,000,000)
Debt Service:			
Senior Debt	229,479,761	248,801,041	19,321,280
Junior Debt	53,434,467	47,006,934	(6,427,533)
JIAN Interest	26,130,468	0	(26,130,468)
Total	309,044,696	295,807,975	(13,236,721)
Capital Program:			
Thruway Capital - Highways and Bridges	222,067,096	219,708,438	(2,358,658)
Thruway Capital - New NY Bridge	220,000,000	72,385,000	(147,615,000)
Thruway Capital - Architectural & Facilities	15,810,164	10,672,910	(5,137,254)
Thruway Capital - Equipment & Systems/ITS	171,806,620	303,292,459	131,485,839
Thruway Capital - SP Equipment/Facilities	30,000	30,000	0
Total	629,713,880	606,088,807	(23,625,073)
Total Uses	1,373,300,918	1,340,100,019	(33,200,899)
Total Uses - New NY Bridge Project	220,157,495	72,520,515	(147,636,980)
Total Uses - Net of New NY Bridge Project	1,153,143,423	1,267,579,504	114,436,081

Toll, Concession & Sundry Revenues

	2018 Actual	2019 Revised	2020 Budget	Change from Revised
Toll Revenue				
Passenger	435,732,485	436,318,031	432,527,540	(3,790,491)
Commercial	300,771,377	303,267,960	303,250,960	(17,000)
Sub Total	<u>736,503,862</u>	<u>739,585,991</u>	<u>735,778,500</u>	<u>(3,807,491)</u>
Concession Revenue				
Gas Stations	2,845,586	2,855,000	2,200,000	(655,000)
Restaurants	12,034,965	11,800,000	6,275,000	(5,525,000)
Sub Total	<u>14,880,551</u>	<u>14,655,000</u>	<u>8,475,000</u>	<u>(6,180,000)</u>
Interest Revenue				
Interest	7,120,025	7,000,000	8,250,500	1,250,500
Sub Total	<u>7,120,025</u>	<u>7,000,000</u>	<u>8,250,500</u>	<u>1,250,500</u>
E-ZPass Violations and Fees				
E-ZPass Violations	10,616,809	9,519,157	9,400,000	(119,157)
E-ZPass Airport Fees	324,997	300,000	300,000	-
E-ZPass Admin Fees	1,201,287	1,200,000	1,200,000	-
Tag Lease Fees	6,270,710	6,000,000	6,200,000	200,000
Sub Total	<u>18,413,803</u>	<u>17,019,157</u>	<u>17,100,000</u>	<u>80,843</u>
Toll By Mail Fees				
AET Violations and Fees	11,499,755	14,696,212	15,880,000	1,183,788
Sub Total	<u>11,499,755</u>	<u>14,696,212</u>	<u>15,880,000</u>	<u>1,183,788</u>
Sundry Revenue				
Special Hauling Permits	2,433,662	2,200,000	2,200,000	-
Permits & Other				
Rental Income	5,254,175	4,200,000	3,300,000	(900,000)
Logo Signs	121,531	120,000	120,000	-
Scrap Material Sales	328,217	300,000	200,000	(100,000)
Unpaid Tolls	679,218	300,000	100,000	(200,000)
Emerg.Service Permits	118,515	100,000	100,000	-
Canadian Exch.	(10,593)	(11,000)	(5,000)	6,000
Real Property	812,800	100,000	50,000	(50,000)
Fiber Network Fees	152,220	150,000	2,000,000	1,850,000
Miscellaneous Revenue	503,176	440,640	400,000	(40,640)
Total Permits & Other	<u>7,959,259</u>	<u>5,699,640</u>	<u>6,265,000</u>	<u>565,360</u>
Sub Total	<u>10,392,921</u>	<u>7,899,640</u>	<u>8,465,000</u>	<u>565,360</u>
Grand Total	<u><u>798,810,917</u></u>	<u><u>800,856,000</u></u>	<u><u>793,949,000</u></u>	<u><u>(6,907,000)</u></u>

Departmental Operating Expenses

	2018 Actual	2019 Revised	2020 Budget	Change from Revised
Operating Expenses				
Board & Executive	649,261	1,007,532	1,224,294	216,762
Media and Government Relations	548,400	524,597	512,130	(12,467)
Legal	1,886,332	2,374,564	2,507,489	132,925
Audit and Management Services	724,486	846,247	839,177	(7,070)
Administrative Services	5,100,303	5,614,090	5,887,326	273,236
Information Technology	10,222,607	12,193,161	12,042,945	(150,216)
Engineering	6,331,297	6,564,520	7,324,929	760,409
Maintenance and Engineering				
Thruway Maintenance	86,367,935	90,824,999	88,821,969	(2,003,030)
Equipment & Inventory Management	28,368,603	30,015,362	31,067,182	1,051,820
Finance and Accounts	9,068,415	9,004,422	9,298,687	294,265
Operations				
Traffic Services	8,473,088	9,062,902	9,178,613	115,711
Toll Collection	38,226,525	32,910,445	31,684,139	(1,226,306)
Sub Total	<u>195,967,252</u>	<u>200,942,841</u>	<u>200,388,880</u>	<u>(553,961)</u>
General Charges	143,976,841	157,392,579	170,308,120	12,915,541
Special Expense	0	0	0	0
Sub Total	<u>339,944,093</u>	<u>358,335,420</u>	<u>370,697,000</u>	<u>12,361,580</u>
Operating Reserves				
Reserve for Claims & Indemnities	1,391,777	0	0	0
Reserve for Environmental Remediation	1,146,510	500,000	1,000,000	500,000
Reserve for Cashless Tolling Transition	2,500,000	4,100,000	0	(4,100,000)
Sub Total	<u>5,038,287</u>	<u>4,600,000</u>	<u>1,000,000</u>	<u>(3,600,000)</u>
Total Thruway	<u><u>344,982,380</u></u>	<u><u>362,935,420</u></u>	<u><u>371,697,000</u></u>	<u><u>8,761,580</u></u>
<u>Other Authority Projects</u>				
State Police				
Operations	58,814,426	64,293,922	64,281,237	(12,685)
Equipment	2,446,004	2,313,000	2,225,000	(88,000)
Sub Total	<u>61,260,430</u>	<u>66,606,922</u>	<u>66,506,237</u>	<u>(100,685)</u>
Total Other Authority Projects	<u><u>61,260,430</u></u>	<u><u>66,606,922</u></u>	<u><u>66,506,237</u></u>	<u><u>(100,685)</u></u>
Total Thruway and OAP	<u>406,242,810</u>	<u>429,542,342</u>	<u>438,203,237</u>	<u>8,660,895</u>

General Charges

	2018 Actual	2019 Revised Budget	2020 Budget	Change from Revised
Payroll Benefits				
Health Insurance	57,038,873	57,656,000	60,180,000	2,524,000
Pension Contributions	22,157,604	23,179,000	23,781,000	602,000
Social Security Contributions	11,998,439	12,228,528	12,401,583	173,055
Employee Benefits Fund	5,571,189	5,800,000	6,041,000	241,000
Workers' Compensation Insurance	10,072,147	8,100,000	9,000,000	900,000
Unemployment Insurance	67,843	100,000	100,000	0
Survivor's Benefits	138,000	175,000	175,000	0
Metropolitan Commuter Transportation Mobility Tax	120,598	118,000	100,000	(18,000)
Anticipated Salary Savings	0	0	(148,715)	(148,715)
Sub Total	<u>107,164,693</u>	<u>107,356,528</u>	<u>111,629,868</u>	<u>4,273,340</u>
Other				
E-ZPass/Tolls by Mail Account Management	41,831,067	53,572,000	61,867,000	8,295,000
Administrative Cost Recovery (due to New York State)	0	0	0	0
Insurance Premiums and Surety Bonds	2,892,537	3,419,500	3,518,500	99,000
Professional Services	2,097,274	1,761,000	1,851,000	90,000
Rentals	0	0	1,020,126	1,020,126
Special Events	14,837	25,000	25,000	0
Environmental Expense	537,290	589,628	450,000	(139,628)
Reimbursement to Civil Service	452,465	460,000	464,000	4,000
Provision for Doubtful Accounts	(35,176)	0	0	0
Employee Vacation Leave Expense	(230,700)	150,000	150,000	0
Tuition Assistance Program	126,544	270,000	270,000	0
Cash Discount Earned	(133,209)	(120,000)	(120,000)	0
Employee Safety Equipment	153,012	160,000	160,000	0
Inventory Obsolescence Expense	107,491	150,000	400,000	250,000
All Others	71,219	60,375	49,000	(11,375)
Sub Total	<u>47,884,651</u>	<u>60,497,503</u>	<u>70,104,626</u>	<u>9,607,123</u>
Allocations				
Allocations to Other Funds	(11,072,503)	(10,486,452)	(11,501,374)	(1,014,922)
Equipment and Projects Not Capitalized				
Transportation Studies	0	25,000	75,000	50,000
Total General Charges	<u><u>143,976,841</u></u>	<u><u>157,392,579</u></u>	<u><u>170,308,120</u></u>	<u><u>12,915,541</u></u>

Debt Service

	Year of Issuance	2018 Actual	2019 Revised Budget	2020 Budget
Debt Service				
Senior Debt				
Series H Bonds	2007	13,742,510	0	0
Series I Bonds	2012	72,623,363	72,623,463	72,622,263
Series J Bonds	2014	44,804,000	44,804,500	44,731,700
Series K Bonds	2014	41,319,138	61,819,388	61,887,188
Series L (Refunding)	2018	52,479,775	63,414,012	63,419,612
Series M (Refunding)	2019	0	(9,774,602)	(8,381,502)
Series N (Proposed)	2020	0	0 (1)	15,219,780
Subtotal Proposed Senior Debt Service		224,968,786	232,886,761	249,499,041
Less: Interest Earnings		4,666,311	3,407,000	698,000
Net Senior Debt Service - Twy Bonds		220,302,475	229,479,761	248,801,041
Interest Earnings				
Junior Debt				
Series 2013A Bonds	2013	79,516,900	26,505,633	0
Series 2016A Bonds	2016	0	27,299,834	41,199,750
TIFIA Refinancing	2019	0	0	2,300,184
Series 2019B Bonds	2019	0	0	3,878,000
Subtotal Junior Debt		79,516,900	53,805,467	47,377,934
Less: Interest Earnings		297,867	371,000	371,000
Net Junior Debt Service		79,219,033	53,434,467	47,006,934
JIAN Interest				
Series 2019A Notes	2019	0	29,041,615	0
Subtotal JIAN Interest		0	29,041,615	0
Less: Interest Earnings		0	2,911,147	0
Net JIAN Interest		0	26,130,468	0

(1) The 2020 Debt Service amount for the Proposed Series N Bonds represents capitalized interest and is funded from Senior Debt proceeds.

Flow of Funds
General Revenue Bond Resolution

	2018 Actual	2019 Revised	2020 Budget	Change from Revised
Revenues				
Tolls	736,503,862	739,585,991	735,778,500	(3,807,491)
Concessions	14,880,551	14,655,000	8,475,000	(6,180,000)
Interest	7,120,025	7,000,000	8,250,500	1,250,500
E-ZPass Violations and Fees	18,413,803	17,019,157	17,100,000	80,843
Tolls By Mail Fees	11,499,755	14,696,212	15,880,000	1,183,788
Sundry	10,392,921	7,899,640	8,465,000	565,360
Sub Total	<u>798,810,917</u>	<u>800,856,000</u>	<u>793,949,000</u>	<u>(6,907,000)</u>
Operating Expenses				
Departmental Operating Expenses	195,967,252	200,942,841	200,388,880	(553,961)
Undistributed Charges	143,976,841	157,392,579	170,308,120	12,915,541
Reserve for Claims & Indemnities	1,391,777	0	0	0
Reserve for Environmental Remediation	1,146,510	500,000	1,000,000	500,000
Reserve for Cashless Tolling Transition	2,500,000	4,100,000	0	(4,100,000)
Sub Total	<u>344,982,380</u>	<u>362,935,420</u>	<u>371,697,000</u>	<u>8,761,580</u>
Net Revenues (A)	<u>453,828,537</u>	<u>437,920,580</u>	<u>422,252,000</u>	<u>(15,668,580)</u>
Senior Debt Service (B)				
Senior Debt	220,302,475	229,479,761	233,581,261	4,101,500
Adjust to Cash basis/Retain for Working Capital	(24,559,971)	12,203,468	(12,711,000)	(24,914,468)
Net Revenue After Debt Service and Retentions	<u>208,966,091</u>	<u>220,644,287</u>	<u>175,959,739</u>	<u>(44,684,548)</u>
Reserve Maintenance Provisions				
Equipment and Facilities	74,141,078	103,706,375	62,446,568	(41,259,807)
Highway and Bridge	0	0	0	0
Sub Total	<u>74,141,078</u>	<u>103,706,375</u>	<u>62,446,568</u>	<u>(41,259,807)</u>
Junior Debt Service (C)				
Junior Debt	79,219,033	53,434,467	47,006,934	(6,427,533)
Facilities Capital Improvement Provision				
New NY Bridge Project	12,000,000	8,000,000	0	(8,000,000)
General Reserve Fund				
State Police	43,605,980	42,162,977	66,506,237	24,343,260
Other	0	13,340,468	0	(13,340,468)
Sub Total	<u>43,605,980</u>	<u>55,503,445</u>	<u>66,506,237</u>	<u>11,002,792</u>
Balance	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Senior Debt Service Coverage Ratio (A/B)	2.06	1.91	1.81	
Senior & Junior Debt Service Coverage Ratio (A/(B+C))	1.52	1.55	1.5	

Capital Program Funding Uses

	2018 Actual	2019 Revised	2020 Budget
Thruway			
<u>Highway & Bridge</u>			
Contracts	208,549,490	198,085,809	196,554,504
Thruway Forces & Materials	14,362,654	23,981,287	23,153,934
Sub Total	222,912,144	222,067,096	219,708,438
<u>Architectural (Facilities)</u>			
Facilities Contracts	44,309,819	15,810,164	10,672,910
Sub Total	44,309,819	15,810,164	10,672,910
<u>Equipment & Systems and ITS</u>			
Equipment & Systems	33,522,490	31,743,053	34,183,910
Intelligent Transportation Systems Contracts	26,892,736	140,063,567	269,108,549
Sub Total	60,415,226	171,806,620	303,292,459
<u>State Police Equipment/Facilities</u>			
Equipment & Systems	37,386	30,000	30,000
Sub Total	37,386	30,000	30,000
Sub Total - Thruway	327,674,575	409,713,880	533,703,807
New NY Bridge Project			
<u>New NY Bridge</u>			
Contracts	259,348,188	215,757,467	69,417,209
Thruway Forces & Materials	4,797,833	4,242,533	2,967,791
Sub Total - New NY Bridge	264,146,021	220,000,000	72,385,000
GRAND TOTAL	591,820,596	629,713,880	606,088,807

Capital Program Funding Sources

	2018 Actual	2019 Revised	2020 Budget
Thruway			
<u>Federal Funds</u>			
Highway & Bridge	0	0	0
Sub Total	0	0	0
<u>Note/Bond Proceeds</u>			
Senior Debt - Thruway and Canal	0	0	408,768,259
Sub Total	0	0	408,768,259
<u>Prior Years Balances/Thruway Revenues</u>			
Reserve Maintenance Fund: Highway & Bridge	7,924,916	15,000,000	0
Reserve Maintenance Fund: Equipment	(10,465,063)	60,000,000	0
General Reserve Fund	37,386	30,000	0
Thruway Revenues	74,141,078	103,706,375	62,446,568
Sub Total	71,638,317	178,736,375	62,446,568
<u>Other Funds</u>			
State & Miscellaneous - TWY & Canal	55,070,043	10,203,885	1,288,694
Equipment Auction Proceeds	985,035	176,686	0
Thruway Stabilization Program Funds	199,981,180	220,596,934	61,200,286
Sub Total	256,036,258	230,977,505	62,488,980
Sub Total - Thruway and Canal	327,674,575	409,713,880	533,703,807
New NY Bridge Project			
<u>Federal Funds</u>			
Loan and Grant Proceeds	\$0	\$0	\$0
<u>Note/Bond Proceeds</u>			
Junior Debt	2,968,517	0	72,385,000
Sub Total	2,968,517	0	72,385,000
<u>Prior Years Balances/Thruway Revenues</u>			
Thruway Revenues	13,135,338	43,042,166	0
Sub Total	13,135,338	43,042,166	0
<u>Other Funds</u>			
Thruway Stabilization Program Funds	248,042,166	176,957,834	0
Sub Total - New NY Bridge	264,146,021	220,000,000	72,385,000
GRAND TOTAL	591,820,596	629,713,880	606,088,807

**Actual 2018, Revised 2019 Budget vs. 2020 Budget
New NY Bridge**

	2018 Actual	2019 Revised	2020 Budget
<u>SOURCES:</u>			
Thruway Revenues	12,121,133	8,157,495	135,515
Prior Year Reserve Balances	1,135,338	35,042,166	0
Junior Debt	2,968,517	0	72,385,000
Federal Funds	0	0	0
Thruway Stabilization Program Funds	248,042,166	176,957,834	0
Total Sources	264,267,154	220,157,495	72,520,515
<u>USES:</u>			
Operating Expenses:			
Thruway Operating	121,133	157,495	135,515
Thruway Capital - Equipment & Systems/ITS:			
Equipment	0	0	0
Thruway Capital - New NY Bridge:			
Thruway Forces & Materials	4,797,833	4,242,533	2,967,791
Contracts	256,133,732	210,565,611	69,417,209
Community Benefits Fund	3,214,456	5,191,856	0
Sub Total	264,146,021	220,000,000	72,385,000
Total Uses	264,267,154	220,157,495	72,520,515

2020 Budget - Sources and Uses of Funds

Use of Funds		Source of Funds							
Category	Amount	2020 Thruway Revenues	Prior Year Reserve Balances	Senior Debt	Junior Debt	Federal Funds	Thruway Stabilization Program Funds (1)	Other Funds	Total
Thruway and Canal									
Thruway Operating	370,697,000	370,697,000	0	0	0	0	0	0	370,697,000
Provision for Claims	0	0	0	0	0	0	0	0	0
Provision for Environ. Rem.	1,000,000	1,000,000	0	0	0	0	0	0	1,000,000
Provision for Cashless Tolling	0	0	0	0	0	0	0	0	0
Senior Debt Service	248,801,041	233,581,261	0	15,219,780	0	0	0	0	248,801,041
Junior Debt Service	47,006,934	47,006,934	0	0	0	0	0	0	47,006,934
Capital Program	606,088,807	62,446,568	0	408,768,259	72,385,000	0	61,200,286	1,288,694	606,088,807
Highways/Bridges	219,708,438	0	0	157,219,458	0	0	61,200,286	1,288,694	219,708,438
Architectural (Facilities)	10,672,910	10,672,910	0	0	0	0	0	0	10,672,910
Equipment & Systems/ITS	303,292,459	51,743,658	0	251,548,801	0	0	0	0	303,292,459
State Police Equipment/Facilities	30,000	30,000	0	0	0	0	0	0	30,000
New NY Bridge	72,385,000	0	0	0	72,385,000	0	0	0	72,385,000
State Police- Troop T	66,506,237	66,506,237	0	0	0	0	0	0	66,506,237
Grand Total	1,340,100,019	781,238,000	0	423,988,039	72,385,000	0	61,200,286	1,288,694	1,340,100,019

(1) Represents a portion of the \$1.285 billion included in the enacted 2015-16 New York State Budget, as well as a portion of the \$700 million included in the enacted 2016-17 New York State Budget.

2020 Operating Budget Summary by Account

Acct Description	2018 Actual	2019 Revised Budget	2020 Budget	Diff between 2019 Revised & 2020 Budget
SALARIES REGULAR	122,777,299	139,252,075	140,328,506	1,076,431
SALARIES TEMPORARY	17,940,143	16,148,804	15,564,772	(584,032)
SALARIES REIMBURSED FEDERAL	10,600	(2,500)	0	2,500
SHIFT DIFFERENTIAL	1,483,816	1,398,362	1,231,132	(167,230)
SALARY SAVINGS	0	(10,621,704)	(7,519,502)	3,102,202
SALARY REDISTRIBUTED	(180,719)	(168,700)	(169,700)	(1,000)
OT PAY REGULAR	10,151,854	7,187,855	7,053,915	(133,940)
OT PAY TEMPORARY	737,543	570,122	516,122	(54,000)
TOLL INCENTIVE PAYMENTS	3,742,750	0	0	0
SALARIES REIMBURSED NONFEDERAL	(418,468)	(112,524)	(115,465)	(2,941)
EXCESS/BONUS SICK & VAC	1,991,343	2,036,869	1,998,502	(38,367)
CHECK OUT PAYMENT	761,111	604,000	587,000	(17,000)
Total Personal Services	158,997,272	156,292,659	159,475,282	3,182,623
ALLOC TO RESERVE MTCE - EQPT	(10,928,864)	(11,184,425)	(10,929,261)	255,164
ALLOC TO FAC CAP IMPR FUND	(3,079,375)	(2,445,488)	(1,751,219)	694,269
ALLOC TO SP	(559,694)	(631,577)	(579,797)	51,780
ALLOC TO TWY CAPITAL PROJ	0	0	(3,010,442)	(3,010,442)
BENE/M&O ALLOC RES MTCE	(7,534,510)	(7,873,835)	(7,592,558)	281,277
SIGN SHOP LABOR	(77,549)	(90,000)	(90,000)	0
BENEFITS REDISTRIBUTED	(170,321)	(119,469)	(117,891)	1,578
BENEFITS REIMBURSED FEDERAL	(11,590)	(1,760)	0	1,760
BENEFITS REIMBURSED-NON FEDERA	(298,289)	(79,217)	(80,214)	(997)
BEN ALLOC TO SP	(385,579)	(444,547)	(402,785)	41,762
BEN ALLOC TO TWY CAPITAL PROJ	0	0	(2,091,354)	(2,091,354)
BEN ALLOC TO FAC CAP IMPR FUND	(2,122,072)	(1,721,624)	(1,216,572)	505,052
Total Allocations	(25,167,843)	(24,591,942)	(27,862,093)	(3,270,151)
AUTO - GAS, OIL	4,171,876	4,232,200	4,532,200	300,000
AUTO - SUPPLIES	5,419,225	5,919,675	6,000,000	80,325
AUTO - INSURANCE	0	0	0	0
AUTO - GENERAL EXP	366,823	393,253	423,253	30,000
REPAIRS DUE TO ACCIDENTS	(17,750)	0	0	0
R&D PARTS NON INVENTORY	1,383	22,100	5,100	(17,000)
REPAIRS DUE TO ACCIDENTS	1,209,266	820,350	770,350	(50,000)
MFG SIGNS - NON INVENTORY	218,689	130,000	110,000	(20,000)
SNOW & ICE CONTROL	14,302,205	13,000,000	12,000,000	(1,000,000)
THRUWAY ROADWAY	1,970,292	1,649,757	1,599,757	(50,000)
SIGNS - INVENTORY	208,041	196,143	152,143	(44,000)
BRIDGES	441,333	448,030	523,030	75,000
BRIDGE CONTRACTS OPERATING	5,570,680	6,407,817	6,671,397	263,580
HIGHWAY CONTRACTS OPERATING	1,381,873	534,666	3,864,375	3,329,709
BUILDINGS - CONTRACTS	0	0	0	0
BUILDINGS	2,330,582	2,024,546	2,024,546	0
BLDG ADMIN HQ	975	1,200	1,200	0
REIMB FROM NYPA	(230,500)	(246,000)	0	246,000
TOLL AND ITS EQPT THRUWAYWIDE	682,098	750,000	850,000	100,000
SCRAP & OBSOLETE	0	0	0	0
PARTS REPAIRED FOR RET	0	0	0	0
RETURNABLE CONTAINER	18,988	23,800	23,800	0
REIMB OF MTCE EXP	(75,717)	(50,000)	(50,000)	0
PERISHABLE TOOLS	660,994	685,903	703,349	17,446
MISC MTCE SUPPLIES	601,591	453,889	416,389	(37,500)
REIMB BY CLAIM	(7,822,140)	(3,850,000)	(3,830,000)	20,000
Total Mtce & Repairs	31,410,807	33,547,329	36,790,889	3,243,560
COMPUTER SUPPLIES	51,258	88,425	86,400	(2,025)
MTCE & REPAIR TO EQPT	2,380,300	2,813,686	2,922,337	108,651
STATIONARY FORMS	198,355	204,925	201,332	(3,593)
POSTAGE	131,930	125,800	125,800	0
NATURAL GAS	800,897	892,000	870,500	(21,500)
TELEPHONE	1,804,423	1,665,514	1,705,010	39,496
HEATING FUEL	324,531	278,000	242,100	(35,900)

