



# **ANNUAL BUDGET 2017**

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**Transmittal Letter**

# New Jersey Turnpike Authority

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November 15, 2016

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JOSEPH W. MROZEK, Executive Director

To: The Board of Commissioners of the New Jersey Turnpike Authority:

We are pleased to submit for your review the New Jersey Turnpike Authority's (the Authority's) 2017 Annual Budget. Section 710 of the Authority's Turnpike Revenue Bond Resolution requires the Board of Commissioners to adopt, on or before January 15<sup>th</sup> of each fiscal year, an Annual Budget for that year, and promptly file the Annual Budget with the Trustee, for inspection by the bondholders. The Annual Budget must include, at a minimum, appropriations for all anticipated Operating Expenses and Reserves therefor, and provisions for Maintenance Reserve Payments and Special Project Reserve Payments. The Annual Budget may set forth such additional material as the Authority may determine and shall contain a certificate of the Consulting Engineer approving such Annual Budget.

In 2016, progress continued on the Authority's 10-year, \$7 billion Capital Improvement Program. This fiscal year saw the completion of several of the program's projects, including the continued widening of the Garden State Parkway between mileposts 42-48, bridge deck reconstruction of the Newark Bay-Hudson County Extension from milepost 6.0 to 8.2, replacement of structures on the Great Egg Harbor Bridge, various Interchange Improvements, and the opening of the new Moorestown State Police Station and Turnpike District 6 maintenance building. Since late 2014, the Authority has increased its capacity on both roads, and as such has experienced traffic volume increases. On the technology side, the Authority launched an improved and updated "Safe Trip NJ" traffic application. This hands free, safe and reliable application provides real time travel advisories for its patrons. These projects serve to reaffirm the Authority's commitment to provide to its motorists safe and well-maintained roadways,

Increases in capacity have generated increased revenue, but are also met with a resultant increase in both operational and maintenance expenditures for the Turnpike System. The 2017 Annual Budget provides the necessary funds to meet these expenditures. Additionally, the Authority will potentially issue up to \$1.025 billion of Turnpike Revenue Bonds during 2017 to provide funding for the Capital Improvement Program. This additional debt will increase the Debt Service Fund budget in 2017.

The 2017 Annual Budget provides for the necessary personnel and expenditures to operate and maintain the New Jersey Turnpike and Garden State Parkway, two of the nation's busiest and safest toll roads. In addition, the 2017 Annual Budget provides bond covenant coverage in excess of that required by the Turnpike Revenue Bond Resolution and the Authority's Financial Management Principles and Guidelines, as well as meets all contractual payment obligations.

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Executive Director

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**Distinguished Budget Presentation Award**

GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished  
Budget Presentation  
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**New Jersey Turnpike Authority****New Jersey**

For the Fiscal Year Beginning

**January 1, 2016**

Executive Director

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to the **New Jersey Turnpike Authority, New Jersey** for its annual budget for the fiscal year beginning **January 1, 2016**. In order to receive the award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

This award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

## Vision Statement

To provide a safe, reliable and modern toll road system that offers a top-quality travel experience for customers and to be regarded as a premier public agency in the operation and management of that system.

## Mission Statement

The New Jersey Turnpike Authority is dedicated to the safe and efficient movement of people and goods over two of the busiest toll roads in the United States – the New Jersey Turnpike and the Garden State Parkway.

## Core Values

The Authority's core values are a commitment to:

- safety
- customer service
- agency and roadway system integrity
- innovation
- sustainability

The Great Egg Harbor Bridge on the Garden State Parkway



Figure 1: Great Egg Harbor Bridge Aerial View

## Background

The New Jersey Turnpike Authority (the “Authority”) is a body corporate and politic of the State of New Jersey (the “State”) organized and existing by virtue of the New Jersey Turnpike Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the “Act”). Pursuant to the Act, the Authority has owned and operated the New Jersey Turnpike (the “Turnpike”) since the time the Turnpike opened for traffic in 1951. In July 2003, the New Jersey Highway Authority (the “Highway Authority”) was abolished and the Authority assumed all of the powers, rights, obligations, assets, debts, liabilities and statutory responsibilities and duties of the Highway Authority, including the ownership and operation of the Garden State Parkway (the “Parkway” and, together with the Turnpike, the “Turnpike System”). As a result, the assets and liabilities of the Authority and the Highway Authority and the ongoing operations, expenses and revenues of the Turnpike and the Parkway are now combined under the ownership and operation of the Authority.

## The Turnpike

The Turnpike is a limited access toll road that serves as part of the I-95 corridor linking the major economic centers of the East Coast. Its connections to a major seaport in Newark and Elizabeth and a major airport in Newark make it an important route for both commercial and passenger vehicles. It also serves New Jersey commuters traveling to and from the major metropolitan areas surrounding Philadelphia and New York City and other employment centers in the State.

The Turnpike consists of a 122-mile mainline and two extensions. Originally, the mainline ran from Deepwater, Salem County, to US Route 46 in Ridgefield Park, Bergen County, a distance of approximately 117.5 miles. In 1992, the Authority acquired the 4.4-mile section of Interstate 95 extending from the northern terminus of the Turnpike mainline to Fort Lee, Bergen County, at the crossing of Route 9W (Fletcher Avenue), a short distance west of the George Washington Bridge toll plaza (the “I-95 Extension”). Approximately three miles west of this location lies a full directional interchange with Interstate 80, a significant traffic generator for the Turnpike. At the southern terminus, the Turnpike connects, via a short section of US Route 40, with the Delaware Memorial Bridge.

The Newark Bay-Hudson County extension, which opened in 1956, is a four-lane, 8.3-mile spur that extends from Interchange 14 on the mainline Turnpike, near Newark Liberty Airport, to the Holland Tunnel plaza in Jersey City, Hudson County. It includes a high-level bridge over Newark Bay. There are three interchanges on the extension: Interchange 14A (Bayonne), Interchange 14B (Jersey City), and Interchange 14C (Holland Tunnel).

The Pearl Harbor Memorial Turnpike extension, which opened in 1956, is a 6.6-mile, six-lane spur that connects the Turnpike to the Pennsylvania Turnpike. The extension begins at a junction with the mainline Turnpike at Interchange 6 (Mansfield, Burlington County) and ends at the Delaware River. The bridge across the Delaware River at that point was bonded and constructed jointly by the Authority and the Pennsylvania Turnpike Commission. A full interchange connecting the extension to Route 130 in Florence Township, New Jersey, was opened in 1999.

The Turnpike roadway is two lanes in each direction from Interchange 1 (Deepwater) to Interchange 4 (Camden-Philadelphia) and three lanes in each direction from Interchange 4 to Interchange 6 (Pennsylvania Turnpike).

From Interchange 6 to north of Interchange 14 (Newark), the Turnpike is configured as a “dual/dual” highway; it has two distinct sets of roadways in each direction, an inner roadway and an outer roadway. Under normal operating conditions, truck, bus, and passenger car traffic is permitted on the outer roadways, but only passenger car traffic is permitted on the inner roadways. Ramps at the interchanges enable traffic to enter or exit the Turnpike from any of the four roadways.

Vehicles are prevented from crossing back and forth between the inner and outer roadways by a median with a guardrail. Crossovers have been provided on those medians to allow access to emergency and maintenance vehicles and to provide for the detouring of traffic under police control if an accident should block one of the roadways. The northbound and southbound roadways are separated by a specially designed, crash-tested, heavy concrete barrier to prevent cross-over traffic. Grade-separated U-turn structures have been provided at appropriate locations so that police, maintenance, and other vehicles can change direction safely.

Between Interchanges 6 (Mansfield) and 11 (Woodbridge), there are 12 lanes total, three outer and three inner in each direction. And from Interchange 11 to Interchange 14 (Newark), there are 14 total lanes, four lanes in each direction on the outer roadways and three in each direction on the inner roadways.

North of Interchange 14, the inner and outer roadways of the Turnpike merge and divide through a complex configuration referred to as the "Southern Mixing Bowl" to follow two separate alignments, one west of the Hackensack River, the other, east of the Hackensack River. The Westerly Alignment is six lanes from north of the Southern Mixing Bowl to the NJ Route 3 crossing; it narrows to four lanes from north of this point to the point where it rejoins the Easterly Alignment just south of US Route 46. The Easterly Alignment is six lanes from the Southern Mixing Bowl to the confluence with the Westerly Alignment. North of northbound US Route 46, the roadway separates into dual express and local roadways leading to the George Washington Bridge.

A ground breaking ceremony was held in July 2009 for the construction of the Turnpike's Interchange 6 to 9 Widening Program. The Program widened the Turnpike from Interchange 6 (Mansfield Township, Burlington County) to Interchange 9 (East Brunswick Township, Middlesex County), a linear distance of 35 miles. The Program was designed to relieve heavy and recurring congestion on this section of the Turnpike, improve operational and maintenance performance, and provide for the increased demand for capacity in the future. The construction added 170 lane miles to the roadway by widening it from six to 12 lanes from two miles south of Interchange 6 to Interchange 8A (South Brunswick Township, Middlesex County), a distance of approximately 25 miles, and from 10 lanes to 12 lanes between Interchange 8A and Interchange 9, a distance of 10 miles. The Program created a dual/dual roadway between Interchange 6 and Interchange 8A and expanded the outer roadway in each direction between Interchange 8A and Interchange 9. The work included improvements at Interchange 7A and the construction of a new toll plaza at Interchange 8. The Program was completed in the fall of 2014 with the opening of the northbound lanes on October 26, 2014, and the southbound lanes on November 2, 2014 at an estimated cost of \$2.3 billion.

## **The Parkway**

The Parkway is a 173-mile limited access toll road with connections in the south to Route 9 near Cape May, New Jersey, and in the north to the New York State Thruway at the New York-New Jersey border near Spring Valley, New York. The Parkway interchanges are numbered according to their distance from the southern terminus.

The northern section of the Parkway serves the metropolitan suburban areas in Bergen, Union, Essex, and Passaic Counties near Newark and New York City. In addition to being heavily used by commuters, the location of many businesses and industrial complexes in or near the Parkway corridor has resulted in significant local business traffic. The Parkway also is the principal highway route between metropolitan Newark-New York City and the New Jersey seashore. Heavy trucks are not allowed north of Interchange 105.

For approximately 135 miles, the Parkway is distinguished by a wide natural-area median separating northbound from southbound traffic. The purpose of the median is threefold: to prevent head-on collisions between traffic traveling in opposite directions, to prevent visual interference by opposing traffic, and to provide areas that allow extensive flexibility in road configuration. The wide natural-area median is a distinctive feature of the Parkway.

Three sections of the Parkway were constructed by NJDOT and maintained by that agency until June 30, 1987. On July 1, 1987, the Highway Authority took ownership of those sections together with all previous responsibilities and obligations. These sections total approximately 19 miles and include a 13-mile link between US Route 22 and US Route 9 in Union and Middlesex Counties, a two-mile link in Ocean County, and a four-mile link in Cape May County. These portions of the road are known collectively as the "State Sections." The term "Parkway" as used herein includes the State Sections. No tolls are charged on the State Sections.

The Parkway is four lanes (two in each direction) from Cape May to milepost 42, six lanes to milepost 91, eight lanes to milepost 102, 10 lanes to milepost 117, 12 lanes to milepost 127, 10 lanes to milepost 140, eight lanes to milepost 145, six lanes to milepost 168, and four lanes to the New York border.

The widening of the Parkway from milepost 63 in Stafford Township to milepost 80 in South Toms River opened in May 2011 was funded as part of the Capital Improvement Program. This widening program, from milepost 35 to 80 was designed to relieve heavy traffic congestion and to improve motorist safety by the addition of one new lane in both the northbound and southbound directions and full-width shoulders. In addition to the widening from milepost 63 to 80, the Parkway was widened from milepost 48 to 63. The widening to milepost 52 opened in the spring of 2014. The remaining widening of this section to milepost 48 was opened in May 2015 upon the completion of the rehabilitation of the Bass River Bridge. The final phase of the Parkway widening from milepost 48 to 35 is under construction. The third lane between milepost 42 and 48 was opened in June 2016. The remaining program has a projected completion in the spring of 2018.

## **\$7 Billion Capital Improvement Program and Financial Management Principles and Guidelines**

The Authority is nearing the end of a \$7 billion ten-year Capital Improvement Program (the CIP), which was approved by the Board of Commissioners in October 2008. Also in October of 2008, the Board of Commissioners approved a two-step toll increase that is expected to fully fund the debt service incurred from the financing of the \$7 billion CIP. The \$7 billion CIP includes large-scale projects, including widening stretches of both the Turnpike and Parkway, as well as projects that improve interchanges, rehabilitate bridges and facilities and deploy new technologies. Due to strict project management and favorable construction pricing, the Authority has been able to expand the scope of the program without increasing the overall \$7 billion budget. The program is divided between capacity, state of good repair and safety projects.

The projects currently included in the \$7 billion CIP are the following:

Turnpike Interchange 6-9 Widening	\$ 2,231,399,000
Bridge Construction, Preservation & Security	1,682,762,000
Roadway Improvements	816,783,000
Interchange Improvements	1,026,431,000
Facilities Improvements	652,625,000
Widening of Garden State Parkway	<u>590,000,000</u>
<b>Total CIP</b>	<b>\$ 7,000,000,000</b>

Actual and targeted completion dates for the widening of the Turnpike and Parkway and major bridge rehabilitations are as follows:

Turnpike Widening – The Turnpike Interchanges 6-9 Widening fully opened on November 2, 2014. The Turnpike widening added three travel lanes in each direction between Interchanges 6 and 8A, and one additional lane in each direction between Interchanges 8A and 9, as well as constructed a new toll plaza at Interchange 8. The project was completed on time and under the original \$2.5 million budget.

Garden State Parkway Widening – The Parkway widening project will add a third travel lane and full shoulders between Mileposts 35 and 80 and was or will be completed as follows:

- Phase I – Milepost 63 to 80 – Construction completed and open to motorists in May 2011.
- Phase II – Milepost 48 to 63 – Construction completed and open to motorists in May 2015
- Phase III – Milepost 35 to 48 – Construction began in 2014 and will be completed in 2018.

Only the Parkway Phase I widening between Milepost 63-80 was in the original scope of the \$7 billion CIP. Phase II and Phase III were added to the program at a cost of \$390,000,000, without increasing the overall \$7 billion CIP.

In addition to the widening projects, the re-decking of two major bridges on the Turnpike – the Newark Bay Bridge and the Hackensack River Bridge, were completed in 2014. Four of the six major Parkway Bridges – Bass River Bridge, Mullica River Bridge, Patcong Creek Bridge and Great Egg Harbor Bridge – have been or are being rehabilitated as part of the CIP. Three of the four bridges were completed in 2015.

Recognizing the significance of undertaking a debt financed \$7 billion CIP, the Authority's Board of Commissioners adopted Financial Management Principles and Guidelines (the Guidelines) in December 2012, which represent management's commitment to fiscal prudence, credit quality and long term repayment of outstanding debt. The Guidelines were amended in November 2015 and are intended to serve as a management tool to enable the Authority to communicate its commitment to a sound financial decision making process, and affirm to investors and the credit rating agencies management's commitment to the long term financial viability of the Authority and the repayment of its bonds. The Guidelines are also intended to serve as guidance for the issuance and management of debt in appropriate amounts with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets. Finally, the Guidelines emphasize the Authority's commitment to compliance with all provisions of the New Jersey Turnpike Authority Act and the Turnpike Revenue Bond Resolution, adopted August 21, 1991, as amended, restated and supplemented ("Bond Resolution"), as well as all other federal, state and local laws. The Guidelines are comprehensive and include items such as:

- Control of operating costs while maintaining the quality of roads and services
- Establish a five-year financial plan based upon conservative revenue projections from the Authority's Traffic Engineer
- Continue the Capital Improvement Program with the lowest possible cost of capital
- Adequately fund the Maintenance Reserve, Special Project Reserve, and other capital needs
- Maintain a minimum General Reserve Fund balance of \$100 million
- Maintain a minimum debt service coverage ratio of 1.4 times, and a minimum total requirements coverage ratio of 1.2 times without transfers from the General Reserve Fund

The Guidelines, which were implemented at the Authority's discretion, are not a legal covenant with Bondholders. A full copy of the Guidelines can be found on the Authority's website at <http://www.state.nj.us/turnpike/>. The 2017 Annual Budget has been formulated in conformance with these Guidelines.

The Authority's current financial plan, which includes the full funding of the \$7 billion CIP, is shown on the following page.



## Financial Plan

### Financial Plan Key Highlights

The Authority's current financial plan includes projected revenues, expenses, deposits to reserve funds and financial covenant calculations through December 31, 2022. Key highlights of the plan are as follows:

#### Revenue

- Toll revenue is projected by the Authority's traffic engineering consultant, CDM Smith. CDM Smith prepared a Toll Revenue Forecast Study on May 1, 2014, and a Draw-Down Letter on October 2, 2015 which revised short-term transaction and toll revenue forecasts. Toll revenue for 2017 – 2022 has come from the October 2, 2015 Draw Down Letter. System-wide toll revenue is expected to increase on average 1.7% over the forecast period.
- E-ZPass Fees are projected to increase by about 2.0% per year based on historical growth.
- Federal Subsidy for Series 2009F and 2010 Bonds (Build America Bonds) is projected to remain constant at current levels, which represents 32.6% of the interest payable on the bonds.
- Concession Revenue is projected to increase by about 2.0% per year based on historical growth.
- Other Revenue (investment, miscellaneous, Arts Center) is projected to decline by approximately \$12.0 million in 2017, as 2016 included several non-recurring settlement payments and a FEMA recovery from winter storm Jonas. After 2017, Other Revenue is expected to increase by about 2.0% per year based on historical growth.

#### Operating Expenses

- Operating Expenses are projected to increase by 2.0% per year from 2017 – 2022, primarily driven by projected pension and health benefit increases, and higher maintenance expenses to cover the increased roadway capacity.

#### Net Debt Service

- Projected Net Debt Service includes future bonds to be issued to complete the funding of the \$7 Billion CIP at an assumed interest cost of 5%.

#### Maintenance Reserve Fund and the Special Project Reserve Fund

- Deposits to both the Maintenance Reserve Fund and the Special Project Reserve Fund are projected by the Authority's General Consulting Engineer, HNTB, as contained in their Consulting Engineer's Report dated October 2, 2015, and are consistent with the Authority's policy of maintaining its assets in a state of good repair.

#### State Payments

- TTF Payments, Feeder Road Maintenance Agreement, and State Transportation Projects Funding Agreement (2016-2021) payments are based on existing agreements between the Authority and the State of New Jersey. Payments under these agreements are payable from the General Reserve Fund and are subordinate to debt service payments to bondholders.

The Authority's Financial Plan through 2022 projects the Authority to be in compliance with its General Bond Resolution Financial covenants, which require debt service coverage of at least 1.20 times and total requirements coverage of at least 1.0 times. In addition, the Authority is projected to be in compliance with its Board approved Financial Policy that targets debt service coverage of at least 1.40 times, total requirements coverage of 1.20 times, and a minimum unencumbered General Reserve Fund balance of \$100 million.



**New Jersey Turnpike Authority  
For 2017 Annual Budget**

Fiscal Year Ending 12/31 (000's omitted)	Actual 2014	Actual 2015	Actual/Est. 2016	Estimated 2017	Estimated 2018	Estimated 2019	Estimated 2020	Estimated 2021	Estimated 2022
<b>Revenues</b>									
Toll Revenue									
Turnpike	1,037,744	1,106,268	1,142,068	1,124,302	1,139,772	1,155,458	1,173,175	1,191,246	1,209,680
Parkway	408,004	416,865	424,844	422,057	427,230	432,082	436,963	441,419	445,919
E-ZPass Fees	52,773	56,262	61,937	59,200	60,300	61,500	62,700	63,900	65,100
Federal Subsidy for Series 2009 F and 2010 Bonds	75,745	75,908	76,099	76,030	76,030	76,030	76,030	76,030	76,030
Concession Revenue	36,842	38,993	38,445	39,200	40,000	40,800	41,600	42,400	43,200
Other Revenue	28,573	28,002	39,924	28,392	28,533	28,709	28,872	29,031	29,200
<b>Total Revenues</b>	<b>1,639,681</b>	<b>1,722,298</b>	<b>1,783,317</b>	<b>1,749,181</b>	<b>1,771,865</b>	<b>1,794,579</b>	<b>1,819,340</b>	<b>1,844,026</b>	<b>1,869,129</b>
<b>Operating Expenses</b>	<b>(472,772)</b>	<b>(503,453)</b>	<b>(519,424)</b>	<b>(528,762)</b>	<b>(539,594)</b>	<b>(549,989)</b>	<b>(560,589)</b>	<b>(571,396)</b>	<b>(582,415)</b>
<b>Total Revenues Available for Debt Service</b>	<b>1,166,909</b>	<b>1,218,845</b>	<b>1,263,893</b>	<b>1,220,419</b>	<b>1,232,271</b>	<b>1,244,590</b>	<b>1,258,751</b>	<b>1,272,630</b>	<b>1,286,714</b>
<b>Future Debt Issuance</b>				1,025,000	300,000				
Net Debt Service	(608,896)	(661,426)	(773,128)	(846,460)	(831,994)	(873,584)	(889,013)	(886,734)	(917,458)
<b>Total Revenues Available After Debt Service</b>	<b>558,013</b>	<b>557,419</b>	<b>490,765</b>	<b>373,959</b>	<b>400,277</b>	<b>371,006</b>	<b>369,738</b>	<b>385,896</b>	<b>369,256</b>
Payments to Charges Fund	(1,150)	(535)	(155)	(155)	(155)	(155)	(155)	(155)	(155)
<b>Cash Flow Available for Reserves</b>	<b>556,863</b>	<b>556,884</b>	<b>490,610</b>	<b>373,804</b>	<b>400,122</b>	<b>370,851</b>	<b>369,583</b>	<b>385,741</b>	<b>369,101</b>
Maintenance Reserve Fund	(74,814)	(87,058)	(89,370)	(116,751)	(119,086)	(121,468)	(123,897)	(126,375)	(128,903)
Special Project Reserve Fund	(28,800)	(50,301)	(38,918)	(39,696)	(40,490)	(41,300)	(42,126)	(42,969)	(43,828)
<b>Net Revenues Available for General Reserve Fund</b>	<b>453,249</b>	<b>419,525</b>	<b>362,322</b>	<b>217,357</b>	<b>240,546</b>	<b>208,083</b>	<b>203,560</b>	<b>216,397</b>	<b>196,370</b>
TTF Payments	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)
Feeder Road Maintenance Agreement	(8,001)	(8,001)	(8,000)	(6,500)	(4,500)	(3,500)	(2,500)	(2,500)	(2,500)
Existing State TCP Funding Agreement	(324,000)	(324,000)	(162,000)						
State Transportation Projects Funding Agreement (2016-2021)			(102,000)	(204,000)	(166,500)	(129,000)	(129,000)	(129,000)	(129,000)
Supplemental Capital/General Reserve Spending	(67,761)	(68,332)	(49,755)	(136,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
<b>Net Annual General Reserve Fund Increase</b>	<b>31,487</b>	<b>(2,808)</b>	<b>18,567</b>	<b>(151,143)</b>	<b>(2,454)</b>	<b>3,583</b>	<b>60</b>	<b>12,897</b>	<b>(7,130)</b>
<b>Ending General Reserve Fund Balance</b>	<b>246,006</b>	<b>243,198</b>	<b>261,764</b>	<b>110,620</b>	<b>108,165</b>	<b>111,747</b>	<b>111,807</b>	<b>124,704</b>	<b>117,574</b>
<b>Debt Service Coverage Ratio</b>									
Net Revenues/Debt Service	1.92	1.84	1.63	1.44	1.48	1.42	1.42	1.44	1.40
Net Revenues/Debt Service and Reserves	1.64	1.52	1.40	1.22	1.24	1.20	1.19	1.20	1.18

**Figure 2: NJTA Financial Plan**

## The Next Strategic Plan

In the fall of 2015, the leadership of the Authority participated in a strategic planning workshop to discuss the future of the Authority. The purpose of the strategic planning discussion was to identify challenges, assess needs and look to opportunities, strategies and foundations that can improve the organization, and the service it provides to travelers, as well as provide long-term direction.

These steps will be used throughout the strategic planning process to set goals for the future:

- Step 1 – Vision for the Future
- Step 2 – Identify Risks and Opportunities
- Step 3 – Develop Goals
- Step 4 – Finalize Goals
- Step 5 – Produce Strategic and Long-Range Capital Plans
- Step 6 – Measure Success

To date, the authority has completed Steps 1 – 4. As a result of the strategic planning process, the following goals were adopted:

### Improve Safety for Patrons and Employees

Safety for both customers and employees working in any and all areas of the organization is a top goal. The Authority must ensure that safety is top-of-mind and put systems into place that will prevent hazards when possible.

Safety Benchmarking Measurement/Metrics:

- External – public outreach/technology
- Internal – enforcement
- Secondary – emergency response

### Improve Financial Strength

Securing a strong financial position for the Authority opens up opportunities for expanding assets and facilities, recruiting and better compensating employees and all other efforts that will be key to future success.

Reserve Benchmarking Measurement/Metrics:

- Debt Service Coverage
- Benchmark criteria
- Non-toll revenue

### Decrease Congestion/Improve Mobility for Patrons

Customer satisfaction is a key best practice for any business, including the Authority. Improving mobility for drivers on both the Turnpike and Parkway is critical to the organization's future success.

Mobility/Congestion Benchmarking Measurement/Metrics:

- Customer Service
- Technology vs. construction
- Software
- Truck Parking
- Freight Mobility
- Outside resources (IBTTA)

**Maintain a State of Good Repair for All Assets**

Effective management of Authority assets will contribute to all key areas for improvement and growth, and ensure a safe driving environment for customers and working environment for employees.

State of Good Repair Benchmarking Measurement/Metrics:

- Funding/Bonding
- GASB 34
- Reports/data/measurement
- Asset management – MAP 21
- Top-tier cycle times

**Maintain and Attract a Quality Workforce**

Qualified, technical experts are the backbone of a successful organization. The Authority is facing the challenge of recruiting and retaining employees, as well as motivating current employees.

People Benchmarking Measurement/Metrics:

- Hiring/keeping/monitoring
- Compensation issues

The next step in the process is Step 5 – to produce strategic and long – range capital plans. These plans will include implementation of programs, technologies and systems, and provide a road map toward achieving the adopted goals. The strategic plan will include the next capital plan. Anticipated to be smaller in size than the current \$7 billion CIP, the next capital plan will focus on state of good repair and operational and safety improvements. The next capital plan may include projects such as pavement resurfacing and rehabilitation, bridge deck replacement and reconstruction, interchange geometry and completion, and toll collection opportunities.

## **New Jersey Turnpike Authority 2016 Accomplishments and 2017 Goals**

As mentioned in the previous section, the Authority is in the process of developing a Strategic Plan for the next five years. The Strategic Plan will incorporate the Authority's vision, mission statement and core values. It is expected that this Strategic Plan will be completed and adopted by the Board of Commissioners before the end of 2018. Although still in the development stage, the Authority's strategic plan will be established based upon the following:

- Improve Safety for Patrons and Employees
- Improve Financial Strength
- Decrease Congestion/Improve Mobility for Patrons
- Maintain a State of Good Repair for All Assets
- Maintain and Attract a Quality Workforce

A summary of major accomplishments in 2016 and goals for 2017 in each of these areas is as follows:

### **Improve Safety for Patrons and Employees**

#### **2016 Accomplishments**

- Increased overhead signage at all Turnpike toll plazas (3 year program).
- Commenced a program to restore roadway illumination levels while reducing energy usage through the LED Roadway lighting purchase program.
- Turnpike Interchanges 4 and 15W supervisor's offices were refurbished to provide a cleaner and safer working environment.

#### **2017 Goals**

- Continue to increase roadway illumination levels while reducing energy usage through the LED Roadway lighting purchase program.
- Continue the installation of overhead signage at all Turnpike toll plazas.
- Continue to upgrade of all toll lanes to LED lighting to increase illumination and reduce energy usage.
- Improve compliance with the Manual on Uniform Traffic Control Devices, which defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public travel.

### **Improve Financial Strength**

#### **2016 Accomplishments**

- Identified and sold surplus real estate, producing \$1.1 million in revenue.
- Refinanced the Series 2004 B for significant debt service savings.
- Successfully refunded several series of variable rate bonds to meet mandatory tender dates on Direct Purchase Bonds. These actions reduced rollover risk on the bonds and basis risk from the associated Interest Rate Swap Agreements.

**2017 Goals**

- Continue to identify and market surplus real estate, generating at least \$1.1 million in proceeds.
- Successfully refund variable rate debt to meet the mandatory tender dates on the bonds, eliminating roll-over risk on the variable rate bonds that will be issued. Eliminate Interest Rate Swap basis risk on any swaps that hedge the variable rate refunding bonds.
- Continue to fund the OPEB reserve, providing an additional \$17.5 million in 2017.

**Decrease Congestion/Improve Mobility for Patrons****2016 Accomplishments**

- Substantially completed the New Jersey Turnpike Interchange 9 and 10 improvements improving interchange safety, increasing interchange capacity and decreasing travel times thereby making the interchanges a more viable alternative to motorists.
- Completed pilot program with Sensys and Esri for capture and display of roadway traffic data to be used to improve traffic management on both roadways.
- Completed a new design for the Asbury Park Toll plaza split using pavement markings and signing.

**2017 Goals**

- Complete the Guide Sign Replacement Program, which will replace and improve existing signs as well as add new VMS (variable message signs) and VSLS (variable speed limit signs). These new signs will notify drivers of congestion or traffic issues ahead allowing drivers to make decisions regarding their travel route.
- Complete Garden State Parkway Interchange 163 improvements which will improve traffic operations, by relocating the exits onto Route 17 from the left side of the road to the right side of the road by realigning the Parkway into the existing median in the vicinity of Interchange 163.
- Begin the design and installation for the hybrid changeable message sign replacement on the Turnpike. The existing signs are over 60 years old.

**Maintain a State of Good Repair for All Assets****2016 Accomplishments**

- Expanded the Authority's EGIS (Enterprise GIS) system which allowed employees to track and report on Authority assets with greater accuracy.
- Replaced Authority equipment that was at the end of its lifecycle, with a concentration on Heavy Duty Trucks.
- Completed the Bridge Deck Reconstruction of the Newark Bay – Hudson County Extension between mileposts N6.0 to N8.2.
- Completed the replacement of structure nos. 28.0S and 28.55S on the Parkway Great Egg Harbor Bridge.
- Repaired a total of 158 lane miles on both roadways.
- Re-decked 67 bridges on both roadways.

**2017 Goals**

- Issue \$525 million of new money bonds in the first quarter of 2017 and potentially up to \$500 million in the second half of 2017 to provide additional funding for the Capital Improvement Program.
- Complete construction on the following Maintenance Districts:
  - Turnpike Maintenance District 5 Milltown
  - Turnpike Maintenance District 6 Elizabeth
  - Parkway Maintenance District 2 Whitehorse
  - Parkway Maintenance District 3 Ocean
- Complete construction of Newark State Police Station.
- Repave a total of 280 lane miles on both roadways.
- Repave a total of 106 bridge decks on both roadways.
- Complete final improvements to Interchanges 9 and 10 on the Turnpike.
- Complete improvements to Interchange 163 on the Parkway.

**Maintain and Attract a Quality Workforce****2016 Accomplishments**

- Awarded new contracts for all Authority health benefit programs
- Continued to increase workforce diversity.
- Completed the creation of a variety of training programs.

**2017 Goals**

- Settle five expired labor contracts.
- Continue to work to increase workforce diversity utilizing expanded outreach programs.
- Consolidate all staff into the new headquarters at 1 Turnpike Plaza. This will be the first time since the consolidation of the New Jersey Turnpike Authority and the New Jersey Highway Authority that all staff will be located in the same building.

## Performance Measures

### Toll Revenue as % of Operating Revenue

This ratio is calculated by dividing the Authority's toll revenue by the operating revenue. The ratio remains consistent over the period to depict that the primary component of the Authority's operating revenue is toll revenue.

(\$'s in Thousands)		<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Toll Revenue	\$	1,523,133	\$ 1,553,686	\$ 1,546,359
Operating Revenue	\$	1,631,492	\$ 1,663,342	\$ 1,656,759
Toll Revenue as a % of Operating Revenue		93.4%	93.4%	93.3%

Figure 3: Toll Revenue as % of Operating Revenue

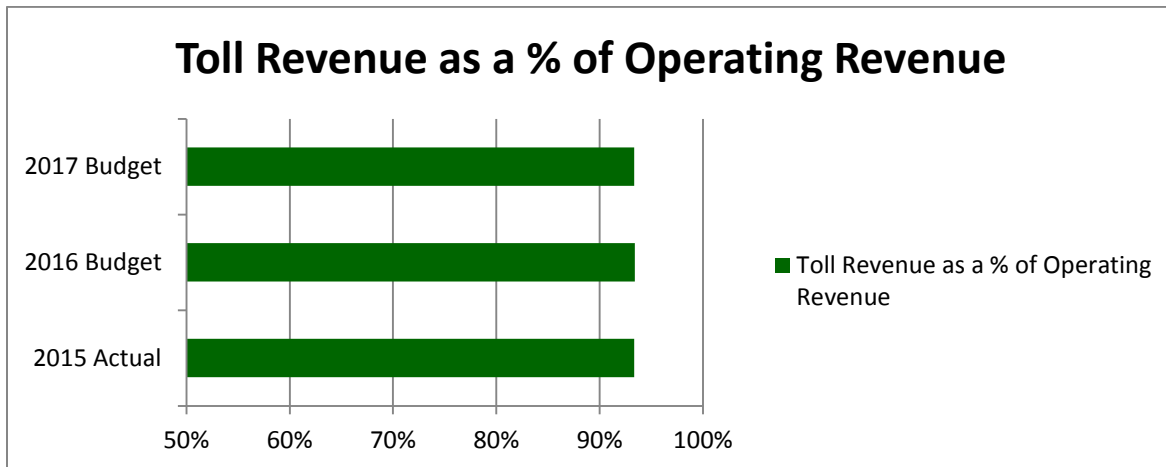


Figure 4: Toll Revenue as % of Operating Revenue Graph

### Operating Margin Ratio

This ratio is calculated by dividing the budgeted operating income by the budgeted operating revenue. This ratio demonstrates the Authority's operating efficiency and capacity to pay for its operating expenses.

(\$'s in Thousands)	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Operating Revenue	\$ 1,631,492	\$ 1,663,342	\$ 1,656,759
Operating Expenses - Revenue Fund	503,453	519,424	528,762
Operating Income	\$ 1,128,039	\$ 1,143,918	\$ 1,127,997
Operating Margin Ratio	69.1%	68.8%	68.1%

Figure 5: Operating Margin Ratio

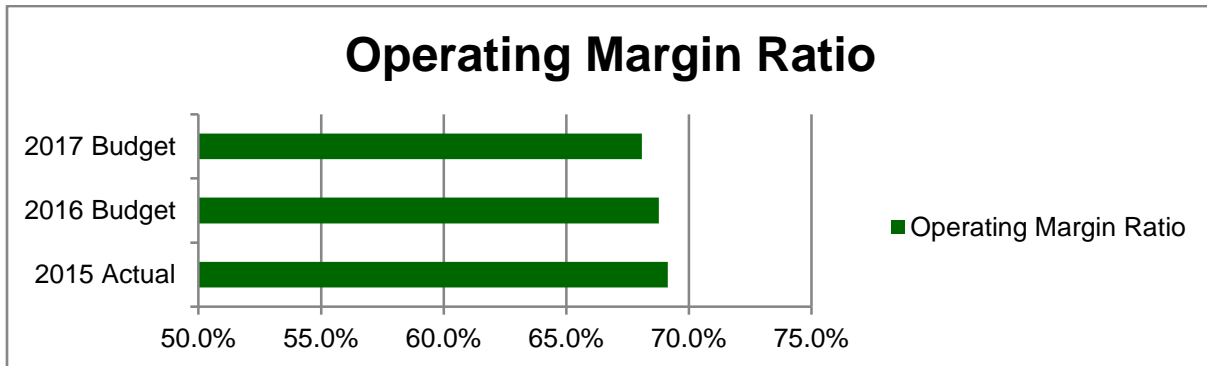


Figure 6: Operating Margin Ratio Graph



### Cost Recovery Ratio

This ratio is calculated by dividing the operating revenue by the total operating expenses excluding depreciation. This ratio is a key indicator of the financial performance of the Authority. The Authority's ratio exceeds 100% which demonstrates that the Authority's operating revenue exceeds its operating expenses providing funds to cover debt service and other requirements.

(\$'s in Thousands)	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Operating Revenue	\$ 1,631,492	\$ 1,663,342	\$ 1,656,759
Operating Expenses - Revenue Fund	\$ 503,453	\$ 519,424	\$ 528,762
<b>Cost Recovery Ratio</b>	<b>324.1%</b>	<b>320.2%</b>	<b>313.3%</b>

Figure 7: Cost Recovery Ratio

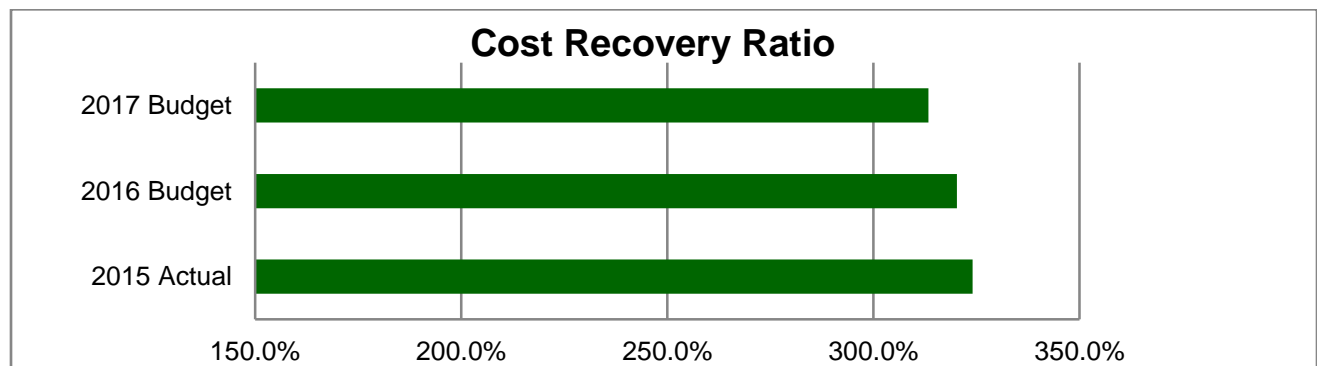


Figure 8: Cost Recovery Ratio Graph

### Average Toll/Transaction – Turnpike

This ratio is calculated by dividing the toll revenue generated by the total number of toll transactions on the Turnpike.

(In Thousands)	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Toll Revenue - Turnpike	\$ 1,106,268	\$ 1,135,690	\$ 1,124,302
Toll Transactions - Turnpike	246,597	252,566	251,442
Average Toll per Transaction - Turnpike	\$4.49	\$4.50	\$4.47

Figure 9: Average Toll/ Transaction- Turnpike

### Average Toll/Transaction – Parkway

This ratio is calculated by dividing the toll revenue generated divided by the total number of toll transactions on the Turnpike.

(In Thousands)	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Toll Revenue - Parkway	\$ 416,865	\$ 417,996	\$ 422,057
Toll Transactions - Parkway	379,284	379,184	382,710
Average Toll per Transaction - Parkway	\$1.10	\$1.10	\$1.10

Figure 10: Average Toll/ Transaction- Parkway

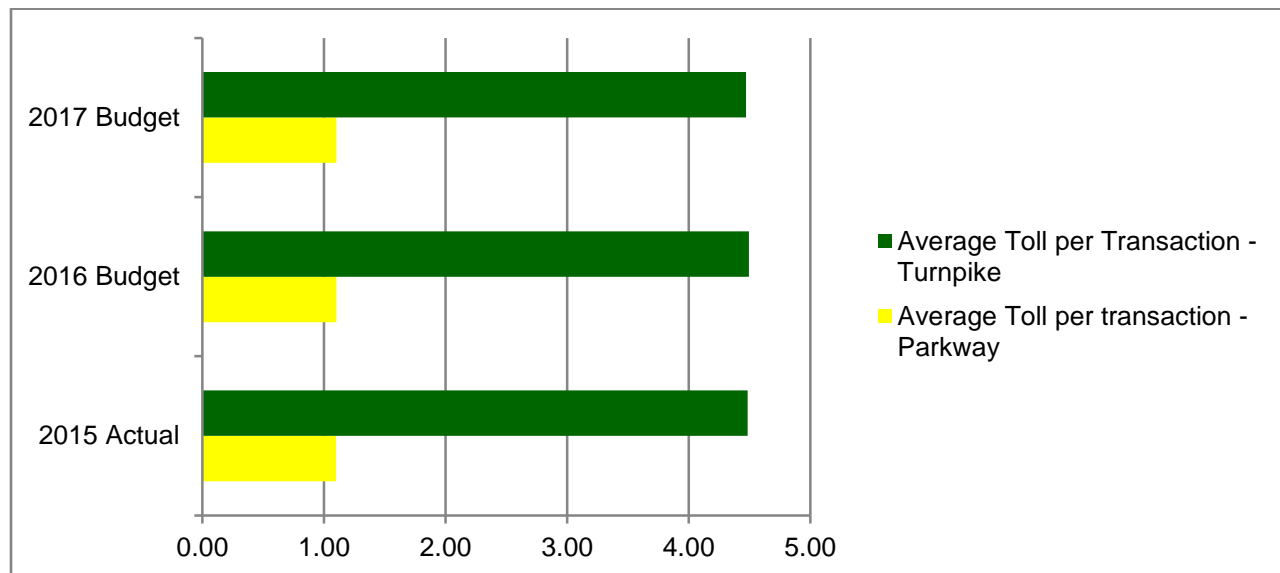


Figure 11: Average Toll/ Transaction- Turnpike/Parkway Graph

### Toll Revenue/Lane Mile

This ratio shows the toll revenue generated per lane mile for both roadways. This can be used to analyze the operating expenses per lane mile and the operating revenue per lane mile. Toll revenue per lane mile will increase with an increase in traffic, assuming there are no additional lane miles.

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Toll Revenue - Turnpike	\$1,106,268,000	\$1,135,690,000	\$1,124,302,000
Toll Revenue - Parkway	416,865,000	417,996,000	422,057,000
Toll Revenue - Authority	1,523,133,000	1,553,686,000	1,546,359,000
Lane Miles - Turnpike	1,819	1,819	1,819
Lane Miles - Parkway	1,757	1,757	1,778
Lane Miles - Authority	3,576	3,576	3,597
Revenue per Lane Mile - Turnpike	\$608,000	\$624,000	\$618,000
Revenue per Lane Mile - Parkway	\$237,000	\$238,000	\$237,000
Revenue per Lane Mile - Authority	\$426,000	\$434,000	\$430,000

Figure 12: Toll Revenue/Lane Mile

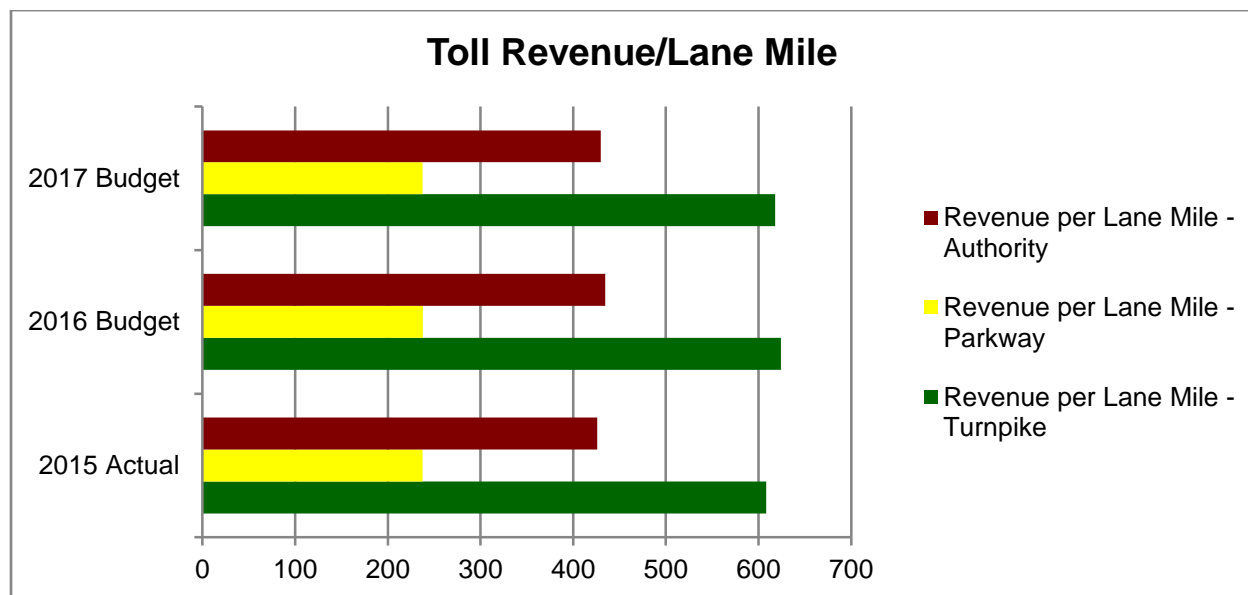


Figure 13: Toll Revenue/Lane Mile Graph

### Operating Cost/Lane Mile

This ratio indicates the operating expenses incurred per lane mile on both the roadways. This ratio can be used in comparison with the toll revenue per lane mile to analyze the Authority's spending efficiency.

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Operating Expenses - Revenue Fund	\$503,453,000	\$519,424,000	\$528,762,000
Lane Miles - Turnpike	1,819	1,819	1,819
Lane Miles - Parkway	1,757	1,757	1,778
Lane Miles - Authority	3,576	3,576	3,597
Operating cost per Lane Mile - Authority	\$141,000	\$145,000	\$147,000

Figure 14: Operating Cost/Lane Mile

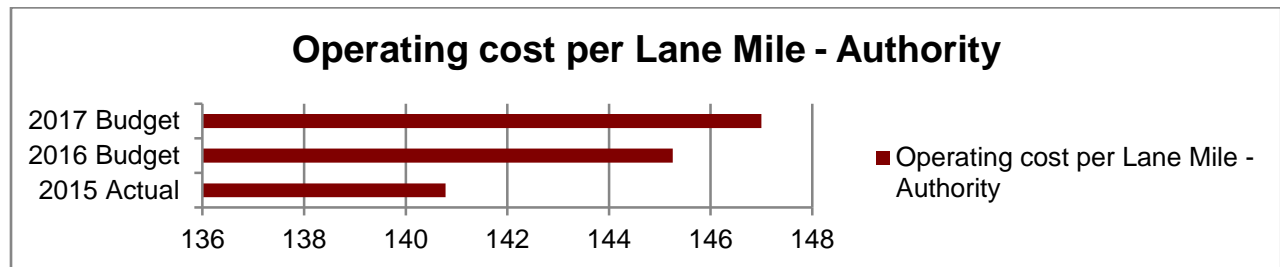


Figure 15: Operating Cost per Lane Mile

### Debt/Lane Mile

This ratio shows the Authority's bond indebtedness per lane mile.

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Bond Indebtedness, net	\$11,251,163,000	\$11,951,684,000	\$12,118,590,000
Lane Miles - Turnpike	1,819	1,819	1,819
Lane Miles - Parkway	1,757	1,757	1,778
Lane Miles - Authority	3,576	3,576	3,597
Debt per Lane Mile - Authority	\$3,146,000	\$3,342,000	\$3,369,000

Figure 16: Debt/Lane Mile

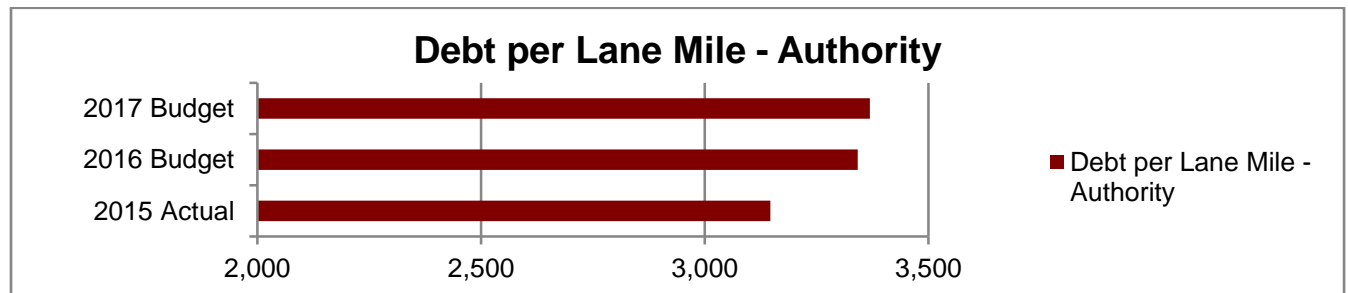


Figure 17: Debt/Lane Mile Graph

## Executive Summary

The Authority operates two well-established highways, one of which serves as a critical link along the I-95/Northeast Corridor and both of which allow for north-south travel in New Jersey. The roads serve a densely populated and extremely wealthy region. Most of the traffic is non-discretionary and the demand for the roads has proven to be inelastic.

In July 2003, the New Jersey Turnpike Authority and New Jersey Highway Authority were consolidated. Combining two major agencies -- each of which was operating a premier toll road, the New Jersey Turnpike and the Garden State Parkway -- into a single agency was no small order. But more than thirteen years later, the singular agency continues to be recognized as a first-class agency among peer public agencies in the transportation and tolling industries.

The Authority's \$7 billion CIP, which started in 2009, is nearly 92% complete, and with the opening of the Turnpike Interchange 6 to 9 widening and the widening of the Parkway between mileposts 42 and 80, has added about 237 lane miles to the roadway system, an increase of nearly 10%. The 2017 Annual Budget is driven by the added operations and maintenance expenses generated by this additional capacity and the Authority's commitment to maintaining its assets in a state of good repair. Traffic and revenue is forecasted to decrease in 2017 on the New Jersey Turnpike due to the reopening of the Pulaski Skyway. The toll revenue budget is based upon projections originally prepared in early 2014 and will be updated by year end to reflect the new re-opening date of fall 2017 and current traffic results. It should be noted that at the time of the original study, average unleaded gas prices in New Jersey were \$3.30/gallon, more than \$1.00/gallon or 50% higher than current prices. The recently enacted gas tax increase in New Jersey is not expected to have any significant impact on traffic. It is expected that 2017 toll revenue forecasts will be increased above the amounts used in the 2017 Revenue Budget when the study is updated by the year-end 2016. Operating expense growth continues to be controlled similar to 2016. The 2017 Operating Expense Budget will increase by less than 2%. The 2017 Annual Budget includes over \$263 million for Maintenance Reserve, Special Project Reserve and Supplemental Capital Projects, the highest these combined budgets have been since 2005. This being said, expected revenues are anticipated to be sufficient to meet the requirements of the Bond Resolution without the need for a toll increase.

A summary of the 2017 Annual Budget is as follows:

### REVENUE

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>
Toll Revenue	\$ 1,523,133,000	\$ 1,553,686,000	\$ 1,546,359,000
Other Revenue	199,165,000	200,403,000	202,822,000
Total	<u>\$ 1,722,298,000</u>	<u>\$ 1,754,089,000</u>	<u>\$ 1,749,181,000</u>

Figure 18: Annual Budget Revenue Summary (2015-2017)

### SIGNIFICANT REVENUE HIGHLIGHTS:

- Toll Revenue on the New Jersey Turnpike is expected to decline 1% reflecting a change in traffic patterns due to the reopening of the Pulaski Skyway in Jersey City for a full year in 2017, as motorists who previously used the toll-free facility would return to it upon its re-opening. Garden State Parkway toll revenue is expected to increase by 1% reflecting normal growth due to the stable economic conditions and continued low gas prices.

- E-ZPass fees are expected to increase by \$1.4 million as compared to the 2016 budget due to an increase in administrative fees collected from toll violators due to enhanced collection efforts, and an increase in monthly membership fees due to continued growth in the customer base.
- The Federal Build America Bond Subsidy is expected to increase by \$327,000 as compared to the 2016 budget, as the automatic federal deficit reduction spending cuts are expected to be only 6.9% in federal fiscal year 2017.

<b>SPENDING</b>	<b><u>2015 Actual</u></b>	<b><u>2016 Budget</u></b>	<b><u>2017 Budget</u></b>
Operating Expenses	\$ 503,453,000	\$ 519,424,000	\$ 528,762,000
Debt Service and Charges	661,961,000	794,514,000	846,615,000
Maintenance Reserve	87,133,000	93,500,000	132,500,000
Special Project Reserve	28,948,000	38,756,000	48,438,500
General Reserve	403,106,000	343,086,000	286,595,000
Supplemental Capital	19,227,000	40,782,000	81,905,000

**Figure 19: Annual Budget Spending Summary (2015-2017)**

#### **SIGNIFICANT SPENDING HIGHLIGHTS/CHALLENGES**

- The 2017 Operating Expense Budget is \$528.8 million, or an increase of only 1.8%, and is driven by the increased volumes of traffic on the roadways, an increase in capacity from the lane miles added as part of the \$7 billion CIP and the need to maintain assets in a state of good repair. The budget also provides funding for the Authority's continued commitment to improving safety for its patrons.
- The 2017 Operating Expense Budget provides \$38.1 million for snow and severe weather costs, which represents the budget level that has been maintained for the past three years. The number and severity of weather events is unpredictable, and could put pressure on the Operating Expense Budget. In addition, the budget includes assumptions on pension payments, health benefit costs and E-ZPass transaction and credit card processing fees, all of which are highly variable. Changes from the current budget assumptions in any of these areas could put pressure on the 2017 Operating Expense Budget.
- The 2017 Debt Service Budget is increasing by over \$52 million to almost \$850 million, or nearly 7%, as compared to the 2016 Debt Service Budget. Debt service is increasing primarily due to higher interest expense from the continued borrowing to fund the \$7 Billion Capital Improvement Program. By the end of 2017, it is expected that the Authority will have over \$12 billion of debt outstanding. Debt Service represents the largest spending component of the Authority's 2017 Annual Budget.
- The 2017 Maintenance Reserve Fund Budget is increasing by \$39 million, or 42%. The \$132.5 million spending budget will fund a necessary increase of approximately 75% in lane miles paved and bridge decks replaced in 2017 as compared to 2016.

As mentioned, the Authority has increased roadway capacity in the past few years. Despite an almost 12% increase in capacity since 2011, the Authority's Operating Budget per Lane Mile has remained unchanged as the Authority continues to maintain safe and efficient roadways while controlling operating expenses.

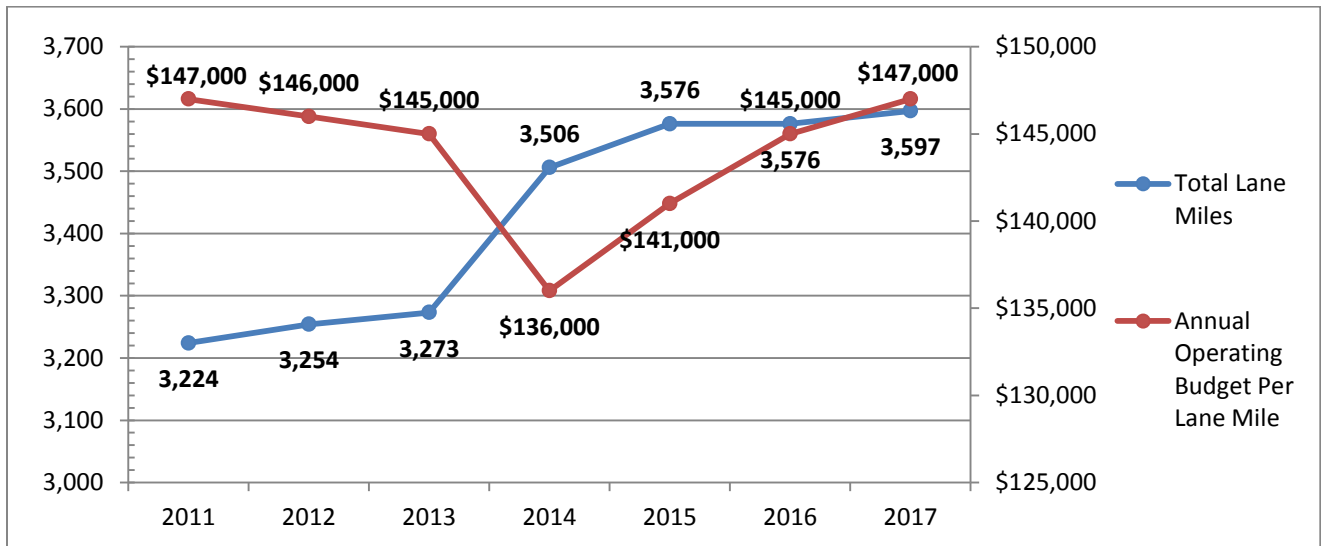


Figure 20: Total Lane Miles and Operating Budget per Lane Mile (2011-2017)

When excluding the budget for costs associated with snow removal and severe weather, the 2017 budget for all other operating expenses of \$490,658,900 is less than \$24,700,000 higher than the 2011 budget for all other operating expenses of \$466,000,000, an increase of only 5% over the six year period. This increase averages to only 0.8% per year, and is a result of the Authority's success in controlling its operating expenses.

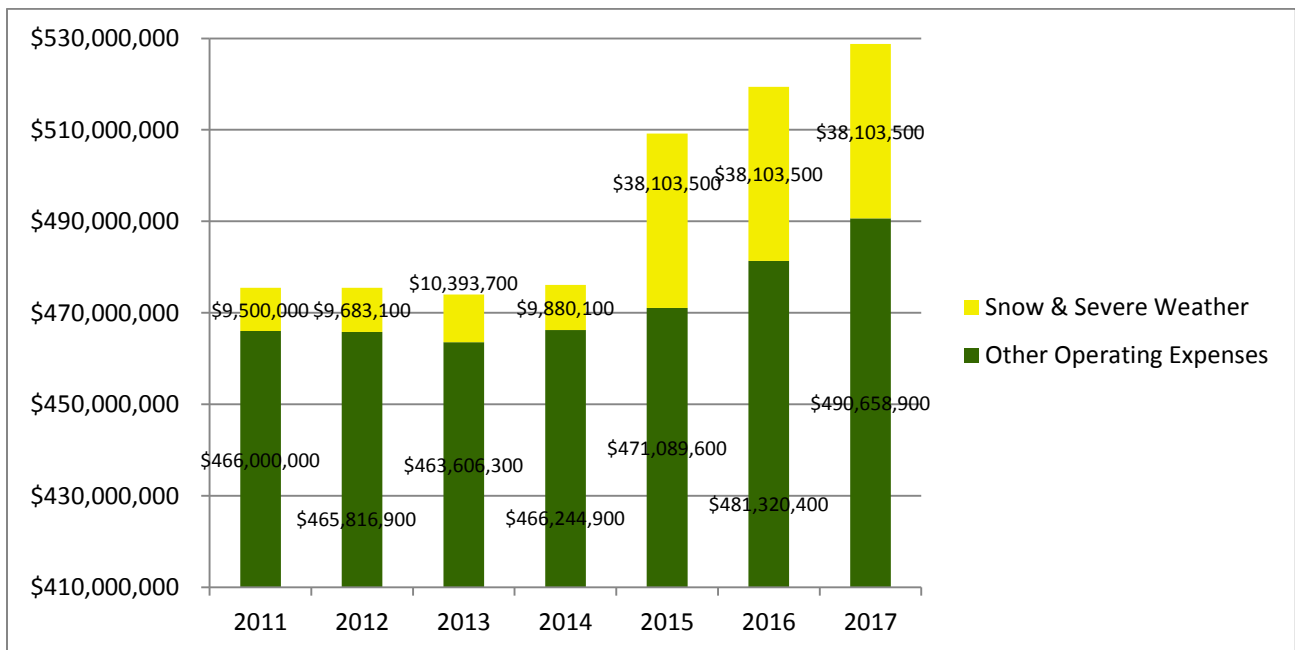
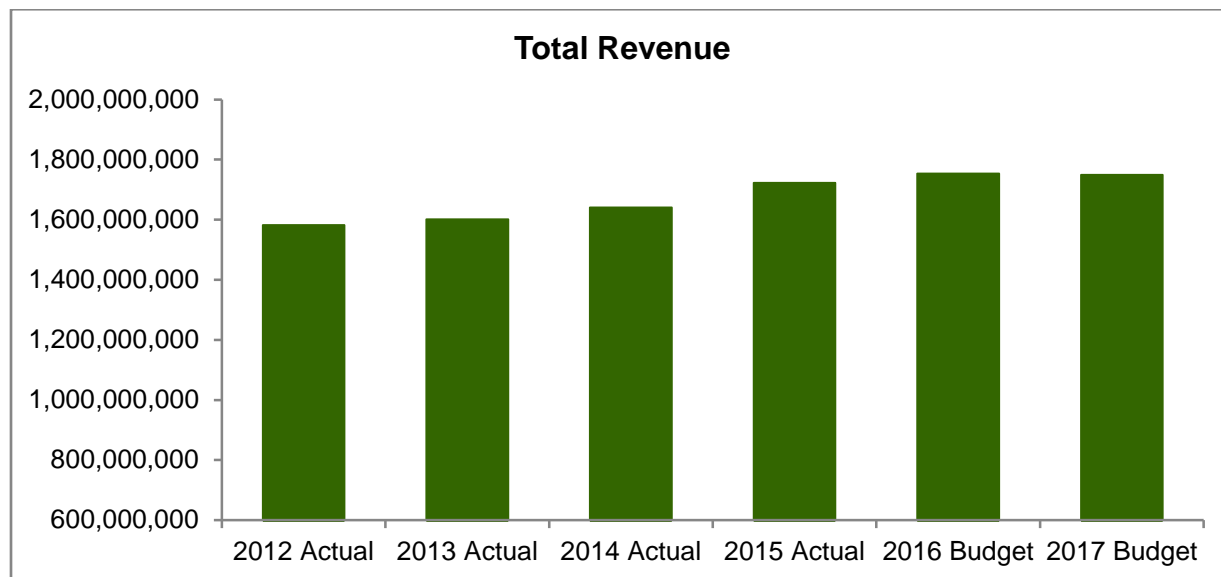


Figure 21: Operating Expenses with Snow and Severe Weather (2011-2017)

**REVENUE BUDGET**

Total revenue in 2017 is budgeted at \$1,749,181,000, a 0.3% decrease from 2016 budgeted revenues, driven primarily by a forecasted decrease in toll revenue. Total revenue trends are shown below.



**Figure 22: Total Annual Revenue (2012-2017)**

Toll revenue comprises 88.4% of total revenue. Toll revenue in 2017 is budgeted at \$1,546,359,000, which represents a decrease of 0.5% compared to the 2016 budget. Turnpike toll revenue is expected to decrease by 1.0% due to the reopening of the Pulaski Skyway, a toll free alternate route in the Jersey City area. Parkway toll revenue is expected to increase by 1.0%, as normal traffic growth resulting from stable economic conditions and low gasoline prices are anticipated to continue through 2017. Traffic and revenue forecasts are contained in the October 2015 drawdown letter by CDM Smith. In 2017, for the first time, both passenger car and commercial traffic are expected to exceed 2008 pre-recession levels. As mentioned, traffic and revenue forecasts will be updated by year-end, and the 2017 toll revenue forecast is expected to be increased above what is being used for the 2017 Annual Budget.



**OPERATING EXPENSE BUDGET**

The 2017 Operating Expense Budget of \$528,762,000 is increasing by \$9,339,000, or 1.8%, compared to the 2016 Operating Expense Budget. Key cost factors in the 2017 Operating Expense Budget are as follows:

- Increased maintenance costs of \$3.6 million, including HVAC, generator and boiler replacements and increased roadway sweepings, as well as additional expenses necessitated by the increased roadway capacity.
- Increased software costs of \$1.1 million from an increase in license costs and costs to develop open road tolling software in anticipation of the expiration of the Xerox software license.
- Increased credit card fees of \$1.0 million based on increased toll revenue volumes processed through E-ZPass.
- State Police costs are increasing by \$1.1 million due to a potential additional 15 troopers assigned to the roadways.
- Pension costs are increasing by \$2.1 million based upon estimated PERS payments.
- Health benefit costs are increasing by \$2.7 million based upon estimated usage and medical and prescription inflation rates.
- Wages include full funding of additional positions added in 2016 and 2017, as well as a decrease in the amount of salaries charged to extraordinary events, all totaling \$2.9 million.

The proposed 2017 Operating Expense Budget is increasing by \$9,339,000, driven by approximately \$14,500,000 in increases in the key cost factors. The total Operating Expense Budget increase is lower than the \$14,500,000 primarily due to projected savings in electronic toll costs due to the lower variable pricing contained in the new Xerox contract to take effect on 2/1/17. In addition, there are net savings projected from a change of who maintains toll lane equipment from an outside vendor to Authority staff during 2017.

After eleven consecutive years of decline following the merger of the New Jersey Turnpike Authority and New Jersey Highway Authority, authorized headcount is once again increasing since the low in 2014 due to the need to add maintenance personnel to handle the increased roadway capacity.

Authorized headcount since 2004 is shown below:

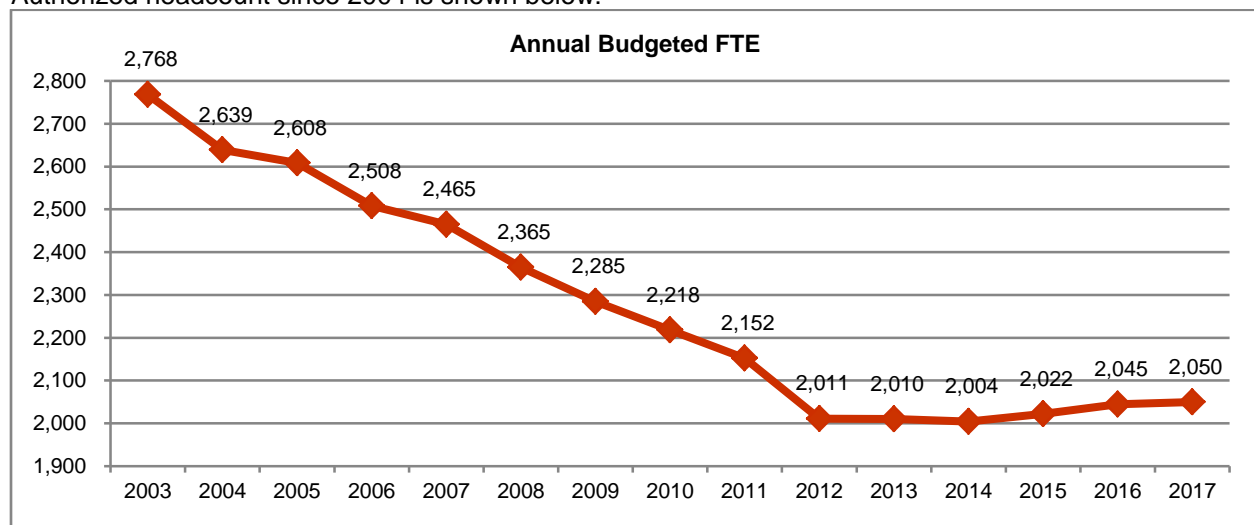


Figure 23: Authorized Headcount (2004-2017)

Snow and severe weather costs are budgeted based upon the highest amount either budgeted or actual over the previous five years. The snow and severe weather budget is remaining at the same level in 2017 as 2016, based upon the high spending levels of 2014 and 2015.

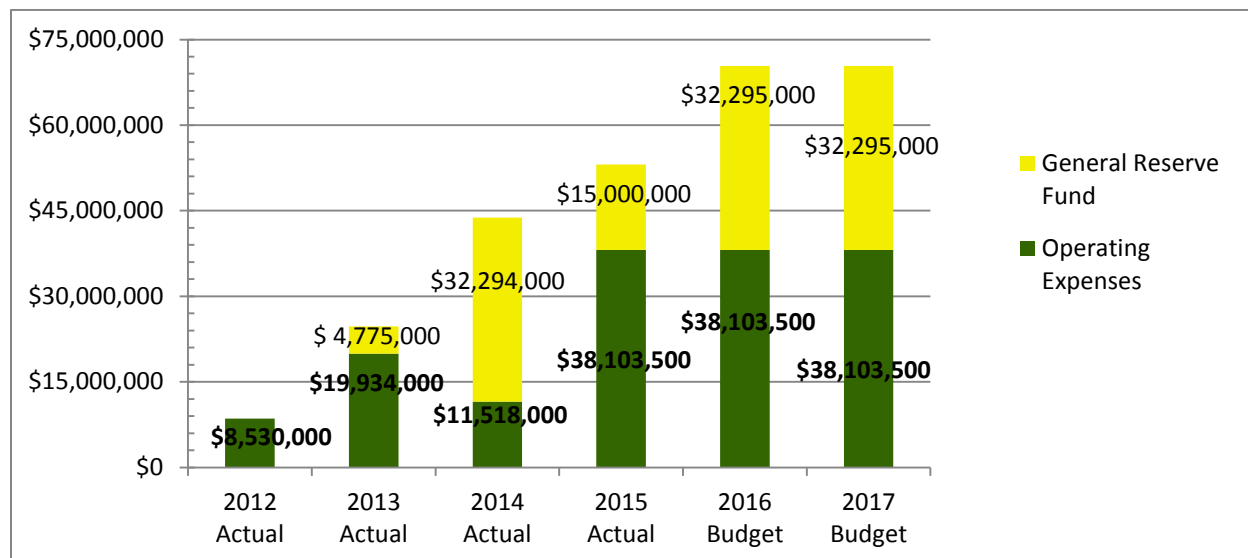


Figure 24: Snow and Severe Weather Expenses (2012-2017)

## DEBT SERVICE BUDGET

Total Debt Service in 2017 is budgeted at \$846,460,000, which is a \$52,101,000 increase from the 2016 Debt Service Budget. Debt service is increasing primarily due to higher interest expense on new money bonds of up to \$1.025 billion to be potentially issued in 2017 to continue to fund the \$7 billion CIP. In addition, the Series 2014A new money bonds have interest expense payable from revenues for a full year in 2017, compared to only seven months in 2016.

## CHARGES BUDGET

Total costs for auction agent and broker/dealer fees on the Series 2000B-G are budgeted at \$155,000 for 2017; the same amount budgeted for 2016.

## MAINTENANCE RESERVE FUND BUDGET

The total 2017 spending budget for the Maintenance Reserve Fund is \$132,500,000, representing an increase of \$39,000,300, or 42%, from 2016 budgeted levels. In 2017, 107 additional lane miles will be resurfaced on the Turnpike, and 15 additional lane miles will be resurfaced on the Parkway, for a total increase of 77% as compared to 2016. Also, 16 additional bridges will be re-decked on the Turnpike and 23 additional bridges will be re-decked on the Parkway for a total increase of 76% over 2016. The Maintenance Reserve Fund budget is based upon repair cycle best practices as determined by the Authority's General Consulting Engineer.

## SPECIAL PROJECT RESERVE FUND BUDGET

The total 2017 spending budget for the Special Project Reserve Fund is \$48,439,000, representing an increase of \$9,682,000 from 2016 budgeted levels. Major projects budgeted for 2017 include Major Fleet Augmentation, which replaces rolling stock with a value of \$50,000 or higher on a rotating basis, technology upgrades and support, and the Newark Bay Hudson County Extension capacity study. The budget also includes funding for extraordinary emergency roadway, lighting and HVAC system repairs.

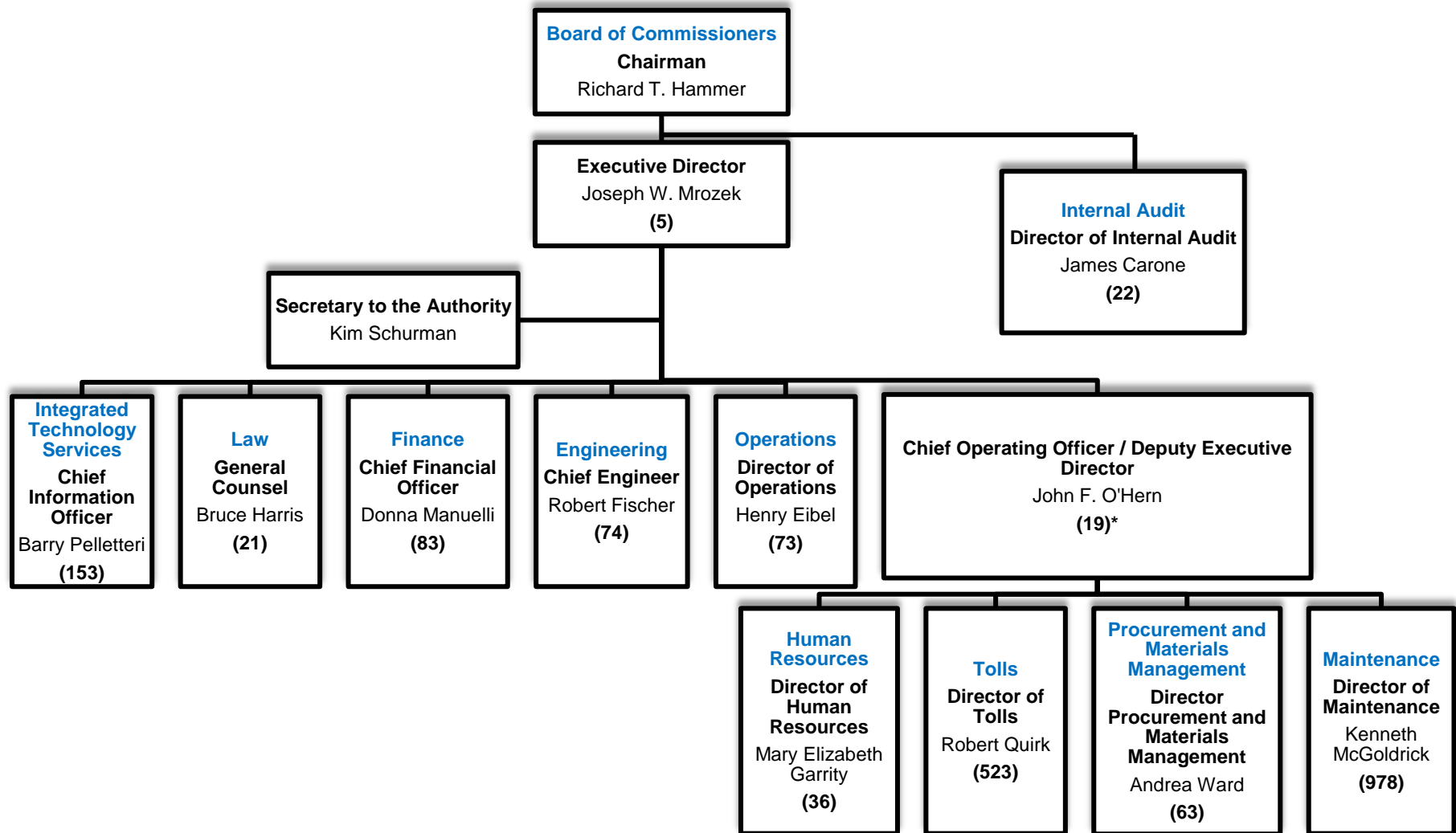
**GENERAL RESERVE FUND (INCLUDING SUPPLEMENTAL CAPITAL) BUDGET**

The total 2017 spending budget for the General Reserve Fund, which includes Supplemental Capital, is \$368,500,000, which is an increase of \$17,632,000 from the 2016 budget primarily due to an increase of \$41,123,000 in spending for Supplemental Capital projects. Funding is included in 2017 to begin to replace the aging hybrid changeable message signs on the Turnpike, and the toll collection system equipment on both of the roadways. The increase in the Supplemental Capital budget is partially offset by a decrease in the amount of payments on the State Transportation Projects Funding Agreement (2016-2021) which provides for a payment of \$204,000,000 in calendar year 2017, and is a reduction from payment levels required under the prior agreement.