2020 Operating Budget Summary by Account

Acct Description	2018 Actual	2019 Revised Budget	2020 Budget	Diff between 2019 Revised & 2020 Budget
WATER	194,039	210,551	214,151	3,600
PROPANE	78,685	68,500	68,750	250
ELECTRIC	3,016,368	3,332,467	3,303,741	(28,726)
ADVERTISING	393	1,000	2,900	1,900
PRINTING & DUPLICATING	54,329	42,000	50,000	8,000
PRINTING OUTSIDE	328,931	527,518	11,518	(516,000)
FIRST AID & PERSON SAFETY SUPP	423,775	361,541	266,463	(95,078)
JANITORIAL SUPPLIES	415,829	417,002	355,202	(61,800)
EMPLOYEE SAFETY EQPT	159,145	164,600	160,600	(4,000)
DUES, BOOKS, SUBSCRIPTIONS	449,724	980,129	937,903	(42,226)
TUITION ASSISTANCE	126,544	270,000	270,000	0
TRAINING EXP	148,171	244,168	402,604	158,436
MEDICAL SERVICES	143,318	330,200	323,100	(7,100)
OVERTIME MEAL EXPENSE	299,238	261,145	205,995	(55,150)
CLOTHES CLEANING	237,936	211,735	193,255	(18,480)
CLOTHING SUPPLIES	794,836	760,294	731,509	(28,785)
ENGINEERING SUPPLIES	3,658	4,000	12,083	8,083
TRAFFIC CONTROL SAFETY SUPP	363,141	321,500	305,400	(16,100)
RENTALS	1,440,187	1,605,877	1,642,278	36,401
SPECIAL EVENTS	14,837	25,000	25,000	0
INSURANCE PREM & SURETY BONDS	2,892,537	3,419,500	3,518,500	99,000
PHOTO SUPPLIES	0	525	625	100
PROMOTION EXPENSE	19,671	32,150	29,150	(3,000)
PROFESSIONAL SERVICES	2,438,358	2,191,025	2,369,000	177,975
EMPLOYEE DEVELOPMENT	40,892	43,100	43,100	0
FREIGHT PARCEL POST	70,255	76,364	76,364	0
CREDIT CARD FEES	65,500	50,000	40,000	(10,000)
SPECIAL CONTRACTS	46,736,648	58,875,495	67,161,937	8,286,442
DEMURRAGE	31,332	32,800	21,800	(11,000)
ADMIN COST RECOVERY	0	0	0	0
CASH DISCOUNT EARNED	(133,209)	(120,000)	(120,000)	0
ENVIRONMENTAL EXPENSE	537,290	589,628	450,000	(139,628)
SERVICE CHARGE EXP	104,710	150,000	100,000	(50,000)
PROVISION FOR DOUBTFUL A/R	(35,176)	0	0	0
EMPLOYEE CLAIM EXP	908	2,000	2,000	0
CONCESSION UTILITY	4,178	20,000	20,000	0
STANDARD PURCHASE PRICE	0	(2,000)	(2,000)	0
PURCHASE VARIANCE	(5,304)	(4,000)	(4,000)	0
INVENTORY VARIANCE	931	2,000	2,000	0
INVENTORY ITEMS REPAIRED	(350)	(19,000)	(39,000)	(20,000)
STORES CLEARING ACCT	4,198	200	200	0
PROJECTS FROM SAVINGS	0	(24,325)	(83,934)	(59,609)
PROMPT PAYMENT INTEREST EXP	3,647	5,000	5,000	0
M&O REIMB FED AID	(1,445,216)	(744,701)	(2,890,000)	(2,145,299)
TRAVEL EXP REGULAR	178,408	194,325	187,182	(7,143)
TRAVEL EXP CARS	1,165	2,112	3,637	1,525
REIMB VOLUNTEER FIRE CO	113,282	105,000	105,000	0
REIMB TO NYS LAW DEPARTMENT	0	0	0	0
REIMBURSEMENT TO CIVIL SERVICE	452,465	460,000	464,000	4,000
FIDUCIARY FEES	66,902	90,000	90,000	0
PROV RES FOR INVENTORY OBSOL	107,491	150,000	400,000	250,000
Total Operating Supplies	66,636,291	81,784,775	87,586,492	5,801,717
PENSIONS NYS EMPLOYEES	22,096,800	23,129,000	23,781,000	652,000
PENSIONS VDCP EMPLOYEES	60,804	50,000	0	(50,000)
EMPLOYEE BENEFIT FUND	5,571,189	5,800,000	6,041,000	241,000
SOCIAL SECURITY	11,998,439	12,228,528	12,401,583	173,055
WORKERS COMPENSATION	10,072,147	8,100,000	9,000,000	900,000
UNEMPLOYMENT INSURANCE	67,843	100,000	100,000	0
HEALTH INSURANCE	26,485,873	25,317,000	26,362,000	1,045,000
HEALTH INSURANCE RETIREES	30,553,000	32,339,000	33,818,000	1,479,000
SURVIVORS BENEFITS	138,000	175,000	175,000	0
MTA TAX	120,598	118,000	100,000	(18,000)
EE VACATION LEAVE	(230,700)	150,000	150,000	0
Total Payroll Benefits	106,933,993	107,506,528	111,928,583	4,422,055

2020 Operating Budget Summary by Account

Acct Description	2018 Actual	2019 Revised Budget	2020 Budget	Diff between 2019 Revised & 2020 Budget
FACILITIES IMPROV EXP	631,571	1,940,820	1,357,726	(583,094)
REPL OF OFFICE EQPT	58,301	78,798	65,285	(13,513)
REPL OF COMPUTER EQPT	215,234	248,495	171,926	(76,569)
REPL OF HWY & MARINE EQPT	42,187	131,320	165,000	33,680
TOLL & ITS SYS IMPROV	0	0	0	0
TECHNOLOGY PROJECTS	188,401	214,000	105,000	(109,000)
SHOP EQPT REPL	51,691	0	0	0
HWY & BRIDGE EXP	45,263	336,761	430,000	93,239
STUDIES	0	25,000	75,000	50,000
COMMUNICATION EQPT REPL	(116,383)	32,500	157,500	125,000
EQUIPMENT ADDITIONAL	20,611	10,095	0	(10,095)
COMPUTER HARDWARE NEW	197,166	501,982	84,650	(417,332)
COMPUTER SOFTWARE NEW	28,820	128,815	151,490	22,675
MOTORIZED EQPT NEW	20,772	5,000	7,000	2,000
SHOP EQPT NEW	39,879	10,680	6,055	(4,625)
NON LABOR REIMB NON FED PROJ REL	(319,644)	0	0	0
OFFICE EQPT NEW	29,722	131,805	1,215	(130,590)
Total Eqpt & Proj not capitalized	1,133,591	3,796,071	2,777,847	(1,018,224)
PROVISION FOR ENV REMEDIATION	1,146,510	500,000	1,000,000	500,000
CLAIMS & INDEMNITY EXPENSE	1,391,777	0	0	0
PROVISION FOR CASHLESS TOLLING TRANSITION	2,500,000	4,100,000	0	(4,100,000)
ROUNDING	(18)	0	0	0
GRAND TOTAL	344,982,380	362,935,420	371,697,000	8,761,580
Total Operating Budget by Account	344,982,380	362,935,420	371,697,000	8,761,580

2020 Budgeted Full-Time Employees

Department	2018*	2019	Net Change 2018- 2019	2020	Net Change 2019-2020
Board & Executive	12	12	-	20	8
Media and Government Relations	6	5	(1)	4	(1)
Legal	24	24	-	23	(1)
Audit and Management Services	9	9	-	8	(1)
Administrative Services	71	72	1	73	1
Information Technology	89	86	(3)	86	-
Engineering	166	167	1	163	(4)
Maintenance and Engineering	1,272	1,308	36	1,325	17
Thruway Maintenance	975	1,002	27	1,016	14
Equipment & Inventory Management	297	306	9	309	3
Finance and Accounts	136	136	-	127	(9)
Operations	380	382	2	359	(23)
Traffic Services	83	104	21	102	(2)
Toll Collection	297	278	(19)	257	(21)
Total	2165	2201	36	2188	-13

* Please note: 2018 estimates do not include an estimated 38 additional positions associated with Snow and ice and Other Major Initiatives

Personnel - History of Budgeted Positions

	Budgeted Positions				Change	Change Since 1995
	Mainline	I-84 (1)	Canal (2)	Total		
1995	3,174	142	557	3,873	NA	NA
1996	3,032	136	536	3,704	(169)	(169)
1997	2,913	112	529	3,554	(150)	(319)
1998	2,873	102	535	3,510	(44)	(363)
1999	2,868	101	539	3,508	(2)	(365)
2000	2,851	95	542	3,488	(20)	(385)
2001	2,881	91	568	3,540	52	(333)
2002	2,887	90	556	3,533	(7)	(340)
2003	2,867	90	555	3,512	(21)	(361)
2004	2,831	90	553	3,474	(38)	(399)
2005	2,796	89	551	3,436	(38)	(437)
2006	2,780	89	544	3,413	(23)	(460)
2007	2,784	89	544	3,417	4	(456)
2008	2,776	89	542	3,407	(10)	(466)
2009	2,730	89	538	3,357	(50)	(516)
2010	2,701	89	539	3,329	(28)	(544)
2011	2,626	0	533	3,159	(170)	(714)
2012	2,590	0	528	3,118	(41)	(755)
2013	2,470	0	498	2,968	(150)	(905)
2014	2,279	0	458	2,737	(231)	(1,136)
2015	2,260	0	457	2,717	(20)	(1,156)
2015 Modified	2,184	0	441	2,625	(92)	(1,248)
2016	2,176	0	435	2,611	(14)	(1,262)
2017	2,162	0	0	2,162	(449)	(1,711)
2018*	2,165	0	0	2,165	3	(1,708)
2019	2,201	0	0	2,201	36	(1,672)
2020	2,188	0	0	2,188	23	(1,685)

(1) Effective October 11, 2010, the Authority turned over all operation and maintenance responsibilities for I-84 to the New York State Department of Transportation.

(2) Effective January 1, 2017, legal responsibility for the Canal Corporation will be transferred to the New York State Power Authority.

* Please note: 2018 estimates do not include an estimated 38 additional positions associated with Snow and ice and Other Major Initiatives



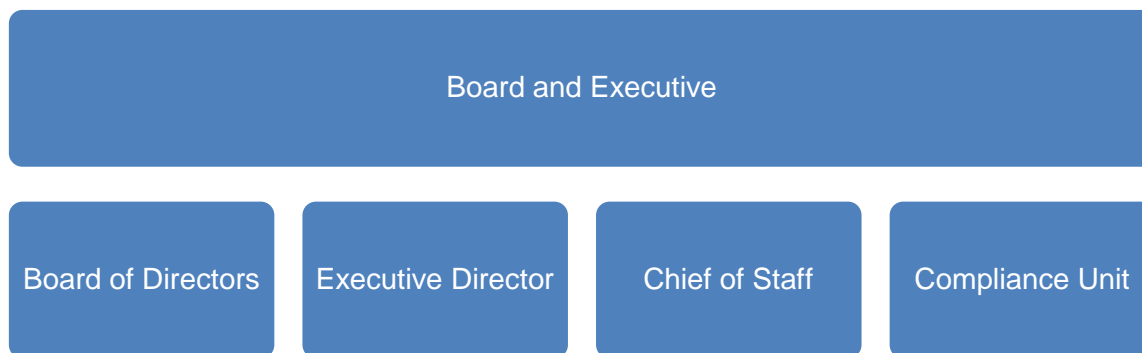
2020 DEPARTMENTAL SUMMARY AND BUDGET INFORMATION

Board and Executive

Department Description

The Board and Executive Department is responsible for the overall executive management of the Thruway Authority. It includes the Thruway Authority Board of Directors, which consists of seven unsalaried members, the Executive Director, Chief of Staff and support personnel. The Executive Office is also responsible for the oversight of the Authority's Compliance Unit, which is responsible for implementing, monitoring and providing DBE, MWBE, SDVOB and EEO Program oversight in accordance with State and Federal laws, rules, regulations and Executive Orders.

Department Organization



Department Budget Summary

BOARD & EXECUTIVE DEPARTMENT BUDGET						
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change	
Personal Services	632,432	991,727	1,197,052	205,325	20.7%	
Allocations	-	(15,672)	-	15,672	0.0%	
Maintenance & Repair	-	-	-	-	0.0%	
Operating & Supplies	16,829	29,777	27,242	(2,535)	-8.5%	
Equipment/Projects not Capitalized	-	1,700	-	(1,700)	0.0%	
Department Total	649,261	1,007,532	1,224,294	216,762	21.5%	

The 2020 Budget request is \$1.2 million, an increase of \$216,762 or 21.5 percent above the 2019 Revised Budget amount. Total wages and salaries are \$1,197,052 and this includes 20 positions, including 7 unsalaried Board members.

Department Budget Highlights

- Personal Services increased by \$205,325, or 20.7 percent, and reflects projected wages based on current salary actions. Two positions were transferred into the Board and Executive 2020 Budget from other Departments.

2019 Accomplishments

- Approved the selection of the Design-Build team who will complete the installation of cashless tolling on the Thruway system-wide by the end of 2020
- Launched the Thruway Authority Skilled Trades Scholarship Program aimed at recruiting qualified students pursuing a career in the trades and increasing workplace diversity

2020 Goals

- Successful completion of the conversion to Cashless Tolling on the ticketed system
- Continuation of the Thruway Authority Skilled Trades Scholarship Program
- Continue the process of redeveloping and modernizing the Authority's 27 service areas through public-private partnerships

Office of Media and Government Relations

Department Description

The Media Relations and Government Relations Department merged to streamline intra and inter-agency communications. The office works closely to deliver effective strategic messaging to elected officials, government bodies and media outlets in New York State and beyond.

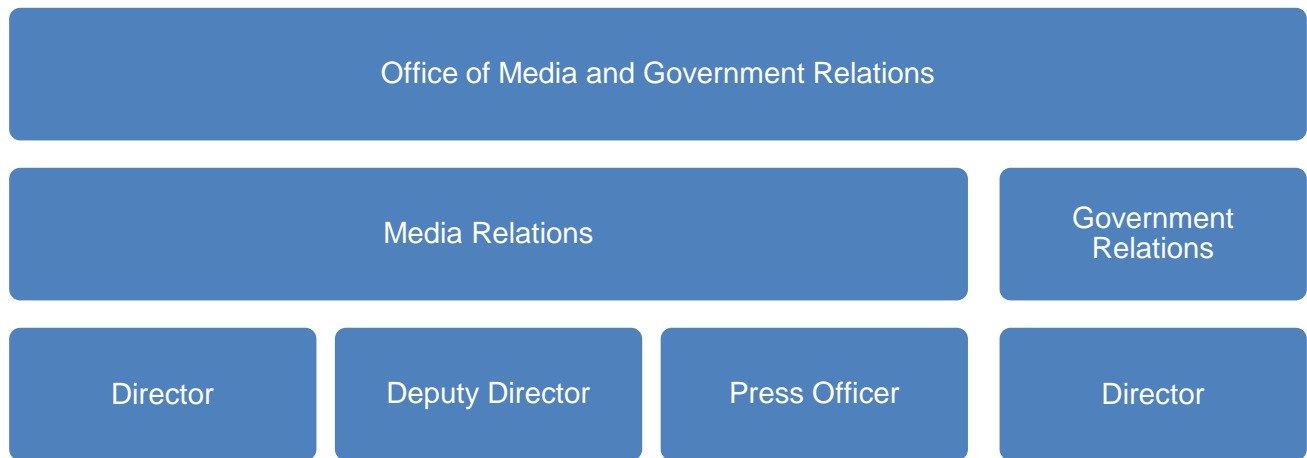
Media Relations - Roles and Responsibilities

- Draft and issue press releases regarding Thruway projects, policies, initiatives and events
- Respond to media inquiries via email and telephone as needed
- Organize Thruway press events across the state
- Respond to numerous public inquiries, concerns and complaints via email
- Issue initial statements and subsequent updates in the event of an emergency situation, such as severe weather or serious incidents on the Thruway
- Manage and update social media accounts (Facebook, Twitter, Instagram) in real-time for the Thruway Authority to keep customers informed of traffic incidents, policies, initiatives, upcoming projects and events
- Coordinate inter-agency communications
- Assist in the creation of numerous marketing materials related to E-ZPass and cashless tolling, including videos and graphics

Government Relations - Roles and Responsibilities

- Coordinate communications with elected officials at the executive, state and local level
- Work closely with Thruway staff and counsel to develop legislative agenda
- Develop strategies to support the Thruway Authority's legislative agenda
- Work with local elected officials and representatives to respond to constituent concerns
- Attend legislative committee meetings and monitor proposed legislation during session on behalf of the Thruway Authority

Department Organization



Department Budget Summary

MEDIA & GOVERNMENT RELATIONS DEPARTMENT BUDGET						
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change	
Personal Services	533,552	486,822	474,330	(12,492)	-2.6%	
Allocations	-	-	-	-	0.0%	
Maintenance & Repair	-	-	-	-	0.0%	
Operating & Supplies	14,848	37,775	37,800	25	0.1%	
Equipment/Projects not Capitalized	-	-	-	-	0.0%	
Department Total	548,400	524,597	512,130	(12,467)	-2.4%	

The 2020 Budget request is \$0.5 million, a decrease of \$12,467 or 2.4 percent below the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$474,330 and this includes 4 positions.

Department Budget Highlights

- Personal Services decreased by \$12,492, or 2.6 percent and reflects the transfer of 1 position to another Department.

2019 Accomplishments

- Successfully issued dozens of press releases and advisories to the media and public to generate positive news coverage
- Continue raising awareness about Cashless Tolling and the Tolls By Mail billing process
- Successfully hosted the initial Grand Island Outreach Session to educate and assist customers about cashless tolling and E-ZPass
- Effectively communicated with approximately 41,165 social media followers on Facebook, Twitter and Instagram
- Successfully managed approximately 250 public inquiries a month
- Continuously updated content on the Thruway's website as to keep the site fresh and relevant
- Successfully managed media coverage for the controlled demolition of the east anchor span of the old Tappan Zee Bridge
- Continued to actively communicate with, and provide project webpage updates for, residents, emergency responders and elected officials regarding progress on the \$135 million New England Thruway (I-95) Reconstruction Project, commonly referred to as the "Last Mile" project
- Effectively worked with numerous statewide and municipal officials to address their constituent's questions regarding the Thruway System

- Successfully hosted two Toll Advisory Panels in Rockland and Westchester counties

2020 Goals

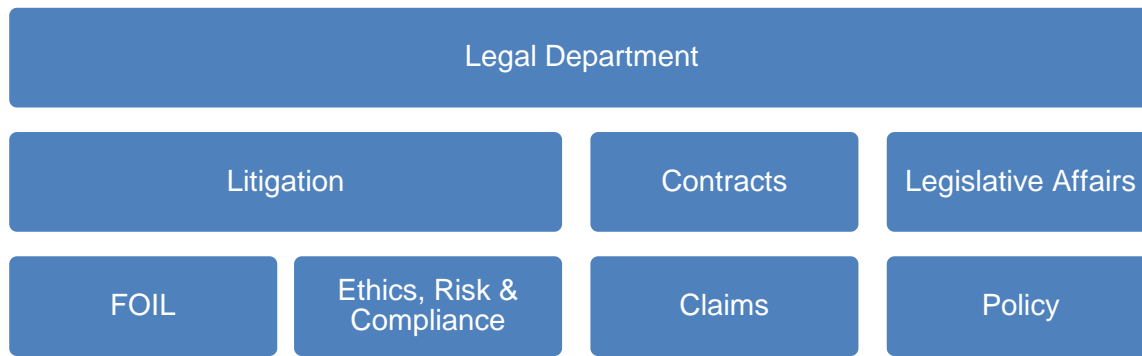
- Continue to strategically communicate an effective and uniform message to all media outlets as needed
- Prepare and begin messaging for the system-wide roll out of cashless tolling across the ticketed system by the end of 2020
- Launch a new website/social media accounts for the Governor Mario M. Cuomo Bridge

Legal Department

Department Description

The Legal Department is responsible for providing legal advice and services to the Board, Executive Director and the Thruway Authority. The Legal Department handles litigation, Thruway Authority contracts, claims against or by the Thruway Authority, Freedom of Information Law (FOIL) requests, legislation, real property transactions, ethics, employment law, Thruway Authority policy, Board issues, supervision of outside counsel services and research as requested. The Legal Department is involved with every aspect of the Thruway Authority's functions.

Department Organization



Department Budget Summary

LEGAL DEPARTMENT BUDGET						
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change	
Personal Services	1,838,885	2,216,996	2,310,319	93,323	4.2%	
Allocations	(108,980)	(100,000)	(48,656)	51,344	-51.3%	
Maintenance & Repair	-	-	-	-	0.0%	
Operating & Supplies	154,623	256,068	244,826	(11,242)	-4.4%	
Equipment/Projects not Capitalized	1,804	1,500	1,000	(500)	-	
Department Total	1,886,332	2,374,564	2,507,489	132,925	5.6%	

The 2020 Budget request is \$2.5 million, an increase of \$132,925 or 5.6 percent above the fiscal year 2019 Revised Budget amount. Total wages and salaries were \$2.3 million and this includes 23 positions.

Department Budget Highlights

- Personal Services increased by \$93,323, or 4.2 percent, and includes funding for 23 permanent positions and temporary law interns.
- Personal Service Allocations decreased \$51,344, or 51.3 percent, due to work on the New NY Bridge Project winding down.

2019 Accomplishments

- Asserted property and equipment damage claims totaling \$2,262,466.12 and collected \$4,250,052.93 as of July 23, 2019
- Provided advice and counsel on matters related to the Governor Mario M. Cuomo Bridge including, but not limited to, contracts, the environment, financing, intellectual property, maintenance, and safety
- Provided advice and counsel to Thruway Authority Board, departments and Executive Chamber
- Drafted legislation necessary for the achievement of Thruway Authority's mission
- Assisted in securing all necessary permits for the safe and efficient demolition of the Tappan Zee Bridge
- Aided in the issuance of Series 2019A Junior Indebtedness Anticipation Notes for the defeasance of \$1.6 billion of the Series 2013A Junior Indebtedness Obligations
- Aided in the drawdown of the TIFIA loan
- Initiated a lawsuit against Vergnet for the failure of the company's wind turbines located in the Buffalo Division
- Assisted with the procurements for modernization and transformation of the Authority's 27 Service Areas and the Cashless Tolling Design-Build Project
- Reviewed, updated, amended and streamlined Thruway Authority policies and procedures
- Continued with efforts to identify risks to the Authority and implement risk mitigation strategies and best practices
- Drafted, reviewed and approved contracts for the Authority
- Responded to 85% of FOIL requests received on or before July 23, 2019
- Responded to 146 subpoenas received from law enforcement
- Provided ethics guidance and training to ensure that all Thruway Authority employees practice the highest ethical standards
- Continued to implement the use of DMS to archive legal files electronically

2020 Goals

- Continue to provide advice and counsel on matters relating to the Governor Mario M. Cuomo Bridge including, but not limited to, contracts, the environment, financing, intellectual property, maintenance, and safety
- Continue to pursue lawsuits concerning the Vergnet wind turbines located in the Buffalo Division
- Continue to defend and settle litigation in a cost effective manner
- Assist in the modernization and transformation of the Authority's 27 Service Areas including necessary lease agreements and the transition to new Service Area operators
- Assist in new agreements related to the use of the Thruway Authority's fiber optics system
- Continue to assist in the Thruway Authority's transition to cashless tolling
- Continue to defend lawsuits related to cashless tolling

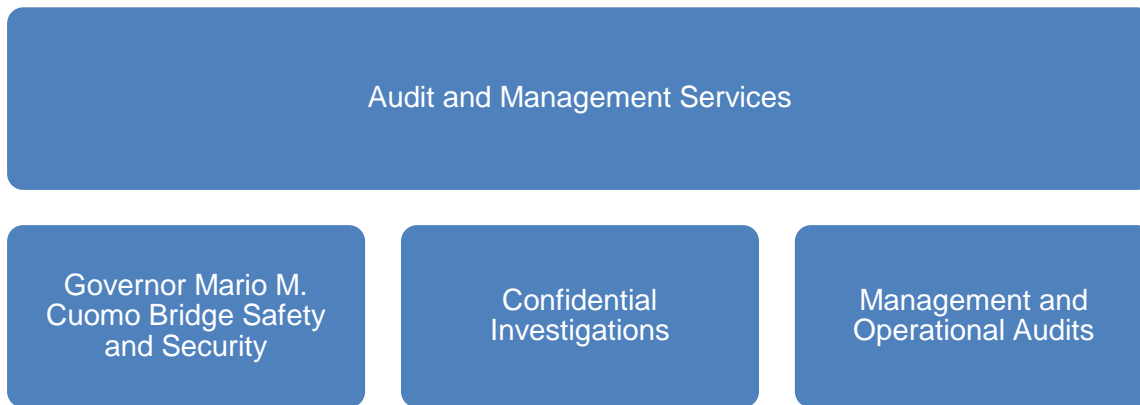
- Continue to focus on customer service and quality provided by the Legal Department and develop Key Performance Indicators to measure performance
- Continue to ensure that best practices are followed by the Thruway Authority with respect to procurement/contracting matters
- Continue to ensure that the Thruway Authority is in full compliance with new statutory and regulatory requirements and offer ideas to exceed requirements
- Continue to review Thruway Authority policies and procedures to identify existing risks and potential risk mitigation strategies and best practices
- Continue to explore technology opportunities and solutions that apply to legal services to reduce workload and increase productivity while lowering costs
- Close the remaining Statement of Services (SOSs) related to the New York Canal Corporation transfer
- Continue to prioritize and deliver on collecting revenue from claims
- Analyze administrative processes and streamline tasks to improve efficiency

Audit & Management Services

Department Description

The Department of Audit and Management Services is responsible for performing independent audits, reviews and analyses of all Thruway Authority operations; conducting confidential investigations to detect and prevent fraud, waste, and abuse; promoting security and protection of Thruway Authority employees, customers and assets which includes the Governor Mario M. Cuomo Bridge; ensuring compliance with the New York State Governmental, Accountability and Internal Control Act; and other requested services from the Thruway Authority Board and Executive Management.

Department Organization



Department Budget Summary

AUDIT & MANAGEMENT SERVICES DEPARTMENT BUDGET						
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change	
Personal Services	711,099	830,943	824,473	(6,470)	-0.8%	
Allocations	-	-	-	-	0.0%	
Maintenance & Repair	-	-	150	150	-	
Operating & Supplies	12,182	14,654	14,554	(100)	-0.7%	
Equipment/Projects not Capitalized	1,205	650	-	(650)	-100.0%	
Department Total	724,486	846,247	839,177	(7,070)	-0.8%	

The 2020 Budget request is \$0.8 million, a decrease of \$7,070 or 0.8 percent below the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$824,473 and this includes 8 positions.

Department Budget Highlights

- Personal Services decreased by \$6,470 or 0.8 percent and reflects the transfer of 1 position to another Department.

2019 Accomplishments

- Conducted Thruway Authority investigations related to fraud, waste and abuse
- Conducted audits of operational programs to ensure compliance with policies, procedures, laws and regulations
- Implemented and oversaw security operations for the Governor Mario M. Cuomo Bridge project, including the hiring and training of eighteen new security personnel
- Conducted safety inspections and evaluations of designated Thruway Authority assets
- Coordinated the annual certification of compliance with the New York State Governmental Accountability and Internal Control Act
- Implemented security measures and systems for the new New Baltimore and Grand Island Welcome Centers
- Followed up on issues noted in the Headquarters Threat Assessment Program
- Additional security cameras were installed at the Administrative Headquarters and Henzel Powers buildings

2020 Goals

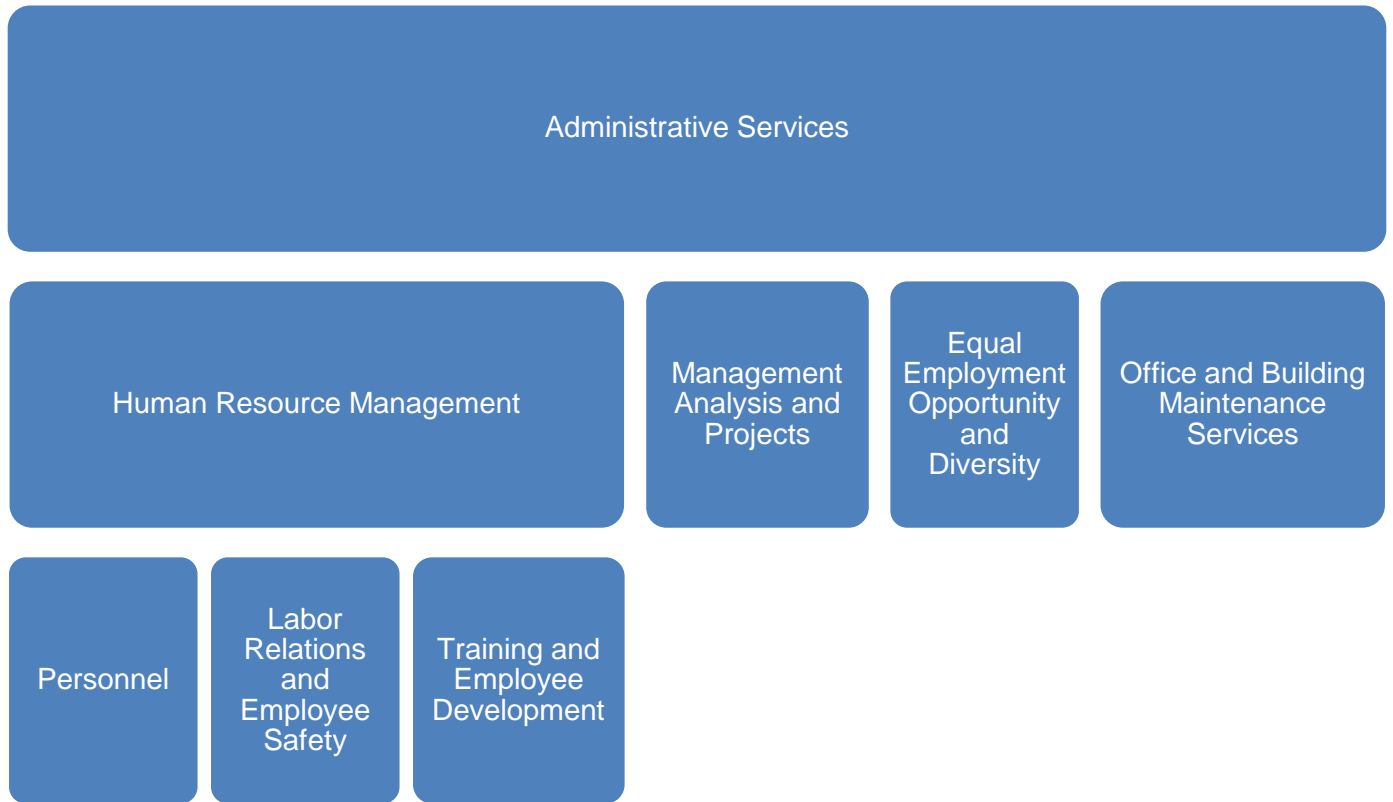
- Hire additional security operators for the Governor Mario M. Cuomo Bridge to carry out safety and security functions
- Hire audit staff to conduct audits and internal control reviews
- Implement the security operations for the Governor Mario M. Cuomo Bridge as required by oversight entities
- Continue installation of security devices in Thruway Authority properties
- Continue security audits of Service Areas
- Continue to implement the Fraud, Waste and Abuse Program at the Thruway Authority
- Continue to implement operational, compliance and management audits
- Continuously improve compliance with the New York State Governmental Accountability and Internal Control Act
- Continue to fulfill requests for other management services
- Continue to facilitate all external audits

Administrative Services

Department Description

Administrative Services provides support to all Departments in the Thruway Authority's Administrative Headquarters, as well as the four Divisions in the areas of Personnel (Staffing Services and Benefits Administration), Training and Employee Development, Equal Employment Opportunity and Diversity, Labor Relations and Employee Safety, Administrative Analysis, and Office and Building Maintenance Services. The Department has nearly 70 employees.

Department Organization



Department Budget Summary

ADMINISTRATIVE SERVICES DEPARTMENT BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	4,210,339	4,550,929	4,847,430	296,501	6.5%
Allocations	-	-	-	-	0.0%
Maintenance & Repair	3,321	3,900	3,900	-	0.0%
Operating & Supplies	883,060	1,051,061	1,032,996	(18,065)	-1.7%
Equipment/Projects not Capitalized	3,583	8,200	3,000	(5,200)	-63.4%
Department Total	5,100,303	5,614,090	5,887,326	273,236	4.9%

The 2020 Budget request is \$5.9 million, an increase of \$273,236 or 4.9 percent above the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$4.8 million and this includes 73 positions.

Department Budget Highlights

- Personal Services increased by \$296,501 or 6.5 percent. The 2020 budget reflects increased wage rates that are part of negotiated union contracts, as well as the elimination of 2 positions offset by the transfer in of a position from another Department.

2019 Accomplishments

- 23 Part-time Toll Collectors have enrolled in expanded Tuition Assistance Program
- 7 employees are enrolled in the CDL training program and 3 have completed the program
- Coordinated the reimbursement of 43 Civil Service Examination fees for employees impacted by the cashless tolling initiative
- Authority Human Resources staff in conjunction with Civil Service's Career Mobility Office conducted Understanding the Civil Service/Merit System in each Division for all employees with special sessions for Toll staff held afterwards. More tailored outreach sessions for Toll staff will be held in 2020.
- Conducted 14 non-technical training courses, from April 1 through June 1, 2019
- Coordinated development, delivery and monitoring of 8 GOER mandatory online training courses
- Developed on-line training courses for New Employee Orientation and Resume Writing
- Coordinated Defensive Driving courses with the National Safety Council in 3 of the 4 Divisions. As of June 1, 2019, 127 employees received this important training.
- Established Domestic Partner Coverage, which was offered to all employees and retirees
- Began offering M/C Paid Family Leave (anticipated effective date September 1, 2019)

- Working closely with Operations to manage the transition to cashless tolling, including payment of incentives and continuously reviewing plans to hire and retain personnel to staff toll lanes
- Launched the Skilled Trades Scholarship Program
- Vigorously and successfully recruited for critical fill positions such as skilled trades, Part-time Toll Collectors and maintenance positions. As part of this recruitment effort, staff attended 9 job fairs, as of June 1, 2019, with more planned.
- Conducted Wellness Fairs at the Administrative Headquarters and Syracuse Division Headquarters
- Developed the first annual Diversity and Inclusion Plan, which was submitted to New York State Civil Service.
- Held the first annual Diversity Day in May 2019.
- Performed more than 40 safety related site visits as of June 1, 2019, with more planned for the remainder for the year.

2020 Goals

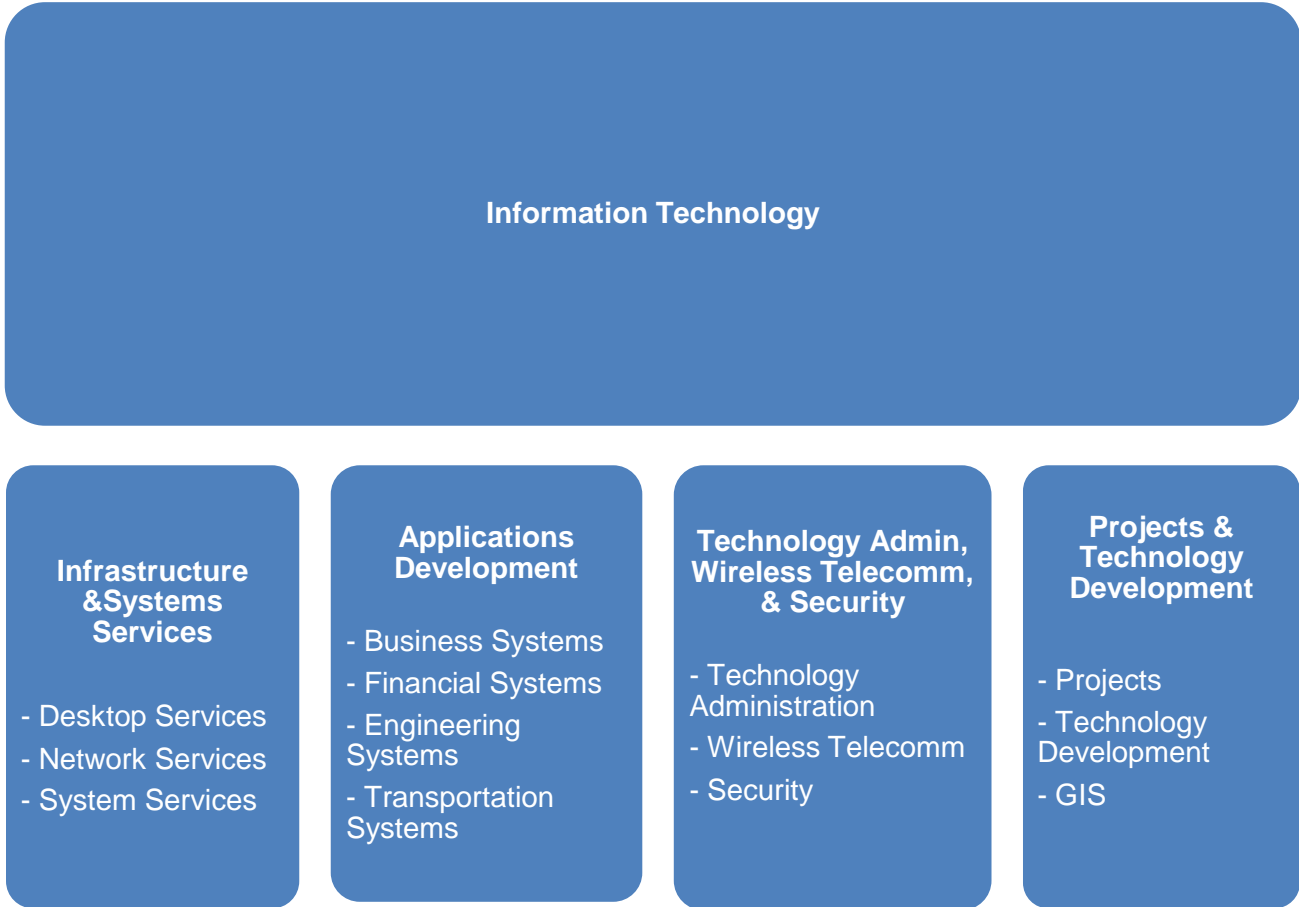
- Support staffing needs for the Governor Mario M. Cuomo Bridge by establishing/filling appropriate items necessary for its operation and maintenance and transition staff back to Authority positions, where necessary
- Support staffing needs for cashless tolling transition, including expansion of the E-ZPass Office
- Assist departments in succession planning
- Reach 100 percent participation for mandatory GOER training
- Continue to promote the wellness initiative
- Equal Employment Opportunity and Diversity Unit and Personnel will continue to enhance recruitment efforts with an emphasis on critical winter maintenance and skilled trade positions
- Update Authority policies and procedures, as necessary
- Revise the Supervisor's Handbook

Information Technology

Department Description

The Information Technology (IT) Department is responsible for managing the Thruway Authority’s computer resources and infrastructure including the fiber optic communications network, video conferencing, cloud computing, Intranet and Internet services, email system, GIS, intelligent transportation systems, security systems, and the use of all computers, software, and telecommunications systems as well as the storing, retrieving, and transmission of the electronic data of the Thruway Authority. IT also develops and maintains financial systems, toll and transportation systems, business systems, engineering systems, network systems, and supports Federal Communications Commission licensing, the Governor Mario M. Cuomo Bridge systems, and all desktop, laptop, modems, and iPad devices. Moreover, IT developed and now manages the Thruway Mobile App. In addition, IT maintains several Data Centers including Headquarters, Tarrytown, and a Disaster Recovery site.

Department Organization



Department Budget Summary

INFORMATION TECHNOLOGY DEPARTMENT BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	7,231,084	7,720,192	8,112,026	391,834	5.1%
Allocations	(495,029)	(558,354)	(822,369)	(264,015)	47.3%
Maintenance & Repair	1,221	3,100	3,100	-	0.0%
Operating & Supplies	3,270,210	4,145,259	4,177,922	32,663	0.8%
Equipment/Projects not Capitalized	<u>215,121</u>	<u>882,964</u>	<u>572,266</u>	<u>(310,698)</u>	<u>-35.2%</u>
Department Total	10,222,607	12,193,161	12,042,945	(150,216)	-1.2%

The 2020 Budget request is \$12.0 million, a decrease of \$150,216 or 1.2 percent below the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$8.1 million and this includes 86 positions.

Department Budget Highlights

- Personal Services increased by \$391,834 or 5.1 percent, and includes funding for 86 permanent positions, the same number as last year.
- Allocations increased by \$264,015 or 47.3 percent relative to anticipated labor hours associated with the cashless tolling project.
- Equipment/Projects not Capitalized decreased by \$310,698 or 35.2 percent. 2019 includes funding for several one-time cashless tolling related equipment purchases.

2019 Accomplishments

- Work with cashless tolling vendor (Kapsch) to improve performance and formally accept sites that went into production in 2018
 - Network equipment deployment to 4 new sites
- Work with Conduent to implement functionality required for system-wide cashless tolling
- Assist with E-ZPass/TollsByMail Website modifications for cashless tolling and with RFP for new Customer Service Center (CSC) contractor
- Work through Adesta contract replacement, resolve complications with PAAA (Public Authorities Accountability Act) for the Fiber
- Obtain valuation of the Fiber Optic System to determine fair market value
- Implement New Computer-Aided Dispatch (CAD) system for TSOC in partnership with NYS Police and NYS DOT at the Hawthorne Valley Traffic Management Center (HVTMC)
- Support the extensive systems for the Governor Mario M. Cuomo Bridge (MCB) that are installed on and around the MCB; these include a Physical Security Information Management system, Secure Access system, Aesthetic and Roadway lighting systems, Video, Structural Health monitoring, a Bridge Information Model and a new Active Traffic

Management system; complete final training and acceptance testing in order to take over the maintenance and management of these systems

- Continue to support and evaluate the new Snow and Ice Preparation systems that were put in place for 2018; in concert with Operations, determine if additional weather stations would be beneficial
- Work with NYSDOT to transition from the Thruway Over Dimensional Permitting System (TOPS) to a new State-wide system
- In support of automating processes such as Toll Credit Requests (BESTPASS), Heavy Vehicle Electronic License Plate (HELP), and as we rely more heavily on the automation of secure file transfer, implement replacement of FTP file transfer systems with SFTP (Secure FTP) software offering redundant failover, tamper-evident logging, OS independent security, and added flexibility for secure methods of transferring data internally and externally
- Implement Incident Response Dashboard
- Plan next radio upgrade to replace obsolete land mobile radio equipment to be in compliance with new mandates

2020 Goals

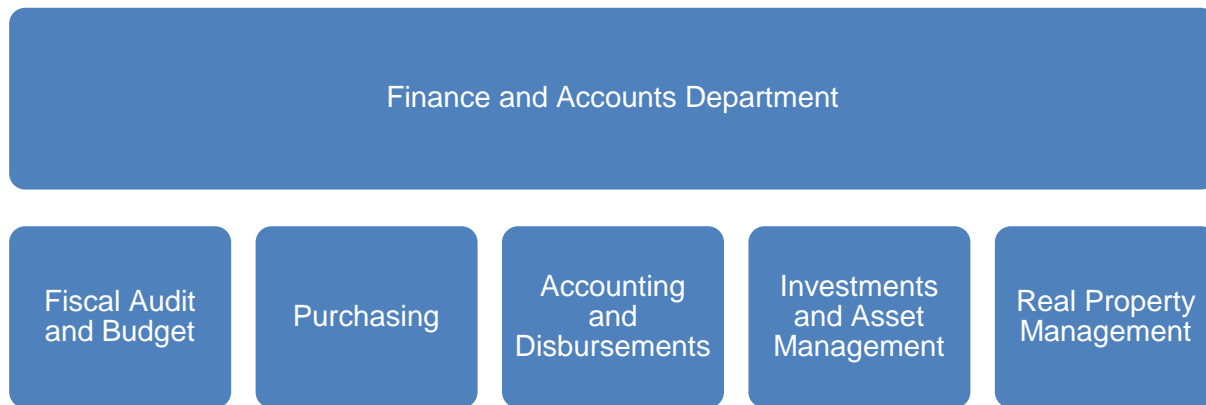
- Work closely with the firm selected for the cashless tolling Design-Build to develop specifications and begin procuring all equipment required to replace the Thruway's legacy toll system in 2020; cashless tolling is a major effort for all of IT in 2020; tasks include:
 - Network deployment at all new Comm sites: 34 mini gantries (to existing sites) and 15 mainline gantries
 - Deploy new redundant storage for all images captured
 - Deploy open-road tolling at the 34 mini-gantries
- Complete implementation of Oracle Primavera Unifier product that replaces three disjointed legacy systems for construction management (CEES), contract management (CMS) and capital planning (CPMS)
- Continue opportunities to participate in the coming revolution in connected and autonomous vehicles and devices
- Complete modifications and upgrades in the HQ Data Center to address risk of non-redundant cooling due to added hardware, replace the UPS, and increase redundant electrical capacity to accommodate additional data center hardware
- Participate in the First Net/AT&T emergency management priority exemption capability to upgrade to priority service access for emergency communications in mission critical events; upgrade devices and change carriers to AT&T as needed for emergency responders
- Enhance HRMS 9.2 PeopleSoft:
 - Convert Classic custom and customized-delivered pages to Fluid, as Classic pages are began deprecation in January 2019
 - Implement employee billing module for health insurance
- Rollout ArcGIS software to end users and provide training; redevelop GISWeb apps based on ArcGIS Pro technology; publish GIS data to State Web Services environment
- Continue efforts for development of Radio System upgrade to bring the Authority's land mobile radio system into compliance with the Governor's mandate for statewide emergency communications interoperability
- Staff Project Management Office in support of major Authority initiatives
- Update IT's Disaster Recovery Plan; test selected recovery procedures

Finance and Accounts

Department Description

The Finance Department is responsible for the Thruway Authority's fiscal matters. The Department ensures compliance with financial requirements, manages the Thruway Authority's resources, structures financial plans to maintain debt service coverage, and works with all Departments to manage costs. Overall financial policies and reporting requirements are dictated by the terms of the Thruway Authority's Bond Resolution, and mandated by statute or Executive Order. The Finance Department is also responsible for meeting deadlines and financial covenants of the bond resolution.

Department Organization



Department Budget Summary

FINANCE & ACCOUNTS DEPARTMENT BUDGET						
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change	
Personal Services	8,150,612	8,092,946	8,429,801	336,855	4.2%	
Allocations	(31,546)	(50,000)	(37,900)	12,100	-24.2%	
Maintenance & Repair	-	-	-	-	0.0%	
Operating & Supplies	947,583	949,959	903,286	(46,673)	-4.9%	
Equipment/Projects not Capitalized	1,766	11,517	3,500	(8,017)	-69.6%	
Department Total	9,068,415	9,004,422	9,298,687	294,265	3.3%	

The 2020 Budget request is \$9.3 million, an increase of \$294,265 or 3.3 percent above The 2019 Revised Budget amount. Total wages and salaries are \$8.4 million and this includes 127 permanent positions.

Department Budget Highlights

- Personal Services increased by \$336,855, or 4.2 percent, and includes funding for 127 permanent positions. The 2020 budget reflects increased wage rates that are part of negotiated union contracts, as well as the elimination of 9 positions.
- Operating & Supplies decreased by \$46,673, or 4.9 percent, mainly due to a reduction in toll deposit counting services associated with the anticipated transition to system-wide cashless tolling.

2019 Accomplishments

- Successfully received \$1.6 billion in Federal TIFIA loan proceeds pursuant to the 2013 loan agreement supporting the construction of the Governor Mario M. Cuomo Bridge.
- Successfully executed a debt restructuring, producing \$326 million in debt service savings resulting from the refunding issuances of: the 2019B Junior Indebtedness Obligations to pre-pay the federal TIFIA Loan and the issuance of General Revenue Bonds, Series M to refunding the previously issued General Revenue Series I bonds.
- Managed the drawdown of an estimated \$414 million in State Thruway Stabilization funds supporting capital expenditures on the NNYB project (\$177 million) and system-wide maintenance and repair projects (\$220 million)
- Managed approximately 2,300 occupancy permits in 2019
- Executed the development and implementation of a new authority-wide budgeting system.
- Developed and published the monthly financial reports, which can be found on the Thruway Authority's website

2020 Goals

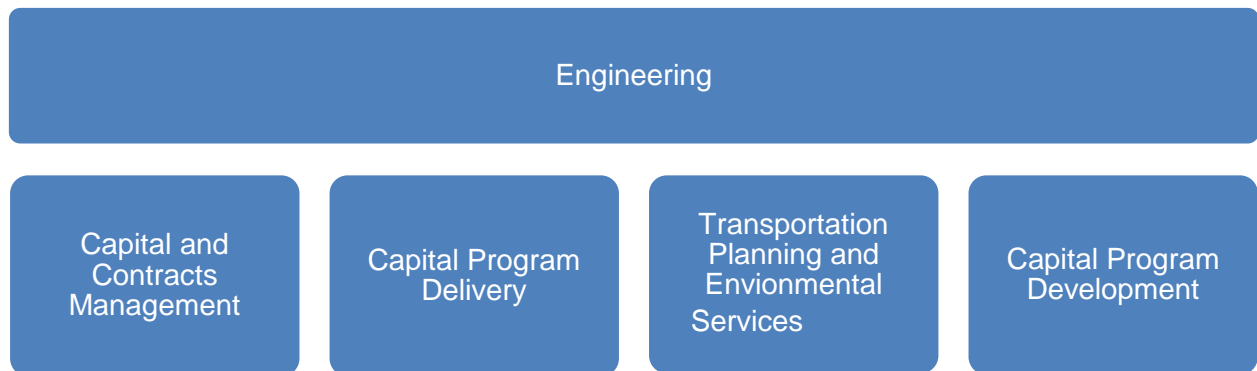
- Successfully execute the issuance of Series N General Revenue Bonds to support capital project costs for projects across the Thruway system.
- Continuously improve the annual plan process for clarity and more transparency
- Develop and monitor the financing components of the proposed five-year capital plan based on best estimates for future planning needs
- Continue the complete and accurate reporting of the Thruway Authority's finances, including producing monthly financial statements, and focus on development of policies and procedure
- Evaluate and implement electronic banking technology in the area of accounts payable and payment processing

Engineering

Department Description

The Department of Engineering, led by the Chief Engineer, is comprised of Headquarters and Division staff, responsible for the engineering needs of the Thruway Authority. These functional areas of the Department all work collectively to develop and implement the Capital Program, starting with planning and program development, through project inception and design, to construction completion. The Engineering Department also supports the Department of Maintenance and Operations, at both the Headquarters and Division levels. The Department manages the Capital and Contracts Programs in accordance with the Contracts Program Board resolution and other mandates.