**SUMMARY**

The 2017 Annual Budget provides the necessary funds to operate and maintain the additional capacity created by the Turnpike and Parkway widening projects. In addition, funds are provided to meet all debt service obligations to bondholders and all contractual payment obligations. The 2017 Annual Budget indicates that the Authority will exceed all required debt coverage covenants contained in its Bond Resolution, as well as exceed all targets established in its Guidelines, including maintaining minimum unencumbered General Reserve Fund balance in excess of \$100 million, without the need for a toll increase.

## Organization Chart



Departmental full-time employee count is shown in parenthesis.

\* The 12 full-time employees in the Patron & Customer Services Department and the 7 full-time employees in the State Police department report directly to the COO/DED.

Figure 25: Organization Chart

## Fund Structure

### Description of Funds

For financial statement purposes, the Authority's activities are accounted for using the flow of economic resources measurement focus and the accrual basis of accounting. All assets, liabilities, net position, revenues and expenses are accounted for as an enterprise fund with revenue recorded when earned and expenses recorded at the time liabilities are incurred. NCGAS 1 defines the purpose of enterprise funds as, "to account for operations (a) that are financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through users charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes."

However, 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** – is the general operating fund of the Authority. The fund is used to account for all pledged revenues and operating expenses. Pledged Revenue includes, among other things, all tolls, revenues, fees, rents, charges and other income and receipts derived from the operation of the Turnpike System. Operating expenses are for operation, maintenance, repairs, ordinary replacement and ordinary reconstruction of the Turnpike System and ordinary acquisition of equipment for the Turnpike System.

**Debt Service Fund** - accumulates the amounts required for payment of interest, maturing principal amounts and sinking fund installments on all outstanding bonds and for amounts due and payable under Interest Rate Swap Agreements.

**Debt Reserve Fund** – holds an amount equal to the greatest amount of interest accruing on all outstanding bonds in any calendar year.

**Charges Fund** – used to pay fees for any variable rate bond liquidity agreement, remarketing fees and tender agent fees.

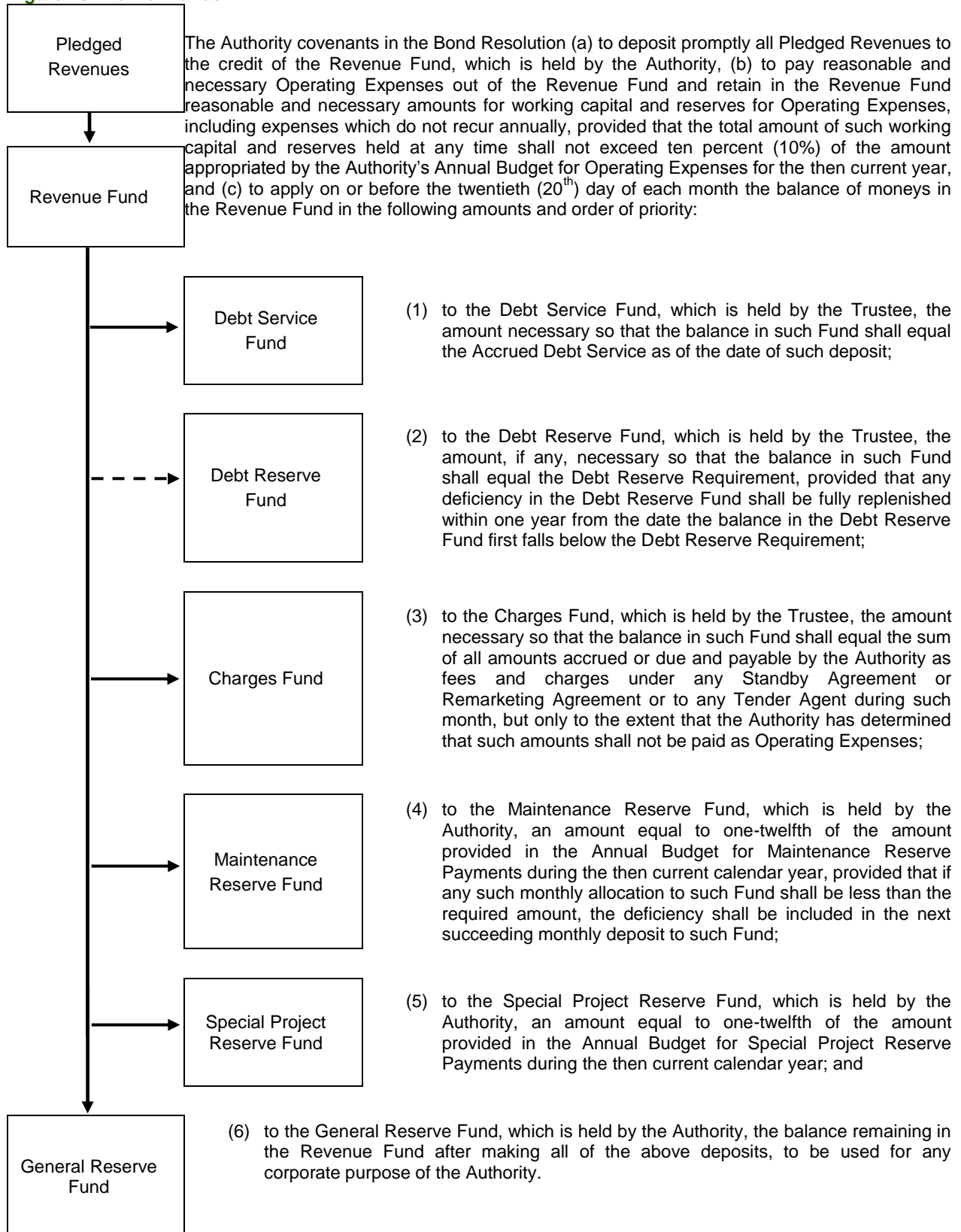
**Maintenance Reserve Fund** – used to pay for the cost of major resurfacing, replacement or reconstruction of the Turnpike System and major or extraordinary repairs, renewals or replacements of the Turnpike System necessary to restore or prevent physical damage to the Turnpike System, for the safe and efficient operation of the Turnpike System or to prevent loss of Pledged Revenues.

**Special Project Reserve Fund** – used to pay for any major resurfacing, renewals or replacements of the Turnpike System and for studies, surveys, estimates and investigations.

**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.

## Flow of Funds

Figure 26: Flow of Funds



## Revenue Requirement

The Revenue Requirement under section 713(b) of the Bond Resolution states that in each calendar year Net Revenues shall at least equal the Net Revenue Requirement for such year. Under Section 101 of the Bond Resolution, Net Revenues are defined as "... for any calendar year or other period of time, the Pledged Revenues during such year or period less the amounts of the Operating Expenses for such year or period." The Net Revenue Requirement is defined as, "an amount equal to the greater of:

(i) The Sum of the Aggregate Debt Service, Maintenance Reserve Payments, Special Project Reserve Payments, and payments, if any, to the Charges Fund for such period; or

(ii) 1.20 times the Aggregate Debt Service for such period (excluding, for purposes of clause (ii) only, any payment due and payable by the Authority under a Qualified Swap upon an early termination thereof)."

On or before December 1 in each year, the Authority will review its financial condition in order to estimate whether the Net Revenues for such year and for the next succeeding year will be sufficient to comply with the toll covenant. The required calculations are shown below.

<b>Net Revenue Requirement</b>			
(in Thousands)			
	<u>2015 Actual</u>	<u>2016 Est./ Actual</u>	<u>2017 Projected</u>
Revenues	\$1,722,298	\$1,783,317	\$1,749,181
Operating Expenses	<u>503,453</u>	<u>519,424</u>	<u>528,762</u>
Net Revenues	1,218,845	1,263,893	1,220,419
Debt Service Requirements	661,426	773,128	846,460
Charges Fund	535	155	155
Maintenance Reserve Payments	87,058	89,370	116,751
Special Project Reserve Payments	<u>50,301</u>	<u>38,918</u>	<u>39,696</u>
Total Requirements	\$799,320	\$901,571	\$1,003,062
Net Revenues	\$1,218,845	\$1,263,893	\$1,220,419
1.2 Times Debt Service	<u>793,711</u>	<u>927,754</u>	<u>1,015,752</u>
Excess Revenues	\$419,525	\$362,322	\$217,357
Debt Service Coverage	1.84	1.63	1.44

**Figure 27: Net Revenue Requirement (2015-2017)**

Based on the above review, Net Revenues for 2016 and 2017 will be sufficient to meet the Net Revenue Requirement.

## Basis of Budgeting

The Authority's Annual Budget provides the basis for expenditures during the year. The Authority operates on a calendar-year basis. No fewer than 40 days before the end of the year, the Authority must submit a Preliminary Budget of operating expenses and reserves to the Trustee as required by the Resolution. The budget is subject to the Trustee's examination, and the Authority is required to comply with all reasonable requests from the Trustee for classifications and clarifications. The Resolution also specifies that each Annual Budget must include funding for operating expenses and reserves and provisions for deposits to the Maintenance Reserve Fund and the Special Project Reserve Fund. The Preliminary Budget and the Annual Budget may provide additional information, as the Authority may determine, and each shall contain a certificate of the Consulting Engineer approving the Preliminary Budget and the Annual Budget, as the case may be.

The Annual Budget must be adopted by the Commissioners of the Authority by January 15<sup>th</sup> of each fiscal year and made a part of the Authority's minutes. In the event that the Authority does not adopt an Annual Budget by January 15<sup>th</sup> of the fiscal year or the Governor vetoes the adopted budget, the preceding year's budget remains in effect until such adoption and approval. The minutes of all meetings are subject to a 10-day review and veto period by the Governor of the State of New Jersey prior to final approval. The adoption and approval of the Annual Budget does not in itself authorize any specific expenditure. Specific expenditures must be submitted, adopted and approved under the Authority's adopted procedure and must be consistent with the statutory, contractual and other commitments of the Authority, including agreements with the holders of its obligations, including bonds. Adoption and approval of the Annual Budget does not limit or preclude the Authority from submitting an amended budget to the Commissioners for adoption. Copies of the Annual Budget and all amendments must be filed promptly with the Trustee. If at any time the Annual Budget and amendments thereto exceed the Preliminary Budget by 10% or more, the Authority must file a detailed report with the Trustee, stating specifically the reason for the increase, and hold a public hearing thereon.

Although the Authority is restricted from expending funds in excess of the Annual Budget allocation for operating expenses (other than through amendment to the Annual Budget), the Authority may allocate additional funds for operating expenses if such funds are obtained from sources other than Pledged Revenues.

The Authority's Annual Budget is prepared on the accrual basis of accounting, accordingly revenues are recognized in the accounting period they are earned and become measurable and expenses are recognized in the accounting period in which the liability is incurred, contrary to the cash basis in which revenues are reported on the income statement when the cash is received and expenses are recognized when the cash is paid. This is consistent with the Authority's audited year-end financial statements, with the exception of the following non-cash items which are not budgeted:

- Depreciation and Amortization
- Accretion
- Change in Fair Market Value of Investments
- GASB 53 Interest Rate Swap Adjustments
- OPEB Annual Required Contribution (except for current pay retiree benefits and reserves for OPEB which are budgeted)
- Uncompensated Absences
- GASB 48 Pollution Remediation Liability Reserve

According to the Authority's capitalization policy, the cost to construct, acquire or replace an existing asset (or otherwise prolong the useful life of an existing asset) is capitalized. The capitalization threshold is \$50,000 and includes equipment valued over \$50,000 or any purchase related to a capital project whose project value exceeds \$50,000. Based on this policy, there are no capitalized assets included in the Operating Budget. The Maintenance Reserve Fund, Special Project Reserve Fund and General Reserve Fund (including the Supplemental Capital Fund within the General Reserve Fund) may contain



capitalized projects. The budget for each fund groups projects into expense projects and capitalized projects in accordance with the Authority's capitalization policy.

It should be noted that the Authority's financial statements are presented as an enterprise fund with the activity of the Bond Resolution Funds shown on schedules to the financial statements. The Authority's Annual Budget is prepared based upon the Bond Resolution Funds.

In addition to the Annual Budget required by the Resolution, NJSA 27:23-3.2 requires the Authority to submit, before the close of each of its fiscal years, a complete and detailed report of its operating and capital construction budget. The report must include receipts and disbursements or revenue and expense, for the prior fiscal year and estimated amounts for the current and succeeding fiscal year.

## Budget Procedure

The Annual Budget process begins in August of each year with a review of the Authority's financial projections, current results compared to budget, and a preliminary estimated budget for the next calendar year. The review is completed by the Authority's Chief Financial Officer, the Deputy Chief Financial Officer, Assistant Director of Finance, Chief Operating Officer/Deputy Executive Director and the Executive Director. Based on this review, the Authority's strategic directives, financial policies and bond covenants, overall and specific departmental guidelines for the upcoming budget year are established. The Finance Department, through its Chief Financial Officer or Deputy Chief Financial Officer, communicates the budget guidelines to each department, as well as a call for capital projects. Departments must submit a detailed operating budget with spending justification, departmental organization, accomplishments for the current year, and goals for the next year. Departments must also submit all capital project requests, including total costs by year and justifications for each project. Based on these requests, a detailed preliminary operating and capital budget is prepared by the Finance Department, and approved by the Chief Operating Officer/Deputy Executive Director, the Executive Director, and the Authority's General Engineering Consultant. The budgets are then reviewed with the Authority's Commissioners at committee meetings. Once approved by the board committees, the Annual Budget, consisting of budgets for Revenue, Operating Expenses, Debt Service, Charges, Maintenance Reserve Fund, Special Project Reserve Fund, Supplemental Capital and the General Reserve Fund, is presented to the Board of Commissioners in public session for adoption at the November Board of Commissioners meeting.

A summary of the 2017 Annual Budget calendar is as follows:

Action	Date
2017 Annual Budget Preparation Kickoff	9/1/2016
Executive Budget Planning Meeting	9/15/2016
Distribution of Operating & Capital Budget Documents to Departments	Week of 9/19/2016
Individual Department Budget Meetings	Week of 9/19/2016
Response from Departments for Operating Budget & Capital Budget	10/3/2016
Executive Budget Review Meeting	Week of 10/17/2016
Budget Presentation at Board Committee Meeting	11/9/2016
Budget Approved at Meeting of Board of Commissioners	11/22/2016
Governor's 10-day veto period expires without Governor exercising said power	(estimated) 12/7/16

**Figure 28: 2017 Annual Budget Calendar**

## Summary of Major Revenues and Expenses

### Sources of Revenue

(in Thousands)

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>	<u>\$ Change from 2016 Budget</u>	<u>% Change from 2016 Budget</u>
Toll Revenue					
Turnpike	\$1,106,268	\$1,135,690	\$1,124,302	(\$11,388)	-1.0%
Parkway	416,865	417,996	422,057	4,061	1.0%
Total Toll Revenue	1,523,133	1,553,686	1,546,359	(7,327)	-0.5%
Other Operating Revenue	108,359	109,656	111,400	1,744	1.6%
Non-Operating Revenue	90,806	90,747	91,422	675	0.7%
Total Revenues	<u>\$1,722,298</u>	<u>\$1,754,089</u>	<u>\$1,749,181</u>	<u>(\$4,908)</u>	<u>-0.3%</u>

Figure 29: Sources of Revenue (2015-2017)

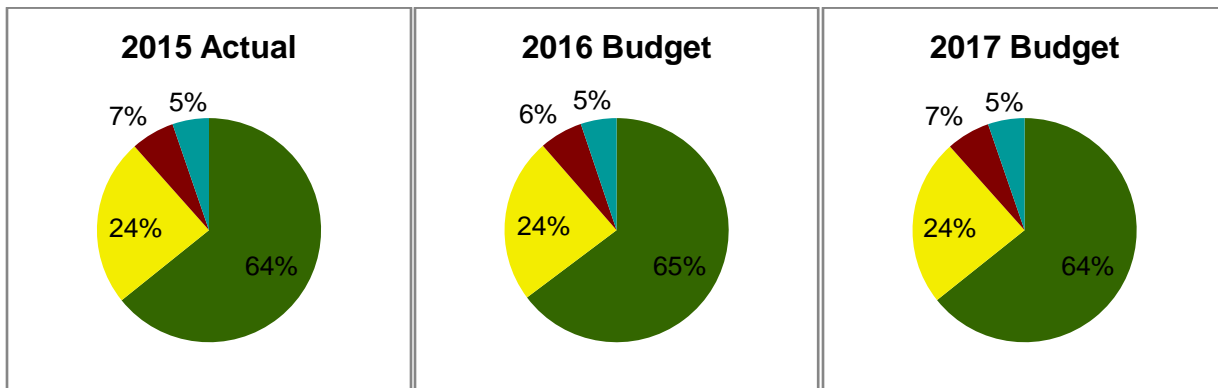


Figure 30: Sources of Revenue Percentages (2015-2017)

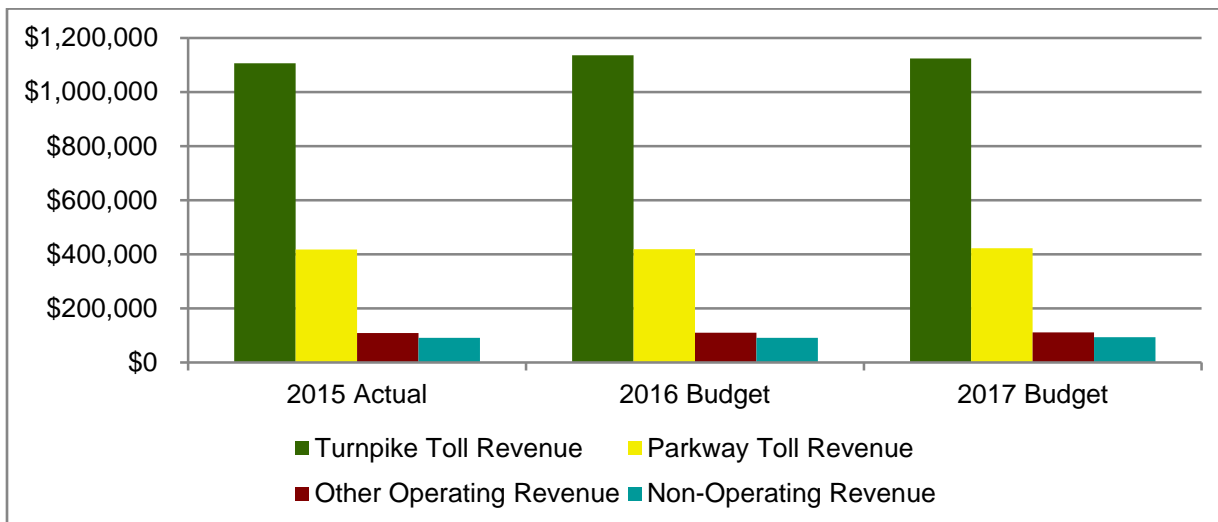


Figure 31: Sources of Revenue Graph (2015-2017)

### Allocation of Revenue

(in Thousands)

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>	<u>\$ Change from 2016 Budget</u>	<u>% Change from 2016 Budget</u>
Operating Expenses	\$ 503,453	\$ 519,424	\$ 528,762	\$ 9,338	1.8%
Transfers to:					
Debt Service & Charges	661,961	794,251	846,615	52,364	6.6%
Maintenance Reserve Fund	87,058	89,370	116,751	27,381	30.6%
Special Project Reserve Fund	50,301	38,918	39,696	778	2.0%
General Reserve Fund	419,525	312,126	217,357	(94,769)	-30.4%
<b>Total Allocation of Revenue</b>	<b>\$ 1,722,298</b>	<b>\$ 1,754,089</b>	<b>\$ 1,749,181</b>	<b>\$ (4,908)</b>	<b>-0.3%</b>

Figure 32: Allocation of Revenue (2015-2017)

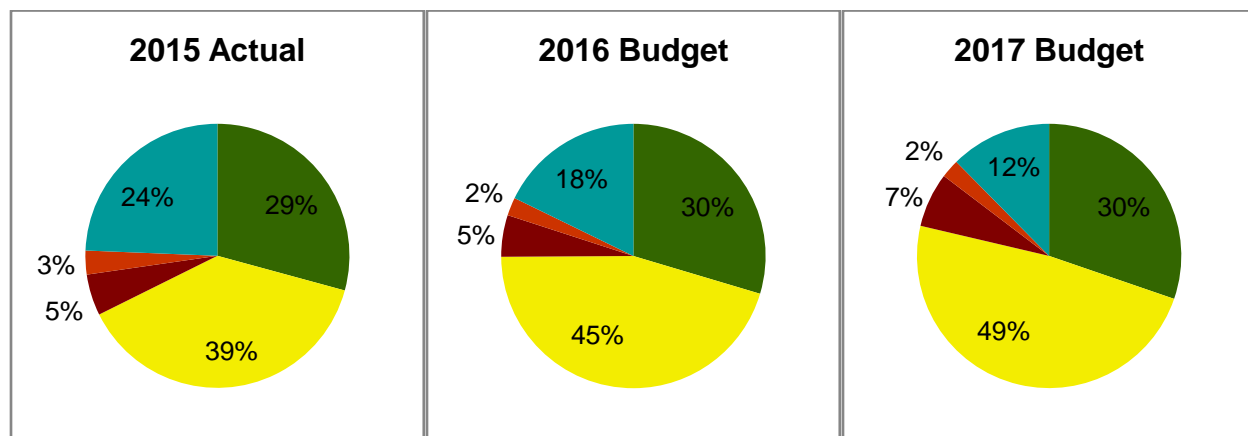


Figure 33: Allocation of Revenue Percentages (2015-2017)

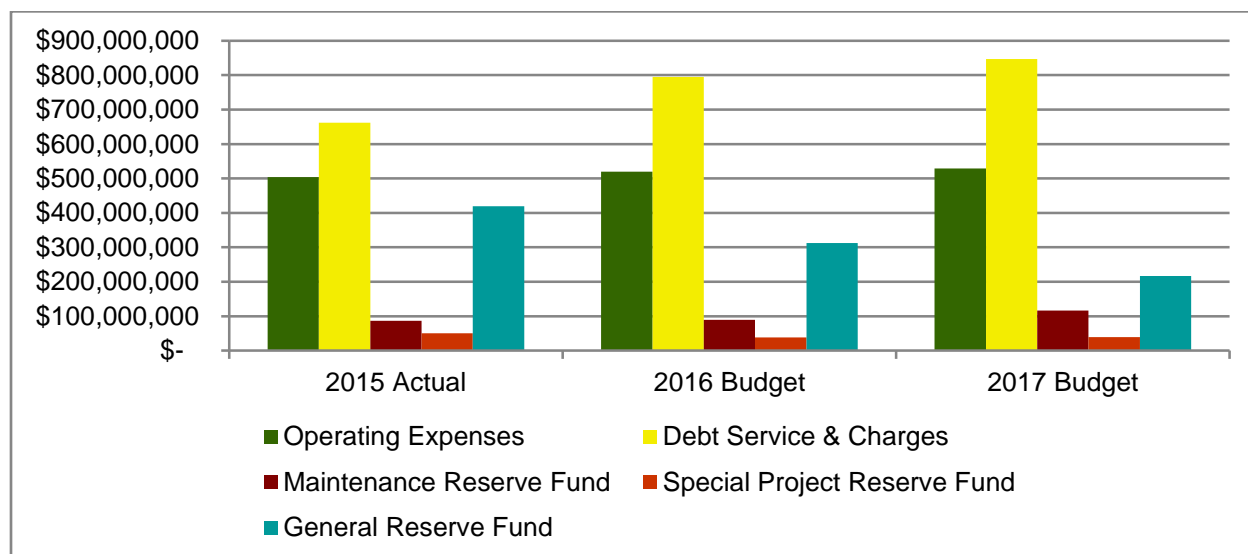


Figure 34: Allocation of Revenue Graph (2015-2017)

## Revenue

### 2017 Revenue Budget

(in Thousand's)

	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2017 Budget</u>	<u>\$ Change from 2016 Budget</u>	<u>% Change from 2016 Budget</u>
<b>Operating Revenue</b>					
Turnpike Toll Revenue	\$ 1,106,268	\$ 1,135,690	\$ 1,124,302	\$ (11,388)	-1.0%
Parkway Toll Revenue	416,865	417,996	422,057	4,061	1.0%
E-ZPass Fees	56,262	57,756	59,200	1,444	2.5%
Concessions	38,993	38,900	39,200	300	0.8%
Miscellaneous	13,104	13,000	13,000	-	0.0%
<b>Total Operating Revenue</b>	<b>1,631,492</b>	<b>1,663,342</b>	<b>1,657,759</b>	<b>(5,583)</b>	<b>-0.3%</b>
<b>Non-Operating Revenue</b>					
Federal Subsidy for Build America Bonds	75,908	75,703	76,030	327	0.4%
Interest Income	11,266	11,700	11,990	290	2.5%
Arts Center Revenues	3,632	3,344	3,402	58	1.7%
<b>Total Non-Operating Revenue</b>	<b>90,806</b>	<b>90,747</b>	<b>91,422</b>	<b>675</b>	<b>0.7%</b>
<b>Total Revenues</b>	<b>\$ 1,722,298</b>	<b>\$ 1,754,089</b>	<b>\$ 1,749,181</b>	<b>\$ (4,908)</b>	<b>-0.3%</b>

Figure 35: Revenue Budget (2015-2017)

#### Key Assumptions:

- Toll Revenue on the New Jersey Turnpike is expected to decline 1% in 2017 compared to the 2016 budget, reflecting a change in traffic patterns due to the reopening of the Pulaski Skyway in Jersey City. Garden State Parkway toll revenue is expected to increase by 1% compared to the 2016 Budget, reflecting normal growth due to the stable economic conditions and continued low gas prices.
- E-ZPass Fees are expected to increase due to an increase in administrative fees collected from toll violators due to enhanced collection efforts, and to a lesser extent an increase in monthly membership fees due to continued growth in the customer base.
- Concession revenue is expected to increase due to continued increases in food and gasoline sales on both roadways.
- Interest income is expected to increase as short term interest rates are budgeted to increase in 2017.

<b>Revenue Fund Balance</b>					
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2016 to 2017</b>	<b>2016 to 2017</b>
	<b>Actual</b>	<b>Est. / Actuals</b>	<b>Budget</b>	<b>\$ Change</b>	<b>% Change</b>
Beginning Balance	\$ 84,657,845	\$ 84,657,845	\$ 84,657,845	\$ -	
Revenues	1,722,298,000	1,783,317,000	1,749,181,000	(34,136,000)	
Expenses	(503,453,000)	(519,424,000)	(528,762,000)	(9,338,000)	
Transfers to Funds	(1,218,845,000)	(1,263,893,000)	(1,220,419,000)	43,474,000	
<b>Ending Balance</b>	<b>\$ 84,657,845</b>	<b>\$ 84,657,845</b>	<b>\$ 84,657,845</b>	<b>\$ -</b>	<b>0.0%</b>

Figure 36: Revenue Fund Balance (2015-2017)

## Toll Statistics

### Toll Transactions by Vehicle Type and Roadway

Toll Transactions (in Thousands):

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>	<u>2017*</u>
New Jersey Turnpike Passenger Vehicles	195,208	202,347	215,359	222,755	218,984
New Jersey Turnpike Commercial Vehicles	<u>29,278</u>	<u>29,896</u>	<u>31,238</u>	<u>31,713</u>	<u>32,458</u>
Total New Jersey Turnpike	224,486	232,243	246,597	254,468	251,442
Garden State Parkway Toll Transactions	<u>368,918</u>	<u>370,349</u>	<u>379,284</u>	<u>387,588</u>	<u>382,710</u>
Total Turnpike System Transactions	<u>593,404</u>	<u>602,592</u>	<u>625,881</u>	<u>642,056</u>	<u>634,152</u>

\* Projected Traffic is based on the CDM Smith Draw Down Letter issued in October 2015 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>	<u>2017*</u>
New Jersey Turnpike Passenger Toll Revenue	0.4%	3.7%	6.4%	3.4%	-1.7%
New Jersey Turnpike Commercial Toll Revenue	<u>2.2%</u>	<u>2.1%</u>	<u>4.5%</u>	<u>1.5%</u>	<u>2.3%</u>
Total New Jersey Turnpike Toll Revenue	0.6%	3.5%	6.2%	3.2%	-1.2%
Garden State Parkway Toll Revenue	<u>0.8%</u>	<u>0.4%</u>	<u>2.4%</u>	<u>2.2%</u>	<u>-1.3%</u>
Total Turnpike System Toll Revenue	<u>0.7%</u>	<u>1.5%</u>	<u>3.9%</u>	<u>2.6%</u>	<u>-1.2%</u>

\* Projected Traffic is based on the CDM Smith Draw Down Letter issued in October 2015 which updated the short-term projections of their Investor Grade Traffic & Revenue Study released in May 2014.

Figure 37: Toll Transactions by Vehicle Type and Roadway (2013-2017)

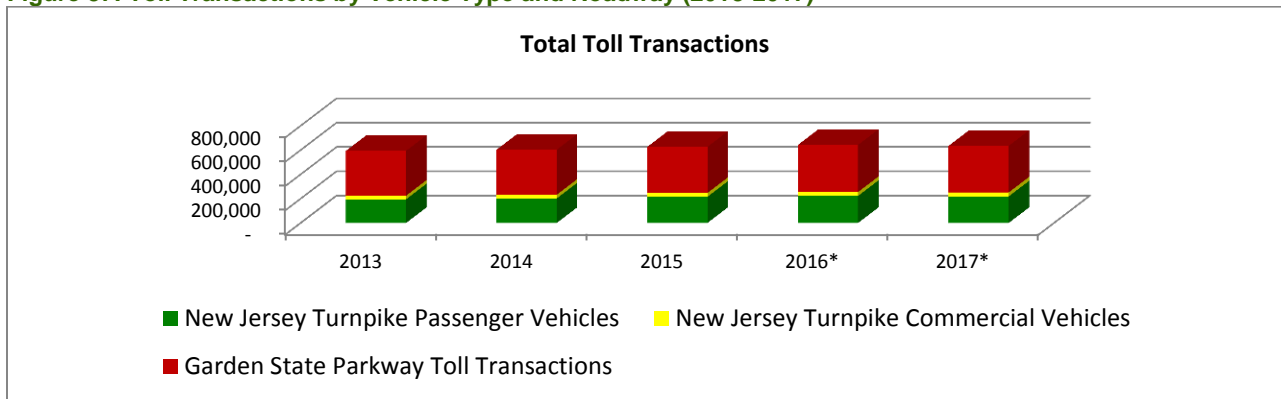


Figure 38: Total Toll Transactions (2013-2017)

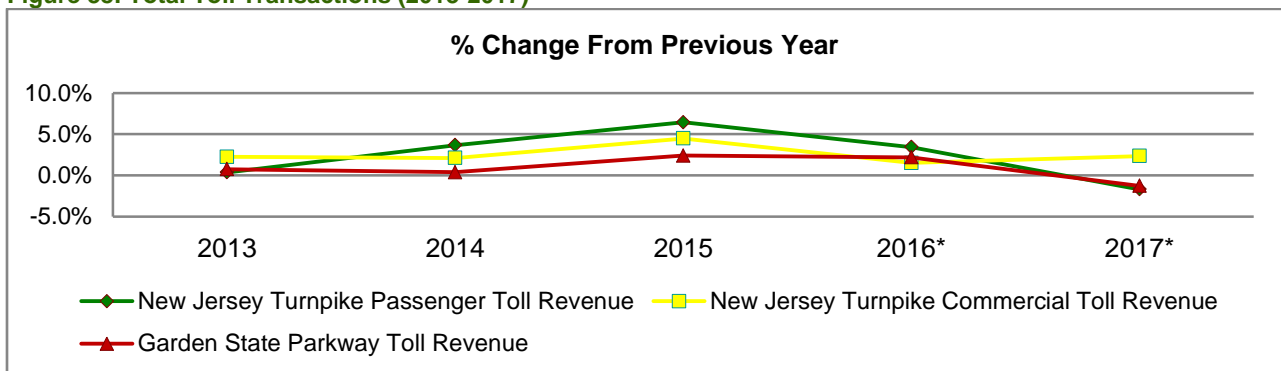


Figure 39: Toll Transactions Percent Change (2013-2017)

**Toll Revenue by Vehicle Type and Roadway**

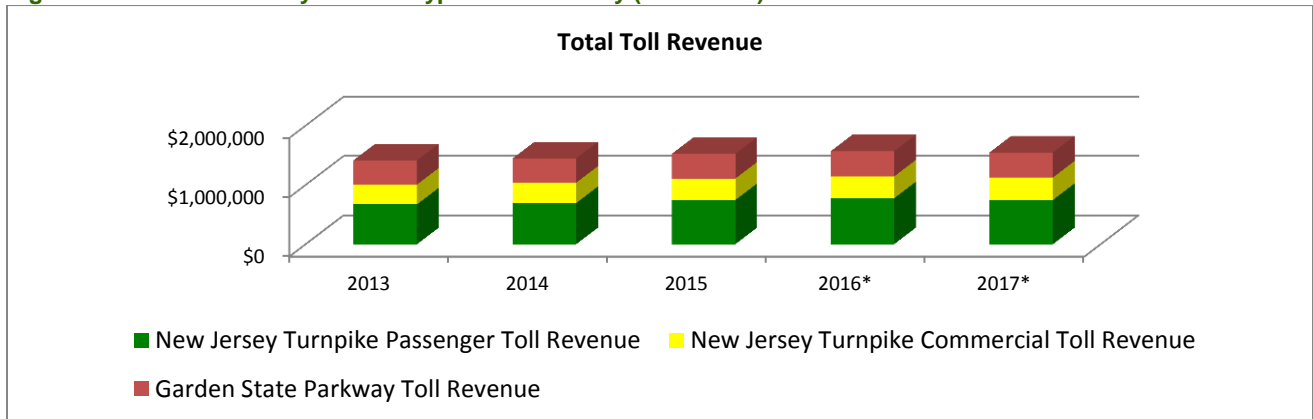
Toll Revenue (in Thousands):

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>	<u>2017*</u>
New Jersey Turnpike Passenger Toll Revenue	\$672,828	\$695,129	\$745,007	\$774,750	\$746,980
New Jersey Turnpike Commercial Toll Revenue	<u>333,892</u>	<u>342,614</u>	<u>361,261</u>	<u>367,318</u>	<u>377,322</u>
Total New Jersey Turnpike Toll Revenue	1,006,720	1,037,743	1,106,268	1,142,068	1,124,302
Garden State Parkway Toll Revenue	<u>407,043</u>	<u>408,004</u>	<u>416,865</u>	<u>424,844</u>	<u>422,057</u>
Total Turnpike System Toll Revenue	<u>\$1,413,763</u>	<u>\$1,445,747</u>	<u>\$1,523,133</u>	<u>\$1,566,912</u>	<u>\$1,546,359</u>

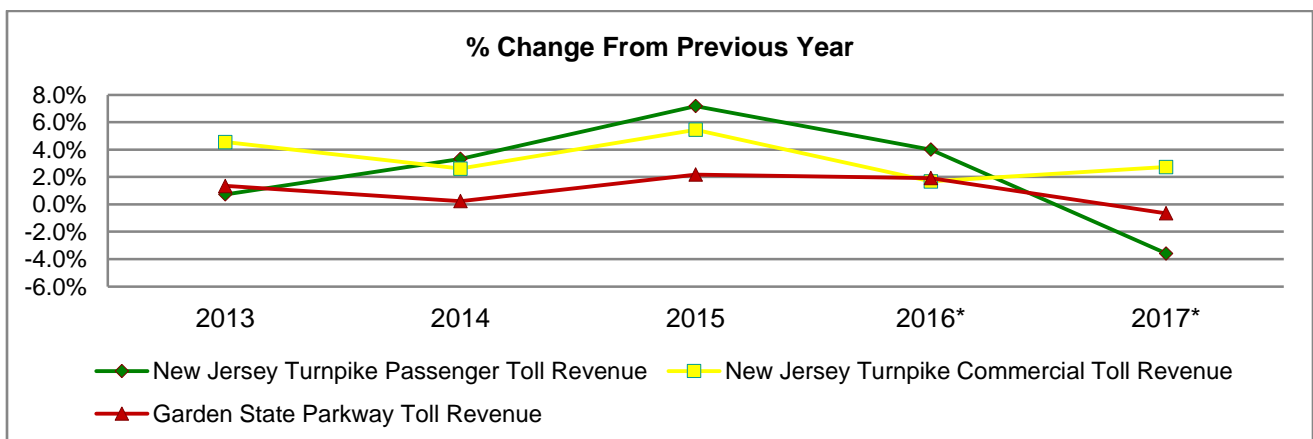
\* Projected Revenue is based on data used for the CDM Smith Investor Grade Traffic & Revenue Study released in May 2014.

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016*</u>	<u>2017*</u>
New Jersey Turnpike Passenger Toll Revenue	0.7%	3.3%	7.2%	4.0%	-3.6%
New Jersey Turnpike Commercial Toll Revenue	<u>4.6%</u>	<u>2.6%</u>	<u>5.4%</u>	<u>1.7%</u>	<u>2.7%</u>
Total New Jersey Turnpike Toll Revenue	2.0%	3.1%	6.6%	3.2%	-1.6%
Garden State Parkway Toll Revenue	<u>1.3%</u>	<u>0.2%</u>	<u>2.2%</u>	<u>1.9%</u>	<u>-0.7%</u>
Total Turnpike System Toll Revenue	<u>1.8%</u>	<u>2.3%</u>	<u>5.4%</u>	<u>2.9%</u>	<u>-1.3%</u>

**Figure 40: Toll Revenue by Vehicle Type and Roadway (2013-2017)**



**Figure 41: Total Toll Revenue (2013-2017)**



**Figure 42: Toll Revenue Percent Change (2013-2017)**

## 2017 Operating Budget

	<u>2015 Actuals</u>	<u>2016 Budget</u>	<u>2017 Budget</u>	<u>\$ Change from 2016 Budget</u>	<u>% Change from 2016 Budget</u>
<b><u>Maintenance of Roadway, Buildings &amp; Equipment</u></b>					
Maintenance	\$ 189,097,700	\$ 200,402,800	\$ 210,701,200	\$ 10,298,400	5.1%
Engineering	8,572,900	8,647,100	9,582,800	935,700	10.8%
	<u>197,670,600</u>	<u>209,049,900</u>	<u>220,284,000</u>	<u>11,234,100</u>	<u>5.4%</u>
<b><u>Toll Collection</u></b>					
Toll Collection	160,329,000	164,450,500	158,965,900	(5,484,600)	-3.3%
<b><u>State Police &amp; Traffic Control</u></b>					
Operations	11,236,900	11,453,900	11,923,500	469,600	4.1%
State Police	67,185,000	68,080,800	69,126,800	1,046,000	1.5%
	<u>78,421,900</u>	<u>79,534,700</u>	<u>81,050,300</u>	<u>1,515,600</u>	<u>1.9%</u>
<b><u>Technology</u></b>					
Integrated Technology Services	28,883,600	26,754,500	27,797,300	1,042,800	3.9%
<b><u>General &amp; Administrative</u></b>					
Executive Office	1,022,900	1,046,800	1,074,100	27,300	2.6%
Law & Insurance Services	7,757,400	8,901,700	9,003,500	101,800	1.1%
Purchasing & Materials Management	8,316,200	8,356,400	8,573,600	217,200	2.6%
Human Resources & Office Services	4,916,700	4,991,800	5,182,800	191,000	3.8%
Finance	11,362,900	11,189,500	11,413,500	224,000	2.0%
Patron & Customer Services	1,850,500	2,054,000	1,960,300	(93,700)	-4.6%
Internal Audit	2,921,500	3,094,100	3,457,100	363,000	11.7%
	<u>38,148,100</u>	<u>39,634,300</u>	<u>40,664,900</u>	<u>1,030,600</u>	<u>2.6%</u>
<b>Total Operating Budget</b>	<b>\$ 503,453,200</b>	<b>\$ 519,423,900</b>	<b>\$ 528,762,400</b>	<b>\$ 9,338,500</b>	<b>1.8%</b>

Figure 43: Operating Budget (2015-2017)

- Key cost factors in the 2017 Operating Expense Budget are as follows:
  - Increased maintenance costs of \$3.6 million, including HVAC, generator and boiler replacements and increased roadway sweepings, as well as additional expenses necessitated by the increased roadway capacity.
  - Increased software costs of \$1.1 million from an increase in license costs and costs to develop open road tolling software in anticipation of the expiration of the Xerox software license.
  - Increased credit card fees of \$1.0 million based on increased toll revenue volumes processed through E-ZPass.
  - State Police costs are increasing by \$1.2 million due to a potential additional 15 troopers assigned to the roadways.
  - Pension costs are increasing by \$2.1 million based upon estimated PERS payments.
  - Health benefit costs are increasing by \$2.7 million based upon estimated usage and medical and prescription inflation rates.
  - Wages include full funding of additional positions added in 2016 and 2017, as well as a decrease in the amount of salaries charged to extraordinary events, all totaling \$2.9 million.
- The proposed 2017 Operating Expense Budget is increasing by \$9.3 million, driven by approximately \$14.5 million in increases in the key cost factors. The total Operating Expense Budget increase is lower than the \$14.5 million primarily due to projected savings in electronic toll costs due to the lower variable pricing contained in the new Xerox contract to take effect on 2/1/17. In addition, there are net savings projected from bringing all lane maintenance functions in house during 2017.
- The 2017 Operating Budget represents a 1.8% increase from the 2016 Operating Budget, after a flat budget in 2013, a minor 0.4% increase in 2014, a 2.0% increase in 2015 and a 1.9% increase in 2016. In fact, when eliminating the budgeted amounts for snow and severe weather, the 2017 budget for all other operating expenses of \$490.7 million is less than \$24.7 million higher than the 2011 budget for all other operating expenses of \$466.0 million, an increase of only 5% over the entire six year period, or an average of only 0.8% per year.



### Budget by Functional Area

	<u>2015 Actuals</u>	<u>2016 Budget</u>	<u>2017 Budget</u>	<u>\$ Change from 2016 Budget</u>	<u>% Change from 2016 Budget</u>
Maintenance of roadway, buildings, & equipment	\$ 197,670,600.00	\$ 209,049,900.00	\$ 220,284,000.00	\$ 11,234,100.00	5.4%
Toll Collection	160,329,000.00	164,450,500.00	158,965,900.00	(5,484,600.00)	-3.3%
State Police & Traffic Control	78,422,000.00	79,534,700.00	81,050,300.00	1,515,600.00	1.9%
Technology	28,883,500.00	26,754,500.00	27,797,300.00	1,042,800.00	3.9%
General & Administrative	38,148,100.00	39,634,300.00	40,664,900.00	1,030,600.00	2.6%
<b>Total Operating Budget</b>	<b>\$ 503,453,200.00</b>	<b>\$ 519,423,900.00</b>	<b>\$ 528,762,400.00</b>	<b>\$ 9,338,500.00</b>	<b>1.8%</b>

Figure 44: Budget by Functional Area (2015-2017)

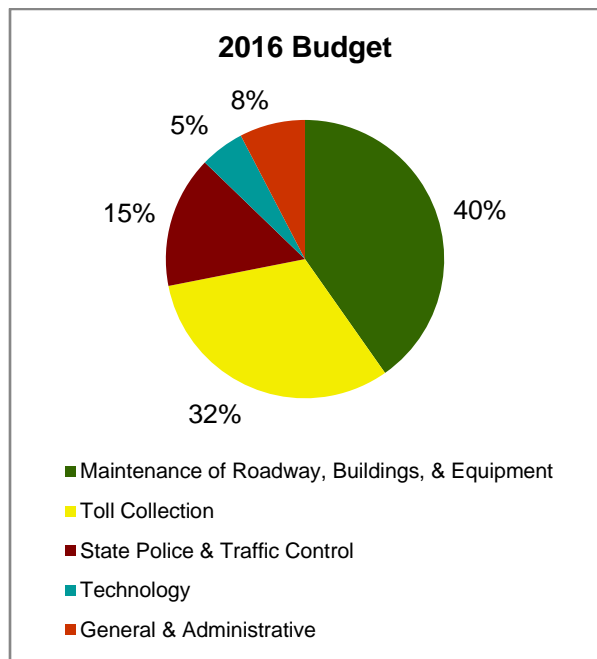
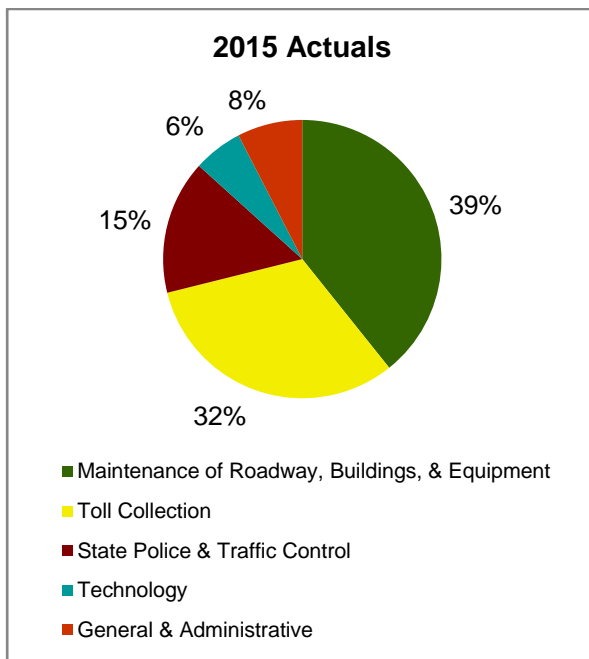
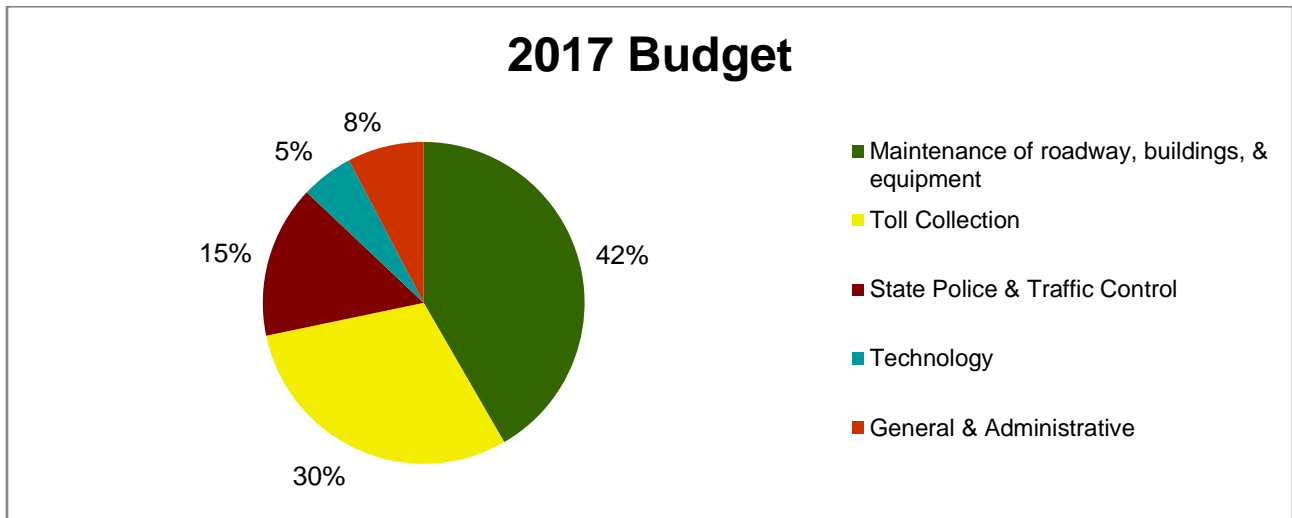


Figure 45: Budget by Functional Area Percentages (2015-2017)

### Budget by Expense Type

	2015 <u>Actuals</u>	2016 <u>Budget</u>	2017 <u>Budget</u>	\$ Change from <u>2016 Budget</u>	% Change from <u>2016 Budget</u>
Personnel Costs	\$ 252,465,500	\$ 254,463,600	\$ 263,281,200	\$ 8,817,600	3.5%
Materials & Supplies	39,528,700	46,545,900	49,976,400	3,430,500	7.4%
Services	159,350,300	163,385,000	161,645,800	(1,739,200)	-1.1%
Maintenance & Fixed Costs	35,133,800	37,833,000	35,292,600	(2,540,400)	-6.7%
Equipment	16,974,900	17,196,400	18,566,400	1,370,000	8.0%
<b>Total Operating Budget</b>	<b>\$ 503,453,200</b>	<b>\$ 519,423,900</b>	<b>\$ 528,762,400</b>	<b>\$ 9,338,500</b>	<b>1.8%</b>

Figure 46: Budget by Expense Type (2015-2017)

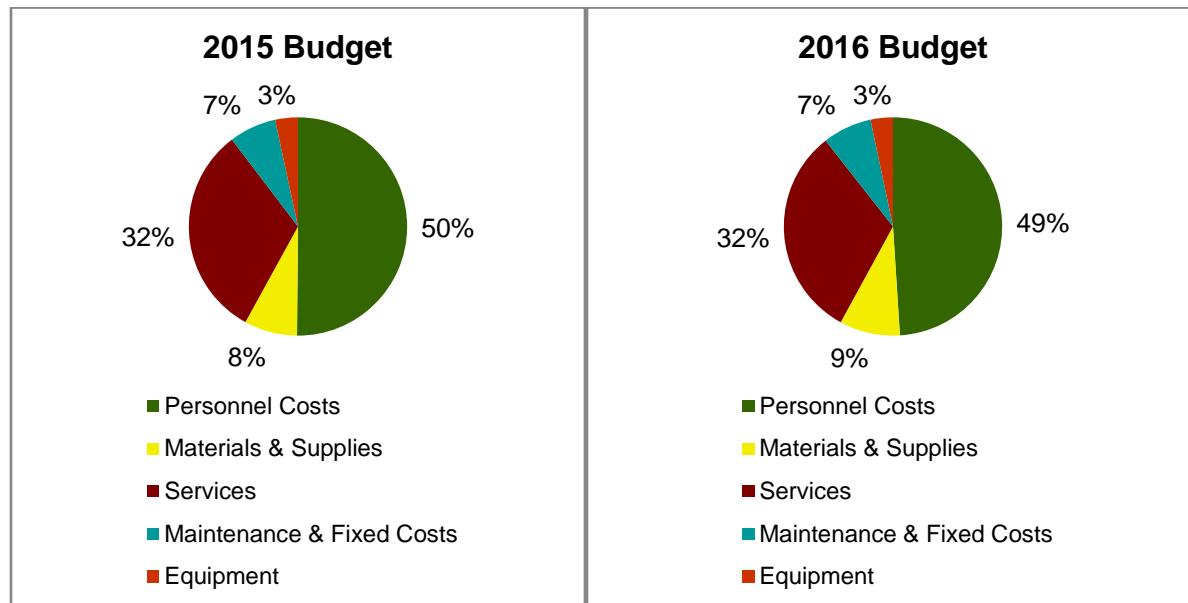
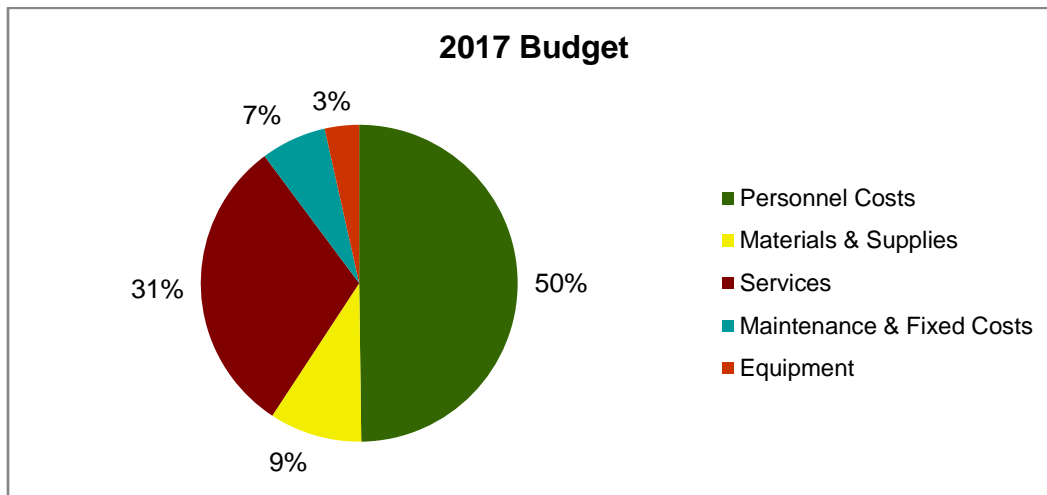


Figure 47: Budget by Expense Type Percentages (2015-2017)

## 2017 Operating Budget Summary by Line Item

	<u>2015</u> <u>Actuals</u>	<u>2016</u> <u>Budget</u>	<u>2017</u> <u>Budget</u>	<u>\$ Change from</u> <u>2016 Budget</u>	<u>% Change from</u> <u>2016 Budget</u>
<b><u>Personnel Costs</u></b>					
Salaries & Wages	\$ 149,358,500	\$ 149,862,500	\$ 153,787,000	\$ 3,924,500	2.6%
Allowances	1,107,800	1,269,300	1,380,300	111,000	8.7%
Pension & Payroll Taxes	27,006,600	27,325,400	29,379,700	2,054,300	7.5%
Health Benefits	74,267,000	75,221,200	77,880,200	2,659,000	3.5%
Tuition	119,500	100,000	99,800	(200)	-0.2%
Training & Transportation	606,100	685,200	754,200	69,000	10.1%
<b>Total Personal Costs</b>	<b><u>252,465,500</u></b>	<b><u>254,463,600</u></b>	<b><u>263,281,200</u></b>	<b><u>8,817,600</u></b>	<b><u>3.5%</u></b>
<b><u>Materials &amp; Supplies</u></b>					
Printing & Office Supplies	400,200	458,600	466,600	8,000	1.7%
Vehicle Fuel	4,470,500	4,674,100	4,258,500	(415,600)	-8.9%
Medical Supplies	8,400	10,400	10,300	(100)	-1.0%
Operating Supplies	1,082,700	1,562,600	1,728,000	165,400	10.6%
Toll Tickets	321,800	322,300	321,300	(1,000)	-0.3%
Utilities	11,605,800	12,612,600	12,494,600	(118,000)	-0.9%
Snow/Ice Materials	11,529,800	13,736,500	14,184,300	447,800	3.3%
Software	2,462,900	3,799,900	4,910,300	1,110,400	29.2%
Operating Materials	7,646,600	9,368,900	11,602,500	2,233,600	23.8%
<b>Total Materials &amp; Supplies</b>	<b><u>39,528,700</u></b>	<b><u>46,545,900</u></b>	<b><u>49,976,400</u></b>	<b><u>3,430,500</u></b>	<b><u>7.4%</u></b>
<b><u>Services</u></b>					
State Police Services	62,989,700	61,792,000	62,961,800	1,169,800	1.9%
Credit Card, Trustee & Banking Fees	26,770,600	28,477,400	29,368,800	891,400	3.1%
Insurance	8,389,100	9,150,800	9,259,100	108,300	1.2%
Facilities Services	2,397,700	2,547,600	2,789,300	241,700	9.5%
Legal Services	1,805,700	1,807,000	1,693,200	(113,800)	-6.3%
Consulting Services	2,295,400	2,397,200	3,153,800	756,600	31.6%
Other Professional Services	49,736,300	52,285,700	47,020,600	(5,265,100)	-10.1%
Environmental Services	4,684,500	4,643,000	5,077,900	434,900	9.4%
Other Services	281,300	284,300	321,300	37,000	13.0%
<b>Total Services</b>	<b><u>159,350,300</u></b>	<b><u>163,385,000</u></b>	<b><u>161,645,800</u></b>	<b><u>(1,739,200)</u></b>	<b><u>-1.1%</u></b>
<b><u>Maintenance &amp; Fixed Costs</u></b>					
Vehicle Maintenance	569,800	577,200	538,300	(38,900)	-6.7%
Roadway Maintenance	18,679,800	20,684,400	20,708,600	24,200	0.1%
Bridge Maintenance	16,100	74,500	60,100	(14,400)	-19.3%
Building Maintenance	600,700	768,500	1,686,700	918,200	119.5%
Toll Booth Maintenance	16,300	29,700	12,500	(17,200)	-57.9%
Equipment Maintenance	11,909,300	12,117,200	7,903,900	(4,213,300)	-34.8%
Building & Equipment Rental	3,140,800	3,326,700	4,220,700	894,000	26.9%
Taxes	200,000	254,800	161,800	(93,000)	-36.5%
<b>Total Maintenance &amp; Fixed Costs</b>	<b><u>35,132,800</u></b>	<b><u>37,833,000</u></b>	<b><u>35,292,600</u></b>	<b><u>(2,540,400)</u></b>	<b><u>-6.7%</u></b>
<b><u>Equipment</u></b>					
Equipment	9,357,100	10,084,000	11,341,600	1,257,600	12.5%
Transponders	7,617,800	7,112,400	7,224,800	112,400	1.6%
<b>Total Equipment</b>	<b><u>16,974,900</u></b>	<b><u>17,196,400</u></b>	<b><u>18,566,400</u></b>	<b><u>1,370,000</u></b>	<b><u>8.0%</u></b>
<b>Total Operating Budget by Line Item</b>	<b><u>\$ 503,452,200</u></b>	<b><u>\$ 519,423,900</u></b>	<b><u>\$ 528,762,400</u></b>	<b><u>\$ 9,338,500</u></b>	<b><u>1.8%</u></b>

Figure 48: Operating Budget by Line Item (2015-2017)

## Budgeted Full Time Employees

<u>Departments</u>	<u>2015</u>	<u>2016</u>	<u>Net Change</u> <u>2015-2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016 -2017</u>
Maintenance	960	969	9	978	9
Engineering	75	74	(1)	74	-
Toll Collection	525	526	1	523	(3)
Operations	73	73	-	73	-
State Police	7	7	-	7	-
Integrated Technology Services	144	154	10	153	(1)
Executive Office	5	5	-	5	-
Law & Insurance Services	21	21	-	21	-
Procurement & Materials Management	62	62	-	63	1
Human Resources & Office Services	37	36	(1)	36	-
Finance	81	84	3	83	(1)
Patron & Customer Services	13	13	-	12	(1)
Internal Audit	19	21	2	22	1
<b>TOTALS</b>	<b>2,022</b>	<b>2,045</b>	<b>23</b>	<b>2,050</b>	<b>5</b>

**Figure 49: Budgeted Full Time Employees (2015-2017)**

The 2017 Authorized Headcount includes a continued commitment to increase maintenance staff to handle the added capacity of both the Turnpike and Parkway after the significant widening projects of the previous two years. The ITS department added staff in 2016 in anticipation of bringing lane maintenance in house upon expiration of the Xerox contract on January 31, 2017. Staff was also being added in 2016 in other departments in anticipation of the active management and realignment of responsibilities between departments to occur with the New Jersey E-ZPass contract which will begin on February 1, 2017.

## Department Budgets

### Maintenance

#### Department Description:

The Maintenance Department is responsible for overseeing the maintenance and care of the Turnpike and Parkway roadways and infrastructure as well as Authority buildings and facilities. Specifically, the Maintenance Department is responsible for the following: the inspection, maintenance and repair of the Authority's maintenance vehicle fleet and equipment; maintenance and repair of approximately 500 facility locations and critical utilities along 321 miles of roadway; HVAC maintenance, inspection and repair; line striping; construction of small structures and facilities; coordination and implementation of snow and ice removal operations; roadway litter and debris removal, and maintenance and care of all roadway vegetation.

#### Department Organization:

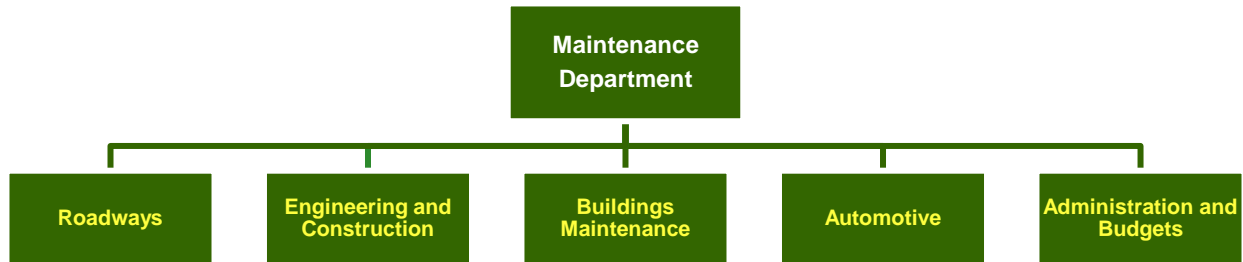


Figure 50: Maintenance Department Organization Chart

#### Senior Staff:

Director of Maintenance: Kenneth McGoldrick  
Deputy Director of Maintenance: William Perna

#### 2016 Accomplishments:

- Expanded the Authority's EGIs (electronic geographic information system) with additional field data.
- Continued fleet wide equipment lifecycle cost and analysis program with concentration on heavy duty trucks.
- Expanded maintenance construction and service contracts to parallel all department functions.
- Launched a HVAC upgrade and service program.
- Commenced a program to restore roadway illumination levels while reducing energy usage through the LED roadway lighting purchase program.

#### 2017 Goals:

- Expand field access to Authority's EGIs system with implementation of field devices.
- Continue expansion of maintenance construction and service contract to parallel all departmental functions.
- Continue on restoration of roadway illumination levels.
- Improve compliance with the Manual of Uniform Traffic Control Devices required by 2019.
- Continued installation of electronic equipment accountability systems at each facility as more sites are constructed and completed.

<b>Maintenance Department Operating Budget</b>					
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>\$ Change from</b>	<b>% Change from</b>
	<b>Actuals</b>	<b>Budget</b>	<b>Budget</b>	<b>2016 Budget</b>	<b>2016 Budget</b>
Salaries & Wages	\$ 73,460,400	\$ 74,669,100	\$ 78,687,500	\$ 4,018,400	5.4%
Allowances	847,400	1,007,500	1,124,100	116,600	11.6%
Pension & Payroll Taxes	12,498,000	12,844,800	13,972,500	1,127,700	8.8%
Health Benefits	34,369,200	35,359,400	37,039,000	1,679,600	4.8%
Training & Transportation	59,300	78,200	121,900	43,700	55.9%
Printing & Office Supplies	75,500	78,200	77,800	(400)	-0.5%
Vehicle Fuel	4,464,600	4,666,400	4,250,800	(415,600)	-8.9%
Operating Supplies	800,500	1,226,217	1,146,392	(79,825)	-6.5%
Utilities	11,605,800	12,612,600	12,494,600	(118,000)	-0.9%
Snow/Ice Materials	11,529,800	13,736,500	14,184,300	447,800	3.3%
Software	17,700	23,600	23,000	(600)	-2.5%
Operating Materials	6,582,400	8,133,800	9,238,600	1,104,800	13.6%
Insurance	4,798,800	4,763,800	4,761,200	(2,600)	-0.1%
Facilities Services	64,900	73,600	67,800	(5,800)	-7.9%
Consulting Services	36,700	197,000	172,900	(24,100)	-12.2%
Environmental Services	768,900	716,700	1,210,100	493,400	68.8%
Other Services	56,900	48,800	77,800	29,000	59.4%
Vehicle Maintenance	430,200	426,500	403,300	(23,200)	-5.4%
Roadway Maintenance	18,679,800	20,684,383	20,708,608	24,225	0.1%
Bridge Maintenance	16,100	74,500	60,100	(14,400)	-19.3%
Building Maintenance	554,600	708,200	1,625,000	916,800	129.5%
Equipment Maintenance	92,600	90,900	99,700	8,800	9.7%
Building & Equipment Rental	3,000,500	3,154,500	4,112,100	957,600	30.4%
Equipment	4,287,000	5,027,600	5,042,100	14,500	0.3%
	<b>\$ 189,097,700</b>	<b>\$ 200,402,800</b>	<b>\$ 210,701,200</b>	<b>\$ 10,298,400</b>	<b>5.1%</b>

**Figure 51: Maintenance Department Operating Budget (2015-2017)**

**2017 Budget Highlights:**

- Salaries are increased as the Authority has committed to adding staff to maintain the increased lane miles that have come from the Authority's capital program. 18 positions have been added in the past two years
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increases in usage and medical inflation
- Training is increased to fund mandatory training on building maintenance systems that are being deployed in all new Authority facilities.
- Operating Materials increased as there are increased facility repairs as new larger facilities continue to open, and costs that have become recurring such as Living Snow Fence were transitioned to operating from SPRF
- Environmental Services increased due to an increase in the volume of roadway sweepings to be disposed of.
- Other Services increased due to increased regulatory fees
- Building Maintenance increased due to maintenance contracts for systems in new & existing facilities that are no longer covered under warranty
- Building & Equipment rental increased as the Authority will incur some overlap costs as it transitions from the old HQ facility to the new headquarters

**Maintenance Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change</b> <u>2016-2017</u>
Administrative Assistant	3	2	2	0
Administrative Manager	1	1	1	0
Administrative Secretary	1	1	1	0
Apprentice/Journeyman	6	6	6	0
Assistant/ Deputy Director Maintenance	2	1	1	0
Assistant Foreman	32	33	33	0
Assistant Maintenance Engineer	1	1	1	0
Assistant Project Supervisor	1	1	1	0
Automotive Manager	1	1	1	0
Automotive Assistant	1	1	1	0
Automotive Craftsperson 1	1	1	1	0
Automotive Foreman	3	3	3	0
Automotive Technician	41	41	41	0
Automotive Training Manager	1	1	1	0
Body Repairperson	3	3	3	0
Building Craftsperson 3	3	3	3	0
Building Maintenance Coordinator	1	1	1	0
Building Maintenance Foreman	3	3	3	0
Buildings Maintenance Manager	1	1	1	0
Building Maintenance Mechanic	13	13	13	0
Buildings Division Coordinator	1	1	1	0
Carpenter	12	12	12	0
Carpenter/Paint Foreman	2	2	2	0
Code Compliance Officer	1	0	0	0
Confidential Secretary	1	1	1	0
Construction Supervisor, Maintenance	1	1	1	0
Craftsperson Assistant - Automotive	2	2	2	0
Craftsperson, Automotive	11	11	12	1
Craftsperson Field Supervisor	6	6	6	0
Crew Manager	6	6	6	0
Crew Supervisor	41	40	40	0
Director of Maintenance	1	1	1	0
District Equipment Manager	3	3	3	0
District Manager	3	3	3	0
Electrical Craftsperson 2	15	16	16	0
Electrical Engineer	1	1	1	0
Electrician	20	20	20	0
Equipment Trainer	4	3	3	0
Executive Secretary 2	2	2	2	0
Facility Craftsperson	0	1	1	0
Facility Manager	0	1	1	0
Financial & Office Manager	1	1	1	0
Fleet Administrator	1	1	1	0
General Foreman	6	6	6	0
General Foreman - Automotive	2	2	2	0
Heavy Equipment Operator	25	25	25	0

**Maintenance Department Budgeted Headcount- Continued**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change</b> <u>2016-2017</u>
Inventory Quality Assurance Manager & Materials	1	1	1	0
Janitor	6	6	7	1
Janitorial Foreman	1	1	1	0
Janitorial Manager	0	0	1	1
Landscape Specialist	1	2	2	0
Landscaper	8	8	8	0
Landscaping Foreman	2	2	2	0
Linestriper	2	2	2	0
Maintenance Coordinator	1	1	1	0
Maintenance District Coordinator	2	2	2	0
Maintenance Engineer	2	4	4	0
Maintenance Person	220	220	220	0
Maintenance Person - General	35	37	37	0
Maintenance Person 1	197	202	207	5
Maintenance Person 2	16	15	15	0
Maintenance Person 3	2	2	2	0
Maintenance Person 4	3	7	7	0
Maintenance Records Clerk	21	20	20	0
Maintenance Roadway Specialist	5	3	3	0
Maintenance Specialist - Landscape	4	4	4	0
Mark Out Coordinator	1	1	1	0
Mason	5	4	4	0
Mechanic 1	36	36	36	0
Mechanic Specialist	3	3	3	0
Mechanical Craftsperson 2	17	17	17	0
Motor Vehicle Supervisor	1	1	1	0
Office Assistant	1	1	1	0
One Call Coordinator Turnpike	1	1	1	0
Painter	4	4	4	0
Power Electric Foreman	4	4	5	1
Procedure Analyst	1	1	1	0
Project Analyst	2	2	2	0
Project Supervisor	12	12	12	0
Property Inspector	1	1	1	0
Roadway Foreman	14	16	16	0
Roadway Superintendent	4	4	4	0
Senior Administrative Assistant - Division	1	1	1	0
Senior Clerk	17	17	17	0
Senior Maintenance Budget Supervisor	1	1	1	0
Senior Maintenance Engineer	1	1	1	0
Senior Maintenance Lighting Specialist	1	1	1	0
Sign Fabricator 1	6	6	6	0
Sign Fabricator 2	1	0	0	0
Sign Fabricator Specialist	1	1	1	0
Sign Shop Manager	1	1	1	0
Superintendent of Snow Operations	1	1	1	0
Training Equipment Supervisor	1	1	1	0
Welder	5	5	5	0
	<b>960</b>	<b>969</b>	<b>978</b>	<b>9</b>

**Figure 52: Maintenance Department Headcount (2015-2017)**



## Engineering

### Department Description:

The Engineering Department’s mission is focused on the preservation and improvement of the Authority’s roadways, structures, buildings and other facilities. Responsibilities include planning, design, and construction management. In-house staff is supplemented by engineers from outside consulting engineering firms who work under direct Authority supervision. The Engineering Department is comprised of two main divisions -- Design Division and Construction Division.

The Design Division is focused on delivery of the Capital Improvement Program. Specifically, the planning and design of projects within the current 10-Year, \$7 billion Capital Improvement Program, which include widening, bridge, roadway, interchange, and facility improvement projects. In addition to the Capital Improvements Program, the design Division is also responsible for the design of various maintenance contracts including annual bridge deck and pavement resurfacing contracts.

The Construction Division is organized into three (3) sections; Contracts, Highways and Structures. The Contracts Section is responsible for transitioning construction contracts from design to construction through the public bid process, maintaining the Authority’s standard specifications and providing current supplemental specifications, and prequalifying all contractors interested in bidding on Authority construction contracts. The Highways and Structures Division is responsible for ensuring that the Authority’s roadway and structural repair/improvement construction contracts are constructed in accordance with the contract’s plans and specifications.

### Department Organization:

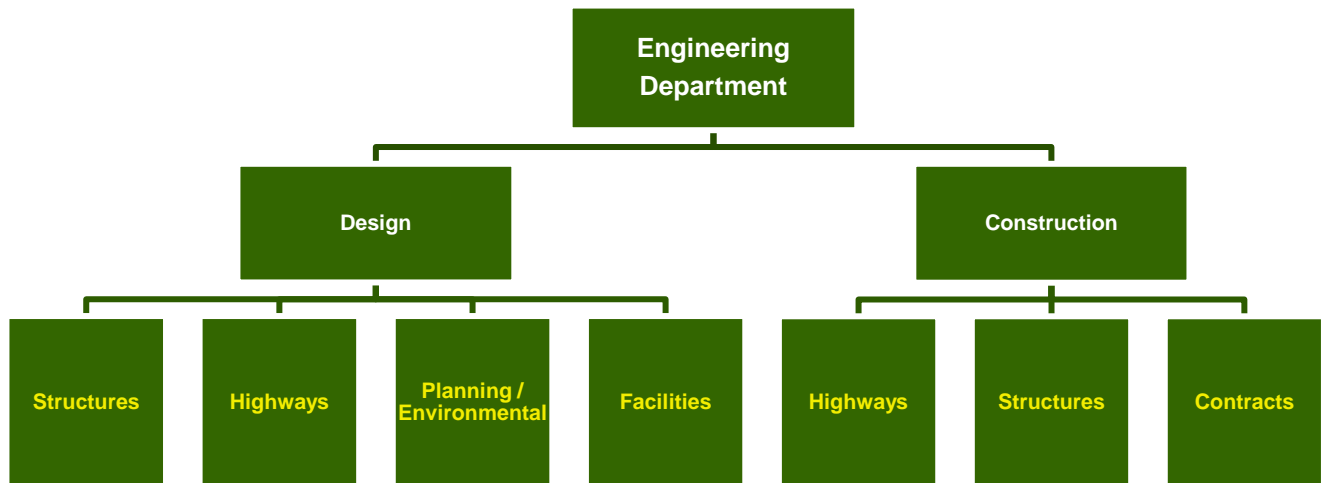


Figure 53: Engineering Department Organization Chart

### Senior Staff:

Chief Engineer: Robert J. Fischer  
 Deputy Chief Engineer – Construction: J. Lawrence Williams  
 Deputy Chief Engineer – Design: John Keller

**2016 Accomplishments:**

- Updated Standard Specifications, Design and Procedures, and Construction Manuals
- Continue implementation of the current \$7 billion Capital Improvement Program
- Completed the population of the Geographic Information System (GIS) for Authority-wide use
- Completed integration of Engineering OPS and Construction processes into the Engineering Departments Electronic Contract Management system - CapEx Manager
- Implemented a Quality Products List (QPL)
- Continued to standardize the Engineering Department's processes and procedures through the Continuous Quality Initiative (CQI) Committee

**2017 Goals:**

- Continue implementation of the current \$7 billion Capital Improvement Program
- Continue development of a new Capital Improvement Program
- Standardize the Engineering Department's processes and procedures thru the Continuous Quality Initiative (CQI) Committee
- Increase bridge repairs and deck reconstruction through the Maintenance Reserve Fund.
- Initiate inspect and repair program for large sized culverts on both roadways
- Implement the Pavement Management System for prioritizing resurfacing needs
- Back fill open staff positions

**Engineering Department Operating Budget**

	<b>2015 Actuals</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016 Budget</b>	<b>% Change from 2016 Budget</b>
Salaries & Wages	\$ 1,643,500	\$ 1,800,800	\$ 1,914,700	\$ 113,900	6.3%
Allowances	600	600	400	(200)	-33.3%
Pension & Payroll Taxes	314,100	346,800	392,800	46,000	13.3%
Health Benefits	863,900	954,600	1,041,200	86,600	9.1%
Training & Transportation	4,400	11,200	11,200	-	0.0%
Printing & Office Supplies	21,100	37,200	25,300	(11,900)	-32.0%
Operating Supplies	500	600	600	-	0.0%
Operating Materials	200	100	200	100	100.0%
Consulting Services	1,801,700	1,559,600	2,321,800	762,200	48.9%
Environmental Services	3,915,100	3,925,500	3,865,200	(60,300)	-1.5%
Other Services	7,800	10,100	9,400	(700)	-6.9%
Totals	<b>\$ 8,572,900</b>	<b>\$ 8,647,100</b>	<b>\$ 9,582,800</b>	<b>\$ 935,700</b>	<b>10.8%</b>

**Figure 54: Engineering Department Operating Budget (2015-2017)****2017 Budget Highlights:**

- Salaries are increasing due to full year funding of vacancies
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increases in usage and medical inflation
- Consulting costs are increased for the maintenance of design & procedures manuals, standard drawings, and specifications and oversight related to activities performed with the Authority's right of way by third parties.