Department Organization



Department Budget Summary

ENGINEERING DEPARTMENT BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	13,825,740	13,779,093	15,274,545	1,495,452	10.9%
Allocations	(8,218,218)	(7,990,263)	(8,884,855)	(894,592)	11.2%
Maintenance & Repair	2,609	3,015	2,861	(154)	-5.1%
Operating & Supplies	614,126	718,175	891,378	173,203	24.1%
Equipment/Projects not Capitalized	<u>107,040</u>	<u>54,500</u>	<u>41,000</u>	<u>(13,500)</u>	<u>-24.8%</u>
Department Total	6,331,297	6,564,520	7,324,929	760,409	11.6%

The 2020 Budget request is \$7.3 million, an increase of \$760,409 or 11.6 percent above

the 2019 Revised Budget amount. Total wages and salaries are \$15.3 million and this includes 163 positions.

Department Budget Highlights

- Personal Services increased by \$1,495,452 or 10.9 percent, and includes funding for 163 permanent positions. The 2020 budget reflects increased wage rates that are part of negotiated union contracts.
- Allocations increased by \$894,592 or 11.2 percent, mainly due to projected increased wage rates which will result in higher allocations.
- Operating & Supplies increased \$173,203 or 24.1 percent, attributable to an increase in training expense associated with the implementation of a new contracts management system. Increased rental rates for an under bridge inspection unit and increased engineering software maintenance costs also contributed to the increase.

2019 Accomplishments

- Over 30 contracts with a value of over \$500 million were let in 2019. For the previous five years, the average annual letting total was \$251 million
- Awarded and started construction for the conversion of the ticketed system to Cashless Tolling. The Design-Build Best Value procurement process was used for the contract
- Completed the construction of the Capital District Welcome Center
- Continued efforts to ensure environmental compliance for Thruway activities and projects and promote sustainable practices
- Continued the I-95 (New England Thruway) “Last Mile” construction contract (\$135 million), which was awarded using a Design-Bid-Build Best Value procurement process
- The reconstruction/rehabilitation of I-90 from West Seneca (Exit 54, MP 427.7) to US Route 219 (Exit 55, MP 429.55) was completed on time and in budget. This \$66 million project was the agency’s first Design-Bid-Build Best Value contract. By using this procurement process, it reduced the number of construction seasons from three to two
- Continue developing the Thruway Authority’s Bridge Asset Management System upgrades. For over 100 Thruway Bridges, the Authority now has long range plans.
- Completed Cashless Tolling Conversion contracts for the Harriman, Yonkers, New Rochelle and Spring Valley toll barriers
- Initiated and supported sustainable projects and activities to foster the reduction of greenhouse gas emissions and promote renewable energy technology. For example, completed the system site design and construction of the solar array at the Woodbury Interchange on the Thruway system

2020 Goals

- Complete the conversion of the ticketed system to Cashless Tolling

- Continue instituting sustainable practices. For example, the implementation of cashless tolling is estimated to result in GHG emission reductions which equate to an approximate annual savings of 4.4 million gallons of gasoline, or \$10.7 million
- Continue the process to replace the existing capital and contracts management systems with a new system that supports electronic bidding, electronic submission of estimates for contractors and consultants, and enhanced reporting
- Continue developing long range plans for all 814 bridges

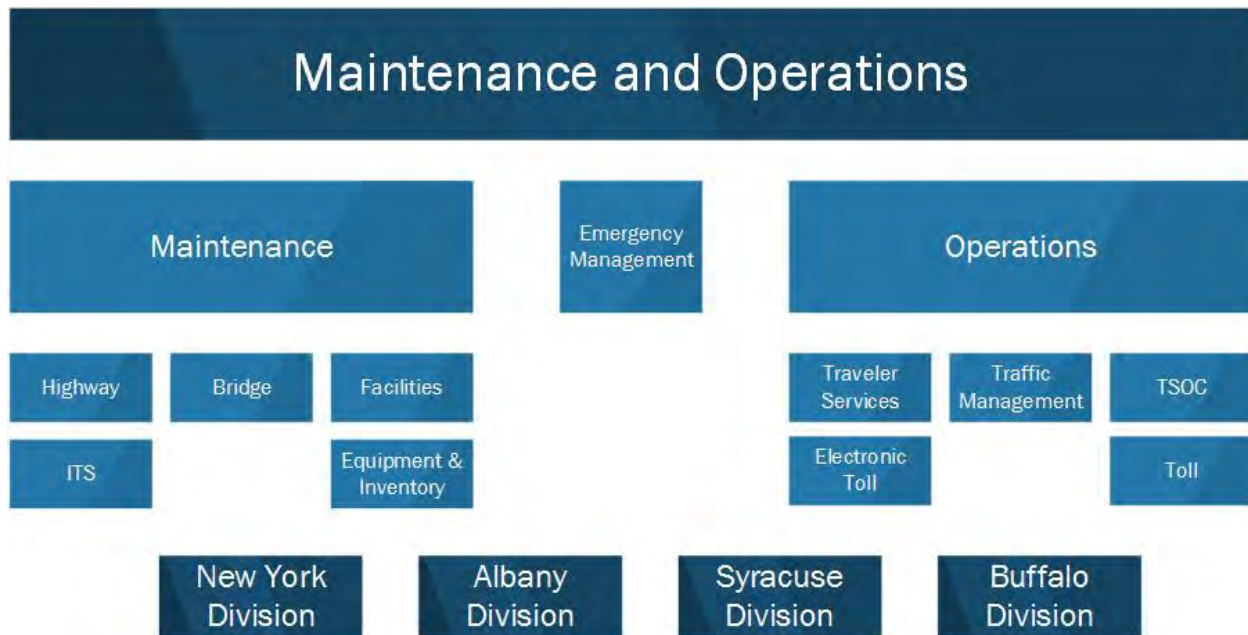
Maintenance and Operations

Department Description

The Department of Maintenance and Operations establishes budgets, priorities and performance standards for maintenance activities for the highway, bridge and facilities infrastructure, as well as the motorized, toll and ITS equipment owned and operated by the Thruway Authority. The Department includes the four Divisions where the daily operations of the Thruway Authority are directed. Whether repairing bridge and highway infrastructure, maintaining vehicles and construction equipment, to collecting toll revenue, employees work to ensure safe and reliable travel for patrons each day. The Thruway Authority's winter maintenance program is implemented in the Divisions with overall program direction provided by Headquarters staff. The Department works collaborately with the Department of Engineering to develop the Authority's multi-year Capital Program. This effort involves project initiation, prioritization and programming of capital work for the entire Thruway system.

The Department is also responsible for managing programs for cash Toll Collection, and Travelers' Services, which manage contracts that operate 27 Service Areas throughout the system. Traffic Management includes management of the authorized towing program and the tandem truck permit program. The E-ZPass office manages electronic toll collection contracts which include E-ZPass, cashless tolling and violation enforcement. In addition, Maintenance and Operations includes the Thruway Statewide Operations Center (TSOC). TSOC is a 24-hour-a-day modified 911 center. The Department is also responsible for the Thruway Authority's emergency response and incident management activities through the Office of Emergency Management.

Department Budget Summary



MAINTENANCE BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	62,968,039	62,960,339	63,210,923	250,584	0.4%
Allocations	(4,579,089)	(4,665,353)	(5,334,484)	(669,131)	14.3%
Maintenance & Repair	20,710,127	22,088,759	24,630,798	2,542,039	11.5%
Operating & Supplies	6,433,910	7,846,970	4,428,006	(3,418,964)	-43.6%
Equipment/Projects not Capitalized	834,948	2,594,284	1,886,726	(707,558)	-27.3%
Department Total	86,367,935	90,824,999	88,821,969	(2,003,030)	-2.21%

The 2020 Budget request is \$88.8 million, a decrease of \$2,003,030 or 2.21 percent below the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$63.2 million and this includes 1,016 positions.

Maintenance Budget Highlights

- Personal Services increased by \$250,584, or 0.4 percent, and includes funding for 1,016 permanent positions. Overtime costs associated with snow and ice control in 2019 were significantly higher than budget due to the severity and duration of the winter season.
- Personal Service Allocations increased \$669,131, or 14.3%, based on planned capital projects.

- Maintenance and Repair increased \$2,542,039 or 11.5 percent, mainly due to anticipated increases in bridge inspection and pavement striping contract costs.
- Operating and Supplies decreased by \$3,418,964 or 43.6 percent, mainly due to anticipated federal reimbursement on pavement striping contracts.
- Equipment & Projects Not Capitalized decreased \$707,558, or 27.3%, mainly attributable to costs associated with the connection of Malden & Weedsport sewer lines to local municipalities.

2019 Accomplishments

- Completed comprehensive program of preventive and corrective maintenance on the bridge, highway, and facility infrastructure
- Conducted simulated “road closure” drills in all divisions
- Trained first responder partners utilizing a modified Highway Safety Training/TIMS program
- Improved winter operations program with addition of strategic salt storage and operational enhancements.
- Took occupancy of new maintenance facility at Governor Mario M. Cuomo Bridge.

2020 Goals

- Complete all programmed maintenance projects and preventive maintenance
- Finalize transition plan for the Governor Mario M. Cuomo Bridge, full responsibility for the operation and maintenance of the bridges and Shared Use Path. Acquire budgeted equipment and hire and train staff in critical areas.
- Implement training and resources for new required safety standards
- Continue strategic plan to upgrade facilities to meet current standards and operational needs
- Further expand the Authority’s alternative energy initiatives
- Refine sustainable right-of-way management practices to advance environmental stewardship goals

EQUIPMENT & INVENTORY MANAGEMENT BUDGET

Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	17,014,203	17,628,348	18,312,745	684,397	3.9%
Allocations	(1,135,072)	(881,848)	(1,142,455)	(260,607)	29.6%
Maintenance & Repair	10,971,013	11,694,825	12,168,150	473,325	4.0%
Operating & Supplies	1,362,052	1,417,537	1,549,877	132,340	9.3%
Equipment/Projects not Capitalized	156,407	156,500	178,865	22,365	14.3%
Department Total	28,368,603	30,015,362	31,067,182	1,051,820	3.5%

The 2020 Budget request is \$31.1 million, an increase of \$1,051,820 or 3.5 percent above the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$18.3 million and this includes 309 positions.

Equipment and Inventory Budget Highlights

- Personal Services increased by \$684,397, or 3.9 percent, and includes funding for 309 permanent positions. The 2020 budget reflects increased wage rates that are part of negotiated union contracts.
- Allocations increased by \$260,607 or 29.6 percent, mainly due to an increase in anticipated labor hours associated with the conversion to cashless tolling.
- Maintenance & Repairs increased by \$473,325 or 4.0 percent mainly due to increases in fuel costs, as well as toll and ITS equipment costs.
- Operating & Supplies increased \$132,340 or 9.3 percent, mainly due to an anticipated increase in toll system monitoring and maintenance costs.

2019 Accomplishments

- Electric Vehicle Initiative – The Authority fleet added three electric vehicles and charging infrastructure at Administrative Headquarters
- Fuel System Networked – All fueling locations are now networked which has improved system dependability and data flow improving maintenance operations
- Began implementation of the Toll Electronic Systems Technician Trainee program
- Successfully maintained a high level of reliability for over 400 toll lanes, 800 ITS elements and associated peripheral equipment
- Installed an additional four permanent Variable Message Signs to replace current use of portable signs
- As part of cashless tolling transition, installed open road tolling ramp gantry equipment at multiple interchange locations

2020 Goals

- Add electric vehicles to all division pools and expend the charging station infrastructure for fleet vehicles
- Upgrade the Authority's fueling system to Ward 4 terminals and operating infrastructure

- Maintain high reliability of toll and ITS systems while training and adapting personnel to new technologies in these areas
- Install additional permanent Variable Message Signs to enhance incident management and communication
- Investigate the potential use of alternative fuel equipment including solar to further reduce our carbon foot print.
- Install open road tolling ramp gantry equipment at 21 locations

TRAFFIC & COMMUNICATIONS BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	6,265,754	6,793,885	7,078,019	284,134	4.2%
Allocations	-	-	-	-	0.0%
Maintenance & Repair	686	20,930	3,930	(17,000)	-81.2%
Operating & Supplies	2,083,049	2,198,981	2,087,004	(111,977)	-5.1%
Equipment/Projects not Capitalized	123,599	49,106	9,660	(39,446)	-80.3%
Department Total	8,473,088	9,062,902	9,178,613	115,711	1.3%

The 2020 Budget request is \$9.2 million, an increase of \$115,711 or 1.3 percent above the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$7.1 million and this includes 102 positions.

Traffic and Communications Budget Highlights

- Personal Services increased by \$284,134, or 4.2 percent, and includes funding for 102 permanent positions. The 2020 budget reflects increased wage rates that are part of negotiated union contracts.
- Operating & Supplies decreased by \$111,977 or 5.1 percent, mainly due to increased towing related costs in 2019 due to multiple snow events early in the year.
- Equipment & Projects Not Capitalized decreased \$39,446, or 80.3%. 2019 included added costs for monitors and related equipment for TSOC.

2019 Accomplishments

- Integrated laptops into Traffic Supervisor vehicles to support emergency response
- Completed the Service Area procurement with the selection of a vendor to operate the Authority's 27 Service Areas
- Installed Level 2 Electric Vehicle charging stations at select commuter lots and Level 3 at select service areas
- Implemented aggressive Move Over Law education campaign through events on and off the Thruway system
- Developed a public service announcement for Move Over safety campaign

- Developed a Continuity of Operations plan
- Updated the Authority's Emergency Management Operations Protocol (EMOP) document.

2020 Goals

- Replace the CARS System used for Traffic Management in TSOC with DYNAC, the new technology used on the new Governor Mario M. Cuomo Bridge
- Continue to educate motorists and train staff, including Authorized Tow Operators, on the Move Over Law.
- Implement a new Computer Aided Dispatch in conjunction with State Police and NYSDOT
- Build out a new TSOC that will upgrade the capabilities for traffic management and dispatching services.

TOLL COLLECTION BUDGET					
Account Description	2018 Actual	2019 Revised	2020 Budget	\$ Change	% Change
Personal Services	35,615,527	30,240,439	29,552,334	(688,105)	-2.3%
Allocations	-	-	-	-	0.0%
Maintenance & Repair	28,045	28,800	28,000	(800)	-2.8%
Operating & Supplies	2,575,194	2,631,056	2,096,975	(534,081)	-20.3%
Equipment/Projects not Capitalized	7,759	10,150	6,830	(3,320)	-32.7%
Department Total	38,226,525	32,910,445	31,684,139	(1,226,306)	-3.7%

The 2020 Budget request is \$31.7 million, a decrease of \$1,226,306 or 3.7 percent below the fiscal year 2019 Revised Budget amount. Total wages and salaries are \$29.6 million and this includes 257 positions.

Toll Collection Budget Highlights

- Personal Services decreased by \$688,105, or 2.3 percent, and includes funding for 257 permanent positions, an overall reduction of 21 positions from 2019. This reduction is relative to the transition to cashless tolling.
- Operating & Supplies decreased \$534,081, or 20.3 percent, mainly due to reduced costs associated with the printing of toll tickets which will no longer be needed upon conversion to cashless tolling.

2019 Accomplishments

- Expanded E-ZPass pop-up sales to all Divisions
- Implemented on-site customer service at the Grand Island Welcome Center
- Increased On-the-Go retailers by 10%

- Re-issued the systems and operations RFPs for the E-ZPass/Toll By Mail Customer Service Center services
- Executed an agreement with Province of Quebec for obtaining customer names and addresses in support of the Cashless Tolling
- Continued to work with Human Resources to implement strategies to assist affected toll positions in obtaining other employment and retention until Cashless Tolling Go Live
- Developed a dashboard to monitor toll collection staffing metrics
- Enhanced E-ZPass website to include easier login capability including “forget password” via text
- Developed a means for Canadian registrants to pay Toll Bills
- Enhanced Tolls By Mail website to include search and pay by license plate

2020 Goals

- Implement Cashless Tolling on the ticketed system
- Implement first-call resolution to improve customer service
- Develop methods for 3rd party applications (Amazon Alexis, Google Voice, chat bots) to enhance the E-ZPass customer experience
- Further efforts with the E-ZPass Interagency Group to implement a HUB that will support regional and national interoperability
- Develop Pilot program with State Police to focus on E-ZPass violators/DMV suspensions
- Execute reciprocal agreements with other states in support of violation enforcement
- Adjust E-ZPass office staffing levels to provide service levels that support the growth in cashless tolling
- Monitor and maintain staffing levels to ensure cash toll collection services



LONG RANGE FINANCIAL PLAN

Long-Term Financial Plan
Per the Thruway Authority General Revenue Bond Resolution
(millions)

	ACTUAL 2018	Revised Rev. Budget 2019	Proposed 2020	Estimated 2021	Estimated 2022	Estimated 2023
Toll Revenue	736.5	739.6	735.8	713.8	722.9	730.4
Other Revenues	62.3	61.3	58.2	76.2	91.8	88.1
Additional Revenue Need					27.7	117.8
Total Revenue Target	798.8	800.9	793.9	790.0	842.4	936.3
Thruway Operating Expenses	339.9	358.3	370.7	374.8	380.4	386.1
Reserve for Claims and Indemnities, Environmental Remediation & Cashless Tolling Transition	5.0	4.6	1.0	1.0	1.0	1.0
Net Revenue (A)	453.8	437.9	422.3	414.2	461.0	549.2
Current Senior Debt Service Outstanding	225.0	242.7	242.7	235.8	258.4	258.4
Proposed Senior Bonds and refunding	0.0	(9.8)	(8.4)	(5.6)	8.0	28.6
Less Interest Earnings on Sr. Debt Srvc Res Funds	(4.7)	(3.4)	(0.7)	(0.7)	(0.8)	(0.8)
Net Senior Debt Service (B)	220.3	229.5	233.6	229.5	265.6	286.1
Net Revenue after Senior Debt Service	233.5	208.4	188.7	184.7	195.4	263.1
Adjust to Cash basis/Retain for Working Capital	(24.6)	12.2	(12.7)	0.0	0.0	0.0
Reserve Maintenance Deposit	74.1	103.7	62.4	67.8	50.3	71.8
Total Junior Debt Service	79.5	53.8	41.2	41.2	41.2	41.2
Proposed Junior Bonds	0.0	0.0	6.2	8.2	35.0	79.8
Less Interest Earnings on Jr. Debt Srvc Res Funds	(0.3)	(0.4)	(0.4)	(0.4)	(0.3)	(0.3)
Net Junior Debt Service (C)	79.2	53.4	47.0	49.1	75.9	120.7
Facilities Capital Improvement Deposit	12.0	8.0	0.0	0.0	0.0	0.0
General Reserve Fund Provision - State Police and JIAN int.	43.6	55.5	66.5	67.8	69.2	70.6
Balance	0.0	0.0	0.0	0.0	0.0	0.0
Senior Debt Service Coverage Ratio (A/B) (1)	2.06	1.91	1.81	1.80	1.74	1.92
Senior & Junior Debt Service Coverage Ratio (A/(B+C))	1.52	1.55	1.50	1.49	1.35	1.35

Schedule of Senior Debt Service for The Thruway Capital Program (millions)							
Series	Principal Balance 1/1/20 or when issued	Year of Issuance	2019	2020	2021	2022	2022
Series I	1,041.8	2012	72.6	72.6	72.6	72.6	72.6
Series J	650.6	2014	44.8	44.7	44.8	44.7	69.1
Series K	743.9	2014	61.8	61.9	61.9	61.9	61.9
Series L (Refunding)	530.3	2018	63.4	63.4	56.5	79.1	54.7
Debt Refunding (Series M)	857.6	2019	(9.8)	(8.4)	(12.8)	(12.8)	(24.4)
Subtotal : Current Debt Service			232.9	234.3	222.9	245.6	234.0
Series N (Proposed)	388.6	2020	0.0	0.0	0.0	0.0	19.4
Series O (Proposed)	289.3	2021	0.0	0.0	7.2	14.5	14.5
Series P (Proposed)	256.5	2022	0.0	0.0	0.0	6.4	12.8
Series Q (Proposed)	253.3	2023	0.0	0.0	0.0	0.0	6.3
Summary			2019	2020	2021	2022	2023
Total Annual Senior Debt Service			232.9	234.3	230.2	266.4	286.9
Annual Change in Senior Debt Service as a % of Revenues			0.9%	0.4%	-0.4%	2.1%	1.5%
Cumulative Senior Debt Service as a % of Revenues			29.1%	29.5%	29.1%	31.6%	30.6%
Outstanding Senior Debt at End of Year			2,887.9	3,170.8	3,356.1	3,480.9	3,592.8

Notes:

The Projected Senior Debt Service is based on issuing 30 year bonds in the amount needed to fund the Thruway Capital Program and assumes it would be issued during the year at an interest rate between 3.5 percent and 5.0 percent. In some years, Capitalized interest is used to fund Debt service. Total revenues from Thruway tolls, concessionaire revenue, interest and other revenue sources are pledged to senior debt service. The limit on senior debt capacity is reached once the debt service coverage ratio drops below 1.2 X coverage.

Schedule of Junior Indebtedness Obligation for The New NY Bridge Project

Series	Principal Balance 1/1/20 or when issued	Year of Issuance	2019	2020	2021	2022	2023
Series 2013 A	1,600.0	2013	26.5	0.0	0.0	0.0	0.0
Series 2016 A	850.0	2016	27.3	41.2	41.2	41.2	41.2
TIFIA 2019 B	1,628.0	2019	0.0	2.3	2.3	18.9	63.7
Series 2019 B (New)	65.3	2019	0.0	3.9	3.9	3.9	3.9
Series 2021 A (Proposed)	245.8	2021	0.0	0.0	2.0	12.3	12.3

Summary	2019	2020	2021	2022	2023
Total Annual Junior Debt Service	53.8	47.4	49.4	76.2	121.0
Annual Change in Junior Debt Service as a % of Revenues	-3.3%	-0.8%	0.3%	0.3%	6.7%
Cumulative Junior Debt Service as a % of Revenues	6.7%	6.0%	6.3%	6.3%	12.9%
Outstanding Junior Debt at End of Year	2,543.2	2,542.4	2,786.9	2,785.5	2,784.0

Notes:

The Projected Jr. Debt Service is based on issuing short term notes and bonds in the amount needed to fund the New NY Bridge Project and includes the Series 2013 A JIO's taken out in September 2019 with the Tifia Loan which was then refinanced in October 2019. After 2019, JIO's would be issued between 3.5 percent and 5.0 percent. Total revenues from Thruway tolls, concessionaire revenue, interest and other revenue sources are pledged to debt service. The limit on debt capacity is reached once the debt service coverage ratio drops below 1.2 X coverage.



MULTI-YEAR CAPITAL PLAN

2020 Budget - Capital Program Sources and Uses
(millions)

	2018	2019 Revised	2020 - 2024 Capital Program					2020-24 Total
			2020	2021	2022	2023	2024	
Thruway:								
Highways	156.4	157.1	126.2	129.3	165.0	180.1	156.1	756.9
Bridges	66.5	65.0	93.5	101.8	78.9	79.6	109.5	463.3
Facilities	47.7	15.8	10.7	7.1	14.5	10.9	14.2	57.4
Equipment	26.7	31.7	34.2	33.0	33.0	34.2	34.8	169.2
Cashless Tolling	28.1	138.1	265.1	83.8	10.5	0.0	0.0	359.4
Intelligent Transportation Systems	2.3	2.0	4.0	5.5	7.0	5.2	1.4	23.0
Sub Total - Thruway	327.7	409.7	533.7	360.5	308.9	310.0	316.2	1,829.2
New NY Bridge Project:								
New NY Bridge	264.1	220.0	72.4	245.0	0.0	0.0	0.0	317.4
Sub Total - New NY Bridge Project	264.1	220.0	72.4	245.0	0.0	0.0	0.0	317.4
Grand Total	591.8	629.7	606.1	605.5	308.9	310.0	316.2	2,146.6

	2018	2019 Revised	2020 - 2024 Capital Program					2020-24 Total
			2020	2021	2022	2023	2024	
Thruway:								
Senior Debt	0.0	0.0	408.7	290.4	257.8	238.0	239.0	1,433.9
Reserve Maintenance Fund	71.6	178.8	62.4	67.8	50.3	71.8	76.9	329.3
General Reserve Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal, State and Other Funds	56.1	10.3	1.3	2.4	0.8	0.2	0.2	4.8
Thruway Stabilization Program Funds	200.0	220.6	61.2	0.0	0.0	0.0	0.0	61.2
Sub Total - Thruway and Canal	327.7	409.7	533.7	360.5	308.9	310.0	316.2	1,829.2
New NY Bridge Project:								
Junior Debt	3.0	0.0	72.4	245.0	0.0	0.0	0.0	317.4
Facilities Capital Improvement Fund	13.1	43.0	0.0	0.0	0.0	0.0	0.0	0.0
Federal, State and Other Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thruway Stabilization Program Funds	248.0	177.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub Total - New NY Bridge Project	264.1	220.0	72.4	245.0	0.0	0.0	0.0	317.4
Grand Total	591.8	629.7	606.1	605.5	308.9	310.0	316.2	2,146.6

CAPITAL PROGRAM DEVELOPMENT SUMMARY

Overview:

- The Authority maintains a “rolling” 5-year Capital Program. Annually, a team comprised of members from Maintenance & Operations, Engineering, and Divisions, will develop a draft new fifth year of the Program and re-evaluate the current Program based on conditions, finances, emergencies, regulatory requirements, etc.