**Engineering Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016-2017</u>
Administrative Secretary/Assistant	6	6	6	0
Assistant/Deputy Chief Engineer	2	2	2	0
Assistant Project Supervisor	3	2	2	0
Assistant Traffic Engineer	1	0	0	0
Assistant Engineer	0	3	3	0
CAAD Engineering Technician	1	1	1	0
Chief Engineer	1	1	1	0
Chief File Clerk	1	1	1	0
Clerk	2	2	2	0
Confidential Secretary	1	1	1	0
Contracts Division Manager	1	1	1	0
Coordinator, Bargaining	1	1	1	0
Engineering Project Analyst	1	1	1	0
Engineering Administrative Aide	1	1	1	0
Engineering Assistant	1	1	1	0
Engineering Coordinator	2	2	2	0
Engineering Technician	1	1	1	0
Field Environmental Manager	1	1	1	0
Highway Engineer	1	1	1	0
Office Administrator, Engineering	1	1	1	0
Project Engineer	12	15	15	0
Project Manager	2	2	2	0
Project Supervisor	8	8	8	0
Right of Way Manager	1	1	1	0
Senior CADD Engineering Technician	1	1	1	0
Senior Clerk	1	1	1	0
Senior Construction Engineer	1	1	1	0
Senior Project Engineer	6	4	4	0
Senior Environmental Supervisor	3	2	2	0
Senior Environmental Manager	1	1	1	0
Senior File Room Supervisor	1	1	1	0
Senior Structures Engineer	0	1	1	0
Structures Engineer	2	1	1	0
Supervising Engineer	5	1	1	0
Senior Supervising Engineer	2	4	4	0
	<b>75</b>	<b>74</b>	<b>74</b>	<b>0</b>

**Figure 55: Engineering Department Headcount (2015-2017)**

## Toll Collection

### Department Description:

The Toll Collection Department oversees the collection of toll revenue through both manual and automatic coin machine methods for the New Jersey Turnpike and the Garden State Parkway. The Department currently has 528 full-time employees and 514 part-time employees. In addition, the budget includes the costs associated with Electronic Toll Collection although oversight for this function is spread over several departments.

### Department Organization:

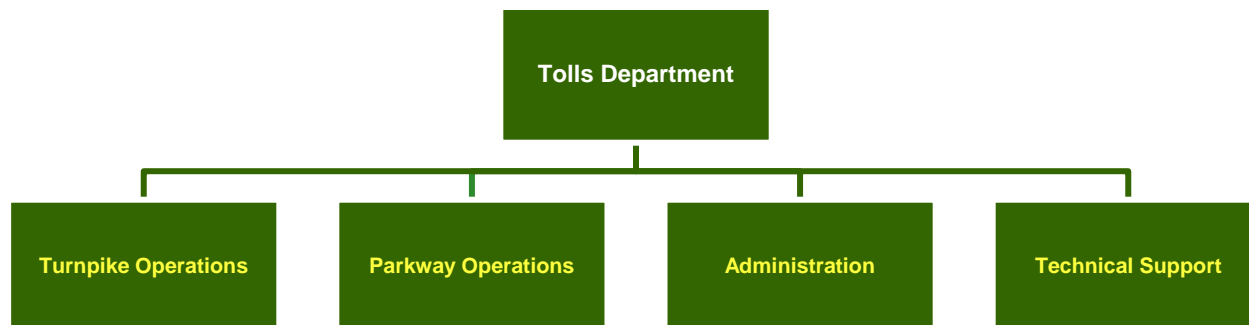


Figure 56: Tolls Department Organization Chart

### Senior Staff:

Director of Tolls: Robert B. Quirk

Deputy Director of Tolls: James L. Roberts

Assistant Director, Technical Services: Colleen L. Lentini

### 2016 Accomplishments:

- Interchange 4 and 15W Supervisor's offices were refurbished to provide a cleaner working environment.
- LED lighting was installed on toll canopies, plaza tunnels, and area lighting to improve safety for motorists and employees.
- Median barrier put outside exit at Interchange 16E/18E which enhanced traffic safety at high peak periods.
- Worked with Engineering to install new heating devices in toll booths as a pilot program.
- Replace PDQ lifts at 8 toll plaza locations.

### 2017 Goals:

- Standardize Toll Collection uniforms on both roadways by 1st quarter of 2017.
- Continue with the Abutment program at Interchanges 16E/18E, and 17 to insure traffic safety for our employees and motorists.
- Continue to address heating and air conditioning concerns using the new climate control technology in all toll booths.
- Investigate and implement new programs for training newly promoted supervisors.
- Continue process for new ACM's on the Parkway – to include an evaluation of existing infrastructure, evaluation of ACM's available, testing and selection of a unit for 2017 procurement.
- Install Express E-ZPass lane at New Gretna plaza on Parkway.

- Continue to install newly designed toll baskets after receiving CADD drawings from outside consultant.
- Complete the installation of overhead signage at all Turnpike toll plazas.
- Begin design and replacement of toll collection system.

### Tolls Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$38,067,200	\$ 38,440,200	\$ 37,817,000	\$ (623,200)	-1.6%
Allowances	190,500	190,400	190,200	(200)	-0.1%
Pension & Payroll Taxes	7,276,100	7,402,000	7,757,600	355,600	4.8%
Health Benefits	20,009,100	20,376,100	20,564,000	187,900	0.9%
Training & Transportation	519,300	516,700	516,100	(600)	-0.1%
Printing & Office Supplies	72,100	74,500	69,400	(5,100)	-6.8%
Operating Supplies	198,300	240,000	489,300	249,300	103.9%
Toll Tickets	321,800	322,300	321,300	(1,000)	-0.3%
Operating Materials	-	-	700,100	700,100	N/A
Credit Card, Trustee & Banking Fees	63,500	59,700	1,210,700	1,151,000	1928.0%
Facilities Services	26,091,100	27,927,200	28,819,100	891,900	3.2%
Other Professional Services	1,875,000	1,988,100	2,310,100	322,000	16.2%
Other Services	47,853,600	49,848,200	44,594,000	(5,254,200)	-10.5%
Toll Booth Maintenance	16,300	29,700	12,500	(17,200)	-57.9%
Equipment Maintenance	10,157,300	9,923,000	5,344,700	(4,578,300)	-46.1%
Equipment	-	-	1,025,000	1,025,000	N/A
Transponders	7,617,800	7,112,400	7,224,800	112,400	1.6%
	<b>\$160,329,000</b>	<b>\$ 164,450,500</b>	<b>\$ 158,965,900</b>	<b>\$ (5,484,600)</b>	<b>-3.3%</b>

Figure 57: Tolls Department Operating Budget (2015-2017)

#### 2017 Budget Highlights:

- Salaries are decreasing due to change in workforce composition of toll collectors to more \$12/hour collectors.
- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Operating Supplies, Operating Materials, and Equipment are increased due to costs related to assuming the responsibility for lane maintenance that was previously handled by an outside service provider.
- Other Professional Services and Equipment Maintenance are decreased as a result of the change in lane maintenance which was previously handled through a contractor and will now be handled in house.
- Credit card fees are increased as toll revenue collected through E-ZPass continues to increase.

## Toll Collection Department Budgeted Headcount

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change</b> <u>2016-2017</u>
Administrative Assistant	1	1	1	0
Administrative Secretary	2	2	2	0
Administration Toll Collection Manager	1	1	1	0
Area Manager	5	6	6	0
Assistant Director, Technical Services Parkway	1	1	1	0
Assistant Division Manager	2	2	2	0
Assistant Manager, Toll Facilities	1	1	1	0
Assistant Plaza Supervisor	20	20	20	0
Assistant/Deputy Director Tolls	1	1	1	0
Director of Tolls	1	1	1	0
Distribution Clerk	1	1	0	-1
Field Operations Manager	1	1	1	0
Interchange Manager	8	8	8	0
Manager, Toll Systems Reconciliation	1	1	1	0
Senior Clerk	1	1	1	0
Stock Control Toll Collection Supervisor	1	1	0	-1
Stock Service Clerk	2	2	0	-2
Toll Collector - Parkway	136	136	136	0
Toll Collector - Turnpike	194	194	194	0
Toll Plaza Supervisor - Parkway	44	44	44	0
Toll Plaza Supervisor - Turnpike	93	93	93	0
Toll Plaza Supervisor - Training	2	2	3	1
Toll Records Clerk	4	4	4	0
Tolls Field Coordinator	2	2	2	0
	<b>525</b>	<b>526</b>	<b>523</b>	<b>-3</b>

Figure 58: Tolls Department Headcount (2015-2017)

## Operations

### Department Description:

The Operations Department ensures the continuous, safe and efficient movement of traffic on the Turnpike and Parkway by developing and implementing programs and by scheduling and coordinating activities of other Authority operating departments, contractors and outside agencies. The department is responsible for all contracts with authorized towers, fire squads, first aid squads, and hazardous material clean-up contractors and coordinates and interacts with the State Police.

### Department Organization:

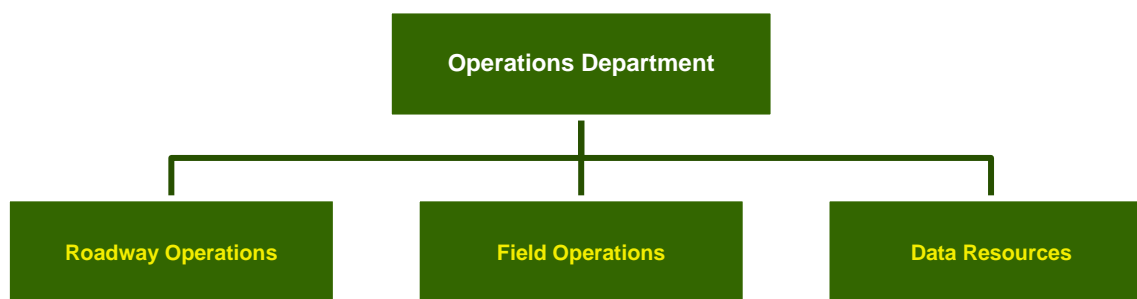


Figure 59: Operations Department Organization Chart

### Senior Staff:

Director of Operations: Henry Eibel  
Deputy Director of Operations: Kevin Dunn

### 2016 Accomplishments:

- Motorist Aid Software: Design and training of phase 3 was completed.
- Winter Event information dissemination procedures were modified.
- Staff evaluation: Worked with existing staff providing education, training etc. to better assist the department with work load and goals.
- Roadway Crash Analysis: Began implementing and providing all stake holders reports on problem areas in regards to enforcement, design, etc.
- Emergency Services staff – three staff members were fully trained and certified by Wreck Master.
- New design was completed for the Asbury Park Toll Plaza split using pavement markings and signing.
- New Construction Scheduling Software was fully implemented.

### 2017 Goals:

- Motorist Aid Software: Implementation and of phase 3. (Dissemination of motorist aids to the towers electronically)
- Design and Implementation of software that would automate sign response and activation to downstream roadway issues.
- The three remaining Emergency Services staff will be fully trained and certified by Wreck Master.
- Implementation of a new traffic pattern at the Raritan Toll Plaza split.
- Publish reports and technical briefs i.e.: annual crash reports study.

- Enhancements to the Construction Scheduling Software.
- Fully functional back-up Traffic Management Center.
- Implementation of Roadway Weather Information Systems (RWIS) on both roadways.

### Operations Department Operating Budget

	<b>2015 Actual</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016 Budget</b>	<b>% Change from 2016 Budget</b>
Salaries & Wages	\$ 5,999,900	\$ 6,065,700	\$ 6,291,500	\$ 225,800	3.7%
Allowances	21,700	23,800	23,800	-	0.0%
Pension & Payroll Taxes	1,146,800	1,168,000	1,290,600	122,600	10.5%
Health Benefits	3,153,700	3,215,200	3,421,200	206,000	6.4%
Training & Transportation	700	10,400	10,400	-	0.0%
Printing & Office Supplies	9,400	10,400	10,000	(400)	-3.8%
Operating Supplies	900	1,600	1,700	100	6.3%
Operating Materials	1,200	5,900	300	(5,600)	-94.9%
Facilities Services	457,800	485,900	411,400	(74,500)	-15.3%
Other Professional Services	338,700	340,900	339,600	(1,300)	-0.4%
Other Services	103,900	123,500	121,200	(2,300)	-1.9%
Vehicle Maintenance	500	700	100	(600)	-85.7%
Equipment	1,700	1,900	1,700	(200)	-10.5%
	<b>\$ 11,236,900</b>	<b>\$ 11,453,900</b>	<b>\$ 11,923,500</b>	<b>\$ 469,600</b>	<b>4.1%</b>

**Figure 60: Operations Department Operating Budget (2015-2017)**

#### 2017 Budget Highlights:

- Salaries are increasing due to expected contractual wage increases and payouts of retirement banks.
- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Facilities Services is decreased as the Authority has experienced lower payments due to fire & first aid companies responding on the Roadways.



## Operations Department Budgeted Headcount

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016-2017</u>
Administrative Assistant	1	1	1	0
Administrative Secretary	1	1	1	0
Assistant Traffic Engineer	2	2	2	0
Assistant/Deputy Director of Operations	1	1	1	0
Communications Dispatcher	23	23	23	0
Director of Operations	1	1	1	0
Emergency Services Supervisor	1	1	1	0
Engineering Aide - Traffic	1	1	1	0
Executive Secretary 1	2	2	2	0
Incident Management Coordinator	1	1	1	0
Manager, STMC	0	1	1	0
Manager, Traffic Operations	1	1	1	0
Operations Administrative Supervisor	1	1	1	0
Operations Coordinator	1	1	1	0
Operations Engineer	1	1	1	0
Roadway Services Administrator	1	1	1	0
Senior Clerk	1	1	1	0
Senior Emergency Services Manager	1	1	1	0
Senior Engineering Technician	1	1	1	0
Senior Shift Supervisor	1	0	0	0
Senior Traffic Control Supervisor	1	1	1	0
Shift Supervisor	12	12	12	0
Supervisor, Statewide Traffic Management Cer	1	1	1	0
Traffic Control Supervisor	10	10	10	0
Traffic Coordinator	0	0	0	0
Traffic Engineer	3	3	3	0
Traffic Operations Specialist	1	1	1	0
Traffic Technician	1	1	1	0
Trailblazer Supervisor	1	1	1	0
	<b>73</b>	<b>73</b>	<b>73</b>	<b>0</b>

Figure 61: Operations Department Headcount (2015-2017)

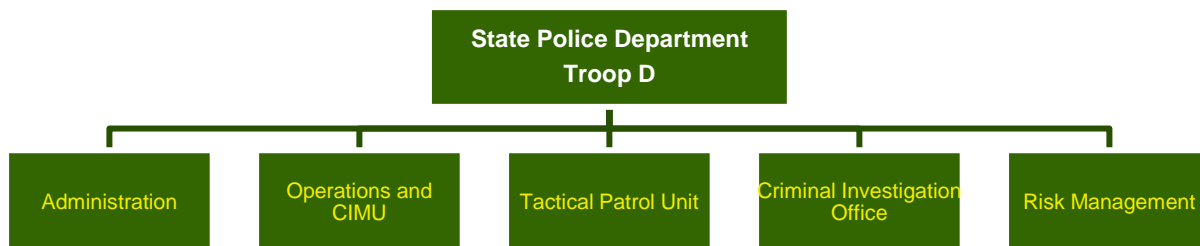
## State Police

### Department Description:

The New Jersey State Police Troop D is committed to the safety of all who travel on the New Jersey Turnpike and the Garden State Parkway. Troop D provides all general police services which include, but are not limited to, the enforcement of laws and regulations, the prevention of crime, the pursuit and apprehension of offenders, providing stranded motorists with assistance and policing of service areas, for both the Turnpike and Parkway through its six regional stations in Cranbury, Moorestown, Newark, Galloway, Bloomfield and Holmdel.

The strict enforcement of all motor vehicle laws inclusive of Driving While Intoxicated, investigation of motor vehicle accidents and the conduct of inspection and enforcement programs are essential to maintaining and improving traffic safety and reducing motor vehicle crashes occurring on both roadways as well as the resulting fatalities, injuries, property damage, and maintenance of traffic flow.

### Department Organization:



**Figure 62: State Police Department Organization Chart**

### Senior Staff:

Major Eric Heitmann, Troop Commander  
 Captain Ernie Giampietro, Deputy Troop Commander  
 Captain Gene Noll, Regional Commander

The New Jersey Turnpike Authority's State Police Manager/liaison is responsible for supporting the New Jersey State Police Troop D assigned to patrol the Turnpike and the Parkway. The State Troopers and their superiors are contracted through an agreement with the New Jersey State Police. Although the costs associated with the Troopers are budgeted in the Authority's State Police Department, the Authority does not exercise control over the Troop assigned to patrol its roadways and does not include the Troop roster in the Authority's headcount. The cost of Troopers is a contractual service.

### 2016 Accomplishments:

- Multiple High profile criminal investigations
  - The arrest of a known Pagan Motorcycle Gang member as well as the seizure of an assault rifle, a handgun, eight high capacity magazines and the possession of a controlled dangerous subject.
  - Assistance with a child birth near milepost 106.9 on the Turnpike.
  - The seizure of twenty pounds of marijuana at the Walt Whitman Service Area.
- Overall Motor vehicle traffic enforcement increased over 2015

- Arrests increased over 2015

#### 2017 Goals:

- Enhance the safety and overall well-being of employees and patrons attending the PNC Bank Arts Center during the concert season.
- Continue Intelligence Led Policing (SAFE) and Quality of Life Details at all Service Areas, commuter and construction lots to detect and thwart criminal activity and apprehend criminals.
- Serve as a liaison with Federal, State, and Local law enforcement agencies regarding crimes committed on the roadways and the surrounding jurisdictions.
- Continue supplemental traffic details to focus on specific violations known to precipitate crashes in an effort to reduce motor vehicle accidents on the roadways.
- Leverage technology to detect suspicious activity as well as receive reports of possible traffic issues and criminal activity.
- Comply with new State directives regarding Body worn cameras and Criminal Justice (bail) Reforms.
- Upgrade training facility and Avalon sub-station.

#### State Police Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$ 449,600	\$ 523,200	\$ 477,700	\$ (45,500)	-8.7%
State Police Services	62,989,700	61,792,000	62,961,800	1,169,800	1.9%
Pension & Payroll Taxes	85,900	100,700	98,000	(2,700)	-2.7%
Health Benefits	236,300	277,300	259,800	(17,500)	-6.3%
Printing & Office Supplies	46,800	51,300	51,300	-	N/A
Vehicle Fuel	5,900	7,700	7,700	-	N/A
Operating Supplies	32,100	41,200	40,400	(800)	-1.9%
Software	3,100	5,300	5,100	(200)	-3.8%
Operating Materials	618,200	725,700	690,700	(35,000)	-4.8%
Consulting Services	7,700	13,200	10,700	(2,500)	-18.9%
Vehicle Maintenance	139,100	150,000	134,900	(15,100)	-10.1%
Equipment Maintenance	25,100	40,000	36,800	(3,200)	-8.0%
Building & Equipment Rental	400	1,000	400	(600)	-60.0%
Equipment	2,545,100	4,352,200	4,351,500	(700)	N/A
	<u>\$ 67,185,000</u>	<u>\$ 68,080,800</u>	<u>\$ 69,126,800</u>	<u>\$ 1,046,000</u>	<u>1.5%</u>

Figure 63: State Police Department Operating Budget (2015-2017)

#### 2017 Budget Highlights:

- Salaries are decreasing due to filling of vacancy with a lower grade level.
- Pension is decreasing as the departmental allocation is based on salary which is decreasing.
- Health benefits are decreasing as the departmental allocation is based on salary which is decreasing.
- Additional funds have been provided to add up to 15 State Troopers to patrol both roadways.

**State Police Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change</b> <u>2016-2017</u>
Confidential Secretarial Aide	1	1	1	0
Motor Pool Fleet Specialist	1	1	1	0
Motor Vehicle Supervisor	1	0	0	0
Police Operations Clerk	2	3	3	0
Police Services Manager	1	1	1	0
Secretary	1	1	1	0
	<b>7</b>	<b>7</b>	<b>7</b>	<b>0</b>

Figure 64: State Police Department Headcount (2015-2017)

**Integrated Technology Services**

**Department Description:**

The Integrated Technology Services (ITS) organization was officially launched on January 1, 2013 combining the Technology and Administrative Services (TAS) and Electronic Toll Collections (ETC) teams under a new unified technology investment, service and delivery model. The ITS Department is responsible for conducting the business of information technology which includes: the discovery, procurement, delivery and maintenance of all technology assets throughout the Authority.

**Department Organization:**

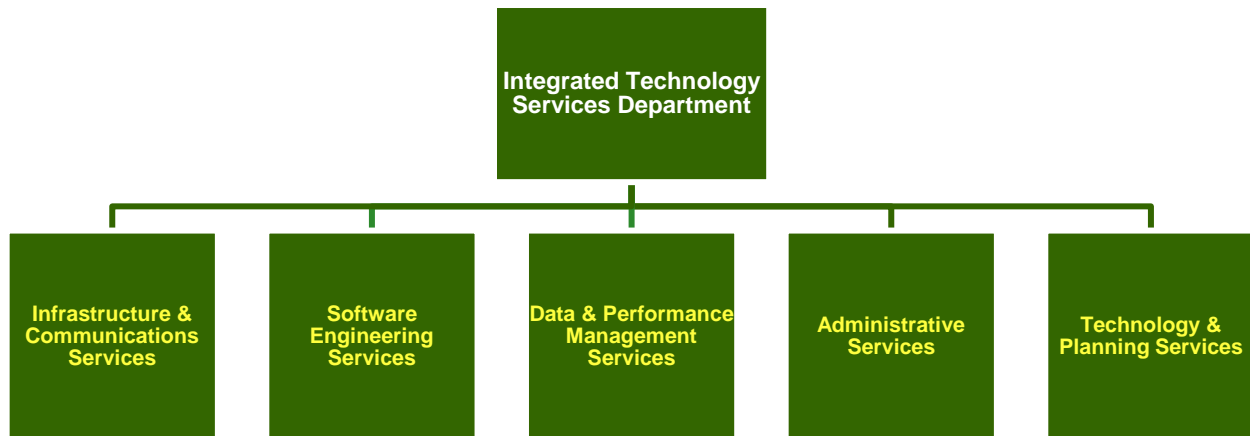


Figure 65: ITS Department Organization Chart

**Senior Staff:**

Chief Information Officer: Barry M. Pellettieri  
 Deputy Chief Information Officer: Jose Dios  
 Assistant Director, Software Engineering: Ning Ding  
 Assistant Director, Data Management Services: Stanley J. Ciszewski

**2016 Accomplishments:**

The ITS Team continues to place Innovation, Risk Management and Security at the center of our planning activities to ensure that all technology assets (Hardware, Software and Facilities) are maintained in a “Good State of Repair” while we selectively introduce new leading edge technologies across the Authority. Where possible our planning includes a “buy once use everywhere” strategy. In 2016, ITS has completed or made substantial progress on a number of essential projects for the Authority while improving our procurement and expense control processes. A sampling of our work efforts are listed below:

**New Active Management Model for E-ZPass Customer Operations**

- Substantial progress toward the implementation of Phase One of the E-ZPass Customer Service Operations and Technology Initiative in preparation for a July 17, 2017 go-live. Requirements documentation, System/ Process Design and Software Development are complete. Testing, training and operational readiness are planned for the first half of 2017. Members of the NJTA “Active Management” team continue to play a key role in ensuring this progress.
- Completed the development and testing of new High-Speed E-ZPass Software. Implementation is planned for 2017 starting with select turnpike locations.
- Completed RFP, Award and negotiations for a standalone Fiber Maintenance Agreement for both Roadways.

**New NJTA Headquarters Location**

- Planned and executed relocation of NJTA employees and related technology to new headquarters location meeting year-end deadlines and minimizing service interruptions.
- Initiated design and construction of a backup Traffic Management Center and an active Data Center at the new headquarters location – 2017 completion expected.

**Communications Services**

- Completed implementation of new 800 MHz Radio Infrastructure and all related software on schedule and in advance of winter operations. Closed out final contract with prior service provider Pinnacle.
- Continued Network upgrades (wired and wireless) to ensure Good State of Repair and additional capacity as necessary on both roadways.

**Facilities Program**

- Completed technology installations for all scheduled (new) buildings within the facilities program.
- Selected, installed and integrated specialized software to support new warehouse management processes for the Authority.
- Developed new Geospatial Data capabilities and added new data sources to the eGIS platform.

**Risk Management**

- Completed broad-based IT Security Audit with remediation funding requested for 2017.
- Continued consolidation and upgrade of legacy TAS/ETC technology infrastructure to improve reliability, performance and recovery capability.

**Motorist Services**

- Completed pilot program with Sensys and Esri for capture and display of roadway traffic data. 2017 project expected to refine this data and identify best use for improvement of traffic management on both roadways.
- Completed stakeholder requirements and initial design of new NJTA Website. Currently building enhanced content. Expected go-live is first quarter of 2017.
- Completed Final Release of Lane Closure Software facilitating approval of a high volume of lane closure requests between traffic management, engineering and maintenance.

- Completed a significant upgrade to our branded “hands-free” mobile app SafeTripNJ. Began an advertising/promotional program to increase awareness and usage.

**Employee Services**

- Completed upgrade of PeopleSoft Human Capital Management (HCM) from version 9.0 to version 9.2. Upgrade allows HCM system to continually receive and apply updates reducing the need for large upgrade initiatives. Also eliminated additional premium support cost for maintaining the older version 9.0.

**Leverage ITS Service Model**

- Transitioned select Electronic Toll Collection Administrative functions to specific departments within the Authority.
- Continue to improve terms and conditions for all technology contracts.
- Maintain high level of leadership visibility and energy with the ITS team and across the Authority.
- Utilized new cost effective education and training tools for the entire ITS team.
- Continued to implement an active succession plan by positioning the next generation of ITS leaders in challenging and visible roles.
- Leveraged Key Supplier Relationships to consolidate maintenance/licensing agreements and reduce Total Cost of Ownership (TCO).
- Negotiated new more favorable licensing agreements with Oracle for PeopleSoft Financials and Human Capital Management.
- Executed an enterprise licensing agreement with Microsoft and upgraded all PC's/Laptops to Windows 7.

**Fulfill Fiduciary Responsibility**

- Utilized all capital funds available to us in the most efficient and expeditious manner by ensuring on-time on-budget delivery of major initiatives.
- Achieved monthly procurement objectives as outlined in the ITS 2016 procurement plan.
- Met operating expense objectives for 2016.

**Talent Management**

- Continued aggressive talent acquisition efforts required by the ITS active succession plan.
- Successfully filled essential technician roles on both roadways in order to meet the demands of our in-house 2017 lane maintenance strategy.

**2017 Goals:*****Active Management Implementation and Support Model for Tolling Operations***

- Complete the implementation of Phase One of the E-ZPass Customer Service Initiative and prepare for a July 17, 2017 go-live. Achieve final acceptance of Phase One prior to year-end.
- Expand current “Active Management Model” to include performance management of Xerox Phase One Customer Operations.
- Finalize Schedule and Initiate requirements, Design and Development for Phase Two A & B of the E-ZPass Customer Service initiative
- Install new High-Speed E-ZPass Software at all Turnpike ORT Locations.

***New NJTA Headquarters Location***

- Complete design, construction, setup and commissioning of a redundant Traffic Management Center and an Active Data Center at the new NJTA headquarters location.

**Communications Services**

- Complete any remaining radio installations for NJTA vehicles and related machinery.
- Continue Network upgrades (wired and wireless) to ensure Good State of Repair and additional capacity as necessary on both roadways.

**Facilities Program**

- Complete technology installations for select (new) buildings within the facilities program.
- Select and install specialized software to support warehouse management functions.

**Risk Management**

- Prioritize and complete select remediation activities identified by the 2016 ITS Security Audit.
- Complete Safety Improvements for select VMS Sign Structures.

**Patron Services**

- Complete design and implementation of a new NJTA Website with enhanced services for a wide variety of stakeholders and new content management capabilities.

**Traffic Operations and Management**

- Complete initial installation of new Congestion & Incident Management capability (traffic detection and alerting) on a select set of roadway segments.
- Participate in planning, design and installation for the HCMS sign Replacement Project
- Participate in a joint effort with Traffic Operations to install Weather Stations (RWIS) across both roadways. This project includes hardware, software, and services.

**Administration and Employee Services**

- Plan and implement an upgrade for PeopleSoft Financial Management.
- Complete a study identifying options for expanded use of "Punch Time" for the Authority.
- Continue development of the FileHold software as a cost-effective solution for enterprise wide document management.

**Maintenance and Administration**

- Begin a multi-year effort to implement a transportation-focused Enterprise Asset Management (EAM) Platform. Part of this initiative will be to replace the existing Spear application from Infor.

**Tolling (Planning, System Integrity and Performance)**

- Toll Lane System Evaluation is a multi-year project in which ITS will continue testing new software and hardware components for our tolling systems on both the New Jersey Turnpike and Garden State Parkway. The results of this testing will serve to validate new technology that will be used to upgrade our tolling infrastructure.
- Production Toll Lane System Refresh is a multi-year project in which ITS will begin to upgrade and replace components of our tolling infrastructure that have been successfully tested and validated as part of our Toll Lane System Evaluation Project.

**Leverage ITS Service Model**

- Continue to improve terms and conditions for all technology contracts.
- Maintain high level of leadership visibility and energy within the ITS team and across the Authority.
- Actively pursue new cost effective education and training opportunities for the entire ITS team.
- Continue to utilize our active succession plan to position the next generation of ITS leaders in challenging and visible roles.
- Leverage Key Supplier Relationships to consolidate maintenance/licensing agreements and reduce Total Cost of Ownership (TCO).

- Continue to improve terms and conditions for all technology licensing agreements.

#### ***Fulfill Fiduciary Responsibility***

- Utilize all capital funds in the most efficient manner to ensure on-time on-budget delivery of major initiatives.
- Achieve monthly procurement objectives as outlined in the ITS 2017 procurement plan.
- Meet operating expense objectives for 2017.

#### ***Talent Management***

- Continue aggressive talent acquisition and re-positioning efforts required by the ITS active succession plan.
- Complete staffing for essential technician roles on both roadways in order to meet the demands of our in-house 2017 lane maintenance strategy.

#### **Integrated Technology Services Department Operating Budget**

	<b>2015 Actual</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016 Budget</b>	<b>% Change from 2016 Budget</b>
Salaries & Wages	\$ 12,362,400	\$ 10,844,100	\$ 10,848,100	\$ 4,000	0.0%
Allowances	30,500	30,100	24,600	(5,500)	-18.3%
Pension & Payroll Taxes	2,362,900	2,088,100	2,225,400	137,300	6.6%
Health Benefits	6,498,000	5,748,100	5,898,900	150,800	2.6%
Training & Transportation	15,700	11,700	26,600	14,900	127.4%
Printing & Office Supplies	18,300	14,000	14,000	-	0.0%
Operating Supplies	26,500	26,200	22,700	(3,500)	-13.4%
Software	2,442,100	3,771,000	4,182,100	411,100	10.9%
Operating Materials	378,900	441,200	441,000	(200)	0.0%
Other Professional Services	538,300	965,000	960,500	(4,500)	-0.5%
Other Services	900	800	1,400	600	75.0%
Equipment Maintenance	1,562,800	1,976,400	2,159,800	183,400	9.3%
Building & Equipment Rental	127,700	151,300	92,200	(59,100)	-39.1%
Equipment	2,518,600	686,500	900,000	213,500	31.1%
	<b>\$ 28,883,600</b>	<b>\$ 26,754,500</b>	<b>\$ 27,797,300</b>	<b>\$ 1,042,800</b>	<b>3.9%</b>

**Figure 66: ITS Department Operating Budget (2015-2017)**

#### **2017 Budget Highlights:**

- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Software Licenses and Equipment Maintenance costs have increased as the Authority has increased its investment in Technology in recent years. The additional software licenses are now due for annual renewal and equipment is no longer on warranty and the Authority is investing in maintenance agreements to support and service the equipment.



## Information Technology Services Department Budgeted Headcount

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change 2016-2017</u>
Administrative Secretary	3	2	2	0
Administrative/Executive Assistant	1	1	1	0
AIX Administrator	1	1	1	0
Assistant Director	2	2	2	0
Assistant Telecom Manager	1	1	1	0
Chief Information Officer	1	1	1	0
Clerk	1	0	0	0
Collaboration Services Manager	1	1	1	0
Communications Systems Analyst	1	1	1	0
Configuration/Software Quality Assurance Manager	1	1	1	0
CSC/IPC Operations Manager	1	1	1	0
Data Processing Operating Coordinator	1	1	1	0
Database Administrator	2	2	2	0
Deputy Chief Information Officer	1	1	1	0
Electrical Engineer	1	1	1	0
Electronic Data Capturing Devices Manager	1	1	1	0
Electronic Project Supervisor	1	1	1	0
Electronic Toll Collection Director	0	0	0	0
Electronic Toll Collection System Manager	0	0	0	0
ERP Application Supervisor	0	0	0	0
ETC Customer Relations Representative	1	1	1	0
ETC Database Manager	1	1	1	0
ETC Hardware Installation Specialist	1	1	1	0
ETC Programmer	4	4	4	0
ETC Project Engineer	1	1	0	-1
ETC Systems Manager	0	0	0	0
Fiber Optic Engineer	1	1	1	0
Field Electronics Manager	1	1	1	0
Field Supervisor	2	2	2	0
Foreman, Inventory Control - TEM	1	1	1	0
Hardware Engineer	1	1	1	0
Information Technology Facilities Manager	0	0	0	0
Information Technology Manager	0	0	0	0
Infrastructure Administrative Support Specialist	1	0	0	0
ITS Administrator	0	1	1	0
ITS Aide	0	1	1	0
ITS Coordinator	0	1	1	0
ITS Program Supervising Engineer	1	0	0	0
Kronos Administrator	1	0	0	0
LAN/WAN Network Administrator	1	1	1	0
Lane Maintenance Supervisor	0	3	3	0
Local/Wide Area Network Administrative Manager	1	1	1	0

**Information Technology Services Department Budgeted Headcount - Continued**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change</b> <u>2016 -2017</u>
Manager, Administration Software	1	1	1	0
Manager, Communication Services	1	1	1	0
Manager, Field Operations and Special Proj	1	1	1	0
Manager, Infrastructure/User Support	1	1	1	0
Manager, Technical Services	1	1	1	0
Manager, Technology Leased Assets	1	1	1	0
Manager, Traffic Operations Software	1	1	1	0
Network Engineer	1	1	1	0
Network Engineer, Voice, Video & Data	1	1	1	0
Networking Fiber Optic Engineer	0	0	0	0
PeopleSoft Developer	0	0	0	0
Planner	1	1	1	0
Program Analyst	1	1	1	0
Programmer	2	2	2	0
Project Change Manager	1	1	1	0
Project Engineer, ITS	1	1	1	0
Project Manager Telecommunications	1	1	1	0
Radio Communications Supervisor	0	0	0	0
Senior Database Administrator	0	0	0	0
Senior Engineer, Voice & Coliab Services	1	1	1	0
Senior ETC Analyst	1	1	1	0
Senior ETC Programmer	2	2	2	0
Senior ETC Project Analyst	1	1	1	0
Senior IT Engineer, Facilities & Structures	0	3	3	0
Senior Network Administrator	8	8	8	0
Senior Project Manager Network Engineerir	0	0	0	0
Senior Secretary	1	0	0	0
Senior Telecom Technical Assistant	1	1	1	0
Software Engineer	3	3	3	0
Systems Administrator	3	3	3	0
Systems Operation Supervisor	0	0	0	0
Systems Supervisor Parkway	2	2	2	0
TAS Office & Budget Administrator	0	1	1	0
Technology Device Technician	54	60	60	0
Technology Support & Operations Manager	0	0	0	0
Telecom Systems Administrator	1	1	1	0
TEM Manager	1	1	1	0
Toll Equipment Supervisor	1	1	1	0
Toll Maintenance Foreman	5	5	5	0
User Support Administrator	1	1	1	0
Voice Engineer	1	1	1	0
Windows Platform Support Manager	1	1	1	0
	<u>144</u>	<u>154</u>	<u>153</u>	<u>-1</u>

**Figure 67: ITS Department Headcount (2015-2017)**

## Executive Offices

### Department Description:

The Executive Office is the primary liaison with the Board of Commissioners and is responsible for the daily and long-term administration and functioning of the Authority, including coordination and prioritization of policy, strategic planning, and special projects. The Department provides leadership and oversight in the development and implementation of efficient solutions and responses to matters concerning both internal and external departmental operations and Authority initiatives.

### Department Organization:

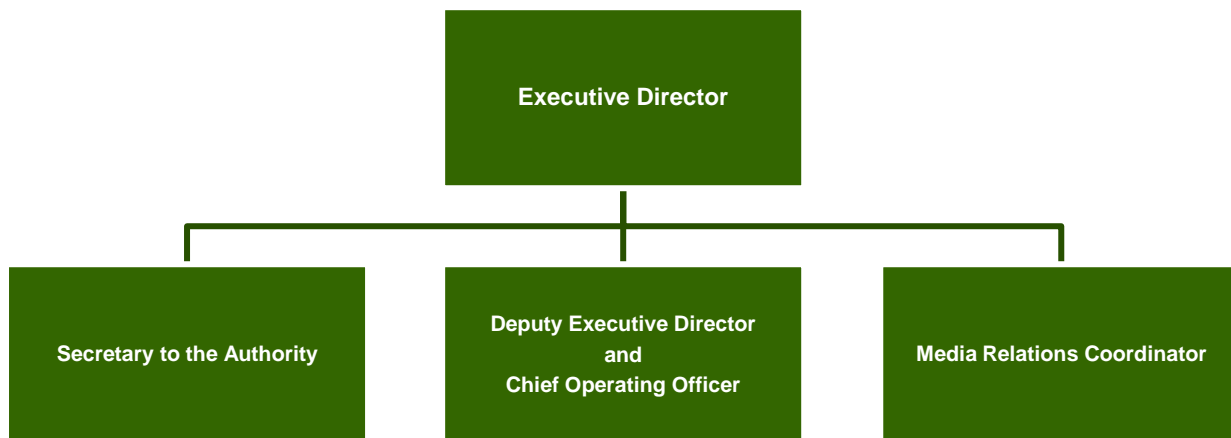


Figure 68: Executive Offices Department Organization Chart

### Senior Staff:

Executive Director: Joseph W. Mrozek  
 Chief Operating Officer and Deputy Executive Director and: John F. O'Hern  
 Media Relations Coordinator: Thomas C. Feeney  
 Secretary to the Authority: Kim Schurman

### 2016 Accomplishments:

- Secured future Authority headquarters building; and
- Increased salt storage capacity on both roadways.

### 2017 Goals:

- Seamlessly move approximately 450 employees into new Authority headquarters building.
- Address contracts with Sunoco, which provides fuel services on both roadways, and Live Nation, which operates the PNC Bank Arts Center. Both contracts expire on December 31, 2017.

**Executive Offices Department Operating Budget**

	<b>2015 Actual</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016</b>	<b>% Change from 2016 Budget</b>
Salaries & Wages	\$ 556,000	\$ 567,100	\$ 567,200	\$ 100	0.0%
Pension & Payroll Taxes	106,300	109,200	116,400	7,200	6.6%
Health Benefits	292,300	300,600	308,400	7,800	2.6%
Training & Transportation	200	2,100	2,300	200	9.5%
Printing & Office Supplies	5,500	5,700	5,500	(200)	-3.5%
Other Professional Services	59,300	59,600	59,300	(300)	-0.5%
Other Services	2,500	2,500	15,000	12,500	500.0%
Equipment	800	-	-	-	N/A
	<b>\$ 1,022,900</b>	<b>\$ 1,046,800</b>	<b>\$ 1,074,100</b>	<b>\$ 27,300</b>	<b>2.6%</b>

**Figure 69: Executive Offices Department Operating Budget (2015-2017)****2017 Budget Highlights:**

- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increases in usage and medical inflation
- Other services is increasing due to funding for a press clipping service which replaces a function previously handled internally by staff in another department providing significant savings to the Authority.

**Executive Offices Department Budgeted Headcount**

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Net Change 2016-2017</b>
Administrative/Executive Assistant	1	1	1	0
Chief Operating Officer & Deputy Executive Direc	1	1	1	0
Executive Director	1	1	1	0
Media Relations Coordinator	1	1	1	0
Secretary to the Authority	1	1	1	0
	<b>5</b>	<b>5</b>	<b>5</b>	<b>0</b>

**Figure 70: Executive Offices Department Headcount (2015-2017)**

## Law

### Department Description:

The Law Department manages all legal, insurance and real estate matters for the Authority as well as EEO and SBE compliance. Duties include providing or supervising the provision of legal advice to the Authority's departments, supervising and managing of outside counsel, insurance and risk management consultant, insurance brokers and third party administrators. The departmental budget includes all insurance costs other than property, professional liability, OCIP and worker's compensation, which are budgeted elsewhere.

### Department Organization:

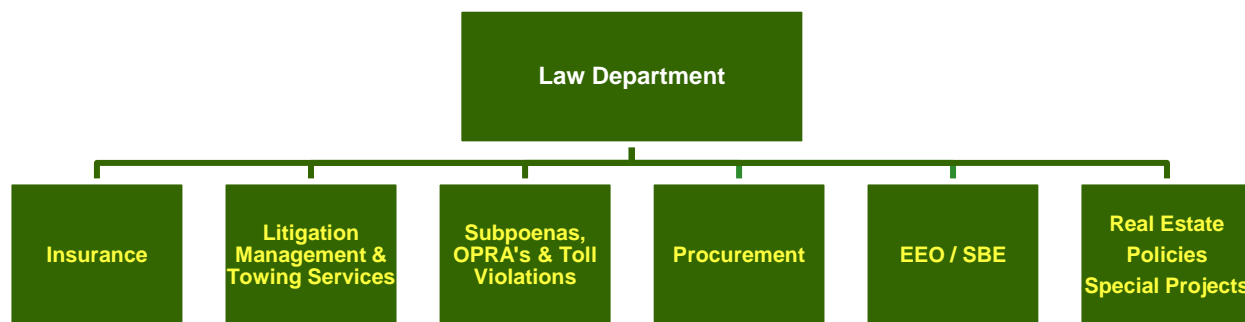


Figure 71: Law Department Organization Chart

### Senior Staff:

General Counsel: Bruce A. Harris  
 Deputy General Counsel: Maura K. Tully  
 Assistant Director of Law: Ann Monica

### 2016 Accomplishments:

- Increased the efficiency of managing litigation by utilizing an online database to track all litigation matters and file relevant documents. Increased role of Third Party Administrator in the claims and litigation process.
- Worked with the Division of Law to settle securities litigation resulting in payments to the Authority in the aggregate amount of \$2.4 million.
- Settled a professional liability lawsuit against an outside engineering consultant and the professional liability underwriter with the acceptance of a payment of \$1.5 million by the Authority.
- Through complicated motion practice, won a major environmental action and a class action, both of which exposed the Authority to the possibility of having to pay millions of dollars in potential damages.
- Settled litigation brought by the Authority against its former workers' compensation insurers for non-payment, resulting in a recovery by the Authority of \$1.25 million.
- Continued all necessary right of way acquisitions in support of the various ongoing roadway improvement projects authorized under the Authority's Ten Year Capital Program.
- Negotiated a new contract for the New Jersey E-ZPass customer service, violations processing and financial back office services with Xerox State and Local Solutions, Inc.
- Enhanced the Authority's cyber insurance coverage to include business interruption coverage.
- Coordinated the introduction of the ARTEMIS records retention management system and updated the Authority's document retention schedule.
- Updated the Authority's regulations.

- Negotiated and revised the Authority's towing rates and regulations.
- Identified and sold surplus real estate, producing in excess of \$500,000.
- Investigated 22EEO complaints (through October 3<sup>rd</sup>).
- Processed 431 OPRA requests (through September 30<sup>th</sup>) and 292 Subpoenas (through August 30<sup>th</sup>).
- Developed new bylaws for the Authority.
- Developed a new contract for state trooper services.

#### 2017 Goals:

- Complete implementation of the Authority's document retention schedule.
- Continue to identify and market surplus real estate.
- Investigate the potential sale of judgments (as surplus personal property).
- Work with Human Resources and other departments to increase workforce diversity; expand outreach.
- Increase litigation management by analyzing the budget estimates prepared over the past years with actuals.
- Continue to work with the Risk Management Committee to advance a full review of the Authority's operations, for the purpose of creating a master plan to prioritize the Authority's enterprise risk management goals, including a timetable for implementing all goals, actions and recommendations identified in the master plan.
- Continue to evaluate the Authority's insurance program and ensure timely renewal of insurance policies.
- Coordinate right of way acquisitions necessary to finalize the Authority's Ten Year Capital Program.
- Finalize the Authority's updated regulations and promulgate them in accordance with standard procedures.

#### Law Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$ 1,061,800	\$ 1,264,100	\$ 1,358,900	\$ 94,800	7.5%
Pension & Payroll Taxes	203,000	243,400	278,800	35,400	14.5%
Health Benefits	558,100	670,100	738,900	68,800	10.3%
Training & Transportation	3,000	5,500	5,600	100	1.8%
Printing & Office Supplies	25,700	26,300	24,900	(1,400)	-5.3%
Insurance	3,590,400	4,387,000	4,497,900	110,900	2.5%
Legal Services	1,805,700	1,807,000	1,693,200	(113,800)	-6.3%
Other Professional Services	302,400	234,600	233,400	(1,200)	-0.5%
Other Services	6,300	8,900	10,100	1,200	13.5%
Taxes	201,000	254,800	161,800	(93,000)	-36.5%
	<b>\$ 7,757,400</b>	<b>\$ 8,901,700</b>	<b>\$ 9,003,500</b>	<b>\$ 101,800</b>	<b>1.1%</b>

Figure 72: Law Department Operating Budget (2015-2017)

**2017 Budget Highlights:**

- Salaries are increasing due to full funding of vacancies.
- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Taxes are decreasing as significant savings has been achieved in property tax costs as all properties were reviewed, those that were erroneously being taxed were appealed and those that were surplus have been sold over the past few years.
- Insurance is increasing due to increased premiums primarily on property insurance due to an increase in insured values.
- Legal services are decreasing as more work is handled by department staff as vacancies are filled.

**Law Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016-2017</u>
Administrative Assistant	1	1	1	0
Administrative Secretary	1	1	1	0
Assistant Director of Law	1	1	1	0
Attorney	7	7	7	0
Claims Coordinator	1	1	1	0
Compliance Manager	1	1	1	0
Confidential Secretary	1	1	1	0
Coordinator	1	1	1	0
Deputy General Counsel	1	1	1	0
Document Services Coordinator	1	1	1	0
Equal Employment Opportunity Office	1	1	1	0
General Counsel	1	1	1	0
Secretary	0	1	1	0
Senior Secretary	2	1	1	0
Staff Attorney	1	1	1	0
	<u>21</u>	<u>21</u>	<u>21</u>	<u>0</u>

**Figure 73: Law Department Headcount (2015-2017)**

## Procurement and Materials Management

### Department Description:

Procurement and Materials Management is tasked with procuring goods and services and managing the flow of inventory items in the most efficient and cost effective manner. Objectives include: enhancing all procurement and materials management processes; reducing spending on contracts; monitoring compliance with procurement laws, policies, and procedures; maintaining strong internal controls for the Authority's physical inventory of goods; increasing revenue via surplus property sales and significantly reducing paper/manual processes.

The Department is separated into two primary functional areas: 1) Procurement, and 2) Materials Management. Procurement is further divided into staff generally dedicated to types of commodities/services as well as methods of procurement. For examples, most of technology goods and services are procured via the New Jersey State Contract system and most of maintenance equipment and services are procured via competitive (public bid or informal) solicitations. Materials Management Section is separated into Inventory Control at one main warehouse and two satellite facilities on both Roadways; Supply Chain Management, Asset Control, Office Services and Personal Property Surplus Sales.

### Department Organization:

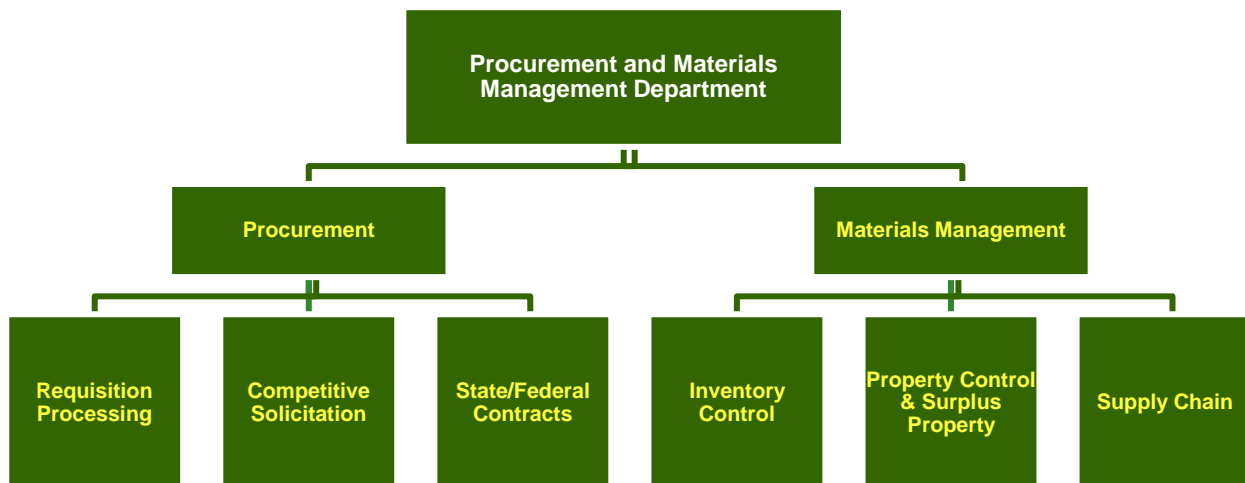


Figure 74: Procurement and Materials Management Department Organization Chart

### Senior Staff:

Director of Procurement and Materials Management: Andrea Ward  
 Deputy Director of Procurement and Materials Management: Donna Wilser

### 2016 Accomplishments:

- Completed approximately 45 public bid solicitations including complex procurements such as: contracts for Snow Removal and Salting Services for 70 locations on both Roadways; Armored Car, Banking and Money Counting Services and Vehicle Wash Systems for Maintenance Districts. In addition, completed solicitations for eight professional services contracts including Self-Funded Health Benefits Program Services (awards to five Providers) and Enterprise Resource Planning Managed Services.



- Commenced implementation of “Bid Express” which is the electronic bidding system for the competitive solicitations of goods and services. Since commencement, 12 bids included the option for electronic submissions. In addition, the implementation involved redrafting of bid instructions; extensive vendor outreach and in-house training of procurement staff, user departments and vendors.
- Completed design, testing and implementation of a Warehouse Management System, to facilitate inventory control, concluding with the opening of a state-of-the-art Centralized Warehouse Facility.
- Cleaned up obsolete inventory and reduced the Inventory Item Master.

#### 2017 Goals:

- Complete implementation of Bid Express for all public bids and explore utility of the electronic process for other methods of procurement such as informal solicitation and professional service contracts by end of 2017.
- Commence vendor registration via the updated Authority website by June 30, 2017.
- Operation of the newly completed Central Services Facility with a goal of operating inventory, Office Services and mailroom functions to achieve optimal operating efficiencies.
- Conduct surplus personal property sales with a goal of \$1,000,000 in proceeds.

#### Procurement and Materials Management Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	%Change from 2016 Budget
Salaries & Wages	\$4,779,400	\$ 4,770,700	\$ 4,822,200	\$ 51,500	1.1%
Allowances	7,000	6,700	6,700	-	0.0%
Pension & Payroll Taxes	913,500	918,700	989,200	70,500	7.7%
Health Benefits	2,512,200	2,528,800	2,622,200	93,400	3.7%
Training & Transportation	200	1,300	2,400	1,100	84.6%
Printing & Office Supplies	28,100	32,900	35,700	2,800	8.5%
Operating Supplies	4,800	5,000	5,100	100	2.0%
Operating Materials	200	300	200	(100)	-33.3%
Consulting Services	8,400	35,200	35,200	-	0.0%
Other Services	61,600	46,300	44,200	(2,100)	-4.5%
Equipment Maintenance	400	500	500	-	0.0%
Building & Equipment Rental	-	10,000	10,000	-	0.0%
Equipment	400	-	-	-	N/A
	<b>\$ 8,316,200</b>	<b>\$ 8,356,400</b>	<b>\$ 8,573,600</b>	<b>\$ 217,200</b>	<b>2.6%</b>

Figure 75: Procurement and Materials Management Department Operating Budget (2015-2017)

#### 2017 Budget Highlights:

- Salaries are increasing due to expected contractual wage increases.
- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Increased training costs to provide procurement training for all buyers.

**Procurement & Materials Management Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016-2017</u>
Administrative Secretary	2	2	2	0
Assistant Buyer	2	1	1	0
Assistant Office Services Manager	1	1	1	0
Assistant Warehouse Supervisor	1	1	1	0
Buyer	3	3	3	0
Clerk	1	1	1	0
Confidential Secretary	0	1	1	0
Deputy Director Procurement & Materials Manageme	1	1	1	0
Director Procurement & Materials Management	1	1	1	0
Inventory and Field Buyer	1	1	1	0
Inventory Control Supervisor	2	2	2	0
Inventory Manager	1	1	1	0
Maintenance Records Clerk	2	2	2	0
Materials Supervisor	2	2	2	0
Office Services Aide	1	1	1	0
Office Services Assistant	1	1	1	0
Office Services Clerk	1	1	1	0
Parts/Inventory Counter Clerk	11	11	11	0
Print & Supply Specialist	0	1	1	0
Procurement Coordinator	1	0	0	0
Procurement Specialist	2	2	2	0
Procurements Specialist Manager	1	1	1	0
Property & Materials Supervisor	3	3	3	0
Property Control Manager	1	1	1	0
Property Control Specialist	1	1	1	0
Purchasing Assistant	1	1	1	0
Purchasing Manager	1	1	1	0
Senior Clerk	0	1	1	0
Senior Confidential Secretary	1	1	1	0
Senior Mail/ Messenger/Shipping Clerk	2	2	2	0
Senior Secretary Parkway	1	1	1	0
Senior Stockperson	1	1	1	0
Stock Control Supervisor	1	1	1	0
Stockperson	1	1	1	0
Storekeeper 2	3	2	2	0
Storekeeper 3	4	4	5	1
Supply Chain Analyst	1	1	1	0
Supply Chain Manager	1	1	1	0
Warehouse Inventory Control Coordinator	1	1	1	0
	<u>62</u>	<u>62</u>	<u>63</u>	<u>1</u>

**Figure 76: Procurement and Materials Management Department Headcount (2015-2017)**

## Human Resources and Office Services

### Department Description:

The Human Resources & Office Services Department supports the activities of the Authority by providing employment services which include hiring, development & training, labor relations management, health administration, safety administration and benefits administration.

### Department Organization:



Figure 77: Human Resources and Office Services Department Organization Chart

### Senior Staff:

Director of Human Resources: Mary-Elizabeth Garrity

### 2016 Accomplishments:

- Streamlined the print shop job process.
- Delivered supervisory training program.
- Delivered safety training through a variety of different mediums including eLearning.
- Completed vendor search for Workers Compensation third party administration.

### 2017 Goals:

- Provide managerial and upper level supervisory training.
- Simplify the on-board process.
- Put 2017 Health Benefits Open Enrollment on-line.
- Develop intake process for various complaints (CEPA, violation in workplace, etc.).
- Provide safety training classes.
- Establish Human Resources Kiosks in field for better access to Human Resources benefits and programs.

### Human Resources & Office Services Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$ 2,631,800	\$ 2,648,300	\$ 2,660,000	\$ 11,700	0.4%
Allowances	6,600	6,800	7,000	200	2.9%
Pension & Payroll Taxes	503,000	510,000	545,700	35,700	7.0%
Health Benefits	1,383,300	1,403,800	1,446,400	42,600	3.0%
Tuition	119,500	100,000	99,800	(200)	-0.2%
Training & Transportation	2,300	42,400	56,000	13,600	32.1%
Printing & Office Supplies	60,500	81,100	111,600	30,500	37.6%
Medical Supplies	8,400	10,400	10,300	(100)	-1.0%
Operating Supplies	6,500	11,200	11,200	-	0.0%
Operating Materials	1,300	1,300	19,900	18,600	1430.8%
Consulting Services	20,100	22,800	40,800	18,000	78.9%
Other Professional Services	98,300	50,300	48,700	(1,600)	-3.2%
Environmental Services	500	800	2,600	1,800	225.0%
Other Services	2,000	2,300	2,400	100	4.3%
Building Maintenance	46,100	60,300	61,700	1,400	2.3%
Equipment Maintenance	13,600	23,200	37,400	14,200	61.2%
Building & Equipment Rental	10,000	1,300	-	(1,300)	-100.0%
Equipment	3,000	15,500	21,300	5,800	37.4%
	<b>\$ 4,916,800</b>	<b>\$ 4,991,800</b>	<b>\$ 5,182,800</b>	<b>\$ 191,000</b>	<b>3.8%</b>

**Figure 78: Human Resources and Office Services Department Operating Budget (2015-2017)**

#### 2017 Budget Highlights:

- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Printing & Office Supplies includes increased Print Shop costs projected for 2017 as usage has been increasing consistently
- Consulting Services is increased due to services required by Safety staff related to Silica oversight
- Equipment Maintenance costs have increased as equipment purchased in recent years has come off warranty and maintenance contracts are now required
- Equipment includes the purchase of QRAE monitors, air compressor & paddy wagon padding machine

**Human Resources & Office Services Department Budgeted Headcount**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change</u> <u>2016-2017</u>
Administrative Assistant	1	1	1	0
Assistant Director, HR Policy & Training	1	1	1	0
Benefits Administrator	1	1	1	0
Benefits Manager	1	1	1	0
Camera Person	1	0	0	0
Clerk	1	0	0	0
Computer Graphics Coordinator	1	1	1	0
Confidential Secretary	2	2	2	0
Director of Human Resources	1	1	1	0
Employment Manager	1	1	1	0
Human Resources Aide	1	1	1	0
Human Resources Clerk	1	1	1	0
Human Resources Generalist	6	5	5	0
Human Resources Manager	0	1	1	0
Junior Printer	1	2	2	0
Manager - Safety Programs	1	1	1	0
Nurse	1	1	1	0
Operator	0	1	1	0
Paste-Up / Graphic Artist	1	1	1	0
Print & Support Specialist	1	0	0	0
Print Shop Manager	1	1	1	0
Printer	1	1	1	0
Safety Manager	2	2	2	0
Senior Benefits Manager	1	1	1	0
Senior Clerk	1	1	1	0
Senior Confidential Secretarial Aide	1	0	0	0
Senior HR Office Administrator	1	1	1	0
Senior Human Resources Manager	0	1	1	0
Senior Nurse	1	1	1	0
Senior Printer	2	2	2	0
Senior Safety Inspector	1	1	1	0
Senior Secretary Parkway	1	1	1	0
	<u>37</u>	<u>36</u>	<u>36</u>	<u>0</u>

**Figure 79: Human Resources and Office Services Department Headcount (2015-2017)**

## Finance

### Department Description:

The Finance Department is responsible for all fiscal matters of the Authority. The department ensures compliance with trust agreements, manages the 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 Authority’s Bond Resolution, and also mandated by statute or Executive Order. Responsibility for meeting the deadlines and financial covenants of the bond resolution lie with the Finance Department. Financial policies approved by the Board of Commissioners include the Guidelines, Debt Management Plan, Investment Policy and Swap Management Plan.

### Department Organization:

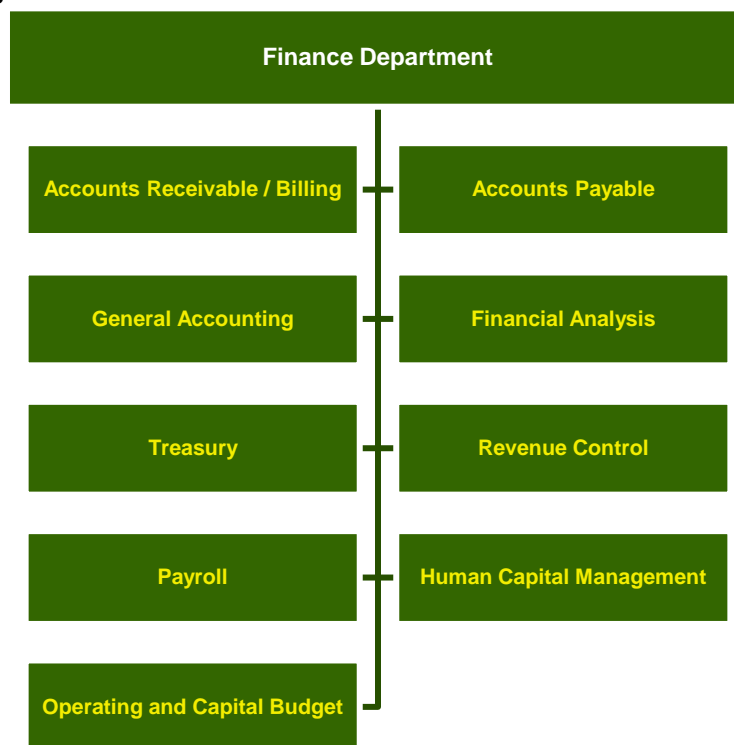


Figure 80: Finance Department Organization Chart

### Senior Staff:

Chief Financial Officer: Donna Manuelli  
 Deputy Chief Financial Officer: Pamela J. Varga  
 Assistant Director of Finance: Katherine M. Johnstone

### 2016 Accomplishments:

- Successfully refunded the Series 2013D-1, Series 2013E-1 and series 2013B-1 into direct placement bonds with commercial banks through a competitive bid process. All bonds were refunded to maturity, eliminating any rollover risk that existed on the bonds.
- The department’s senior staff and managers have taken on a leadership role, working with the Authority’s consultant, sister agencies and Xerox to document business rules during the implementation of the E-ZPass Customer Service Center contract signed with Xerox. A new staff

member has been hired to work with Xerox on violations reporting and collections. Staff has coordinated with New Jersey State Police to arrest high dollar amount violators.

- Staff has developed and published a quarterly financial analysis report which can be found in the Authority's investor relations section of the website.

#### 2017 Goals:

- Issue \$525 million of new money bonds in the first half of 2017 and potentially \$500 million in the second half of 2017 to provide additional funding for the CIP.
- Refund the Series 2013D-2, Series 2013E-2 and Series 2013B-2 bonds to meet the mandatory tender date of January 1, 2017.
- Complete the testing and implementation of the PeopleSoft Financial system upgrade by the fourth quarter of 2017.
- Change departmental payroll approval process to smaller groups, with managers approving directly in PeopleSoft. This will replace the manual approval system by managers outside the system, improving efficiency and accuracy.
- Complete testing and implement a new automated traffic and revenue report which will improve efficiency and accuracy of data reporting.
- Work with Engineering Department staff to have engineering consultant and contractor contracts include ACH payments as the required method of payment by the Authority to further reduce the number of paper checks issued by Accounts Payable each month.

#### Finance Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$ 5,669,900	\$ 5,474,100	\$ 5,526,800	\$ 52,700	1.0%
Allowances	-	100	-	(100)	-100.0%
Pension & Payroll Taxes	1,085,100	1,055,500	1,135,200	79,700	7.6%
Health Benefits	2,984,100	2,905,500	3,009,200	103,700	3.6%
Training & Transportation	400	5,200	1,400	(3,800)	-73.1%
Printing & Office Supplies	26,400	33,500	29,100	(4,400)	-13.1%
Operating Materials	700	900	900	-	0.0%
Credit Card, Trustee & Ba	679,500	550,200	549,700	(500)	-0.1%
Consulting Services	379,800	385,000	384,900	(100)	0.0%
Other Professional Services	498,100	739,600	737,600	(2,000)	-0.3%
Other Services	38,400	39,600	38,700	(900)	-2.3%
Equipment	500	300	-	(300)	-100.0%
	<u>\$ 11,362,900</u>	<u>\$ 11,189,500</u>	<u>\$ 11,413,500</u>	<u>\$ 224,000</u>	<u>2.0%</u>

Figure 81: Finance Department Operating Budget (2015-2017)

#### 2017 Budget Highlights:

- Salaries are increasing due to expected contractual wage increases.
- Pension is increasing based upon expected increase in PERS required payments.
- Health benefits are increasing based upon expected increases in usage and medical inflation.
- Reduction in printing & office supplies reflective of decrease in actual costs due to continued oversight and monitoring.

## Finance Department Budgeted Headcount

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Net Change 2016-2017</u>
Accounting Manager, Internal Control	1	1	1	0
Accounting Manager, General Ledger	1	1	1	0
Accounts Clerk	2	2	2	0
Accounts Payable Analyst	1	1	1	0
Accounts Payable/Disbursements Manager	1	1	1	0
Accounts Receivable Manager	1	1	1	0
Accounts Receivable Supervisor	1	1	1	0
Administrative Assistant	1	1	1	0
Assistant Director of Finance	1	1	1	0
Audit Data Inspector	1	1	1	0
Audit Data Specialist	3	2	2	0
Billings Manager/Administrator	1	1	1	0
Billings Supervisor	1	1	1	0
Budget Coordinator, Finance	1	1	1	0
Budget Supervisor	1	1	1	0
Capital Budget Analyst	0	1	1	0
Cash Manager	1	1	1	0
Cash Management Supervisor	1	1	1	0
Cash Toll Audit Manager	1	1	1	0
Chief Financial Officer	1	1	1	0
Clerk 1, 70	2	2	2	0
Data Analyst	3	3	3	0
Deputy Chief Financial Officer	1	1	1	0
Disbursements Clerk	1	1	1	0
Disbursements Section Supervisor	1	1	1	0
Documents Services Coordinator	1	1	1	0
ETC Audit Supervisor	0	1	1	0
Executive Secretary	1	1	1	0
Financial Manager	2	2	2	0
Financial Analyst	0	2	2	0
Financial Resources Specialist	1	1	1	0
Human Capital Management Specialist	1	1	1	0
Human Capital Management Analyst	2	2	2	0
Human Capital Management Manager	1	1	1	0
Junior Accountant	5	5	5	0
Junior Accounting Analyst	8	8	8	0
Payroll Administrator/Manager	1	1	1	0



**Finance Department Budgeted Headcount - Continued**

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<b>Net Change <u>2016-2017</u></b>
Payroll Coordinator	3	3	3	0
Revenue Control Manager	1	1	1	0
Senior Accounting Analyst	0	1	1	0
Senior Accounts Clerk	1	1	1	0
Senior Accounts Payable Supervisor	1	1	1	0
Senior Budget Supervisor	2	2	2	0
Senior Clerk	9	9	8	-1
Senior Confidential Secretary	1	1	1	0
Senior Data Analyst	1	1	1	0
Senior F&B Document Specialist	1	1	1	0
Senior Toll Audit Coordinator	3	3	3	0
Staff Accountant	2	2	2	0
Toll Audit Coordinator	1	0	0	0
Variance Analyzer Coordinator	2	2	2	0
	<u>81</u>	<u>84</u>	<u>83</u>	<u>-1</u>

**Figure 82: Finance Department Headcount (2015-2017)**

## Patron and Customer Services

### Department Description:

The primary responsibility of Patron Services is to oversee the management and operation of all service area facilities located on the New Jersey Turnpike and Garden State Parkway. The division oversees the majority of lease agreements that produce non-toll revenue for the Authority. The Authority's non-toll revenue programs managed by Patron Services include, but are not limited to, billboard vendors, installation and operation of electric vehicle charging stations, the PNC Bank Arts Center operator, the operation of park-and-ride facilities and commuter bus services provider(s). Patron Services is also responsible for participating in the negotiation of lease agreements and the procurement of services provided by the above-referenced vendors.

### Department Organization:

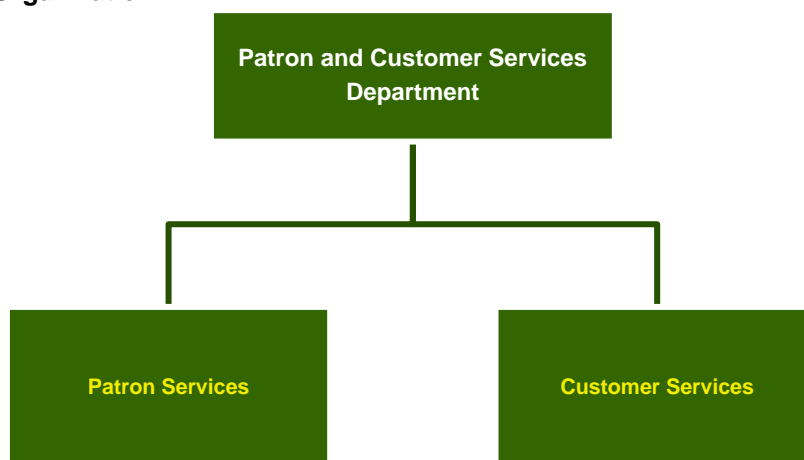


Figure 83: Patron and Customer Services Department Organization Chart

### Senior Staff:

Patron Services Manager: Erika Vargas-Garrison

Customer Services Manager: Denise DeSante

### 2016 Accomplishments:

- Opened new Sunoco fuel station at the Brookdale North Service Area.
- Completed capital improvement projects at the McDonald's restaurants located in the Brookdale South and Vauxhall service areas.
- Executed agreement with EVgo - the Authority's direct current fast charge electric vehicle charging station operator.
- Continued management of non-toll revenue leases.

### 2017 Goals:

- Execute new operating agreements with service area operators.
- New procurement for the operation of commuter bus services at the Montvale Service Area.
- Installation of direct current fast charge electric vehicle charging stations at select service area locations on the New Jersey Turnpike and Garden State Parkway.
- Complete 100% back-up generator power at all Sunoco fuel stations on the Garden State Parkway.
- ADA compliance at all service area locations on the New Jersey Turnpike.
- Continue management of all non-toll revenue leases.

**Patron and Customer Services Department Budget**

	<b>2015 Actual</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016 Budget</b>	<b>% Change from 2016 Budget</b>
Salaries & Wages	\$ 1,023,600	\$ 1,053,500	\$ 982,500	\$ (71,000)	-6.7%
Pension & Payroll Taxes	195,700	202,800	201,500	(1,300)	-0.6%
Health Benefits	538,000	558,500	534,300	(24,200)	-4.3%
Training & Transportation	100	100	100	-	0.0%
Printing & Office Supplies	4,600	7,200	6,900	(300)	-4.2%
Consulting Services	41,000	184,400	187,500	3,100	1.7%
Other Professional Services	47,500	47,500	47,500	-	0.0%
	<b>\$ 1,850,500</b>	<b>\$ 2,054,000</b>	<b>\$ 1,960,300</b>	<b>\$ (93,700)</b>	<b>-4.6%</b>

**Figure 84: Patron and Customer Services Department Operating Budget (2015-2017)**

**2017 Budget Highlights:**

- Decreased Salaries & Wages due to the reduction of one position through attrition.
- Pension is decreasing due to salaries decreasing as the departmental allocation is based on salaries
- Health benefits are decreasing as the departmental allocation is based on salaries.

**Patron and Customer Services Budgeted Headcount**

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Net Change 2016-2017</b>
Assistant Customer Service Manager	2	2	2	0
Assistant Patron Services Manager	1	1	1	0
Clerk	1	0	0	0
Contract Services Supervisor	1	1	1	0
Customer Service Manager	1	1	1	0
Marketing Coordinator	1	1	1	0
Patron Services Contract Manager	1	1	0	-1
Patron Services Manager	1	1	1	0
Receptionist	2	2	2	0
Senior Clerk	0	1	1	0
Senior Patron Services Aide	2	2	2	0
	<b>13</b>	<b>13</b>	<b>12</b>	<b>-1</b>

**Figure 85: Patron and Customer Services Department Headcount (2015-2017)**

## Internal Audit

### Department Description:

The Internal Audit Department reports functionally to the Audit Committee and the Authority's Commissioners and administratively to the Executive Director. The department is responsible for providing an independent appraisal of Authority financial and operating activities. In addition, the department is responsible for safeguarding the Authority's assets as well as its employees.

### Department Organization:

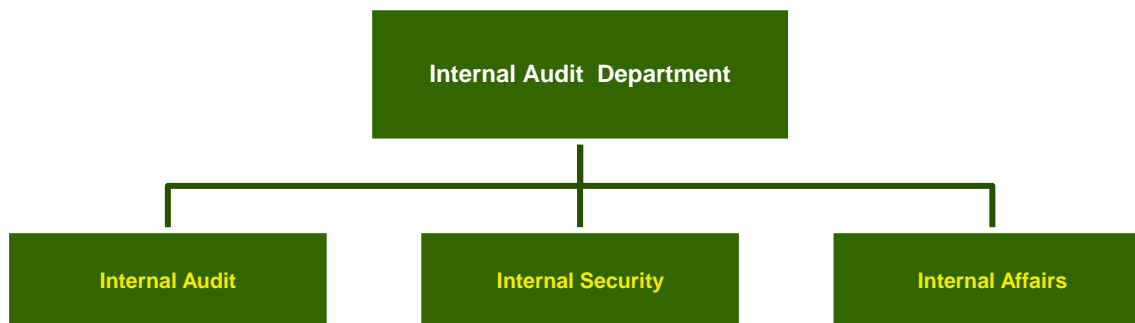


Figure 86: Internal Audit Department Organization Chart

### Senior Staff:

Director of Internal Audit: James Carone  
 Deputy Director of Internal Audit: Tracey Walters  
 Senior Security Manager: Thomas McGowan

### 2016 Accomplishments:

- Completed an Authority-wide Enterprise Risk Assessment to provide an efficient and systematic process to determine the universe of auditable areas.
- Developed and implemented the 2016 Audit Plan based on the results of the Enterprise Risk Assessment.
- Upgraded the access control system software (C-Cure 9000) needed to accommodate the increase in facilities as the Authority moves forward with the completion of its Facilities Improvement Program
- Conducted over twenty (20) Toll Plaza/Interchange inspections with the assistance of the New Jersey State Police.
- Completed a number of Internal Audit projects resulting in recoveries of over \$1 million.

### 2017 Goals:

- Continue to update the Authority-wide Enterprise Risk Assessment to provide an efficient and systematic process to determine the universe of auditable areas.
- Identify major IT Audit Projects and train staff to support these initiatives.
- Manage and support Phase 2 of the Toll Plaza Security Upgrade project for the remaining seven Turnpike Toll Facility locations.

## Internal Audit Department Operating Budget

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
Salaries & Wages	\$ 1,653,100	\$ 1,741,600	\$ 1,832,900	\$ 91,300	5.2%
Allowances	3,600	3,300	3,500	200	6.1%
Pension & Payroll Taxes	316,000	335,400	376,000	40,600	12.1%
Health Benefits	868,900	923,200	996,700	73,500	8.0%
Training & Transportation	300	400	200	(200)	-50.0%
Printing & Office Supplies	6,300	6,300	5,100	(1,200)	-19.0%
Operating Supplies	12,600	10,600	10,600	-	0.0%
Other Services	1,100	1,500	1,100	(400)	-26.7%
Equipment Maintenance	57,400	63,200	225,000	161,800	256.0%
Building & Equipment Rental	2,200	8,600	6,000	(2,600)	-30.2%
	<b>\$ 2,921,500</b>	<b>\$ 3,094,100</b>	<b>\$ 3,457,100</b>	<b>\$ 363,000</b>	<b>11.7%</b>

Figure 87: Internal Audit Department Operating Budget (2015-2017)

## 2017 Budget Highlights:

- Additional employee added to Toll Investigation staff as the Authority is committed to ensuring that tolls employees are monitored and revenue is properly secured.
- Pension is increasing based upon expected increase in PERS required payments
- Health benefits are increasing based upon expected increases in usage and medical inflation
- Equipment maintenance is increased to cover the cost of repairing and maintaining security gates on Authority property.