Tasks and Timeline:

- **By 1st week in January** – Engineering and Maintenance & Operations will meet to discuss programmatic or other priorities and any new/revised construction methods which could influence project identification or prioritization for Highway, Bridge, Architecture and ITS needs Thruway-wide.
- **By 3rd week in January** – Based upon asset management data, Engineering will provide the following in order to start preparing for the annual project review field visits:
 - A draft proposed list of projects for the new fifth year of the Capital Program with recommended treatments.
 - A draft proposed list of projects that may need to be reviewed/re-scoped based upon discussions (see above) and trends/conditions. These changes will be limited to the 4th and 5th years of the current capital program.
 - Note: In the revised process, the Capital Program Project Proposal (CPPP) will be replaced with project lists and some project detail sheets (for field visit use). These will be used to document the Capital Program update.
- **By 4th week in January** - Maintenance & Operations sends the draft lists to the Divisions for review and input.
- **By 2nd week in March** – Using the draft lists provided to them, the Divisions will submit their program recommendations for the new fifth year to Maintenance & Operations. The submission will include appropriate project checklists for new projects, as well as an identification of any unusual items of work likely to have significant cost impact. For changes requested to existing projects, a revised project checklist will be submitted. (Revised checklists will be developed for this effort and they will be used during the field visits).
- **By 3rd week in March** – Working together, Maintenance & Operations and Engineering will develop a final list of projects to be reviewed during the field visits. Lists can be updated based upon spring conditions.

- **By end of April** - The Department of Finance & Accounts will provide funding projections to Capital Program & Contracts Management. Capital Program & Contracts Management will provide proposed annual letting totals to the Department of Maintenance & Operations to assist in program development.
- **By 2nd week of May** – Maintenance & Operations will ensure completion of all capital project field visits. Attendees for the field visits will include staff from Maintenance & Operations, Division Maintenance, Engineering and others as determined by the team.
- **By 2nd week of June** - Maintenance & Operations and Engineering will develop a new draft 5-year Program based on review and concurrence of the Division submissions and the outcome of the field visits. This 5-year Program will be submitted to Capital Program & Contracts Management.
- **By 3rd week of June** - Capital Program & Contracts Management will coordinate review by Design and Environmental Services for program deliverability. Any necessary changes will be coordinated with Maintenance & Operations and the Department of Engineering, as appropriate.
- **By 1st week of July** - Capital Program & Contracts Management will review the program for final conformance to the financial model to meet cash flow requirements. Any necessary changes will be coordinated with the Department of Maintenance & Operations and Department of Engineering, as appropriate.
- **By mid-July** - The Capital Program Executive Committee will review the proposed Capital Program for conformance to established goals and objectives.
- **By late-July** - Cash flow numbers for inclusion in the annual Budgets (to be presented to the Boards for final approval) will be finalized.
- **By early September** – Final 5-year Capital Program project lists will be developed for inclusion in the annual budget books for presentation to the Boards and public.

NYS THRUWAY AUTHORITY
Proposed 2020-2024 Capital Program Letting List as of 9/19/19
New York Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2020	3	H9.1	MP: 12.85	Improvements to I-87 Interchange 9 Ramp Intersection with Route 9 and Construct Route 9/I-87 Pedestrian Bridge	\$14,000,000
	2	A750.1	MP: 45.20	Harriman Maintenance Section and Toll Building (Exit 16, MP 45.2): Connect to Municipal Water, Sewer and Gas	\$1,600,000
	2	B762.1	MP: 60.95	Meadow Hill Road Bridge over Thruway - Rehabilitation	\$2,500,000
	1	B284.4	MP: 605.76	North Avenue Bridge over I-95 (New England Thruway) - Relocate Utilities for Replacement	\$3,500,000
2020 Total:					\$21,600,000
2021	1	H1045.1	MP: 0.00	Major Deegan Expressway (MP 0.00) to Cross Westchester Expressway (Exit 8, MP 11.3): Pavement Resurfacing	\$25,000,000
	1	H342.1	MP: 16.20	South of Nyack (MP 16.2) to south of Spring Valley Toll Barrier: Pavement Resurfacing	\$15,000,000
	1	H165.1	MP: 29.40	I-287/Route 17S (Exit 15, MP 29.4) to north of Suffern (MP 38.7): Pavement Resurfacing	\$28,000,000
	4	A359.1	MP: 45.20	Replacement of a Deteriorated Roof at the Harriman Maintenance Section	\$370,000
	4	A370.1	MP: 45.20	Harriman Maintenance Section - Renovations	\$1,000,000
	1	H343.1	MP: 600.00	I-95, New England Thruway: North of Exit 17 to north of Exit 18B Northbound Only and north of Exit 19 to north of Exit 21: Pavement Resurfacing	\$25,000,000
	1	B763.1	MP: 600.17	I-95 (New England Thruway) Bridge Maintenance Cleaning for Steel Preservation - 2021	\$700,000
	3	B284.1	MP: 605.76	North Avenue Bridge over I-95 (New England Thruway) - Replacement	\$18,000,000
	1	I112.1	NY Div.	Replacement of ITS Equipment in New York Division	\$5,000,000
2021 Total:					\$118,070,000
2022	1	A169.1	MP: 18.80	New York Maintenance Facility - Replace Metal Buildings	\$2,500,000
	1	H345.1	MP: 600.00	I-95, New England Thruway: Highway Improvements	\$48,000,000
	1	B780.1	MP: 600.17	I-95 (New England Thruway) Bridge Maintenance Cleaning for Steel Preservation - 2022	\$700,000
	1	H864.2	MP: 640.00	Garden State Parkway Connector (MP GS0.00 to MP GS2.40): Pavement Resurfacing	\$3,500,000
	4	B778.1	NY Div.	New York Division: On-Demand Repair Contract - 2023-2024	\$3,000,000
2022 Total:					\$57,700,000

New York Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2023	1	A361.1	MP: 18.80	Nyack Maintenance - Construct Vehicle Wash Bay and Storage	\$2,313,000
	1	H139.1	MP: 24.00	North of Garden State Parkway Connector (MP 24.0) to south of I-287/Route 17S (Exit 15, MP 29.4): Pavement Resurfacing	\$12,200,000
	1	H440.1	MP: 43.00	South of Harriman Toll Barrier (Exit 16, MP 43.0) to north of Woodbury Toll Barrier (MP 46.0): Pavement Resurfacing	\$5,000,000
	1	A877.1	MP: 45.20	Harriman Maintenance Section - Equipment Storage Building Wash Bay	\$950,000
	1	H161.1	MP: 46.00	North of Harriman Toll Barrier (MP 46.0) to Newburgh (MP 60.1): Pavement Resurfacing	\$28,200,000
	3	B884.1	MP: 47.58	Pine Hill Road Bridge over Thruway - Replacement	\$6,500,000
	1	B782.1	MP: 600.17	I-95 (New England Thruway) Bridge Maintenance Cleaning for Steel Preservation - 2023	\$700,000
	4	B728.1	MP: 600.23	Rehabilitation of Four I-95 (New England Thruway) Bridges	\$1,500,000
	4	B630.1	MP: 601.56	222nd Street and Dyre Avenue Pedestrian Bridges and Baychester Road Bridge: Substructure Rehabilitations	\$3,500,000
	1	B661.1	MP: 605.09	I-95 (New England Thruway) Viaduct, Railroad Span (New Rochelle) - Rehabilitation	\$4,000,000
	1	B2223.1	MP: 607.64	Chatsworth Avenue Bridge over I-95 (New England Thruway) - Rehabilitation	\$2,500,000
	1	B700.1	MP: 607.72	Larchmont Station Plaza - Substructure Repairs	\$2,000,000
2023 Total:					\$69,363,000
2024	2	H138.1	MP: 11.30	I-287 (MP 11.00) to Governor Mario M. Cuomo Bridge Toll Barrier (MP 13.0): Pavement Resurfacing	\$3,900,000
	2	B635.1	MP: 16.56	New York Division: Paint 5 Bridges with Poor Paint Condition Ratings	\$5,250,000
2024 Total:					\$9,150,000
2020-2024 New York Division Total:					\$275,883,000

Albany Division Projects

2020	1	B686.1	MP: 84.14	Albany Division: Bridge Scour Repairs at Various Locations	\$1,200,000
	4	B725.1	MP: 113.22	Catskill Creek Slope Stabilization	\$2,500,000
	1	B687.1	MP: 141.36	Route 295 Bridge and MP 141.36: Normanskill Creek Bridge - Steel Repairs	\$3,100,000
	1	A829.1	MP: 141.90	Albany Maintenance Section: Replace Salt Shed	\$1,400,000

Albany Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2020	1	H352.1	MP: 141.90	I-787 (Exit 23, MP 141.9) to Northway (Exit 24, MP 148.15): Concrete Pavement Diamond Grinding Southbound Only	\$2,000,000
	3	A368.2	MP: 141.92	Administrative Headquarters - Computer Room Renovations	\$2,000,000
	4	A368.3	MP: 141.92	Administrative Headquarters - TSOC and State Police - Renovations	\$3,000,000
	4	B735.1	MP: 801.08	Castleton Bridge - Rehabilitation	\$30,000,000
	2	H15.4	ALB Div.	Albany Division: Various Culvert Rehabilitations/Replacements - 2020	\$3,500,000
2020 Total:					\$48,700,000
2021	1	H331.3	MP: 121.20	North of Coxsackie (MP 121.2) to south of Albany (MP 141.9): Safety Upgrades	\$5,000,000
	4	B778.2	ALB Div.	Albany Division: On-Demand Repair Contract - 2022-2023	\$3,000,000
2021 Total:					\$8,000,000
2022	1	A828.2	MP: 91.40	Salt Storage Building at Saugerties Maintenance Section	\$450,000
	1	H1138.1	MP: 93.80	North of Kingston (MP 93.8) to south of Saugerties (MP 100.8): Pavement Resurfacing	\$6,000,000
	1	A171.1	MP: 103.00	Malden Service Area - Rehabilitate/Replace Wastewater Treatment Plant	\$1,000,000
	1	H1134.1	MP: 109.30	South of Catskill (MP 109.3) to south of Coxsackie (MP 121.2): Pavement Resurfacing	\$10,000,000
	1	A360.1	MP: 141.90	Albany Maintenance Facility - Replace Metal Building	\$3,000,000
	1	I113.1	ALB Div.	Replacement of ITS Equipment in Albany Division	\$4,000,000
2022 Total:					\$24,450,000
2023	3	B346.1	MP: 112.57	Leeds-Old Kings Highway Bridge over Thruway - Replacement	\$6,500,000
	1	B629.1	MP: 128.08	Thruway Bridge over Hannacroix Creek - Rehabilitation	\$3,000,000
2023 Total:					\$9,500,000
2024	1	H435.1	MP: 100.80	South of Saugerties (MP 100.80) to south of Catskill (MP 109.30): Pavement Resurfacing	\$7,100,000
	1	B681.1	MP: 131.90	Thruway Bridge over Coeymans Creek - Rehabilitation	\$6,000,000
	1	H140.1	MP: 154.40	West of Schenectady / I-890 (Exit 25, MP 154.40) to west of Schenectady / Scotia (Exit 26, MP 163.30): Pavement Resurfacing	\$9,500,000
2024 Total:					\$22,600,000
2020-2024 Albany Division Total:					\$113,250,000

Syracuse Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2020	3	A354.1	MP: 252.71	Verona Maintenance - Construct Municipal Sewer / Water Connections	\$750,000
	1	H1147.2	MP: 304.50	Weedsport (Exit 40, MP 304.5) to east of Waterloo (MP 313.8): Safety Upgrades	\$2,500,000
	3	B498.1	MP: 310.98	Thruway Bridge over Crane Brook - Replacement	\$10,000,000
	1	A882.1	MP: 327.10	Construction of New Salt Shed at Geneva Interchange (Exit 42)	\$300,000
	4	B745.3	SYR Div.	Syracuse Division: On-Demand Repair Contract - 2021-2022	\$3,000,000
2020 Total:					\$16,550,000
2021	3	H337.1	MP: 284.10	Electronics Parkway (Exit 37, MP 284.1) to I-690 (Exit 39, MP 289.3): Pavement Replacement	\$70,000,000
	3	B695.1	MP: 287.11	Thruway Bridge over Onondaga Parkway - Rehabilitation	\$3,000,000
	3	B696.1	MP: 287.25	Thruway Bridge over Onondaga Lake Outlet - Rehabilitation	\$9,000,000
	3	B193.1	MP: 288.13	Thruway Bridge over CSX Railroad (Geddes) - Replacement	\$8,000,000
	3	B914.1	MP: 292.06	Warners-Baldwinsville Road Bridge over Thruway - Removal	\$1,500,000
	3	B439.1	MP: 292.49	Warners-Ionia Road Bridge over Thruway - Replacement	\$7,000,000
	1	B754.1	SYR Div.	Syracuse Division: Bridge Preservation for Various Bridges - 2021	\$7,000,000
2021 Total:					\$105,500,000
2022	1	H162.1	MP: 197.90	West of Canajoharie (MP 197.9) to east of Little Falls (MP 210.3): Pavement Resurfacing	\$10,400,000
	1	H141.1	MP: 262.00	Canastota (Exit 34, MP 262.0) to west of Canastota (MP 268.0): Pavement Resurfacing	\$5,000,000
	3	A348.1	MP: 278.90	Tarbell Road Maintenance Building (M3341) - Reconfigure/Refurbish	\$8,500,000
	1	A172.1	MP: 304.20	Weedsport Maintenance Section - Renovations to Section Maintenance Building and Roof Replacement	\$1,250,000
	3	A299.3	SYR Div.	Construct Sandblast Booth in Syracuse Division	\$750,000
	4	B778.3	SYR Div.	Syracuse Division: On-Demand Repair Contract - 2023-2024	\$3,000,000
2022 Total:					\$28,900,000
2023	2	A865.1	MP: 210.00	Iroquois and Chittenango Service Areas - Rehabilitate/Replace Wastewater Treatment Plants	\$1,450,000
	1	H430.1	MP: 210.30	Little Falls (Exit 29A, MP 210.3) to Herkimer (Exit 30, MP 220.0): Pavement Resurfacing	\$10,800,000
	1	A173.1	MP: 252.70	Verona Maintenance Section - Equipment Storage Building Wash Bay	\$750,000
	1	H163.1	MP: 253.00	West of Verona (MP 253.0) to west of Canastota (MP 262.0): Pavement Resurfacing	\$18,000,000

Syracuse Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2023	4	A865.2	MP: 310.00	Port Byron and Clifton Springs Service Areas - Rehabilitate/Replace Wastewater Treatment Plants	\$1,900,000
	1	H350.1	MP: 320.70	Waterloo (Exit 41) to Geneva (Exit 42): Pavement Resurfacing	\$13,600,000
	3	B697.1	MP: 327.54	Thruway Bridge over Canandiagua Outlet - Replacement	\$13,400,000
	1	A356.1	SYR Div.	Syracuse Division: Upgrade Waste Water Treatment Plants Division-Wide	\$2,000,000
	1	I114.1	SYR Div.	Replacement of ITS Equipment in Syracuse Division	\$4,000,000
2023 Total:					\$65,900,000
2024	3	B573.1	MP: 261.73	North Peterboro Street (Route 13) Bridge over Thruway - Replacement	\$6,000,000
	1	B679.2	MP: 285.67	Syracuse Division: Bridge Painting at Various Locations	\$4,000,000
	1	H428.1	MP: 313.80	West of Weedsport (MP 313.8) to Waterloo (Exit 41, MP 320.7): Pavement Resurfacing	\$7,000,000
	1	A864.1	MP: 340.20	Manchester Maintenance Section: Addition and Roof Replacements	\$1,500,000
2024 Total:					\$18,500,000
2020-2024 Syracuse Division Total:					\$235,350,000

Buffalo Division Projects

2020	1	H341.1	MP: 483.00	East of Westfield (MP 483.0) to Pennsylvania State Line (MP 496.0) Eastbound: Pavement Resurfacing	\$20,000,000
	1	B469.1	MP: 914.35	North and South Grand Island Bridges - Retrofit / Repair Roller Bearings, Pins and Hangers	\$20,500,000
	1	B645.1	MP: 920.35	North Grand Island Bridges - Steel Repairs	\$15,000,000
2020 Total:					\$55,500,000
2021	3	B230.1	MP: 411.60	Ransom Road Bridge over Thruway - Replacement	\$7,800,000
	1	B668.1	MP: 485.59	Chautauqua Creek (Eastbound & Westbound) and Hawley Street Bridges - Rehabilitations	\$1,000,000
	1	B772.1	MP: 914.35	South Grand Island Bridges: Maintenance Cleaning for Steel Preservation - 2021	\$400,000
	3	B778.4	BUF Div.	Buffalo Division: On-Demand Repair Contract - 2022-2023	\$3,000,000
2021 Total:					\$12,200,000

Buffalo Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2022	1	H142.1	MP: 351.40	Victor (Exit 45, MP 351.4) to Henrietta (Exit 46, MP 362.5): Pavement Rehabilitation, Safety Upgrades and Drainage Improvements	\$7,500,000
	1	H1153.1	MP: 378.20	LeRoy (Exit 47, MP 378.2) to West of Batavia (Exit 48, MP 393.7): Pavement Resurfacing	\$14,500,000
	1	H143.1	MP: 393.70	West of Batavia (MP 393.7) to West of Pembroke (MP 404.7): Pavement Resurfacing	\$10,100,000
	1	H144.1	MP: 419.40	East of Williamsville Toll Barrier (MP 419.4) to west of Buffalo-Williams Street (Exit 52A, MP 425.9): Pavement Resurfacing	\$17,800,000
	1	H145.1	MP: 430.60	Lackawanna Toll Barrier (MP 430.6) to west of Hamburg (MP 438.5): Pavement Resurfacing	\$7,500,000
	1	H146.1	MP: 467.00	Dunkirk (Exit 59, MP 467.0) to east of Westfield (Exit 60, MP 483.0): Pavement Resurfacing	\$16,200,000
	1	B779.1	MP: 914.35	South and North Grand Island Bridges: Maintenance Cleaning for Steel Preservation - 2022	\$800,000
2022 Total:					\$74,400,000
2023	3	B724.1	MP: 362.44	West Henrietta Interchange Bridge over Thruway - Replacement	\$9,000,000
	1	B699.1	MP: 434.48	Thruway Bridges over Erie RR - Rehabilitations	\$2,000,000
	1	B784.1	MP: 908.75	Thruway Bridge over Scajaquada Creek - Retaining Wall Stabilization	\$5,500,000
	1	B781.1	MP: 914.35	South and North Grand Island Bridges: Maintenance Cleaning for Steel Preservation - 2023	\$800,000
2023 Total:					\$17,300,000
2024	1	H438.1	MP: 416.90	East of Depew (Exit 49, MP 416.90) to east of Niagara Falls (Exit 50, MP 419.40): Pavement Resurfacing	\$2,500,000
	4	A352.1	MP: 423.19	Walden Avenue Maintenance Facility - Replace Metal Buildings and Construct Vehicle Wash Bay	\$5,900,000
	1	H152.1	MP: 425.90	I-90, west of William St. (Exit 52A) to west of West Seneca (Exit 54) and I-190 (Niagara Section), I-90 to Route 266 (Exit 17): Pavement Resurfacing	\$20,600,000
	1	H439.1	MP: 438.50	West of Hamburg (Exit 57, MP 438.50) to east of Eden-Angola (Exit 57A, MP 443.60), Eastbound: Pavement Resurfacing	\$3,000,000
	1	B679.1	MP: 447.78	Buffalo Division: Bridge Painting at Various Locations	\$4,000,000
	1	B986.1	MP: 454.47	Thruway over Cattaraugus Creek Bridge - Rehabilitation	\$10,000,000
	1	H437.1	MP: 455.20	East of Silver Creek (MP 455.2) to Dunkirk (Exit 59, MP 467.0): Pavement Resurfacing	\$11,900,000
	3	B521.1	MP: 901.06	Weiss Street Bridge over Thruway - Removal	\$1,000,000

Buffalo Division Projects

LETTING YEAR	QTR.	ITEM NO.	MILEPOST	PROJECT DESCRIPTION	ESTIMATED CONSTRUCTION CONTRACT VALUE
2024	3	B558.1	MP: 915.46	Beaver Island State Parkway Bridge over I-190 Thruway - Replacement	\$9,000,000
	1	B641.1	MP: 920.35	North Grand Island Southbound and Northbound Bridges - Painting	\$37,500,000
2024 Total:					\$105,400,000
2020-2024 Buffalo Division Total:					\$264,800,000

Statewide Projects

2020	4	H748.1	TWY wide	Statewide: Pavement Safety Striping - 2021	\$2,000,000
2020 Total:					\$2,000,000
2021	4	H752.1	TWY wide	Statewide: Pavement Safety Striping - 2022	\$2,000,000
2021 Total:					\$2,000,000
2022	1	B773.1	TWY wide	Statewide: Bridge Preservation for Various Bridges - 2022	\$9,500,000
	1	H20.2	TWY wide	Statewide: Various Culvert Rehabilitations/Replacements - 2022	\$3,500,000
	4	H749.1	TWY wide	Statewide: Pavement Safety Striping - 2023	\$2,000,000
2022 Total:					\$15,000,000
2023	1	B776.1	TWY wide	Statewide: Bridge Preservation for Various Bridges Statewide - 2023	\$20,000,000
	1	H25.1	TWY wide	Statewide: Various Culvert Rehabilitations/Replacements - 2023	\$5,000,000
	4	H750.5	TWY wide	Statewide: Pavement Safety Striping - 2024	\$2,000,000
2023 Total:					\$27,000,000
2024	1	B785.1	TWY wide	Statewide: Bridge Rehabilitations - 2024	\$45,000,000
	4	I116.1	TWY wide	Statewide: Replacement of ITS Equipment	\$3,000,000
2024 Total:					\$48,000,000
2020-2024 Statewide Total:					\$94,000,000

Thruway Project Totals by Division

2020-2024 New York Division Total:	\$275,883,000
2020-2024 Albany Division Total:	\$113,250,000
2020-2024 Syracuse Division Total:	\$235,350,000
2020-2024 Buffalo Division Total:	\$264,800,000
2020-2024 Statewide Total:	\$94,000,000
2020-2024 Thruway Authority Total:	\$983,283,000

Thruway Project Totals by Year

2020 Total:	\$144,350,000
2021 Total:	\$245,770,000
2022 Total:	\$200,450,000
2023 Total:	\$189,063,000
2024 Total:	\$203,650,000
2020-2024 Thruway Authority Total:	\$983,283,000

9/19/19



APPENDIX

To: Dorraine Steele, New York State Thruway Authority From: Suzanne Seegmuller
Subject: Budget Forecast
Date: October 22, 2019

Reference: NYSTA 2020 Budget Forecast

The New York State Thruway Authority (“the Authority”) has requested that Stantec Consulting Services, Inc. provide updated forecasts of traffic and revenue for budgeting purposes. It is important to note that the forecasts contained herein represent our baseline view of projected traffic and toll revenue trends without any changes to toll rates. These traffic and revenue forecasts have been prepared for 2019 – 2023.

In addition to the transition to all-electronic toll collection (AETC) at the Gov. Mario M. Cuomo Bridge (formerly the Tappan Zee Bridge), which occurred on April 23, 2016, the remaining toll barriers were converted to AETC in the year 2018 as follows:

- Grand Island Bridges Toll Barriers on March 30th
- Harriman Barrier on September 28th
- Yonkers Barrier on November 19th
- New Rochelle Barrier on December 20th
- Spring Valley Barrier on December 20th

The Authority plans to convert the rest of the system (ticket controlled) to AETC in October 2020.

Economic Backdrop and Outlook for the Future

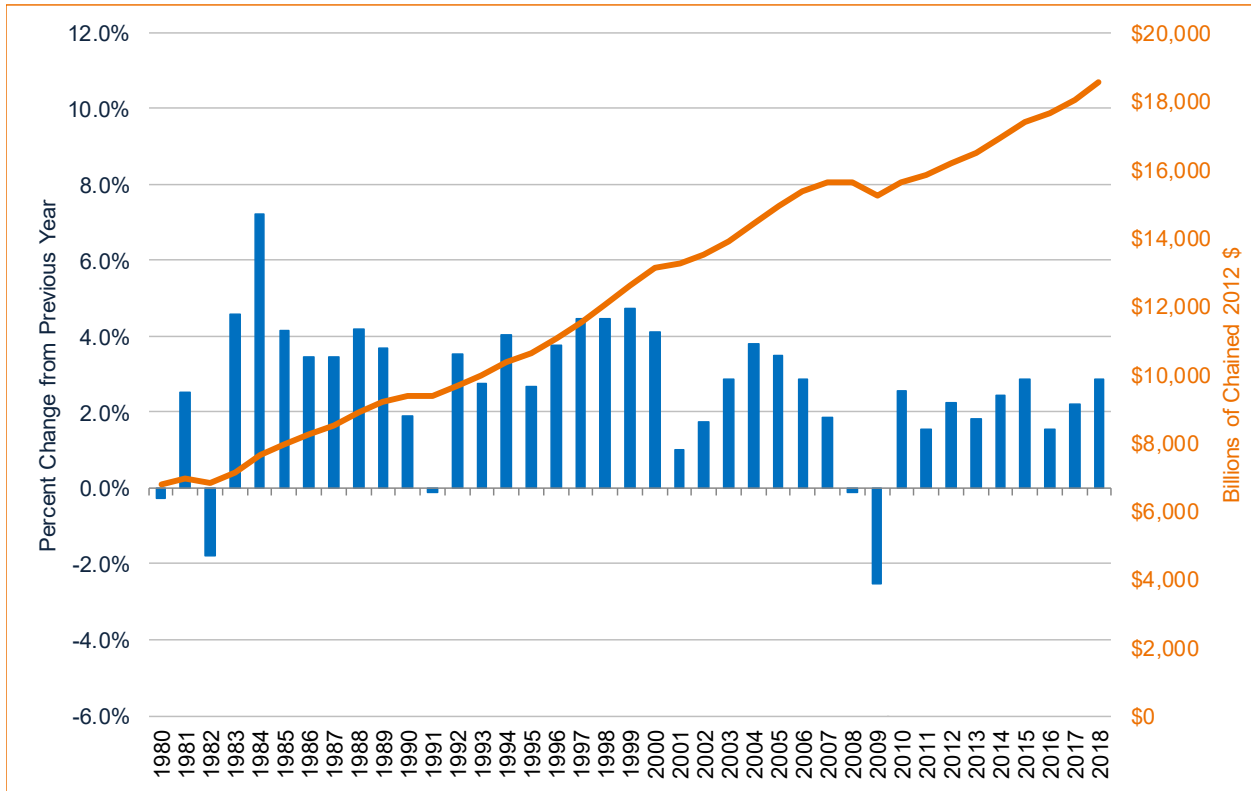
In the preparation of Thruway traffic and toll revenue forecasts, we considered a number of important national and regional economic trends that influence traffic and motorist behavior. Historically, passenger vehicle traffic has generally correlated to Gross Domestic Product (GDP), while truck traffic growth has shown some correlation to the Industrial Production Index (IPI). Factors such as unemployment and gas prices have also affected vehicle-miles traveled (VMT) by passenger vehicles.

Gross Domestic Product (GDP)

Figure 1 shows the real annual GDP from 1980 through the end of 2018, the most recent annual data available. From 2000 through 2018, real GDP in the United States increased at an average annual rate of 1.9 percent. This period included the 2001 recession and the recession that lasted from late 2007 until June 2009. This most recent recession, which some economists termed the “Great Recession”, was far more severe than originally predicted and significantly deeper and longer than previous recessions. In 2008, real GDP decreased by 0.1 percent, and in 2009 the recession reached its low point, with real GDP decreasing by 2.5 percent. Since 2010, the U.S. economy has recovered and shown consistent growth. Real GDP

increased on an annual basis by between 1.6 and 2.6 percent in the years 2010 to 2016, then increased at an annual rate of 2.2 percent in 2017 and 2.9 percent in 2018, according to the most recently available data.¹ The first quarter 2019 real GDP was estimated at \$ 18.9 trillion.² Note that gray shaded areas on the figures in this section represent U.S. recessions as determined by the National Bureau of Economic Research. Recessions are technically defined as two consecutive calendar quarters of negative GDP growth.

Figure 1: Real Gross Domestic Product, Annual 1980 to 2018



Source: U.S. Census Bureau, Bureau of Economic Analysis, National Bureau of Economic Research
 Note: gray shaded areas of the graphic represent U.S. recessions

Financial and economic analysts expect the U.S. economy to continue to grow in the near-term future. The most recent consensus forecast, derived from projections from more than 50 financial institutions and professional forecasting firms, is that real GDP will grow by 2.5 percent in 2019 and 1.8 percent in 2020.³

¹ Bureau of Economic Analysis, News Release: [Gross Domestic Product](#), May 30, 2019.

² Ibid.

³ "Blue Chip Economic Indicators: Top Analysts' Forecasts of the U.S. Economic Outlook for the Year Ahead", Wolters and Kluwer Law & Business, June 10, 2019.

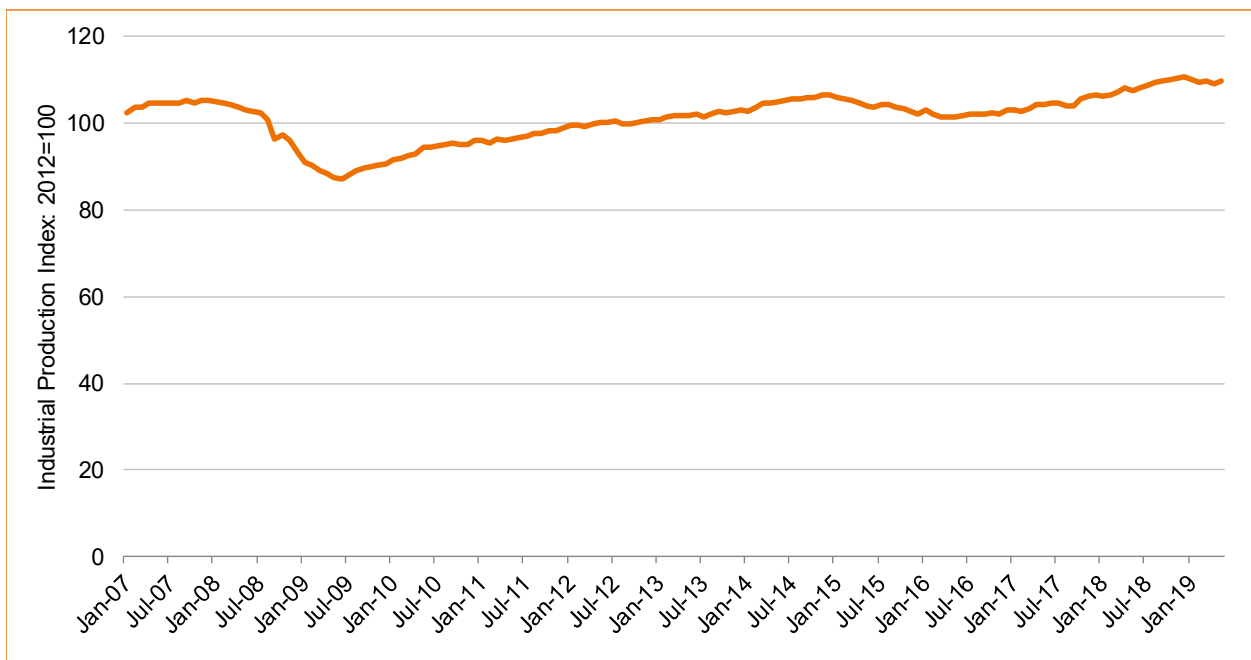
Longer term, in the 2021-2025 timeframe, the consensus forecast is for real GDP to continue to grow by 1.9 percent annually.⁴

Industrial Production Index (IPI)

The Industrial Production Index (IPI) is a measure of real output published by the Board of Governors of the Federal Reserve System. The index is measured as a percentage of real output of a given base year, in this case 2012. Stantec has been tracking traffic volumes on the Thruway and other toll facilities throughout the northeast for over a decade, and has found that growth in commercial traffic generally correlates to growth in IPI.

As shown in Figure 2, the IPI hit its most recent trough in June 2009, the last month of the 2007 to 2009 recession. Since that time, it has generally been on an upward trajectory, increasing by 25.8 percent from June 2009 to May 2019.

Figure 2: Industrial Production Index (IPI), Monthly January 2007 to May 2019



Source: Board of Governors of the Federal Reserve System, National Bureau of Economic Research

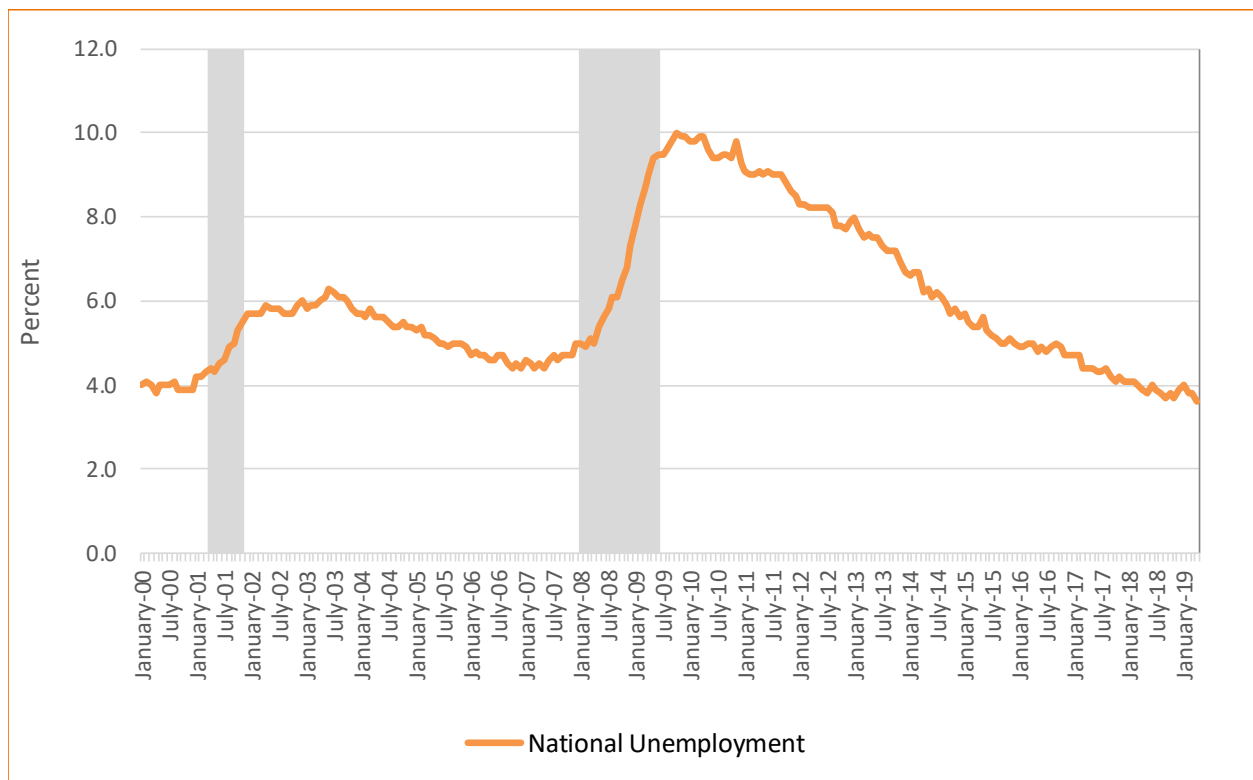
⁴ Blue Chip Economic Indicators: Top Analysts' Forecasts of the U.S. Economic Outlook for the Year Ahead", Wolters and Kluwer Law & Business, March 10, 2019.

Based on consensus forecasts developed by financial institutions and industry analysts, the IPI is forecasted to increase by 1.7 percent in 2019 and by 1.4 percent in 2020.⁵ Longer term, in the 2021-2025 timeframe, the consensus forecast is for the index to continue to grow by 2.0 percent annually.⁶

Unemployment Rates

At the beginning of 2008, the national unemployment rate was 5.0 percent, as it had been similarly for years. By October 2009 during the depth of the recent recession, unemployment peaked at approximately 10.0 percent. Total employment has since recovered and finally eclipsed its pre-recession peak, reaching 156.8 million persons in April 2019.⁷ Consequently, as shown in Figure 3, the national unemployment rate has fallen to 3.6 percent as of April 2019.

Figure 3: Civilian Unemployment Rate, Seasonally Adjusted, Monthly January 2000 to April 2019



Source: U.S. Department of Labor, Bureau of Labor Statistics, National Bureau of Economic Research

Note: gray shaded areas of the graphic represent U.S. recessions

⁵ Blue Chip Economic Indicators: Top Analysts' Forecasts of the U.S. Economic Outlook for the Year Ahead", Wolters and Kluwer Law & Business, June 10, 2019.

⁶ Blue Chip Economic Indicators: Top Analysts' Forecasts of the U.S. Economic Outlook for the Year Ahead", Wolters and Kluwer Law & Business, March 10, 2019.

⁷ "Bureau of Labor Statistics, Economic News Release, Employment Situation Summary Table A. Household data, seasonally adjusted, data extracted June 17, 2019.

Long-term forecasts of employment tend to differ, depending on varying assumptions of the impact of long-term structural trends such as advances in information technology, outsourcing, and an aging population. The U.S. Congressional Budget Office (CBO) has forecasted that the unemployment rate will remain under 5.0 percent through 2029 with a forecast of 4.2 percent for 2021, 4.6 percent for 2022, then increasing to 4.8 percent for the 2023-2027 time period before falling to 4.7 percent for 2028-2029.⁸

National Trends in Vehicle Miles Traveled (VMT)

The United States experienced an historic flattening and drop in vehicle-miles traveled (VMT) on its highways, starting in 2008 and lasting until approximately 2014. A reduction in VMT means less revenue – in the form of gasoline taxes or tolls - for funding transportation operations, maintenance and capital expenses. However, beginning in mid-2014, VMT experienced a growth trend, increasing at an even more rapid rate than in the 1990s until a very recent plateau occurred in early 2018.

Figure 4 depicts the 12-month moving total of national travel mileage on all U.S. highways, from 1971 through the first quarter of 2019. As seen in this figure, there were temporary reductions in VMT during military combat, oil crises and economic recessions. Despite these temporary “dips”, the VMT continued to grow rapidly over the years. The figure shows that, in recent years, with the exception of short, flat periods during the 1991 and 2001 recessions (each less than one year), VMT grew at a steady pace through about 2005, then grew at a much slower pace through 2008. The increase in gas prices and the downturn in economic activity that took hold in late 2008 resulted in a significant reduction in total national travel mileage after the December 2007 peak. VMT declined throughout 2008 and early 2009. From the official end of the recession in mid-2009 through 2013, VMT generally remained flat. Then, in 2014 through 2017, VMT increased at a strong rate not seen since the late 1990s. 2016 experienced the largest annual increase in VMT since tracking began in 1971.⁹ This upward trend in VMT is likely due to an improved economy, employment and population growth, and a reduction in fuel prices.

In addition, recent data has shown that the Millennials, many of whom delayed purchasing a car, are now buying cars and driving more because they are now employed. On the other hand, there are factors that may slow down VMT growth over time, including baby boomers retiring and driving less, the ability of workers to work remotely, and communication technologies that can substitute for in-person interaction.¹⁰ The State Smart Transport Initiative (SSTI) concluded in a 2014 report that a decline in per-capita VMT reflected “changing demographics, saturated highways, and a rising preference for compact, mixed-use neighborhoods, which reduce the need for driving.”¹¹ These factors may have come into play in the past few years; from late 2017 through early 2019, nationwide VMT has experienced little growth.

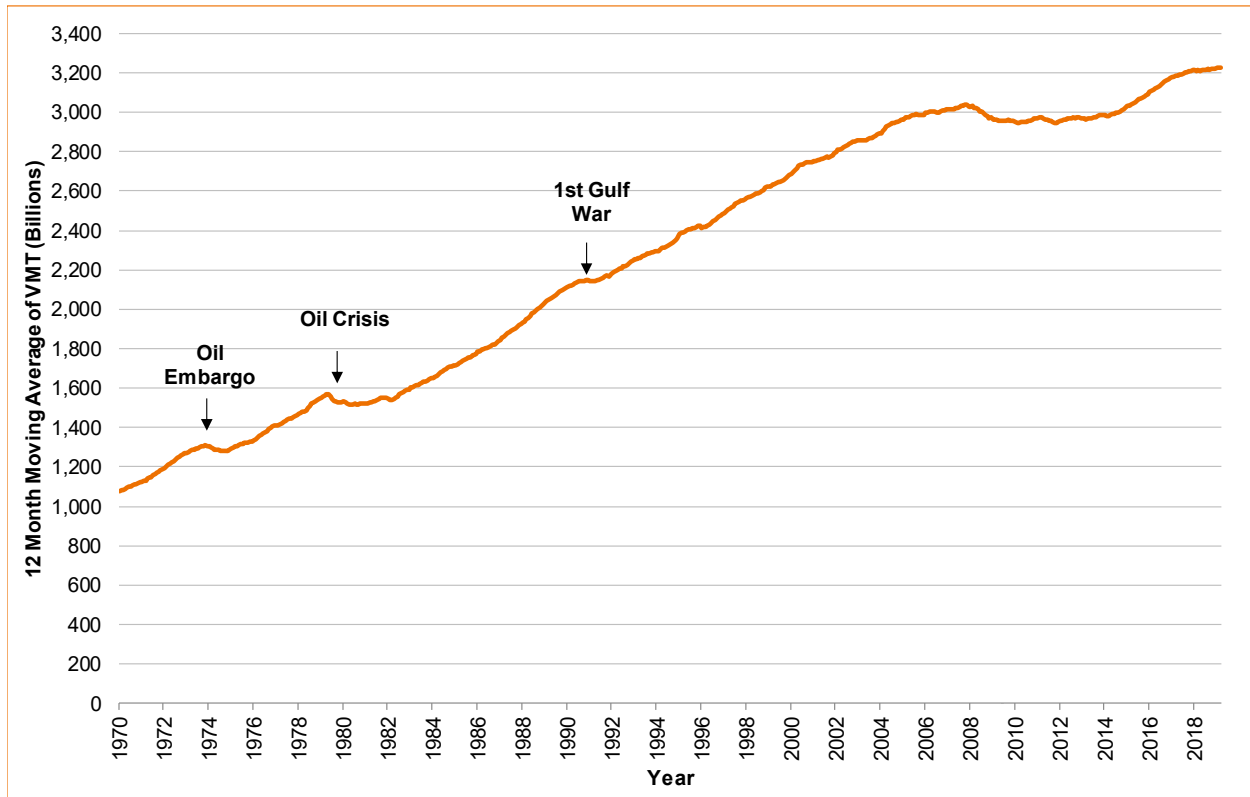
⁸ “The Budget and Economic Outlook: 2019 to 2029”, Congressional Budget Office Report, January 2019.

⁹ U.S. Department of Energy, Alternative Fuels Data Center, Maps and Data - Annual Vehicle Miles Traveled in the U.S.

¹⁰ “Vehicle Miles Traveled: Another Look at Our Evolving Behavior”, Jill Mislinski, March 17, 2017.

¹¹ State Smart Transportation Initiative News, “Per capita VMT drops for ninth straight year; DOTs taking notice,” Chris Cahill, February 24, 2014.

Figure 4: Vehicle Miles Traveled, Monthly January 1971 to March 2019



Source: U.S. Department of Transportation, Federal Highway Administration, National Bureau of Economic Research

The Federal Highway Administration prepares long term (20- and 30-year) forecasts of VMT. In its May 2018 report (the most recent report available), FHWA highlights “prospects for future economic growth, alternative interpretations of the causes of recent declines in vehicle ownership and use (particularly among younger Americans), and the potential effects on vehicle use of dramatic innovations in technology such as the advent of autonomous vehicles” as sources of uncertainty in its forecasts. While not attempting to capture the impacts of all these uncertainties in its forecasts, FHWA projects VMT growth under three different economic outlooks: baseline, low economic growth, and high economic growth, with the most recent forecasts shown in Table 1.¹² Interestingly, growth in vehicle mileage for single unit and combination trucks is forecast to be at a higher rate than light duty vehicles.

¹² “FHWA Forecasts of Vehicle Miles Traveled (VMT): Spring 2018,” Office of Highway Policy Information, May 2018, as accessed on September 5, 2018 at https://www.fhwa.dot.gov/policyinformation/tables/vmt/vmt_forecast_sum.pdf

Table 1: FHWA Long-Term Growth Forecasts of National Vehicle Miles Traveled (VMT)

Vehicle Class	Compound Annual Growth Rates					
	Low Economic Growth Outlook		Baseline Economic Growth Outlook		High Economic Growth Outlook	
	2016-2036 (20-Year)	2016-2046 (30-Year)	2016-2036 (20-Year)	2016-2046 (30-Year)	2016-2036 (20-Year)	2016-2046 (30-Year)
Light-Duty Vehicles	0.9%	0.7%	1.1%	0.8%	1.3%	1.0%
Single-Unit Trucks	1.4%	1.5%	1.8%	1.9%	2.3%	2.4%
Combination Trucks	1.2%	1.2%	1.6%	1.6%	1.9%	1.9%
TOTAL	0.9%	0.8%	1.2%	0.9%	1.3%	1.1%

Source: Office of Highway Policy Information U.S. DOT, Federal Highway Administration, May 2018. Most recent report available.

The Energy Information Administration (EIA) projects a similar differential between light duty vehicles and trucks for the 2018-2050 timeframe with lower projected rates of growth than in the FHWA forecasts for two vehicle categories but higher projected growth for the heaviest vehicle category:¹³

- 0.6 percent annually for light duty vehicles less than 8,501 pounds,
- 1.4 percent annually for light duty trucks (commercial trucks 8,501 to 10,000 pounds gross vehicle weight rating), and
- 1.3 percent annually for freight trucks greater than 10,000 pounds.

Fuel Cost Impacts on Travel

Gas prices are often cited as one of the primary factors that have a significant impact on travel trends. Figure 5 presents recent historical and projected gasoline and crude prices from the U.S. Energy Information Administration (EIA). Between the depths of the recession in December 2008 and mid-2011, gas prices jumped by more than 130 percent to \$4.13 in today's dollars. After three years of high gas prices, the prices plunged from \$3.69 in June 2014 to under \$2 per gallon in the first quarter of 2016¹⁴. Between the spring of 2016 and third quarter of 2017, gas prices generally remained in the \$2.20 to \$2.40 range. Since then (September 2017 through May 2019), prices have averaged \$2.65 per gallon, and the most recent EIA report indicates that U.S. monthly average regular gasoline retail prices are expected to be fairly stable for the rest of 2019, averaging \$2.69 per gallon over that period.¹⁵ U.S. regular gasoline retail prices are forecast to average \$2.63 per gallon for 2019 overall and increase slightly to an average of \$2.75 in 2020.¹⁶

¹³ Annual Energy Outlook, 2019, Transportation Sector Key Indicators accessed on March 15, 2019 at <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=7-AEO2019&cases=ref2019&sourcekey=0>

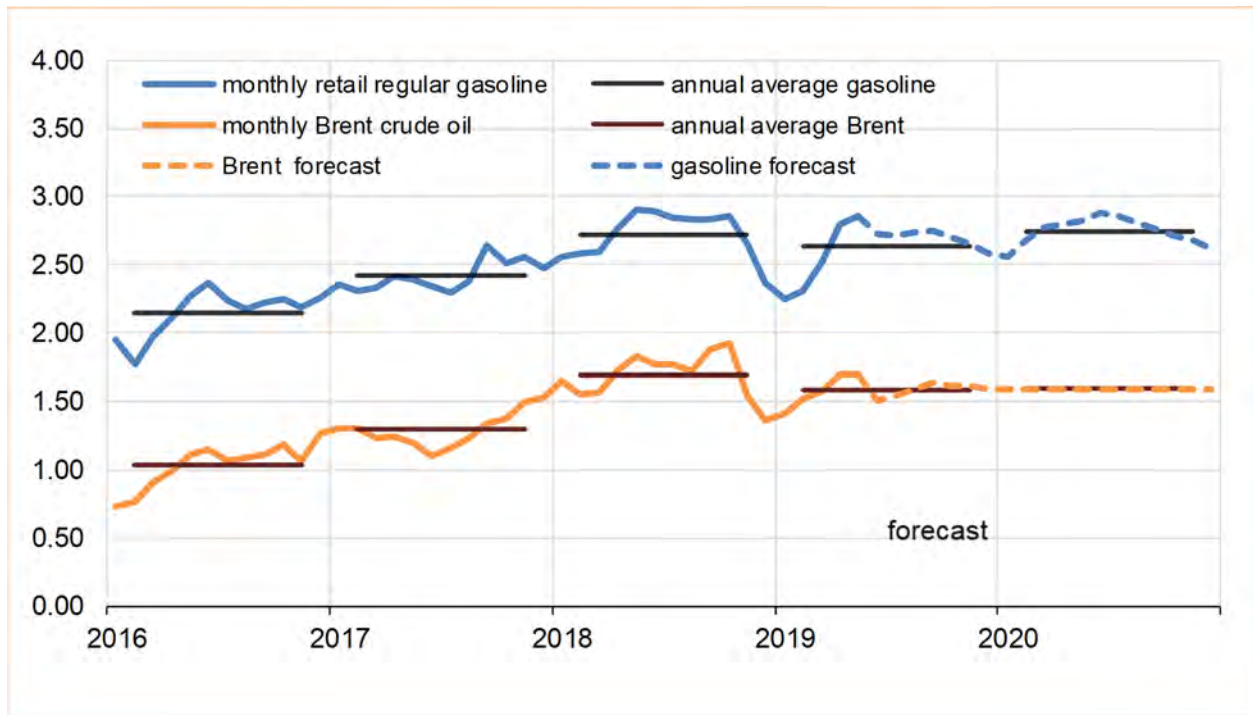
¹⁴ "Short-Term Energy Outlook," U.S. Energy Information Administration, June 2019.