## Internal Audit Department Budgeted Headcount

	2015	2016	2017	Net Change 2016 -2017
Administrative Assistant	1	0	0	0
Audit Manager	1	1	1	0
Auditor	3	3	3	0
Case Manager	1	1	1	0
Clerk	2	2	2	0
Confidential Secretary	1	2	2	0
Deputy Director Internal Audit	1	1	1	0
Director Internal Audit	1	1	1	0
Security Inspector	1	1	1	0
Security Officer	0	2	2	0
Security Manager	0	0	0	0
Security Supervisor	2	2	2	0
Senior Auditor	2	2	2	0
Senior Security Manager	1	1	1	0
Tolls Investigation Manager	1	1	1	0
Tolls Investigation Supervisor	1	1	2	1
	<b>19</b>	<b>21</b>	<b>22</b>	<b>1</b>

Figure 88: Internal Audit Department Headcount (2015-2017)

## Capital and General Reserve Spending Budgets

The Authority considers its Capital Budget to consist of projects included in the Maintenance Reserve Fund, Special Project Reserve Fund, and Supplemental Capital (a part of the General Reserve Fund) budgets. These budgets include total spending of \$263.0 million in 2017. All projects submitted for consideration for funding in the 2017 Capital Budget were categorized into one of the following eight (8) categories that briefly describe the need for or benefit of the project. They are:

1. Employee Health & Safety
2. Frequent Problems
3. Generates Cost Savings
4. Public Benefit
5. Public Safety
6. Regulatory Mandate
7. State of Good Repair
8. Strategic Goal

During the evaluation process of determining which projects would be funded, the categories were considered. Priority was given to those projects that maintain a state of good repair of the roadways and facilities, improve the safety of our roadways for our patrons, and provide a high level of service for our patrons. A summary of the 2017 Capital Budget projects by category is as follows:

<u>Category</u>	<u>% of Total Capital Budget Funding</u>
State of Good Repair	68%
Public Benefit	11%
Public Safety	8%
Employee Health & Safety	6%
Strategic Goal	4%
Regulatory Mandate	1%
Generates Cost Savings	1%
Frequent Problems	1%

Approximately 68% of the total funding for 2017 is intended to maintain assets in a state of good repair. This includes bridge repair, roadway resurfacing projects and facility improvements. The Authority continues to increase its funding to maintain the roadways in a state of good repair. In 2017 the Authority will continue the goal of resurfacing 200 lane miles per year (12 year repaving cycle) and painting 20,000 tons of steel per year (15 year cycle). Approximately 19% of the total 2017 Capital Budget funding is for projects which are intended to improve Public Safety, such as providing better lighting and more effective signage, and programs that will provide a benefit to the public other than safety, such as Commuter Park & Ride expansion and evaluation of interchanges or sections of the roadway that may be improved to provide patrons with a more efficient travel experience.

	2015 <u>Actual</u>	2016 <u>Budget</u>	2017 <u>Budget</u>	\$ Change from 2016 Budget	% Change from 2016 Budget
Maintenance Reserve Fund	\$ 87,132,800	\$ 93,500,000	\$ 132,500,000	\$ 39,000,000	41.7%
Special Project Reserve Fund	28,947,500	38,756,300	48,438,500	9,682,200	25.0%
General Reserve Fund:					
General Reserve Fund	403,105,700	343,086,000	286,595,000	(56,491,000)	-16.5%
Supplemental Capital Fund	19,226,900	40,782,000	81,905,000	41,123,000	100.8%
<b>Total Capital and General Reserve Funds</b>	<b>\$ 538,412,900</b>	<b>\$ 516,124,300</b>	<b>\$ 549,438,500</b>	<b>\$ 33,314,200</b>	<b>6.5%</b>

Figure 89: Total Capital and General Reserve Funds Budget (2015-2017)

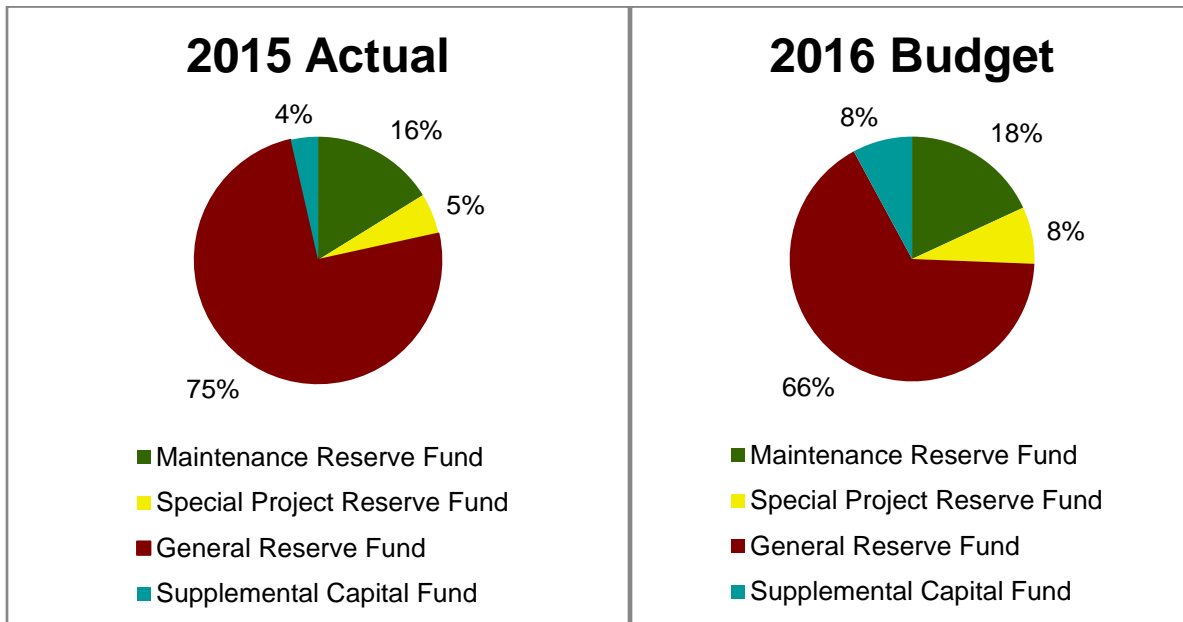
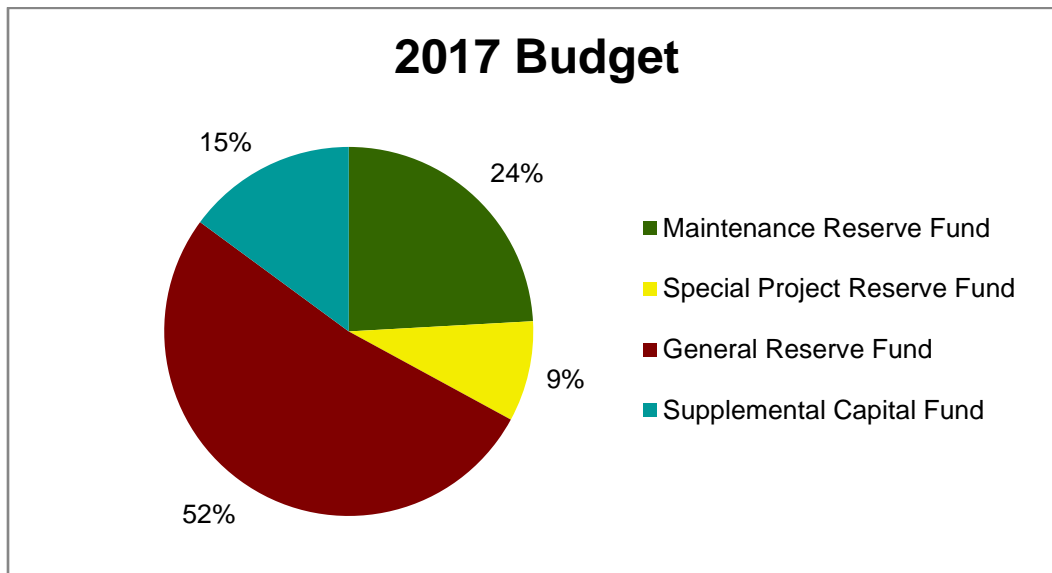


Figure 90: Total Capital and General Reserve Funds Percentages (2015-2017)

### Maintenance Reserve Fund

- The New Jersey Turnpike lanes will be resurfaced at selected locations between mileposts 3 to 7, mileposts 10 to 18, mileposts 25 to 38, mileposts 70 to 85, mileposts 85 to 90, mileposts 92 to 94, mileposts 98 to 102, and mileposts 114 to 115 for a total of 190 lane miles.
- The New Jersey Turnpike is scheduled to have 45 bridge decks repaired.
- The Garden State Parkway lanes will be resurfaced northbound and southbound between mileposts 104.5 to 116 for a total of 90 lane miles.
- The Garden State Parkway is scheduled to have 22 bridge decks repaired.

	2015 Actual	2016 Budget	2017 Budget	\$ Change from 2016 Budget	% Change from 2016 Budget
<b>Capital Projects</b>					
Turnpike Bridge Repairs	\$28,279,000	\$25,827,200	\$33,000,000	\$ 7,172,800	27.8%
Turnpike Resurfacing	18,586,600	18,178,900	32,500,000	14,321,100	78.8%
Parkway Bridge Repairs	18,410,000	18,904,600	25,000,000	6,095,400	32.2%
Parkway Resurfacing	9,807,500	12,833,400	18,000,000	5,166,600	40.3%
Drainage Structure Repairs	0	-	5,000,000	5,000,000	N/A
Emergency Maintenance	5,712,400	8,500,000	8,500,000	N/A	N/A
<b>Total Capital Projects</b>	<b>80,795,500</b>	<b>84,244,100</b>	<b>122,000,000</b>	<b>37,755,900</b>	<b>44.8%</b>
<b>Expense Projects</b>					
Authority Bridge Inspections	6,337,200	8,145,500	9,500,000	1,354,500	16.6%
Pavement Management	-	1,110,400	1,000,000	(110,400)	-9.9%
<b>Total Expense Projects</b>	<b>6,337,200</b>	<b>9,255,900</b>	<b>10,500,000</b>	<b>1,244,100</b>	<b>13.4%</b>
<b>Total Maintenance Reserve Fund</b>	<b>\$ 87,132,700</b>	<b>\$ 93,500,000</b>	<b>\$ 132,500,000</b>	<b>\$ 39,000,000</b>	<b>41.7%</b>

Figure 91: Maintenance Reserve Fund Projects (2015-2017)

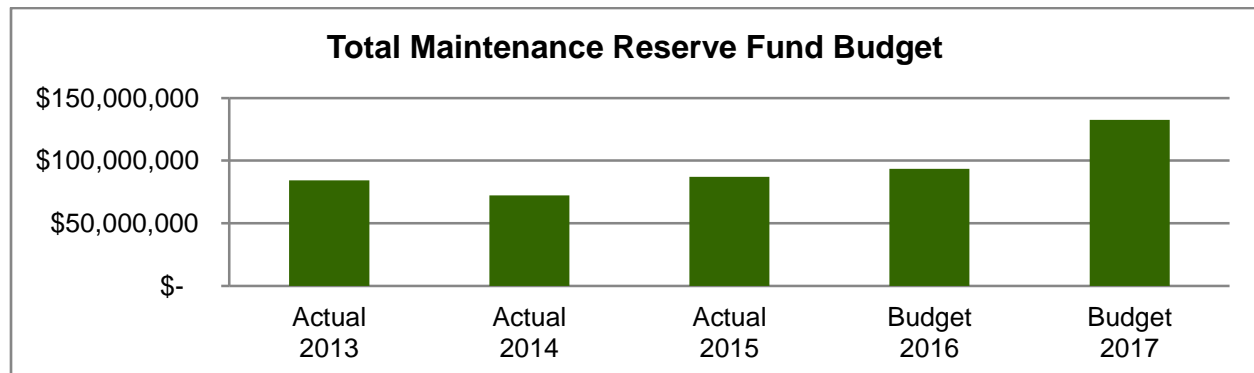


Figure 92: Maintenance Reserve Fund Budget Graph (2013-2017)

Maintenance Reserve Fund Balance					
	2015 Actual	2016 Est. / Actuals	2017 Budget	2016 to 2017 \$ Change	2016 to 2017 % Change
Beginning Balance	\$20,180,300	\$20,105,500	\$35,421,500	\$ 15,316,000	
Transfer from Revenue Fund	87,058,000	89,370,000	116,751,000	27,381,000	
Project Expenses	(87,132,800)	(74,054,000)	(132,500,000)	(58,446,000)	
Ending Balance*	\$ 20,105,500	\$ 35,421,500	\$ 19,672,500	\$ (15,749,000)	-44.5%

\*Does not agree to fund balance in the Authority's financial statement as this chart excludes capitalized assets.

Figure 93: Maintenance Reserve Fund Balance (2015-2017)



**Maintenance Reserve Fund**

<b><u>Project #</u></b>	<b><u>Project Name</u></b>	<b><u>Description</u></b>
<b><u>Capitalized Projects</u></b>		
3010001	Turnpike Bridge Repairs	Inspection, design, construction & construction supervision of all New Jersey Turnpike bridges. Includes Turnpike contracts T100.379 & T100.380.
3010002	Turnpike Resurfacing	Resurfacing of pavement on the New Jersey Turnpike based upon inspection results. Includes Turnpike contracts T200.428 & T200.429.
3020001	Parkway Bridge Repairs	Inspection, design, construction & construction supervision of all Garden State Parkway bridges. Includes Parkway contracts P100.377 & P100.378.
3020005	Parkway Resurfacing	Resurfacing of pavement on the Garden State Parkway based upon inspection results. Includes Parkway contract P200.418.
NEW	Drainage Structure Repairs	Inspection, design, construction & construction supervision of major drainage projects on the New Jersey Turnpike and Garden State Parkway.
3999999	Emergency Maintenance	Emergency/Unanticipated roadway, bridge or structure maintenance.
<b><u>Expensed Projects</u></b>		
3010005	Bridge Inspections	Inspection of New Jersey Turnpike & Garden State Parkway facilities including but not limited to major bridges, routing bridges, culverts, sign structures, antenna towers and other structural roadway features.
3030002	Pavement Management	Utilizing the Authority's General Consulting Engineer, the Authority will collect data on estimated 3000 lane miles and to analyze with weather, equipment availability, lack of access to targeted site, etc. This will allow the Authority to better identify distressed pavement areas and possible voids under the pavement and better plan pavement replacement.

**Figure 94: Maintenance Reserve Fund Project Descriptions**

### Special Project Reserve Fund

Approximately \$9 million (19%) is budgeted for Facility Improvements, \$11.9 million (25%) on Fleet Upgrades, \$12.3 million (25%) for Roadway Improvements, and \$15.2 million (31%) on Technology Improvements.

Category	2015 <u>Actual</u>	2016 <u>Budget</u>	2017 <u>Budget</u>	\$ Change from 2016 Budget	% Change from 2016 Budget
Facility Improvements	\$6,821,400	\$6,537,200	\$8,975,000	\$ 2,437,800	37%
Fleet Upgrades	9,295,400	9,774,500	11,900,000	2,125,500	22%
Roadway Improvements	6,606,000	11,848,200	12,338,500	490,300	4%
Technology Improvements	6,224,700	10,596,400	15,225,000	4,628,600	44%
<b>Total Special Project Reserve Fund</b>	<b>\$ 28,947,500</b>	<b>\$ 38,756,300</b>	<b>\$ 48,438,500</b>	<b>\$ 9,682,200</b>	<b>25%</b>

Figure 95: Special Project Reserve Fund Budget (2015-2017)

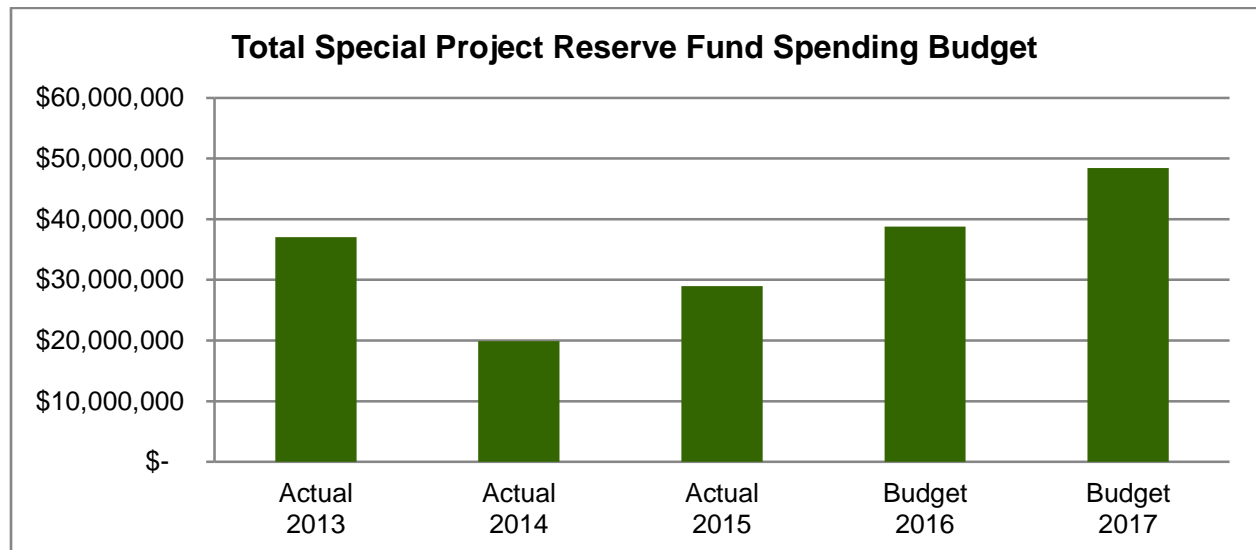


Figure 96: Special Project Reserve Fund Budget Graph (2013-2017)

Special Project Reserve Fund Balance					
	2015 <u>Actual</u>	2016 <u>Est. / Actuals</u>	2017 <u>Budget</u>	2016 to 2017 <u>\$ Change</u>	2016 to 2017 <u>% Change</u>
Beginning Balance	\$29,555,600	\$50,909,100	\$63,121,600	\$12,212,500	
Transfer from Revenue Fund	50,301,000	38,918,000	39,696,000	778,000	
Project Expenses	(28,947,500)	(26,705,500)	(48,438,500)	(21,733,000)	
Ending Balance*	\$ 50,909,100	\$ 63,121,600	\$ 54,379,100	\$ (8,742,500)	-13.9%

\*Does not agree to fund balance in the Authority's financial statement as this chart excludes capitalized assets.

Figure 97: Special Project Reserve Fund Balance (2015-2017)

Figure 98: Special Project Reserve Fund Project

Special Projects Reserve Fund 2017 Projects		2017 Budget
<u>Project #</u>	<u>Project Name</u>	
<b><u>Capitalized Projects</u></b>		
04000124	Turnpike Commercial Vehicle Inspection	\$ 260,000
04007003	Immediate Repairs Design & Construction	1,250,000
04007021	Major Fleet Augmentation	3,100,000
04007021D	Major Fleet Augmentation Dump Trucks	4,500,000
04007021G	Major Fleet Augmentation Generators	650,000
04007021L	Major Fleet Augmentation Loaders	1,100,000
04007059	State Police Body Cameras	1,500,000
04008056	Lane Closing Application	500,000
04008086	PeopleSoft Upgrades & Support	2,400,000
04008157	Toll Plaza Canopy Signs	1,260,000
04008160	Fire Alarm	250,000
04008161	Document Management	150,000
04008167	UPS Replacement - Cranbury	300,000
04008168	Bridge Inspection Software	240,000
04017027	Major Building Improvements	750,000
04018065	Turnpike Widening Program Traffic Detection Fill-in	410,000
NEW	Design NJSP substation at Avalon	200,000
NEW	Design replacement facilities for trailers at NJSP Shooting Range	150,000
NEW	Replacement of Underground Storage Tanks	100,000
NEW	16E/18E Cross Drain Repairs	500,000
NEW	Turnpike I-95 Section Z Turn Modifications	600,000
NEW	TD9 Jersey City Pre-engineered Storage Building	275,000
NEW	Telegraph Hill Pre-engineered Storage Building	275,000
NEW	Turnpike Milepost 29 Grade Separated U Turn	500,000
NEW	Turnpike Interchange 13 TB & ST Ramp Improvements	300,000
NEW	Turnpike MP 58.4 Zip Turn	300,000
NEW	Major Sign & Safety Replacement & Improvements	500,000
NEW	PD5 GSP Sign Shop Pre-engineered Storage Building	275,000
NEW	OPRA Software	100,000
NEW	Toll Lane System Evaluation	800,000
NEW	Enterprise Asset Management	1,000,000
NEW	Image Server	200,000
NEW	DWDM Replacement	900,000
NEW	SPEN Radio at Tower	480,000
NEW	Exchange Upgrade	150,000
NEW	Security Remediation	250,000
NEW	Actuate Server Replacement	150,000
NEW	Rutgers Assignment - Maintenance software	200,000
NEW	EGIS Implementation Phase IV	650,000
NEW	Major Fleet Augmentation - Tractors	1,050,000
NEW	Major Fleet Augmentation Bucket Trucks	750,000
NEW	GSP Interchange 98 Belmar North Toll Admin Trailer	300,000
NEW	Maintenance Trailer GSP Great Egg Salt Barn	300,000
NEW	ITS Lifts & Bucket Trucks	750,000
NEW	TPK CDL Training Facility	300,000
NEW	Replace Chiller at HQ	750,000
NEW	Hydraulic Paper Cutter	60,000
		<b>\$31,735,000</b>

## Special Projects Reserve Fund 2017 Projects- Continued

<u>Project #</u>	<u>Project Name</u>	<u>2017 Budget</u>
<b><u>Expensed Projects</u></b>		
04000046	EZ Pass Contract Implementation	\$1,800,000
04000127	Arc Flash Labeling	400,000
04007062	Extraordinary/ Emergency Roadway Repairs	1,250,000
04008107	Equipment Study	50,000
04008121	Construction Manual	200,000
04008137	Website Redesign	300,000
04008171	eGis Data Collection	500,000
04010062	Engineering Studies	750,000
04018054	On Call Traffic Services Engineer	500,000
04018059	Drainage Pipe Inspections GSP MP 63-80 and MP 30-35	10,000
04028058	GSP Taper Point Implementation	553,500
NEW	Maintenance Studies & Scoping	150,000
NEW	Water Tower Replacement Study HQ	30,000
NEW	Study using Herbertsville vs Pleasant Plains	50,000
NEW	Toll Facility Study	500,000
NEW	Removal of Water Tower at TPK Service Area 7S	150,000
NEW	Remedial Investigation & Remedial Action at Chromate Sites	750,000
NEW	Building Demolition	400,000
NEW	Evaluation of Express EZ Pass on GSP & TPK	250,000
NEW	Preparation of Jurisdictional Limits Maps	150,000
NEW	NBHCE Capacity Study	1,500,000
NEW	Revenue Certification for EZ-Pass Only at GSP Exit 125	100,000
NEW	Study alternate use of NJHA HQ Property	150,000
NEW	Non toll revenue study	200,000
NEW	Punch Time Study	100,000
NEW	Transcom Hardware Software & Services	150,000
NEW	Extraordinary/Emergency Stormwater Facility Replacement & Reconstruction	1,000,000
NEW	Extraordinary/Emergency Sign & Safety Replacement & Improvements	500,000
NEW	Extraordinary/Emergency Replacement/Reconstruction of Roadway Lighting	1,000,000
NEW	Extraordinary/Emergency HVAC System Reconstruction	500,000
NEW	Extraordinary/Emergency Roofing Services	200,000
NEW	Toll Facility Repairs & Improvements	150,000
NEW	Toll Lane Traffic Lights	100,000
NEW	Data Resources Systems Upgrade	225,000
NEW	Horizontal Curve Warning Signs	300,000
NEW	Statewide Re-designation of I95 to NJ Turnpike	285,000
04999999	Contingency	1,500,000
		<b><u>\$16,703,500</u></b>
<b>Total Special Project Reserve Fund</b>		<b><u>\$48,438,500</u></b>

**Figure 99: Special Project Reserve Fund Project Descriptions**

<b><u>Project #</u></b>	<b><u>Project Name</u></b>	<b><u>Project Description</u></b>
	<b><u>Capitalized Projects</u></b>	
04000124	Turnpike Commercial Vehicle Inspection	Preparation of design documents for top ranked sites developed in 2016 evaluations.
04007003	Immediate Repairs Design & Construction	This project is intended for design & construction of repairs along both the New Jersey Turnpike and Garden State Parkway or any other Authority facility deemed to be of an emergency nature and whose circumstances will not allow for the advertisement and award of an OPS or Contract. Such repairs include but are not limited to: sink holes, drainage repairs, bridge deck and/or joint repairs, spall repair, as well as damage to pavement as a result of vehicle or other types of fire, etc. These repairs are managed by the Authority's Engineering Department.
04007021	Major Fleet Augmentation	The purchase of replacement and supplemental equipment over \$50 K as needed on a priority and lifecycle basis.
04007021D	Major Fleet Augmentation Dump Trucks	Annual purchase of twenty seven (27) dump trucks to maintain current lifecycle levels. (Vehicles have a twelve (12) year life cycle). Replace models that have exhausted their life expectancy as well as supplementing the Roadway Divisions fleet due to widening projects on both roadways.
04007021G	Major Fleet Augmentation Generators	Designated program for purchase of Stand-by Generators.
04007021L	Major Fleet Augmentation Loaders	Designated program for Loader Replacement that lack diesel particulate filters, as required by the Environmental Protection Agency
04007059	State Police Body Cameras	State of New Jersey mandate to provide all State Troopers with body cameras.
04008086	PeopleSoft Upgrades & Support	Funding for the upgrade of PeopleSoft Financials and the implementation of Benefits Administration.
04008157	Toll Plaza Canopy Signs	Funding for design OPS approved at July 2016 CM to prepare contracts T600.415 and T600.417. Funding for 2017 construction & supervision
04008160	Fire Alarm	This project will allow the Authority to procure new Fire Alarms Panels. A small portion of this funding will be spent by ITS for software, support, and services. However, Safety should specify and prioritize the replacement of the new fire alarm panels. This procurement includes hardware, software, and services.

**Special Project Reserve Fund – Continued**

04008161	Document Management	Continuation of 2016's development of the FileHold software. Project will include analysis of Authority documents to be catalogued, document types, metadata, access, as well as retrieval rules. Funding is requested for software, hardware and services to bring the remaining departments onto FileHold.
04008167	UPS Replacement - Cranbury	Replace the UPS at Cranbury State Police: State Police Troop D Headquarters. This facility is the only State Police facility which does not have stable UPS. All other State Police sites have reliable power. The current UPS is the original UPS installed when the building was built. This procurement includes hardware, software, and services.
04008168	Bridge Inspection Software	Continuation of 2016 efforts to remove customizations in order to make the Authority's software compatible with NJDOT software. This procurement includes hardware, software, and services.
04017027	Major Building Improvements	Major Repairs and/or Improvements to Authority's buildings with a project cost greater than \$50,000.00.
04018065	Turnpike Widening Program Traffic Detection Fill-in	Install the first set of fill-in sites of traffic detection stations and other required components on the New Jersey Turnpike and /or Garden State Parkway. This procurement includes hardware, software, and services.
NEW	Design NJSP substation at Avalon	Design a new NJSP substation in Avalon
NEW	Design replacement facilities for trailers at NJSP Shooting Range	Design replacement facilities for the trailers at the State Police shooting range.
NEW	Replacement of Underground Storage Tanks	Request funding for preparation of Plans and Specifications for replacing Underground Storage Tanks at GSP Maintenance Districts 1, 2, & 3. Design will take place in 2017 & Construction & Tank Removal will take place in 2018.
NEW	16E/18E Cross Drain Repairs	Construct repairs to Toll Plaza cross drains at 16/18E
NEW	Turnpike I-95 Section Z-Turn Modifications	Lengthen the Z-turns for low speed cross over use
NEW	TD9 Jersey City Pre-engineered Storage Building	Preparation of construction documents with consultant to provide additional storage for small equipment out of the elements. Climate controlled environment and shelter extends the life of construction materials and condition of equipment.

### Special Project Reserve Fund – Continued

NEW	Telegraph Hill Pre-engineered Storage Building	Preparation of construction documents with consultant to provide additional storage for small equipment out of the elements. Climate controlled environment and shelter extends the life of construction materials and condition of equipment.
NEW	Turnpike Milepost 29 Grade Separated U Turn	Preparation of construction documents for the long deferred U-turn for Maintenance and operational beneficial use. Cost and time savings can be found during incident response and winter weather operations.
NEW	Turnpike Interchange 13 TB & ST Ramp Improvements	Preparation of construction documents with consultant to improve failing pavement conditions and geometry.
NEW	Turnpike MP 58.4 Z Turn	Preparation of construction documents for a new access Z- turn to improve emergency vehicle response.
NEW	Major Sign & Safety Replacement & Improvements	Funding for design, permitting, purchasing and construction resources for replacement or new installs of roadside signage and safety features with costs greater than \$50,000.00.
NEW	PD5 GSP Sign Shop Pre-engineered Storage Building	Preparation of construction documents with consultant to provide additional storage for and climate controlled environment for materials. Also allows for vehicle decals to be installed properly during all times of the year out of the elements.
NEW	OPRA Software	Software application to handle intake, distribution and overall management of OPRA requests (approximately 700 per year). The software would provide an online request form that a requestor can then submit to our OPRA coordinator. The coordinator would then be able to direct the request to the appropriate personnel via the software (rather than by sending e-mails) and the software would keep track of all activities and deadlines so that, for example, we could easily tell what requests are nearing their deadline, or have deadlines extended, etc.

### Special Project Reserve Fund – Continued

NEW	Toll Lane System Evaluation	This is a multiyear project in which ITS will continue testing software and hardware which comprise the tolling system on both the New Jersey Turnpike and Garden State Parkway. Funding for this project will be used to pilot components and configurations. In this project, ITS will bring a vendor onboard, procure software or hardware, implement, and test. Once completed, mass production will occur and funding will be provided from the Toll Lane System Refresh Project. Much of the lane equipment deployed today is obsolete and no longer available. This procurement includes hardware, software, and services.
NEW	Enterprise Asset Management	Implement a transportation focused Enterprise Asset Management (EAM) System as part of the process to replace the existing Spear software from Infor. Infor has no further development on the Spear platform. Spear does not meet NJTA's requirements in an efficient manner.
NEW	Image Server	Increase disk space on the image server to extend data retention period, from 90 days to 1 year, providing enhanced support to the customer service team.
NEW	DWDM Replacement	The current DWDM technology is approximately 8 years old. This technology is end of sale and the Authority no longer benefits from this particular technology due to its complexity and cost to support. ITS would like to replace this technology with high end routers, communicating via the same fiber pairs in use today. The replacement technology will be easier to maintain and is substantially more affordable.
NEW	SPEN Radio at Tower	New base station to replace 20 year old units. State Police uses these radios for local communications with municipalities.
NEW	Exchange Upgrade	The Authority is currently running a Microsoft Exchange platform (email system) which is end of life. This upgrade is necessary to avoid an increase in support costs, as well as, improve system functionality.
NEW	Security Remediation	ITS requests funding to remediate any security vulnerabilities identified in the security assessment the Authority had conducted.



**Special Project Reserve Fund – Continued**

NEW	Actuate Server Replacement	Replace the report server for the MyETCPassport system. The system is used by ITS, Tolls, Finance, and Internal Audit. The current report server is outdated and needs to be replaced. This procurement includes hardware, software, and services.
NEW	Rutgers Assignment - Maintenance software	Continued development, upgrades and improvement to the Authority's web based Maintenance Department Operations Software platforms.
NEW	EGIS Implementation Phase IV	Additional GIS services are needed for further enhance the program.
NEW	Major Fleet Augmentation - Tractors	Designated Program for tractor replacement
NEW	Major Fleet Augmentation Bucket Trucks	Designated Program for annual Bucket Truck replacement
NEW	GSP Interchange 98 Belmar North Toll Admin Trailer	Funding for design, permitting, purchasing and construction resources for the new trailer and associated site work at this location.
NEW	Maintenance Trailer GSP Great Egg Salt Barn	Funding for design, permitting, purchasing and construction resources for the new seasonal Maintenance facility and associated site work at this location.
NEW	ITS Lifts & Bucket Trucks	Funding for the Lift & Scissor Trucks to be utilized by the ITS department for Lane Maintenance.
NEW	TPK CDL Training Facility	Preparation of construction documents with consultant for a new NJ Department of Motor Vehicle approved Commercial Drivers Licensing test location. The construction of the new Central Services / TD6A, thru the Facilities Improvement Program, has necessitated relocation of this facility.
NEW	Replace Chiller at HQ	Funding for the replacement of one of the chillers at the Authority Headquarters.
NEW	Hydraulic Paper Cutter	Purchase of a Hydraulic Paper Cutter for use in the Authority's Holmdel Print Shop.
<b><u>Expensed Projects</u></b>		
04008121	Construction Manual	Completion of the Construction Manual update
04010062	Engineering Studies	Funding for various Engineering studies required in 2017
04018059	Drainage Pipe Inspections GSP MP 63-80 and MP 30-35	Post Design funds for OPS A3561 D-6
04028058	GSP Taper Point Implementation	Provides for the development of Standardized Taper Point Locations on the Garden State Parkway to permit greater Contractor & Consultant access. Deliverable will include an updateable database & criteria for taper point selection (Left & Right Lane Access)
NEW	Water Tower Replacement Study HQ	Study the replacement of the water tower at HQ.

**Special Project Reserve Fund – Continued**

NEW	Study using Herbertsville vs Pleasant Plains	Study using Herbertsville vs. Pleasant Plains as a State Police substation.
NEW	Toll Facility Study	Study the Authority's toll plazas on both roadways to determine the optimal lane type and configuration for future toll plaza improvements.
NEW	Removal of Water Tower at TPK Service Area 7S	Request funding for preparation of Plans and Specifications for removing the existing water tower at the Molly Pitcher Service Area. The tower's cathodic protection system is no longer functioning and as a result the tower is deteriorating and in need of repair. The tower no longer serves any viable function and therefore should be removed.
NEW	Remedial Investigation & Remedial Action at Chromate Sites	Efforts associated with the remediation of chromium impacted soil and/or groundwater at Chromate sites 120, 21 & 192 in accordance with a court ordered mandate. Design will take place in 2017 & Construction & Tank Removal will take place in 2018 - 2021.
NEW	Building Demolition	Funding for design related to demolition of existing Authority assets including the former NJTA Headquarters at Interchange 9, the former NJHA Headquarters near Interchange 11, and the Celebrity House at the PNC Arts Center.
NEW	Evaluation of Express E-ZPass on GSP & TPK	Provide an evaluation of the costs and parameters to implement Express E-ZPass at GSP Great Egg Toll Plaza and Tpk Interchange 6.
NEW	Preparation of Jurisdictional Limits Maps	Study of the Maintenance & Jurisdictional Limits Maps for Cape May and Monmouth Counties. This will benefit the Authority by clearly depicting the Authority's limits of responsibility. This will help in defining maintenance responsibilities and responsibility relative to lawsuits.
NEW	NBHCE Capacity Study	Engineering study related to the NBHCE capacity and options to increase it.
NEW	Revenue Certification for E-ZPass Only at GSP Exit 125	Obtain a revenue study for having an E-ZPass only exit at Parkway Interchange 125
NEW	Study alternate use of NJHA HQ Property	Study potential alternate uses for the property occupied by the former NJHA Headquarters.
NEW	Non toll revenue study	Study options to increase non toll revenue sources.
04000046	E-ZPass Contract Implementation	Assist the Authority in transitioning to the new E-ZPass contract.

**Special Project Reserve Fund – Continued**

04008137	Website Redesign	Continuation of 2016 efforts to redesign the Authority's website. The new Website will have new consumer driven features and capabilities. This will be a significant improvement in the Authority's ability to communicate with a wide variety of stakeholders via this medium. This procurement includes hardware, software, and services.
04008171	eGis Data Collection	To provide services to help expand, enhance and maintain the Authority's Enterprise Geographic Information System. These services include assistance with training for Authority staff; administering the GIS databases and services; system assessments, maintenance and enhancements; and discovery, development and delivery of key datasets and spatial applications.
NEW	Punch Time Study	Evaluate the possible solutions of prepopulating PeopleSoft timecards with data from a card swipe. This procurement includes hardware, software, and services.
NEW	Transcom Hardware Software & Services	The Authority is in discussions with Transcom to share NJTA video. Currently Transcom has access to NJTA video via Trafficland who charges Transcom several thousand dollars a year. All other agencies in the area are sharing video with Transcom via their own infrastructure. NJTA is the only agency not sharing video directly.
04008056	Lane Closing Application	Funding will provide for the next phase and possible options to migrate application from the cloud to on premise.
04000127	Arc Flash Labeling	Electrical safety Arc Flash and Shock Hazards Protection as required by OSHA including system analysis and Arc Flash Labeling
04007062	Extraordinary/ Emergency Roadway Repairs	This project is intended for repairs and replacements along both the New Jersey Turnpike and Garden State Parkway or any other Authority facility deemed to be of an emergency and immediate nature with costs less than \$50,000.00.
04008107	Equipment Study	Award design study assignment to On-call consultant to evaluate our dump truck fleet and continue to hone our standard specification package (with drawings) for purchasing. This will supplement and support our dump truck life cycle purchasing program.
NEW	Maintenance Studies & Scoping	The study of various maintenance projects. The consultant will assist the maintenance department in properly studying, scoping, and quantifying projects on an immediate or scheduled basis.