¹⁵ Ibid

¹⁶ Ibid

As shown in the graph, the retail price for gasoline is expected to remain under \$3.00 per gallon in the near-term future. In addition to the reduced gas prices, it is important to note that average fuel economy increased by 29 percent ¹⁷ between 2004 and 2017, the latest year for which final fuel economy data is available.

Figure 5: U.S. Gasoline and Crude Oil Prices, Monthly January 2016 to December 2020



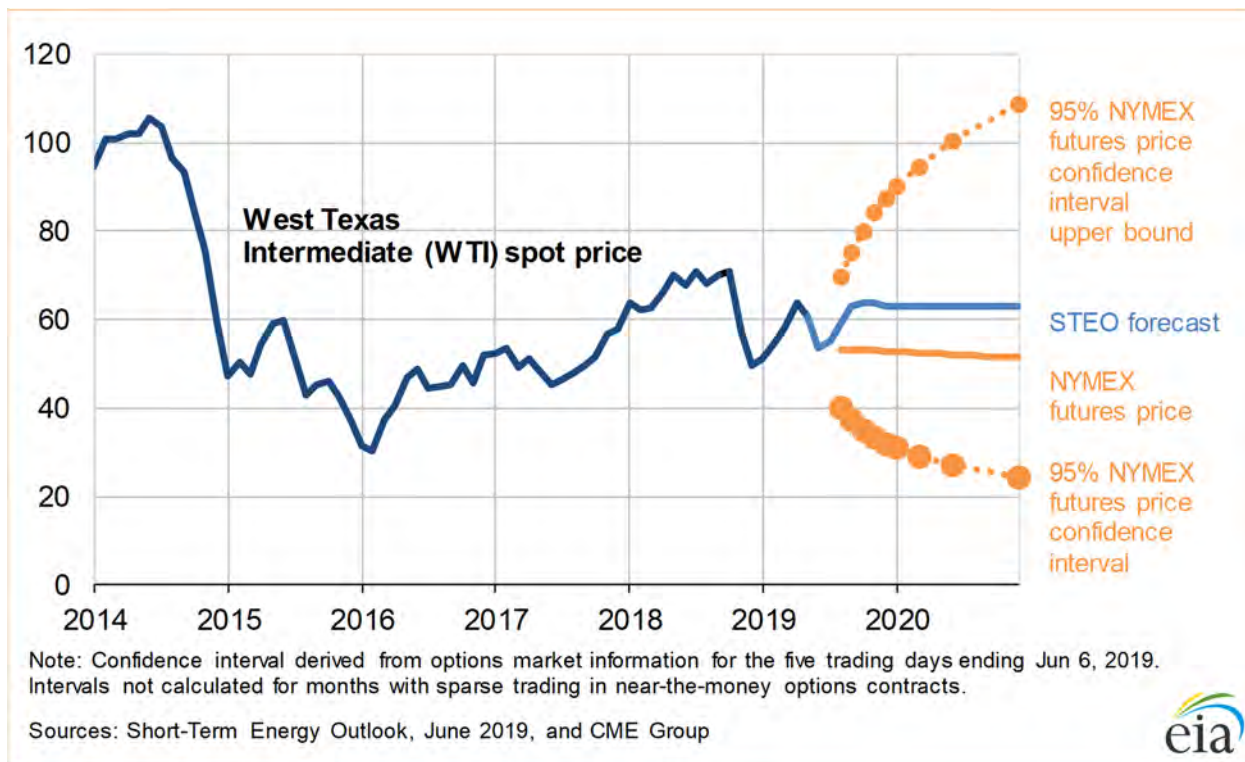
Source: U.S. Department of Energy, U.S. Energy Information Administration, Short-Term Energy Outlook, June 2019

This relatively low, static forecast of future oil and gas prices may be reassuring; however, this figure does not show the level of uncertainty in these projections. Figure 6 presents the EIA’s projections for West Texas Intermediate (WTI) Crude Oil Price. The base projection is similar to that illustrated in Figure 5, but it is the possible range of this price that represents a downside risk to the U.S. economy and VMT. Based on options markets, the 95 percent confidence interval for WTI is between 73 percent more to 61 percent less than current forecasts for December 2020.¹⁸ Recognizing the impact fuel prices have on motorist behavior, with a wide range of possible future prices of oil and gasoline, accurately projecting traffic volumes has become an increasingly difficult task.

¹⁷Executive Summary: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975 EPA Automotive Trends Report, U.S. Environmental Protection Agency, March 2019, page ES6

¹⁸ Short-Term Energy Outlook U.S. Energy Information Administration, June 2019.

Figure 6: West Texas Intermediate (WTI) Crude Oil Prices and NYMEX Confidence Intervals, Monthly January 2014 to December 2020 (dollars per barrel)



Note: Confidence interval derived from options market information for the five trading days ending Jun 6, 2019. Intervals not calculated for months with sparse trading in near-the-money options contracts.

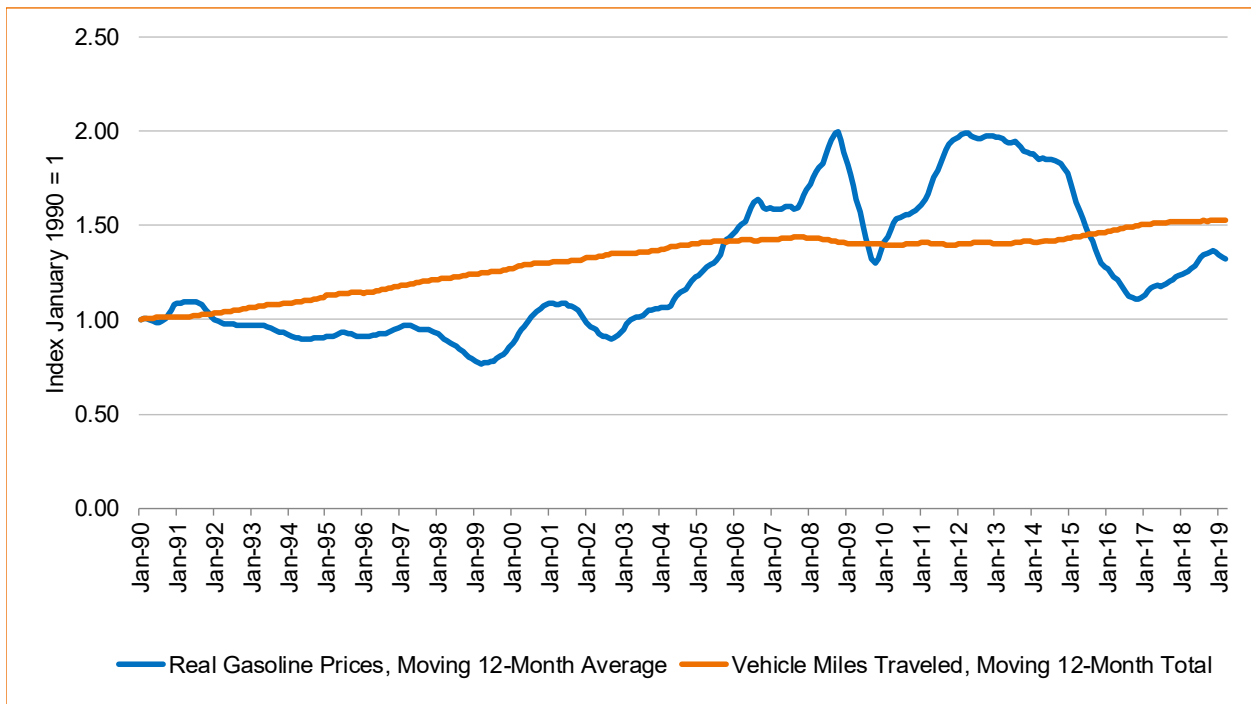
Sources: Short-Term Energy Outlook, June 2019, and CME Group

Source: U.S. Department of Energy, Energy Information Administration, Short-Term Energy Outlook and CME Group, June 2019

To understand the potential impact of future gas prices on traffic, we can look at their historical correlations. Figure 7 presents VMT across the United States as compared to real retail gasoline prices from 1990 through the beginning of 2019. The VMT and real gas prices represent a 12-month moving total and average, respectively, to remove any seasonality factors; all data are indexed to the 12 months ending January 1990. While the Great Recession began at the end of 2007, there was still a flattening, then decline, in vehicle miles traveled that started several years before, which is partially attributed to rising gas prices. The continuation of the decline, post-fall 2008, would be more attributable to the economic meltdown, as gas prices dropped significantly by early 2009. Gas prices then increased throughout the rest of 2009 and through the spring of 2011 with no noticeable change to VMT. However, between 2014 and 2016 there was a precipitous drop in gas prices which coincided with a steep increase in VMT.

These data show that it is difficult to pinpoint the elasticity of travel as it relates to gas prices; however, very large gas price changes do generally result in a change in driving behavior.

Figure 7: National VMT vs. Real Gas Prices, Moving 12-Month Average, 1990 to 2019



Source: U.S. Department of Energy, Energy Information Administration and U.S. Department of Transportation, Federal Highway Administration, June 2019

Baseline Traffic and Toll Revenue Forecasts

As stated previously, AETC began on the Gov. Mario M. Cuomo Bridge (formerly Tappan Zee Bridge) in April 2016. The remaining toll barriers were converted to AETC in 2018, and the rest of the system (ticket controlled) is assumed to have AETC starting in October 2020. No future toll increases are included in these forecasts.

Table 2 presents actual traffic for the Thruway System from 2010 through 2018 and baseline forecasts for 2019 through 2023. As shown in the table, over the first half of the decade, passenger cars saw little growth until the years 2015 and 2016, following a period of economic recovery and significant reduction in gas prices. Over this same timeframe, truck traffic growth was generally strong, especially at the Gov. Mario M. Cuomo Bridge. 2017 had moderate traffic growth, but 2018 saw a slight decrease in overall traffic due to reductions in passenger cars on the controlled system and at the some of the barriers – Grand Island Bridges, Yonkers, and Harriman.

Data through April 2019 suggests that this year will see further reductions in passenger cars at some barriers, and moderate to strong increases in commercial vehicles at most locations, leading to an overall estimated traffic growth of 0.3 percent. We expect overall traffic to continuing growing at a modest rate beyond 2019 as predicted in previous forecasts.

Table 2: Baseline Annual Tolloed Traffic, Actual and Forecasts (in millions)

Year	Passenger Cars			Commercial Vehicles			Total	Annual Growth
	Control System	Gov. Mario M. Cuomo Br.	Other Barriers	Control System	Gov. Mario M. Cuomo Br.	Other Barriers		
2010 ¹	129.0	23.1	70.7	15.7	1.4	7.7	247.6	
2011 ¹	126.6	22.6	70.9	15.8	1.4	7.9	245.2	-1.0%
2012 ¹	127.3	22.9	71.1	15.9	1.5	7.9	246.5	0.5%
2013 ¹	128.2	23.3	71.1	16.0	1.7	8.1	248.4	0.7%
2014 ¹	129.5	23.4	71.4	16.5	1.9	8.3	250.8	1.0%
2015 ¹	134.2	23.6	72.7	17.0	2.0	8.8	258.2	3.0%
2016 ^{1,2}	137.8	24.4	73.5	17.4	2.2	9.0	264.2	2.3%
2017 ¹	139.6	24.6	73.3	17.6	2.4	9.1	266.6	0.9%
2018 ^{1,3}	139.5	24.8	72.5	18.0	2.4	9.3	266.4	-0.1%
2019	140.2	25.5	71.5	18.2	2.4	9.4	267.2	0.3%
2020 ⁴	141.6	25.9	71.8	18.3	2.5	9.5	269.6	0.9%
2021	143.0	26.3	72.4	18.4	2.5	9.6	272.2	1.0%
2022	144.4	26.7	73.2	18.5	2.5	9.7	275.0	1.0%
2023	145.8	27.0	73.6	18.6	2.6	9.8	277.4	0.8%

¹ Actual 2010-2018

² All-Electronic Toll Collection (AETC) began on the Gov. Mario M. Cuomo Bridge (formerly Tappan Zee Bridge) on 4/23/16

³ AETC began at Grand Island Bridges on 3/30/18, Harriman Barrier on 9/28/18, Yonkers Barrier on 11/19/18, and Spring Valley and New Rochelle Barriers on 12/20/18.

⁴ The rest of the system (ticket controlled) is assumed to have AETC starting in October 2020

Note: Numbers may not add due to rounding. Non-revenue traffic not included.

Details on how the current traffic forecast compares to the previous forecast (the 2019 Budget Forecast, completed in June 2016) are presented in Table 3. Data through the end of April 2019 indicates that so far this year passenger car traffic is lower than previously expected, while truck traffic is slightly higher. Overall, traffic is expected to be about 1.5 to 1.6% (4.2 to 4.5 million) below the previous forecast over the next five years.

As in our previous Budget Forecast, we expect continuation of modest traffic growth throughout the forecast period due to estimated economic conditions and travel trends.

Table 3: Baseline Annual Tolled Traffic, Comparison of Current to Previous Forecast (in millions)

Year	Current Forecast				Previous Forecast (2019 Budget)				Difference Between Current & Previous Forecast
	Car Traffic	Truck Traffic	Total Traffic	Annual Growth	Car Traffic	Truck Traffic	Total Traffic	Annual Growth	
2018 ¹	236.8	29.6	266.4		239.3	29.4	268.7		-2.3
2019	237.2	30.0	267.2	0.3%	241.7	29.7	271.4	1.0%	-4.2
2020	239.3	30.3	269.6	0.9%	244.0	30.0	274.0	1.0%	-4.4
2021	241.7	30.5	272.2	1.0%	246.4	30.3	276.7	1.0%	-4.4
2022	244.3	30.7	275.0	1.0%	248.7	30.5	279.3	0.9%	-4.3
2023	246.4	31.0	277.4	0.8%	251.1	30.8	281.9	0.9%	-4.5

¹ Actual

Note: Numbers may not add due to rounding.

Table 4 presents the baseline toll revenue forecasts for the Thruway System. No future toll increases are included in these forecasts. Forecasts for cars and trucks are presented separately for the Control System, Gov. Mario M. Cuomo Bridge, and the remaining toll barriers. Note that the forecasts incorporate a level of Tolls by Mail (“TBM”) revenue ‘uncollectability’ due to factors such as bad license plate images, inability to find customer DMV mailing addresses, or customers not paying the invoice. Additionally, there is an adjustment for the lag in revenue collection from Tolls by Mail customers that has been applied to the first full year of AETC at each facility, as it may take several months or more between the time a toll transaction takes place and when it is paid. Adjustments for commercial vehicle volume discounts are also included in the forecasts shown in the table. In general, moderate growth in toll revenue is expected, with some losses in toll revenue in 2020 and 2021 when AETC begins on the ticket controlled system.

Table 4: Baseline Annual Toll Revenue, Actual and Forecasts (in millions)

Year	Passenger Cars			Commercial Vehicles				Unadj. Total	Lag in Tolls by Mail Collection	Adj. Total	Annual Growth
	Control System	Gov. Mario M. Cuomo Br.	Other Barriers	Control System	Gov. Mario M. Cuomo Br.	Other Barriers	Comm'l Vehicle Disc.				
2010 ¹	\$226.6	\$104.7	\$81.8	\$194.9	\$24.6	\$31.4	\$(22.8)	\$641.2		\$641.2	
2011 ¹	\$220.2	\$102.4	\$81.3	\$196.3	\$24.1	\$32.4	\$(22.7)	\$634.1		\$634.1	-1.1%
2012 ¹	\$220.7	\$103.4	\$81.2	\$196.9	\$26.2	\$32.1	\$(22.8)	\$637.7		\$637.7	0.6%
2013 ¹	\$225.6	\$105.1	\$81.3	\$199.1	\$28.8	\$32.8	\$(23.8)	\$648.9		\$648.9	1.8%
2014 ¹	\$226.5	\$105.1	\$81.6	\$209.6	\$32.2	\$33.6	\$(24.6)	\$664.1		\$664.1	2.3%
2015 ¹	\$237.8	\$106.5	\$83.5	\$219.3	\$34.4	\$35.6	\$(25.5)	\$691.7		\$691.7	4.2%
2016 ^{1,2}	\$245.2	\$103.4	\$84.0	\$227.6	\$38.2	\$36.4	\$(26.6)	\$708.3	\$(6.2)	\$702.1	1.5%
2017 ^{1,3}	\$251.6	\$103.4	\$84.1	\$233.3	\$47.8	\$38.7	\$(27.4)	\$731.5		\$731.5	4.2%
2018 ^{1,4}	\$250.3	\$104.2	\$81.3	\$242.0	\$47.8	\$39.1	\$(28.0)	\$736.5	(\$0.7)	\$735.8	0.6%
2019	\$251.8	\$108.8	\$75.7	\$244.5	\$49.1	\$38.4	\$(28.6)	\$739.6	(\$1.1)	\$738.4	0.4%
2020 ⁵	\$246.2	\$110.8	\$75.5	\$243.6	\$49.8	\$38.9	\$(29.0)	\$735.8	(\$12.7)	\$723.1	-2.1%
2021	\$225.9	\$113.0	\$76.6	\$238.0	\$50.4	\$39.3	\$(29.3)	\$713.8		\$713.8	-1.3%
2022	\$229.2	\$115.0	\$77.9	\$239.9	\$51.0	\$39.6	\$(29.6)	\$722.9		\$722.9	1.3%
2023	\$232.1	\$116.7	\$78.4	\$241.6	\$51.5	\$39.9	\$(29.9)	\$730.4		\$730.4	1.0%

¹ Actual 2010-2018

² All-Electronic Toll Collection (AETC) began on the Gov. Mario M. Cuomo Bridge (formerly Tappan Zee Bridge) on 4/23/16

³ Removal of discounts for vehicles with out-of-state E-ZPass began on 1/1/17

⁴ AETC began at Grand Island Bridges on 3/30/18, Harriman Barrier on 9/28/18, Yonkers Barrier on 11/19/18, and Spring Valley and New Rochelle Barriers on 12/20/18.

⁵ The rest of the system (ticket controlled) is assumed to have AETC starting in October 2020

Note: Numbers may not add due to rounding.

Table 5 compares the baseline toll revenue forecast to the previous (2019) Budget Forecast completed in June 2018. Actual 2018 toll revenue was \$2.2M (0.3 percent) higher than the forecast. 2019 toll revenue is expected to be about the same as the previous forecast. 2020 and 2021 forecasted toll revenues are noticeably different than the previous forecast because the expected start date for controlled system AETC has been moved up two months to October 2020; the revenue differences are due primarily to the lag in collection of TBM revenues which is now shifted from 2021 to 2020. In 2022 and 2023, less than one percent more toll revenue is expected than previously forecast.

Table 5: Toll Revenue Forecast Comparison, Current Baseline Forecast Compared to Previous Budget Forecast (in millions)

Year	Current Forecast					Previous Forecast (2019 Budget)					Difference Between Current & Previous Forecast
	Control System	Gov. Mario M. Cuomo Br.	Other Barriers	Total	Annual Growth	Control System	Gov. Mario M. Cuomo Br.	Other Barriers	Total	Annual Growth	
2018 ¹	\$469.9	\$149.8	\$116.1	\$735.8		\$468.4	\$151.9	\$113.3	\$733.6		\$2.2
2019	\$473.5	\$155.7	\$109.2	\$738.4	0.4%	\$473.4	\$155.1	\$109.9	\$738.4	0.7%	\$0.0
2020 ²	\$454.1	\$158.3	\$110.6	\$723.1	-2.1%	\$469.5	\$158.1	\$111.7	\$739.3	0.1%	(\$16.3)
2021	\$440.6	\$161.1	\$112.1	\$713.8	-1.3%	\$427.0	\$160.6	\$112.7	\$700.4	-5.3%	\$13.4
2022	\$445.6	\$163.6	\$113.7	\$722.9	1.3%	\$440.2	\$162.8	\$113.6	\$716.7	2.3%	\$6.3
2023	\$450.0	\$165.8	\$114.5	\$730.4	1.0%	\$444.2	\$164.9	\$114.4	\$723.6	1.0%	\$6.8

¹ With the current forecast, AETC began at Grand Island Bridges on 3/30/18, Harriman Barrier on 9/28/18, Yonkers Barrier on 11/19/18, and Spring Valley and New Rochelle Barriers on 12/20/18.

² With the current forecast, the rest of the system (ticket controlled) is assumed to have AETC starting in October 2020. The previous forecast had assumed that AETC would start on the rest of the system (ticket controlled) in December 2020.

Notes: Adjustments for three months of lag in collection of Tolls by Mail revenue have been included in both forecasts.

Numbers may not add due to rounding.

Violation and Fee Revenues

Violation and late fee revenues are also collected from E-ZPass customers and Tolls by Mail customers who do not pay their toll invoices on time. Some changes made in recent years to violation fees charged on the New York State Thruway System:

- 1) On January 20, 2016 an enforcement measure was enacted whereby drivers of New York state registered vehicles with toll violations on five days over an 18-month period would have their registration suspended. In 2017 this was changed to three violations over a five-year period. This enforcement measure was applied to all past unpaid tolls and violations from prior years.
- 2) Starting January 1, 2017, violations for systemwide E-ZPass vehicles and Gov. Mario M. Cuomo Bridge Tolls by Mail customers that did not pay their toll bills increased from \$25 to \$50.
- 3) Starting January 17, 2017, this Tolls by Mail violation fee increased again to \$100 at the Gov. Mario M. Cuomo Bridge.
- 4) On January 9, 2018, the Authority announced a short-term amnesty program that allowed Tolls by Mail customers with open toll violations to pay their outstanding tolls and have all violations and late fees waved. This program ran from January 22nd through February 26th, and resulted in \$1.1M in additional toll revenue for the Governor Mario M. Cuomo Bridge.
- 5) Starting May 15, 2018, the Tolls by Mail violation fee was reduced to \$50 at the Gov. Mario M. Cuomo Bridge.

In 2016, the first year with AETC, \$5.3M was collected in E-ZPass violation fees, which was about \$1.5M more than the amount collected in 2015. This grew to \$7.7M in 2017 and \$10.6M in 2018. The increases can

be attributed to enforcement measures, and included a significant amount of delayed violation payments (i.e., violations from trips made in prior years). In addition, all E-ZPass violation trips made in 2017 and after were charged the increased E-ZPass violation fee of \$50.

Also in 2016, \$0.3M was collected in \$5 per-bill late fee charges that appear on the second bill sent to Tolls by Mail customers, and \$2.2M was collected in Tolls by Mail violation fees that are charged per transaction on the third bill sent to Tolls by Mail customers. These collected revenues grew significantly to \$1.0M and \$14.6M in Tolls by Mail late fees and violations, respectively, in 2017. This growth is because 2017 was the first full year with Tolls by Mail at the Gov. Mario M. Cuomo Bridge, and because the Tolls by Mail violation fee increased from \$25 to \$50 to \$100. With subsequent reduction in the violation fee to \$50 at the Gov. Mario M. Cuomo Bridge in May of 2018, the TBM violations collected from bridge customers dropped to \$9.0M in 2018, however, since AETC is now installed at all the barriers, there is recent growth in fee revenues collected for the remainder of the system. In 2018, a total of \$0.9M in late fees and \$10.6M in violation fees was collected.

Table 6 provides baseline forecasts of late and violation fee revenues. The current Tolls by Mail violation fee of \$50 has been assumed at all facilities throughout the forecast period. Note that there is an estimated three-month lag in collection of the \$5 per-bill late fees and five-month lag in collection of violation fees built into the forecasts, as it takes time after a trip is made to bill and collect these fees, if any are charged. Data from late 2018 and early 2019 shows a significant reduction in TBM violation revenues that is likely a result of the reduced violation fees and, perhaps, with increased awareness of registration suspensions for unpaid toll bills, fewer violators.

The forecasts show a decline in systemwide E-ZPass violation revenues as more facilities are converted to AETC. This is because these revenues include both E-ZPass and cash customer violations, and there are no longer cash customer violations at AETC facilities.

With these assumptions, a total of \$24.2M in annual violation and late fee revenues is estimated for 2019, growing to nearly \$25.3M in 2020. By 2022, after there has been more than a full year with AETC on the controlled system, about \$58 or \$59M in annual fee revenue is expected. As seen in Table 6, this growth is due almost entirely to AETC violation revenues collected on the rest of the system.

Table 6: Baseline Violation/Late Fee Revenue Forecast (in millions)

Year	Systemwide E-ZPass Violation Revs ¹	Gov. Mario M Cuomo Br. Only		Remainder of System		TOTAL
		TBM Violation Revs ^{2,3}	TBM \$5 Per Bill Late Fee Revs	TBM Violation Revs ³	TBM \$5 Per Bill Late Fee Revs	
2016 ⁴	\$5.3	\$2.2	\$0.3			\$7.8
2017 ⁴	\$7.7	\$14.6	\$1.0			\$23.3
2018 ^{4,5}	\$10.6	\$9.0	\$0.7	\$1.7	\$0.20	\$22.1
2019	\$9.5	\$5.9	\$0.5	\$7.6	\$0.7	\$24.2
2020 ⁶	\$9.4	\$5.7	\$0.4	\$9.0	\$0.7	\$25.3
2021	\$4.5	\$5.6	\$0.4	\$33.3	\$4.2	\$48.1
2022	\$1.8	\$5.6	\$0.4	\$47.4	\$3.9	\$59.1
2023	\$1.8	\$5.6	\$0.4	\$46.7	\$3.9	\$58.4

¹ Includes both E-ZPass and cash customer violations. The E-ZPass violation fee increased from \$25 in 2016 to \$50 on 1/1/17

² AETC violation fee at the Gov. Mario M. Cuomo Bridge increased from \$25 in 2016 to \$50 on 1/1/17 and to \$100 on 1/17/17. This was reduced back to \$50 on 5/15/18.

³ AETC violation fee assumed to be \$50 in the future at all facilities.

⁴ Actual

⁵ An amnesty program ran from 1/22/18 through 2/26/18 waiving violations for customers who paid outstanding tolls. AETC began at the Grand Island Bridges on 3/30/18, Harriman Barrier on 9/28/18, Yonkers Barrier on 11/19/18, and Spring Valley and New Rochelle Barriers on 12/20/18.

⁶ The rest of the system (ticket controlled) is assumed to have AETC starting in October 2020.

It is important to note that additional revenues may be needed for the Authority's Long Range Financial Plan to be able to successfully complete the remaining elements of the Governor Mario M. Cuomo Bridge project and fulfill its system-wide operating, debt service, and capital needs through the forecast period. Future funding needs will be established by the Authority at amounts necessary to continue high levels of safety and service, maintain good infrastructure conditions, support Thruway operations, and maintain debt service coverage levels appropriate for its current "A" credit rating. Any additional revenues needed and the impact of any rate changes will be studied independently from these forecasts.

Limits and Disclaimers

It is Stantec's opinion that the traffic and toll revenue estimates provided herein represent reasonable and achievable levels of traffic and toll revenues that can be expected to accrue at the Authority's toll facilities over the forecast period and that they have been prepared in accordance with accepted industry-wide practice.

In Stantec's opinion, the assumptions underlying the study provide a reasonable basis for the analysis. However, any financial projection is subject to uncertainties. Inevitably, some assumptions used to develop the projections will not be realized, and unanticipated events and circumstances may occur. There are likely to be differences between the projections and actual results, and those differences may be material. Because of these uncertainties, Stantec makes no guaranty or warranty with respect to the projections in this study.

This document, and the opinions, analysis, evaluations, or recommendations contained herein are for the sole use and benefit of the contracting parties. There are no intended third-party beneficiaries, and Stantec Consulting Services Inc. (and its affiliates) shall have no liability whatsoever to any third parties for any defect, deficiency, error, omission in any statement contained in or in any way related to this document or the services provided.

Neither this document nor any information contained therein or otherwise supplied by Stantec Consulting Services Inc. in connection with the study and the services provided to our client shall be used in connection with any financing solicitation, proxy, and proxy statement, proxy soliciting materials, prospectus, Securities Registration Statement or similar document without the express written consent of Stantec Consulting Services Inc.

* * * * *

Stantec Consulting Services Inc.



Suzanne Seegmuller
Senior Transportation Specialist

Phone: +1-212-732-6908
Suzanne.Seegmuller@stantec.com

Funds Description

The Authority's Bond Resolution established the following funds, and the activities of the funds are reported in schedules included in the Authority's financial statements.

Revenue Fund –The fund is used to account for all pledged revenues. Pledged Revenue includes, among other things, all tolls, revenues, fees, rents, charges and other income and receipts derived from the operation of the Thruway System.

Operating Fund- The fund is used to account for all operating expenses. Operating expenses are for operation, maintenance, repairs, ordinary replacement and ordinary reconstruction of the Thruway System and ordinary acquisition of equipment for the Thruway System.

Senior Debt Service Fund - accumulates the amounts required for payment of interest, maturing principal amounts and sinking fund installments on all outstanding.

Senior Debt Reserve Fund – Established to retain funds equal to the maximum amount of aggregate debt service for any twelve-month period on all outstanding General Revenue Bonds secured by the Senior Debt Service Reserve Fund, Series F, Series G, Series H, Series I, Series J, and Series K General Reserve Bonds.

Reserve Maintenance Fund – Established to hold funds required to be deposited each year into the Reserve Maintenance Fund. Funds held in the Reserve Maintenance Fund can be disbursed for specific costs relating to the "Facilities," as defined in the bond resolution and certain highway and railroad grade crossings.

Junior Indebtedness Fund- Established to hold moneys paid into it from the sale of Junior Indebtedness Obligations (bonds and notes) which are to be used to fund the Facilities Capital Improvement Fund for a portion of the cost of the Authority's New NY Bridge Project as defined in the Junior Indebtedness Bond Resolution and to pay debt service including capitalized interest on the Series 2013A Junior Indebtedness Obligations through December 31, 2017

Facilities Capital Improvement Fund- Established to hold funds determined to be necessary or appropriate by the Authority Board to fund project costs of facilities or to set up reserves to fund such costs. The Authority has elected to use this fund to hold certain revenues, debt proceeds, and other monies dedicated to the New NY Bridge.

Other Authority Projects Operating Fund- Established pursuant to the General Revenue Bond Resolution, the Authority may, from time to time, disburse or transfer amounts in the Other Authority Projects Operating Fund, free and clear of the lien and pledge created by the Resolution, for the purpose of providing for operating costs of Other Authority Projects, or, upon the determination of the Authority Board, transfer such amounts to the General Reserve Fund. Investment income on amounts in the Other Authority Projects Operating Fund shall be deposited into the Revenue Fund.

General Reserve Fund – used to make payments under any agreements with the State of New Jersey or for any other corporate purpose. For budgeting purposes only, the Authority has established a "Supplemental Capital Fund" within the General Reserve Fund that is used to fund short to medium term projects not financed through bond proceeds. The Supplemental Capital Fund is not a legal fund, is not recognized under

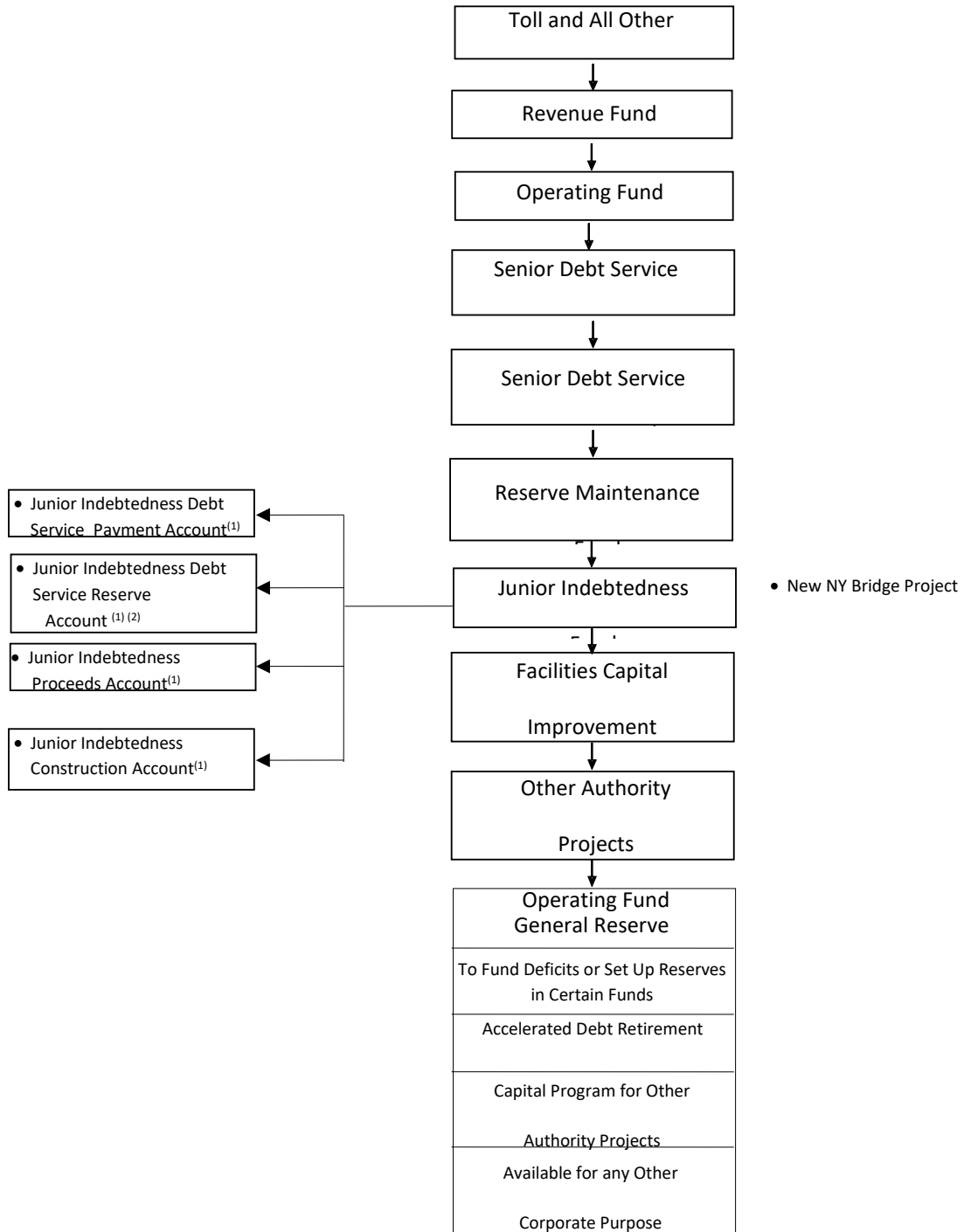
the Bond Resolution, and its activity is reported as General Reserve Fund activity in the Authority's financial statements.

Rebate Fund- Moneys on deposit in the Rebate Fund may be applied by the Authority to make payments to the Department of the Treasury of the United States of America at such times and in such amounts as the Authority shall determine to be required by the Code to be rebated to the Department of the Treasury of the United States of America in accordance with the provisions of the Arbitrage and Use of Proceeds Certificate, if any, delivered in connection with each Series of Bonds. Moneys which the Authority determines to be in excess of the amount required to be so rebated shall be deposited to the Revenue Fund.

Construction Fund- Established to hold moneys paid into it from the sale of bonds and notes to pay for costs of the "Facilities" and "Other Authority Projects" as defined in the bond resolutions. Any remaining money upon completion or abandonment of such projects shall be transferred to other funds in accordance with the terms outlined in the bond resolutions.

Flow of Funds Chart

Senior Resolution and Junior Indebtedness Resolution Flow of Funds



Net Revenue Requirements

Pursuant to the General Revenue Bond Resolution, the Thruway is empowered at all times, to fix, charge and collect such tolls, fees and charges for the use of the Facilities as are required in order to meet the Net Revenue Requirement for such year. "Net Revenue Requirement" means, with respect to any period of time, an amount equal to the greater of (i) the sum of (A) Aggregate Debt Service, (B) amounts required to make deposits to the Senior Debt Service Reserve Fund, if any, (C) amounts required to make Reserve Maintenance Payments, and (D) amounts required to be deposited in the Junior Indebtedness Fund pursuant to the Supplemental Resolution or other resolution or agreement authorizing outstanding Junior Indebtedness or (ii) 1.20 times the sum of the Aggregate Debt Service for such period; provided, however, that "Aggregate Debt Service" for purposes of calculating the Net Revenue Requirement may be reduced by an amount equal to investment income on the Senior Debt Service Fund and on the Senior Debt Service Reserve Fund to the extent such investment income is required to be retained in or transferred to the Senior Debt Service Fund, as appropriate, pursuant to a Supplemental Resolution, such amount to be calculated at the rate per annum equal to the lesser of (A) the then current yield on five year obligations of the United States Treasury and (B) the actual income to be earned as estimated by an Authorized Officer.

Basis of Budgeting

Pursuant to the General Revenue Bond Resolution, the Authority shall prepare an Authority Budget on an annual basis, or on such other periodic basis as the Authority Board shall determine, but in no event on a less frequent basis than biennially, which shall include amounts for all anticipated Operating Expenses and reserves therefor, Reserve Maintenance Payments and provision for anticipated deposits into each Fund under this Resolution for the period of such budget. Such Authority Budget may set forth such additional material as the Authority may determine. On or before the first day of each fiscal year or for such applicable period for the Authority Budget as aforesaid, the Authority shall finally adopt the Authority Budget for such period and shall mail such Authority Budget to the Trustee. The Authority may at any time adopt an amended Authority Budget for the remainder of the then current fiscal year or other applicable period. Copies of the Authority Budget and of any amended Authority Budget shall at all times be on file with the Secretary of the Authority, and be available for inspection by the Trustee and by Bondholders. If for any reason the Authority shall not have adopted the Authority Budget before the first day of any fiscal year, the budget for the preceding fiscal year or other applicable period shall be deemed to be in effect for such fiscal year or other applicable period until the Authority Budget for such period is adopted.

Budgeting Process

Each year the Authority constructs a budget and financial plan that is consistent with its strategic goals. Our strategic plan has long served as the foundation in which staff and the Authority's Board have planned and made decisions on the allocation of important, and often scarce, resources. This plan identifies three principal goals:

- Maintaining high levels of customer service and safety;
- Maintaining infrastructure and deliver the capital program; and
- Enhancing the efficiency and effectiveness of Authority operations.

The Authority pursues an interaction and dynamic budget process that involves input from all levels of the organization. The budget process begins with a bulletin issued by the Chief Financial Officer in February that provides strategic direction and guidelines on how the ensuing year's budget will be constructed. The bulletin is issued to all Department Heads and Division Directors, providing them with timelines, pricing

assumptions and other guidance that will allow them to begin recommending their budgetary needs for the upcoming year.

Once this information is entered into the Authority's Budget Reporting and Analysis Support System in March or April, discussions begin on these recommended budgets, often involving visits into the field to provide a more hands-on experience to the budget process. These important discussions allow staff to exchange information with employees from all levels of the organization regarding the impacts the budget may have on operational efficiency and effectiveness and the condition of the Authority's extensive infrastructure.

By November, this interactive process results in a balanced, proposed budget for the ensuing year that meets all of the established goals. The proposed budget is then submitted to the public and the Authority Board for their review. Once this review period is completed and all comments have been considered, the budget is updated and presented to the Board for final approval. Upon the Board's approval, the budget becomes official and is placed on the Authority's website (www.thruway.ny.gov) and distributed to New York State's Authority Budget office, State Legislature and Office of the State Comptroller.

Budget Assumptions

As the annual budget is being developed, the Authority determines the principal financial and economic assumptions underlying projections for non-toll revenues, concession revenues, interest earnings on Authority investments and other revenues. Toll revenue projections are provided by the Authority's independent traffic consultant (currently Jacobs Civil Consultants) who takes a conservative approach to its projections. Jacobs' toll forecast is based on anticipated toll revenue changes, an analysis of past, current and projected traffic and transaction trends, E-ZPass penetration rates, economic trends and indicator's, and experiences of other toll roads and interstate systems.

While revenue assumptions are being defined, the Authority also determines a number of underlying assumptions that impact operational expenses, including:

- Staffing levels, which are strictly controlled under a cost-benefit review process;
- Salary changes and employee benefits based on labor contracts with Unions that represent the employees (Teamsters, CSEA and Management confidential employees);
- Contractual services and equipment purchases needed to maintain the Thruway systems in a state of good repair;
- Estimates of future retirement, health insurance, workers compensation, insurance and other administrative costs;
- Projected fuel and utility market conditions, pricing and usage; and
- Allocations for operational savings achieved from streamlining and other planned initiatives.

Assessment of Budgetary Risks

There are several budgetary risks associated with developing a budget several months before the beginning of the fiscal year that are determined by variables that could measurably impact revenues and expenses.

On the revenue side, toll collections account for over 90 percent of Thruway revenues, so accuracy of toll revenue projections is critical. The risks associated with toll revenue and concession revenue forecasts are principally focused on traffic and how it is impacted by weather patterns, fuel prices, general economic conditions, changing traveler behaviors, and construction activity along the highway. Other revenues include a very large number of smaller revenue items that collectively make up a very minor portion of Authority revenues. As a result, little budgetary risk is associated with this revenue category.

On the operational side, the risks associated with the operating budget generally include economic changes, such as changes in the cost of fuel and other inputs (such as utilities, steel, cement, and asphalt), inclement weather, and, while rare, legislative mandates that may increase overall costs.

It is important to note that revenues and expenditures are constantly monitored by the Authority and if any material and negative changes from the financial plan are encountered, the Executive Director and Chief Financial Officer will take immediate action to eliminate or reduce discretionary expenditures to maintain a balanced budget and healthy financial condition.

Projecting needs, remedies and costs into a five-year Capital Plan requires estimates of variables including future impacts of traffic, weather, and deterioration rates on a 570 mile, 60 year old highway system. As the Authority's trailblazing progress in asset management continues to increase our ability to better assess these variables, its application to each successive annual budget and five-year plan should significantly reduce the risks of over or under expenditures.

Thruway Bond Program

The Authority's authorizing legislation provides for the ability to issue, from time to time, negotiable bonds and notes for any corporate purpose secured by tolls, revenues, and other earned income of the Authority. The Authority has issued General Revenue Bonds and Notes for the purpose of funding a portion of the Authority's Capital Program, and Junior Indebtedness Obligations for the purpose of funding a portion of the New NY Bridge project leading to construction of the Governor Mario M. Cuomo Bridge.

The Authority is currently authorized to issue State Personal Income Tax Revenue Bonds (Transportation) (PIT) to fund expenditures under the Consolidated Local Street and Highway Improvement Program (CHIPs), the Municipal Streets and Highways Program (Marchiselli), the Suburban Highway Improvement Program (SHIPs) and the Multi-Modal Program. These programs provide funds to municipalities and other project sponsors throughout the State for qualifying capital expenditures for highway, bridge, and multi-modal projects. These programs were previously funded by Local Highway and Bridge Service Contract Bonds (CHIPs), for which the Authority is authorized to issue. Currently, CHIPs bonds are issued only for purposes of refunding previously issued CHIPs bonds, and are no longer issued for new money purposes.

The Authority has also been authorized to issue Highway and Bridge Trust Fund Bonds to reimburse the State for expenditures made or to be made by the State Department of Transportation in conjunction with the State's multi-year highway and bridge capital program.

The Authority has also been authorized to issue State Sales Tax Revenue Bonds for certain Authorized Purposes.

The CHIPs, PIT, Trust Fund and State Sales Tax Revenue Bonds are special limited obligations of the Authority secured by a pledge of certain payments by the State, subject to appropriation by the State Legislature. No Authority revenues or assets are pledged to pay debt service on these bonds.

Debt Issuance Requirements

In accordance with the Bond Resolution, the amount of bonds to be issued is limited by the following:

- 1) Additional Bonds Test - New Money Purposes: In accordance with Section 204 of the Bond Resolution, in order for the Authority to issue and sell its bonds for new money purposes, the Authority must, among other things, satisfy the following tests:
 - a) the Net Revenues of the Authority (Pledged Revenues minus Operating Expenses) for any period of twelve (12) consecutive calendar months out of the eighteen (18) calendar months next preceding the issuance of such bonds must equal or exceed the Net Revenue Requirement for such twelve (12) month period without regard to the bonds proposed to be issued; and
 - b) the estimated Net Revenues for the first full five (5) calendar years after the financed asset is estimated to be placed in service must equal or exceed the Net Revenue Requirement for each such year and the estimated Net Revenues in the 5th such calendar year must equal or exceed the future maximum Aggregate Debt Service in any year after the issuance of the additional bonds.

In addition, all other requirements of the Bond Resolution relating to the issuance of bonds for new money purposes must be satisfied.

For purposes of the Bond Resolution, the “Net Revenue Requirement” in any year is the greater of:

- i) the sum of the Aggregate Debt Service on all outstanding Authority bonds, the Maintenance Reserve Payments, the Special Project Reserve Payment and all deposits to the Charges Fund in such year; or
 - ii) 1.20 times the Aggregate Debt Service on all outstanding Authority bonds in such year.
- 2) Additional Bonds Test - Refunding: In accordance with Section 204 of the Bond Resolution, in order for the Authority to issue and sell its bonds for refunding purposes, the Authority must, among other things, either:
- a. Demonstrate that the Aggregate Debt Service on all outstanding Authority bonds is not increased in the then current or any future calendar year as a result of the issuance of such refunding bonds, or
 - b. Satisfy both of the tests described in clauses (a) and (b) of the preceding subsection of this policy entitled “Additional Bonds Test – New Money Purposes”.

Debt Profile

On January 1, 2020, the Thruway has four scheduled Senior General Revenue Bond principal payments totaling \$100,945,000. After making those principal payments the Thruway will have \$2,887,895,000 par amount of Senior General Revenue Bonds outstanding and \$2,543,245,000 of Junior Indebtedness Obligations. Proceeds generated from the issuance of Senior General Revenue Bonds were used to fund the Thruway’s capital projects relating to construction, rehabilitation and replacement of the roadways, bridges and facilities that make up the Thruway toll system (including the Tappan Zee Bridge through the year 2012). Proceeds generated from the issuance of Junior Indebtedness Obligations are used solely to fund the New NY Bridge project leading to construction of the Governor Mario M. Cuomo Bridge, a twin-span replacement of the Tappan Zee Bridge.

The outstanding Senior General Revenue Bonds are made up of four series of tax exempt bonds and one series of taxable bonds. All series were issued as serial bonds, and include term bonds for three of the series issued. Senior General Revenue Bonds may be issued with maturity dates up to 40 years, and typically contain a 10 year early redemption provision to call certain maturities prior to final maturity for refunding purposes to capture savings. The taxable series of bonds also include a “make whole” redemption provision as well as a 10 year early redemption provision for certain maturities.

The outstanding Junior Indebtedness Obligations are made up of two series of tax exempt bonds, and contain a 10 year early redemption provision to call certain maturities prior to final maturity for refunding purposes to capture savings.

Bond par amount typically differs from proceeds provided for capital expenditures due to the bond issue’s discount/premium and the funding of issuance costs, capitalized interest (if applicable), debt service reserve account deposits, and, in the case of refunding bond issues, the extent by which the cost of the cash and investments in the refunding escrow exceeds the principal amount of bonds refunded and defeased. The Authority’s current outstanding bonds were issued with a net premium.

The following table lists each outstanding series and its respective final maturity, and the principal scheduled to be outstanding after any principal payments due January 1, 2020. All outstanding bonds were issued as traditional fixed-rate bonds, with principal paid annually on January 1, and interest paid semi-annually on July 1 and January 1, with the exception of the Series M bonds, which were issued as taxable bonds, and the Series 2019B Junior Indebtedness Obligations, in which principal is paid semi-annually on July 1 and January 1 for certain maturities.

The Thruway currently does not have any variable-rate debt outstanding.

General Revenue Bonds		
<u>Series</u>	<u>Par Amount Outstanding</u>	<u>Longest Outstanding Maturity</u>
Series I	\$ 177,940,000.00	January 1, 2042
Series J	608,495,000.00	January 1, 2044
Series K	713,570,000.00	January 1, 2032
Series L	530,265,000.00	January 1, 2037
Series M	857,625,000.00	January 1, 2042
Total	\$ 2,887,895,000	

General Revenue Junior Indebtedness Obligations		
<u>Series</u>	<u>Par Amount Outstanding</u>	<u>Longest Outstanding Maturity</u>
Series 2016A	\$ 850,000,000	January 1, 2056
Series 2019B	1,693,245,000.00	January 1, 2053
Total	\$ 2,543,245,000	

Planned 2020 Debt Issuance

Senior Debt Issuance: The 2020 Budget includes a planned 2020 issuance of General Revenue Bonds of \$388.6 million.

Junior Debt Issuance: There are no planned 2020 issuances of Junior Indebtedness Obligations in the 2020 Budget.

MUNICIPAL BOND RATINGS

The Thruway applies for municipal bond ratings from Moody's Investors Services, Inc. (Moody's) and Standard & Poor's Rating Services (S&P). Each rating agency reviews the Thruway's current fiscal condition, capital financing plan, debt coverage ratios and various other factors to assess the Thruway's

ability to repay its debt obligations. The underlying ratings of the Thruway’s Senior General Revenue Bonds and Junior Indebtedness Bonds are outlined in the following table:

General Revenue Bonds and Notes

MOODY'S	S&P
A1 (Stable) uninsured	A (Stable) uninsured
A2 insured (Assured Guaranty Municipal – formerly FSA)	AA insured (Assured Guaranty Municipal – formerly FSA)

General Revenue Junior Indebtedness Obligations

MOODY'S	S&P
A2 (Stable) uninsured	A- (Stable) uninsured
A2 insured (Assured Guaranty Municipal – formerly FSA)	AA insured (Assured Guaranty Municipal – formerly FSA)