**Special Project Reserve Fund – Continued**

NEW	Extraordinary/Emergency Stormwater Facility Replacement & Reconstruction	Provide resources for the design and construction of emergency/extraordinary repairs and improvements of drainage facilities with costs less than \$50,000.00. Increase and maintain the Authority's compliance with NJDEP guidelines.
NEW	Extraordinary/Emergency Sign & Safety Replacement & Improvements	Funding for design, permitting, purchasing and construction resources for replacement or new installs of roadside signage and safety features with costs less than \$50,000.00.
NEW	Extraordinary/Emergency Replacement/Reconstruction of Roadway Lighting	Funding for design and construction resources for emergency/extraordinary repairs and improvements of the roadway lighting systems on the New Jersey Turnpike and Garden State Parkway with costs less than \$50,000.00.
NEW	Extraordinary/Emergency HVAC System Reconstruction	Funding for design, permitting, purchasing and construction resources for the emergency/extraordinary repair or replacement of HVAC system components with costs less than \$50,000.00. The completion of this project will provide control and monitoring capabilities for the NJTA. Benefits include a reduction of wasted energy, improved maintenance of HVAC equipment, and optimization of HVAC systems.
NEW	Extraordinary/Emergency Roofing Services	Funding for design, permitting, purchasing, investigation, building commissioning and construction resources for all Authority Buildings, facilities and building structures with costs less than \$50,000.00. Facilities include service areas, toll department facilities, maintenance yards, etc.
NEW	Toll Facility Repairs & Improvements	Funding for emergency/extraordinary repairs, replacements, and/or improvements at all Toll Department Facilities with a value under \$50K.
NEW	Toll Lane Traffic Lights	Install X & Arrow Lights at Interchanges 12 (17 lanes), Interchange 13 (21 lanes), Interchange 3 (5 lanes), and Interchange 2 (4 lanes)
04018054	On Call Traffic Services Engineer	Funding for Traffic Engineering Studies required by the Authority's Operations Department.

### Special Project Reserve Fund – Continued

NEW	Data Resources Systems Upgrade	<p>The Data Resources section of the Operations Department has antiquated and obsolete software and tools to produce and store basic volume, crash, and roadway statistics. In addition, these systems are unable to communicate directly with the State Police. File transferring between Operations and State Police is time consuming and incongruent creating multiple steps to cross-communicate. This effort will investigate if new software is necessary, if on-site temporary staff can be used to rectify these situations, or other. This effort will also investigate how to relieve the Department of its obligation to software and programs built and designed by employees whom no longer work for the Authority.</p>
NEW	Horizontal Curve Warning Signs	<p>FHWA has a December 31, 2019 compliance date for the required installation of warning signs for horizontal curves. Almost every ramp terminal the Authority owns was retrofitted into a preexisting urban area or other environmental constraint resulting in ramps with horizontal curves containing small radii and low operating speeds. With these geometric prerequisites satisfied, the FHWA requires warning signing on these ramps. The project is planned to be broken into three major stages. The first year is the collection of data. Vehicles will ballbank the curves to obtain an advisory speed that can be posted to the signing. Stage 2, planned for 2018, is to create a construction contract to install all signing. All signing is expected to be ground-mounted and no overhead structures are necessary. For both roads including all ramps, over 1,000 signs are expected. Stage 3, planned for 2019, is the installation of the signs through the awarding of a contract previously designed. Installation is outside the scope and resources of the Maintenance Department.</p>

**Special Project Reserve Fund – Continued**

NEW	Statewide Re-designation of I95 to NJ Turnpike	<p>FHWA has imposed in the Interstate Highway Route Log the existence of Interstate 95 on the New Jersey Turnpike between Florence and Fort Lee. Penn DOT and the Pennsylvania Turnpike Commission are building an interchange in Bristol, PA that will directly connect I-95 to the NJ Turnpike. With this connection currently absent, signing has been intentionally omitted at the longstanding direction of NJDOT for I-95 signing south of Interchange 10 in the Turnpike system. This effort will study and inventory all existing Turnpike signs that need to be replaced or that need to accommodate the I-95 sign to fulfill FHWA requirements, satisfy route continuity and meet motorist expectation. \$285,000 has been estimated from a preliminary scope to study NJ Turnpike needs that include new applicable Guide signs, a new exit numbering system, new milepost systems and signs and the introduction of the I-95 shield inside and outside the Turnpike system. The I-95 connection is expected to be completed in the fall of 2017 by Penn DOT. After completing the study in early 2017, it will produce a cost that will be needed to design and install the signs. Installation of all signs is expected to be outside the scope and resources of the Maintenance Department. The effort also includes an application by the Authority to AASHTO for the permission to make additional changes for a potential I-695 and I-895. Submission and subsequent approval, if granted, is not an obligation that the Authority establish I-695 and I-895. Rather, decisions made by AASHTO dictate how the aforementioned mileposts and exit numbering systems are to be studied.</p>
04999999	Contingency	<p>Provides additional funding for increased project needs or unanticipated projects that fit the description of an eligible Special Project Reserve Fund project as approved by Executive Staff.</p>

## General Reserve Fund

The General Reserve Fund includes \$232.5 million (81%) for contractual state payments, including the State Transportation Projects Funding Agreement payments of \$204 million. The 2017 budget also includes \$32.3 million (11%) for Extraordinary Events, which are generally costs for state of emergency weather events, and \$20.5 million (7%) for reserves, primarily OPEB. The 2017 budget also includes all reimbursable projects which net to zero spending.

Category	2015	2016	2017	\$ Change from 2016 Budget	% Change from 2016 Budget
	Actual	Budget	Budget		
Extraordinary Events	\$17,714,300	\$32,295,000	\$32,295,000	\$ -	0%
Claim Settlements	2,500,000	2,500,000	3,000,000	500,000	20%
Other Post-Employment Benefits	27,500,000	13,000,000	17,500,000	4,500,000	35%
Bond Cost of Issuance	1,390,900	1,290,000	1,300,000	10,000	1%
State Payments	354,000,500	294,001,000	232,500,000	(61,501,000)	-21%
<b>Total General Reserve Fund</b>	<b>\$ 403,105,700</b>	<b>\$ 343,086,000</b>	<b>\$ 286,595,000</b>	<b>\$ (56,491,000)</b>	<b>-16%</b>

Figure 100: General Reserve Fund Budget (2015-2017)

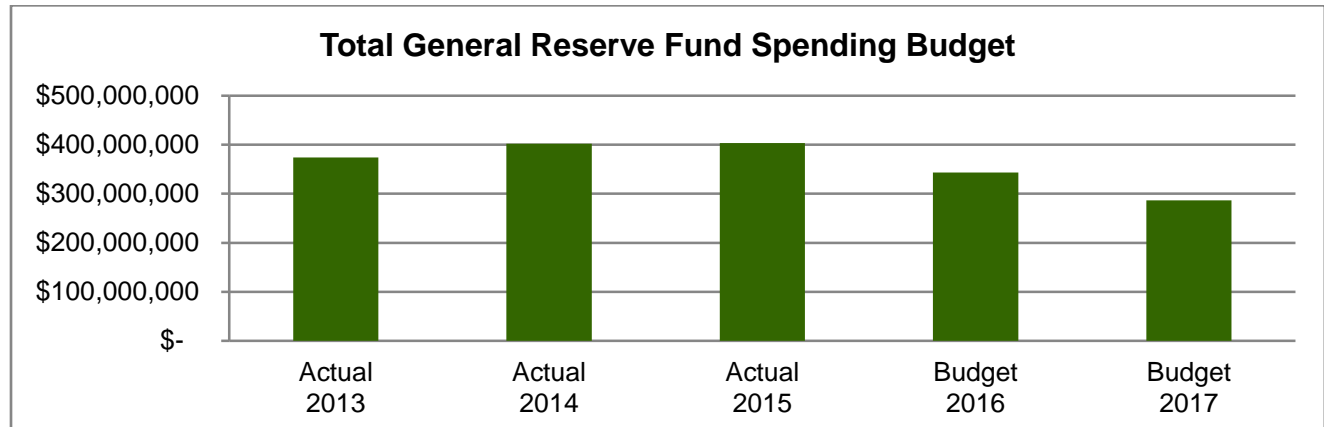


Figure 101: General Reserve Fund Budget Graph (2013-2017)

General Reserve Fund Balance					
	2015	2016	2017	2016 to 2017	2016 to 2017
	Actual	Est. / Actuals	Budget	\$ Change	% Change
Beginning Balance	\$246,006,000	\$243,198,400	\$261,765,400	\$18,567,000	
Transfer from Revenue Fund	419,525,000	362,322,000	217,357,000	(144,965,000)	
General Reserve Spending	(403,105,700)	(330,666,000)	(286,595,000)	44,071,000	
Supplemental Capital Spending	(19,226,900)	(13,089,000)	(81,905,000)	(68,816,000)	
Ending Balance	\$243,198,400	\$261,765,400	\$ 110,622,400	(\$151,143,000)	-57.7%

Figure 102: General Reserve Fund Balance (2015-2017)

### General Reserve Fund 2017 Projects

<u>Project #</u>	<u>Project Name</u>	<u>2017 Budget</u>
08000014	Bond Cost of Issuance	\$1,250,000
08007000	Extraordinary Events	32,295,000
08007990	Claim Settlements	3,000,000
08007991	Other Post-employment benefits	17,500,000
08007997	Arbitrage Expense	50,000
08007015	Feeder Road Reimbursement NJDOT	6,500,000
08007007	Transportation Trust Fund	22,000,000
08007137	State Transportation 2016-2021	204,000,000
08007045	I-95 GWB Approach Signs PANYNJ	1,938,000
08007045R	I-95 GWB Approach Signs PANYNJ- Reimbursable	(1,938,000)
08017028	PTC Design Service- A3291	303,000
08017028R	PTC Reimbursement Design Service- A3291	(303,000)
08017029	PTC Delaware River Bridge	3,036,600
08017029R	PTC Delaware River Bridge - Reimbursement	(3,036,600)
08017031	PTC Security Cameras	1,090,700
08017031R	PTC Security Cameras - Reimbursable	(1,090,700)
08017032	PTC Arch Hardening	16,079,800
08017032R	PTC Arch Hardening - Reimbursable	(16,079,800)
08017033	PTC Repaint and Improvements	18,100,000
08017033R	PTC Repaint and Improvements - Reimbursable	(18,100,000)
08017035	Parkway Interchange 125	7,500,000
08017035R	Parkway Interchange 125 - Reimbursable	(7,500,000)
08018046	Accident Damage - Structures	5,000,000
08018046R	Accident Damage - Structures - Reimbursement	(5,000,000)
08027016	DWDM Clifton to TOC Elmwood Park	9,900
08027016R	DWDM Clifton to TOC Elmwood Park- Reimbursable	(9,900)
08027021	Fiber Relocation Newark Airport	170,300
08027021R	Fiber Relocation Newark Airport - Reimbursable	(170,300)
08027023	NBHCE Expansion-Pulaski Skyway-NJDOT	1,853,200
08027023R	NBHCE Expansion-Pulaski Skyway-NJDOT - Reimbursable	(1,853,200)
08027025	Beesley's Point	3,000,000
08027025R	Beesley's Point Reimbursable	(3,000,000)
08027026	Goethals Bridge Project	409,300
08027026R	Goethals Bridge Project Reimbursable	(409,300)
<b>Total General Reserve Fund Projects</b>		<b><u><u>\$286,595,000</u></u></b>

Figure 103: General Reserve Fund Projects



### General Reserve Fund

<u>Project #</u>	<u>Project Name</u>	<u>Project Description</u>
08000014	Bond Cost of Issuance	To pay rating agency, legal, trustee, financial advisor, general consulting & traffic engineer fees, etc. for cost of issuance expenses related to variable rate debt.
08007000	Extraordinary Events	To pay for the cost of major weather or other events when there is a declared state of emergency.
08007990	Claim Settlements	To fund reserve for the Authority's self-insured retention on claims related to property, general liability and/or auto liability.
08007991	Other Post-employment benefits	To fund reserve for OPEB, representing a portion of the additional funding necessary to meet the difference between actuarially calculated Annual Required Contribution (ARC) and pay-go expenses paid through the Operating Expense budget.
08007997	Arbitrage Expense	To fund reserve for potential arbitrage payments due to the IRS on the Authority's bonds based upon the arbitrage consultants annual calculations.
08007015	Feeder Road Reimbursement NJDOT	Annual renewable Cost Sharing Agreement to provide reimbursement by the Authority to the NJDOT for reconstruction, maintenance and repair of Feeder Roads at twenty New Jersey Turnpike Interchanges and thirty-six Garden State Parkway Interchanges.
08007007	Transportation Trust Fund	Under an agreement dated 4/27/84, Authority pays the Treasurer of State of New Jersey. These funds are to be used by the State of New Jersey, or the Transportation Trust Fund, to pay or provide for the development of State transportation projects, in efforts to further satisfy the overall transportation needs of the State. The agreement expires when all obligations of the Transportation Trust Fund have been satisfied.
08007137	State Transportation 2016-2021	The Authority makes annual payments to the State of New Jersey under a five-year Transportation Projects Funding Agreement for the development of transportation purposes. The agreement expires in 2021.
08007045	I-95 GWB Approach Signs PANYNJ	Installation of five (5) new Sign Structures, the installation of fixed sign panels on one (1) existing sign structure and the modification of two (2) existing Changeable Message Signs, within the I-95 Corridor. The locations are MP 117.8, MP 118.24, MP 118.4, MP 120.95, MP121.16, MP 121.32, MP 121.48 and MP 121.68.
08007045R	I-95 GWB Approach Signs PANYNJ- Reimbursable	Reimbursement to be received from the PANYNJ

**General Reserve Fund – Continued**

08017028	PTC Design Service- A3291	Pennsylvania Turnpikes portion of expenses for Design Services on the Delaware Bridge (OPSA3291)
08017028R	PTC Reimbursement Design Service- A3291	Reimbursement to be received from the Pennsylvania Turnpike
08017029	PTC Delaware River Bridge	Replacement of the suspenders and suspender protection in the main arch truss portion of the bridge
08017029R	PTC Delaware River Bridge - Reimbursement	Reimbursement to be received from the Pennsylvania Turnpike
08017031	PTC Security Cameras	Replacement of cameras on the main arch truss portion of the bridge
08017031R	PTC Security Cameras - Reimbursable	Reimbursement to be received from the Pennsylvania Turnpike
08017032	PTC Arch Hardening	Local hardening of the arch chords in the main arch truss portion of the bridge
08017032R	PTC Arch Hardening - Reimbursable	Reimbursement to be received from the Pennsylvania Turnpike
08017033	PTC Repaint and Improvements	Bridge Painting and seismic retrofit, structural steel repairs, catwalk repairs, and installation of security gates
08017033R	PTC Repaint and Improvements - Reimbursable	Reimbursement to be received from the Pennsylvania Turnpike
08017035	Parkway Interchange 125	
08017035R	Parkway Interchange 125 Reimbursable	
08018046	Accident Damage	Work to repair NJTA property as a result of accident. Insurance recovery.
08018046R	Accident Damage - Reimbursable	Insurance recovery
08027016	DWDM Clifton to TOC Elmwood Park	Relocation of the existing node at the NJTA Clifton Maintenance yard to the NJDOT Traffic Operations Center at Elmwood Park. The DWDM ring provides protection and redundancy for the fiber optic system covering the northern half of the state.
08027016R	DWDM Clifton to TOC Elmwood Park- Reimbursable	Reimbursement to be received from the NJDOT
08027021	Fiber Relocation Newark Airport	Relocation of Existing Fiber Optic Facilities at Newark Liberty Airport. Design and construct an Engineered Material Arresting System (EMAS) for Runway 11 in response to the Federal Aviation Administration Runway Safety Program. As part of this project, the existing perimeter roadway at the airport adjacent to the Turnpike, Brewster Road, needs to be relocated onto the NJTA right-of-way.
08027021R	Fiber Relocation Newark Airport - Reimbursable	Reimbursement to be received from the PANYNJ
08027023	NBHCE Expansion-Pulaski Skyway-NJDOT	Project consists of the conversion of the right shoulder of the eastbound Newark Bay Hudson County Extension as a third traffic lane between interchanges 14 and 14C throughout the Pulaski Skyway project.
08027023R	NBHCE Expansion-Pulaski Skyway-NJDOT - Reimbursable	Reimbursement to be received from the NJDOT

**General Reserve Fund – Continued**

08027025	Beesley's Point	Demolish and remove the Beesley's Point Bridge (Cape May County) in association with the replacement of GSP bridge numbers 28.0S and 28.5S.
08027025R	Beesley's Point Reimbursable	Reimbursement to be received from Cape May County
08027026	Goethals Bridge Project	Project consists of the design, building financing and maintenance of the Replacement Bridge. Demolition and removal of the Existing Bridge (Goethals) and all associated work. Paving, curbing and other modifications to Interchange 13 connecting. Agreement between PANYNJ and NJTA.
08027026R	Goethals Bridge Project Reimbursable	Reimbursement to be received from the PANYNJ

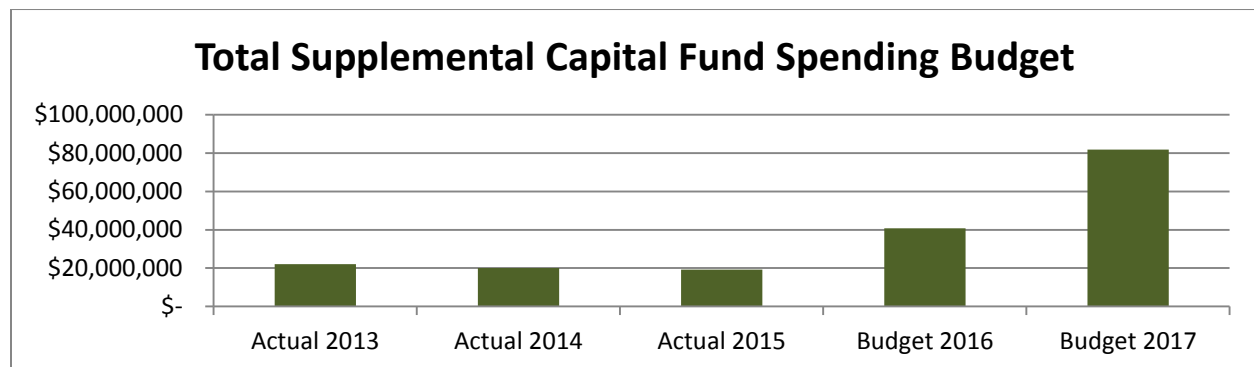
**Figure 104: General Reserve Fund Project Descriptions**

**Supplemental Capital Fund**

Approximately \$32.8 million (40%) is budgeted for Technology Improvements, \$28.9 million (35%) for Roadway Improvements, and \$20.3 million (25%) for Facility Improvements.

Category	2015	2016	2017	\$ Change from	% Change from
	<u>Actual</u>	<u>Budget</u>	<u>Budget</u>	2016 Budget	2016 Budget
Roadway Improvements	\$ 3,552,700	\$ 5,178,200	\$ 28,890,000	\$ 23,711,800	458%
Facility Improvments	2,463,900	21,002,600	32,765,000	11,762,400	56%
Technology Improvements	13,210,300	14,601,200	20,250,000	5,648,800	39%
<b>Total Supplemental Capital Fund</b>	<b>\$ 19,226,900</b>	<b>\$ 40,782,000</b>	<b>\$ 81,905,000</b>	<b>\$ 41,123,000</b>	<b>100.8%</b>

**Figure 105: Supplemental Capital Fund Budget (2015-2017)**



**Figure 106: Supplemental Capital Fund Budget Graph (2013-2017)**

### Supplemental Capital Fund 2017 Projects

<u>Project #</u>	<u>Project Name</u>	<u>Funding</u>
08000020	NBHCE Pulaski Skyway - stand-by	\$ 240,000
08007019	Major Roofing Replacements	1,400,000
08007033	Security Systems/C Cure	2,000,000
08007050	LED Lighting Upgrades	650,000
08007052	Network Infrastructure Improvements	250,000
08007108	Radio Replacement Project	1,000,000
08007115	Overhead Sign Structure Access Improvements	1,500,000
08007116	Congestion & Incident Management	500,000
08007117	HVAC & Boiler Replacement Program	5,000,000
08007118	Arts Center Parking Lot Lighting	2,000,000
08007119	Refurbish of Concrete Abutment	3,055,000
08017034	Non-Vegetative Management	1,500,000
08018028	Morris Canal Bridge	5,000,000
08020019	Commuter Park and Ride Design & Construction (Int. 58)	2,050,000
08020020	Toll Plaza Cash Recyclers	3,500,000
08020021	Monmouth Service Area Improvements	2,410,000
08027033	Arts Center Roof	500,000
08999999	Contingency	5,000,000
NEW	Relocation of E-ZPass Equipment at Keyport Plaza	1,300,000
NEW	Slope Stabilization	2,000,000
NEW	Replacement Toll Booths for Turnpike & Parkway	1,200,000
NEW	Major Backup Generator Replacement	4,500,000
NEW	Replacement of Concrete Abutments at Interchanges 3 & 4 (15 lanes)	1,500,000
NEW	Hybrid Changeable Message Sign Replacement Project	7,500,000
NEW	Interchange Improvements	1,500,000
NEW	Concrete Barrier Repairs	4,500,000
NEW	Toll Facility Repairs & Improvements	4,500,000
NEW	Escrow Deposit for HQ purchase	1,350,000
NEW	Coin Machine Replacement - GSP	5,000,000
NEW	Road Weather Information Systems (RWIS)	2,000,000
NEW	Production Toll Lane System Refresh	3,000,000
NEW	Major Replacement & Reconstruction of Roadway Lighting	2,000,000
NEW	Gate Repair and Replacement	2,500,000
<b>Total Supplemental Capital Fund</b>		<b>\$ 81,905,000</b>

**Figure 107: Supplemental Capital Fund Projects**

### Supplemental Capital Fund

<u>Project #</u>	<u>Project Name</u>	<u>Project Description</u>
08000020	NBHCE Pulaski Skyway - stand-by	To provide stand by wrecker service during the construction on the Pulaski Skyway
08007019	Major Roofing Replacements	Funding for design, permitting, purchasing and construction resources to continue the Maintenance Departments roofing replacement program. Facilities include service areas, toll department facilities, maintenance yards, etc.
08007033	Security Systems/C Cure	Funding to complete the C Cure installation at the remaining Turnpike Tolls locations and to begin installation at other Authority facilities.
08007050	LED Lighting Upgrades	Upgrade multiple locations to LED Lights for TPK Underpasses, High mast Poles, Interchange and Ramp lights, Toll Department Facilities, etc. New LED systems will provide maintenance free lighting for 10 years as well as a 55% reduction in energy usage.
08007052	Network Infrastructure Improvements	Continuation of installing wireless, switching, and routing equipment as well as terminating / installing fiber in locations where communications are required along the New Jersey Turnpike and Garden State Parkway. The equipment and material will connect the intelligent transportation data points (signs, cameras and sensors) back to the NJTA's network. This procurement includes hardware, software, and services.
08007108	Radio Replacement Project	Continuation of radio replacement efforts in 2017. Go Live is schedule for 10/1/2016. Funding is required for 1 year support as well as procurement of additional hardware, software, and services for items which go above and beyond the original scope of the project which was a one for one replacement of the existing radio system.

### Supplemental Capital Fund – Continued

08007115	Overhead Sign Structure Access Improvements	There have been several potential safety issues found during the sign commissioning and inspection process that need to be corrected: 1. Furnish/install retractable lifeline (all sites) 2. Install pedestal rungs (where needed) 3. Replace structure ladder (where needed) 4. Lower ladder guard and/or padlock (where needed) 5. Repair structure door (where needed) 6. Furnish/install padlocks (where needed).
08007116	Congestion & Incident Management	This project will provide funding for the completion of ongoing 2016 ITMS enhancements. After 1st Quarter 2017, remaining funding will be used to procure software, hardware, and services related to traffic detection and alerting.
08007117	HVAC & Boiler Replacement Program	Funding for design, permitting, purchasing and construction resources to continue the Maintenance Departments Authority wide HVAC equipment replacement program. Facilities include service areas, toll department facilities, maintenance yards, etc.
08007118	Arts Center Parking Lot Lighting	Upgrade of lighting in the parking lot at the PNC Bank Arts Center
08007119	Refurbish of Concrete Abutment	Replacement of concrete abutments at Interchanges 16E/18E & 17.
08017034	Non-Vegetative Management	This contract provides a pervious asphaltic ground surfacing to combat vegetation growth adjacent to Authority roadways. Selected areas are chosen based on priority, significant man hours and resources are spent on maintenance, and/or place our employees in potentially unsafe conditions.
08018028	Morris Canal Bridge	Design, Supervision & Construction of a vehicular bridge over the Morris Canal connecting Jersey Avenue & Phillips Street in Jersey City.
08020019	Commuter Park and Ride Design & Construction (Int. 58)	Funding is required for the Authority to reimburse Ocean County for the design and construction of a new park & ride at MP 58 on the Parkway. The design costs (maximum of \$400K) are to be paid upon completion of the design & the construction costs (\$2,000,000 max) are to be paid monthly based on construction progress.

### Supplemental Capital Fund – Continued

08020020	Toll Plaza Cash Recyclers	Funding for the purchase of money counting machines for each toll plaza to be used in the collector bank out process. Machines include a vault that secures funds until picked up by armored car company. The machines also transmit electronically a verified money count to the Authority's bank that is credited same day to the Authority's account
08020021	Monmouth Service Area Improvements	Post design, construction and supervision of bus parking reconfiguration to provide better access to patrons utilizing the service area.
08027033	Arts Center Roof	Repair/replacement of roof & windows at the PNC Bank Arts Center
08999999	Contingency	Provides additional funding for increased project needs or unanticipated projects that fit the description of an eligible Supplemental Capital or General Reserve Fund project as approved by Executive Staff.
NEW	Relocation of E-ZPass Equipment at Keyport Plaza	Partial Facility demolition & modification of existing administrative structure at GSP Interchange 117.
NEW	Slope Stabilization	Stabilization of the slope for Heards Brook on Authority property.
NEW	Replacement Toll Booths for Turnpike & Parkway	Funding to have 2 of each type of toll booth on both roadways fabricated to have available for replacement when accidents damage the booth in the lane and they require immediate replacement.
NEW	Major Backup Generator Replacement	Funding for decommissioning of current generators and replacement with new backup generators at Interchanges 3,5,11 & 16E.
NEW	Replacement of Concrete Abutments at Interchanges 3 & 4 (15 lanes)	Continue program established in 2016 to replace aging concrete abutments at Toll Plazas to enhance safety.
NEW	Hybrid Changeable Message Sign Replacement Project	Joint effort with Operations and Engineering to begin replacing the legacy Changeable Message Signs on the Turnpike. This procurement includes hardware, software, and services.
NEW	Interchange Improvements	Construction of Improvements resulting from the Interchange 129, 136 & 139 studies.

**Supplemental Capital Fund – Continued**

NEW	Concrete Barrier Repairs	Provide dedicated funding for design, plan preparation, supervision & inspection of construction for this necessary roadside safety feature.
NEW	Toll Facility Repairs & Improvements	Provide dedicated funding for design, plan preparation, supervision & inspection of construction for any Authority Toll Facility.
NEW	Escrow Deposit for HQ purchase	Required Escrow Deposit for the purchase of 1 Turnpike Plaza
NEW	Coin Machine Replacement - GSP	Replacement of all coin machines on the Garden State Parkway.
NEW	Road Weather Information Systems (RWIS)	Joint effort with Operations to install Weather Stations across both roadways. This procurement includes hardware, software, and services.
NEW	Production Toll Lane System Refresh	This is a multiyear project in which ITS will begin to replace all components which have successfully been tested thought the years as part of the ETC Field Improvements and High Speed Lane Support projects. The current toll collection components are approximately 20 years old. Funding for this project will replace equipment in High Speed, Manual, Standard, and Automatic lanes. Components in these lanes include, but are not limited to, lane controllers, Automatic Vehicle Classification (AVC), Automatic Vehicle Identification (AVI), Violation Enforcement System (VES), Lane Electronic Cabinet (LEC), Zone Controller Patron Fare Display (PFD), Manual Lane Toll Terminals (MLT), and Zone Controllers, etc. These components have been tested in the last year, now ITS will begin to systematically replace components in the lane. This procurement includes hardware, software, and services.
NEW	Major Replacement & Reconstruction of Roadway Lighting	Funding for design and construction resources for scheduled major reconstruction, repairs and improvements of the roadway lighting systems on the New Jersey Turnpike and Garden State Parkway with costs greater than \$50,000.00.
NEW	Gate Repair and Replacement	Continue the design and preparation of construction documents for the New Jersey Turnpike Interchange 11 pilot site for new railroad style ramp gates.

**Figure 108: Supplemental Capital Fund Project Descriptions**



## Construction Fund

### Capital Improvement Program

The New Jersey Turnpike Authority's 10 year, \$7 billion CIP was adopted in October 2008. The program includes projects focused on capacity, state of good repair, safety and security. These projects are separated into the following categories: Turnpike Interchanges 6 to 9 Widening, Bridge Construction, Preservation and Security, Roadway Improvements, Interchange Improvements, Facilities Improvements, and Widening of the Garden State Parkway (Mileposts 35 to 80). To date, the Authority has issued \$6.75 billion of the Turnpike revenue Bonds to fund the \$7 billion CIP. Approximately \$1.4 billion of additional bonds are expected to be issued through 2018.

A summary of the projects in the \$7 billion CIP is shown below:

<u>Tier I Project Groups</u>	<u>Current Budget</u>	<u>Project Amount Spent or Committed Through 10/31/16</u>	<u>Percentage of Budget</u>
Turnpike Interchange 6-9 Widening	\$ 2,231,399,000	\$ 2,135,278,000	95.7%
Bridge Construction, Preservation & Security	1,682,762,000	1,388,663,000	82.5%
Roadway Improvements	816,783,000	794,352,000	97.3%
Interchange Improvements	1,026,431,000	937,093,000	91.3%
Facilities Improvements	652,625,000	614,766,000	94.2%
Parkway Mileposts 35-80 Widening*	590,000,000	556,955,000	94.4%
	<b>\$ 7,000,000,000</b>	<b>\$ 6,427,107,000</b>	<b>91.8%</b>

\* The total Parkway Mileposts 35-80 Widening cost is \$690,000,000, but \$100,000,000 was financed with Bond Anticipation Notes proceeds prior to the first series of bonds being issued for the CIP.

**Figure 109: Capital Improvement Program Projects Summary**

	<b>Construction Fund Balance</b>				
	<b>2015 Actual</b>	<b>2016 Est. / Actuals</b>	<b>2017 Budget</b>	<b>2016 to 2017 \$ Change</b>	<b>2016 to 2017 % Change</b>
Beginning Cash and Investments	\$ 904,705,572	\$ 915,321,032	\$ 312,624,932	\$ (602,696,100)	
Bond Proceeds	750,000,000	-	1,025,000,000	1,025,000,000	
Interest Income	2,290,324	2,500,000	2,000,000	(500,000)	
Spending	(741,674,864)	(605,196,100)	(654,196,100)	(49,000,000)	
Ending Available Cash and Investments*	\$ 915,321,032	\$ 312,624,932	\$ 685,428,832	\$ 372,803,900	119.2%

\*Does not agree to fund balance in financial statement as this chart excludes capitalized assets.

**Figure 110: Construction Fund Balance (2015-2017)**

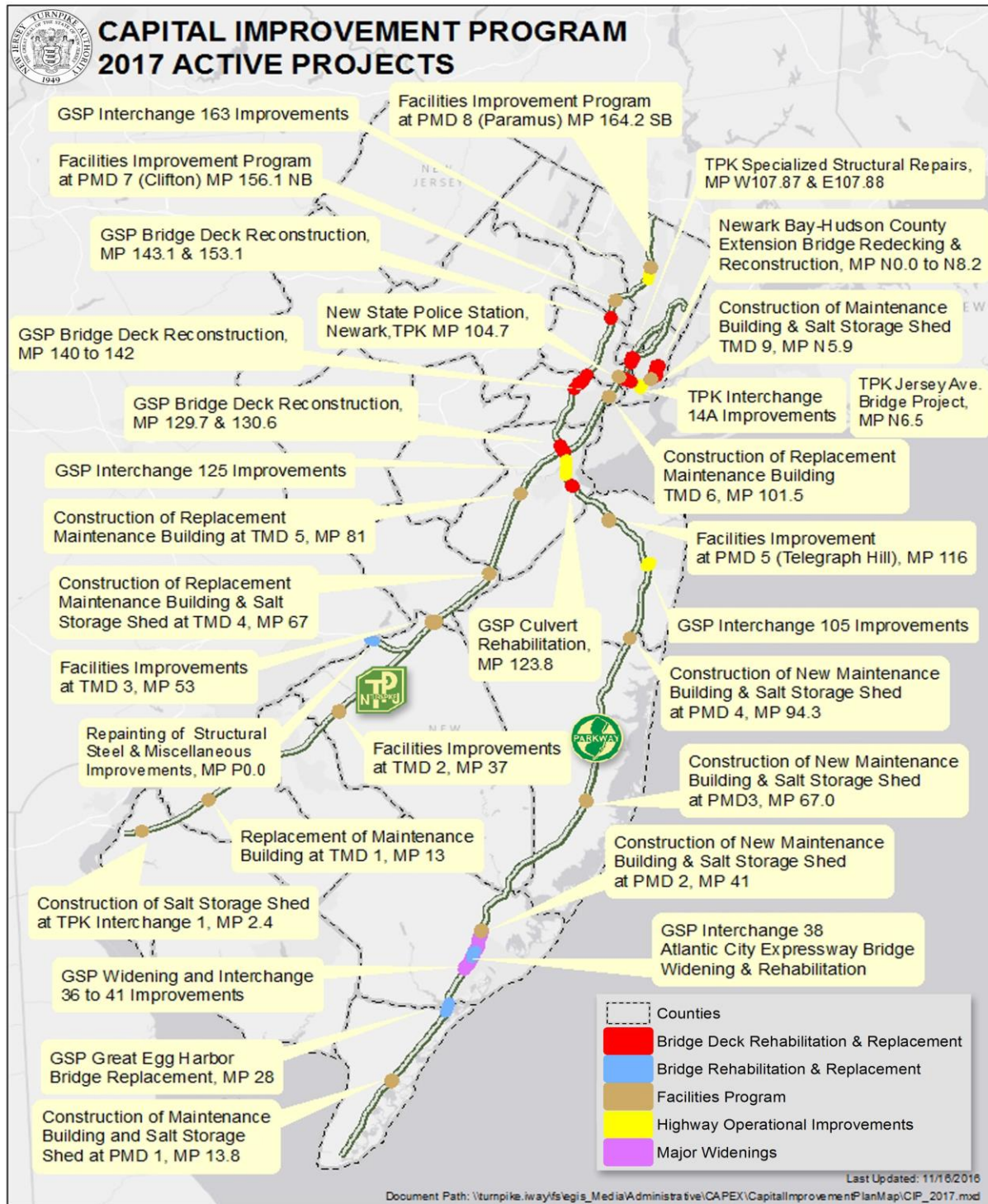


Figure 111: Map of Capital Improvement Program Active Projects

Funding for the 10-year CIP began with the issuance of \$160 million of Series 2008A Subordinate Bond Anticipation Notes. In April 2009, the Authority issued \$1.75 billion of Turnpike Revenue Bonds, which included \$1.375 billion of Federally Taxable, Issuer Subsidy, Build America Bonds, which were authorized under the American Recovery and Reinvestment Act of 2009. The Authority was one of the first issuers in the country to take advantage of this financing option. Financing of the program has continued, at an average net interest cost below 5%.

**The \$7 billion CIP includes the following projects:****New Jersey Turnpike****1. Interchanges 6 to 9 Widening**

- a. **Location:** Burlington, Mercer, and Middlesex counties
- b. **Description:** Some 170 new lane miles of roadway will be added to this chronically congested stretch of the Turnpike. Three additional lanes will be added in each direction between Interchanges 6 and 8A, and one additional lane will be added in each direction between Interchanges 8A and 9. A new toll plaza will be built at Interchange 8.
- c. **Schedule:** Construction began in June 2009 and was completed and opened to traffic in November 2014. The new Interchange 8 was completed in February 2013.
- d. **Impact on the Operating Budget:** Improved safety and increased roadway capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel time thereby making the interchange a more viable alternative to motorists.

**2. Interchange 9 Improvements**

- a. **Location:** Middlesex County
- b. **Description:** Interchange 9 will be improved to better accommodate existing and future projected traffic volumes utilizing the interchange and along Route 18. The ramp from Route 18 southbound to the Turnpike will be widened to two lanes and Route 18 will be shifted to the east to minimize impacts to the adjacent residential neighborhood. The merge of Route 18 northbound traffic with vehicles exiting from the Turnpike will also be modified to improve traffic flow.
- c. **Schedule:** Construction began in 2012 and is scheduled to be completed in early 2017.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

**3. Interchange 10 Improvements**

- a. **Location:** Middlesex County
- b. **Description:** Ramp improvements will be undertaken to accommodate existing and future projected traffic volumes utilizing the interchange. The ramp carrying traffic from the toll plaza to the southbound Turnpike will be widened to two lanes and other ramps will be realigned to minimize traffic weaving and improve traffic flow.
- c. **Schedule:** Construction began in 2013 and is scheduled to be completed in early 2017.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

**4. Easterly Hackensack River Bridge Deck Reconstruction**

- a. **Location:** Essex and Hudson Counties
- b. **Description:** Deck reconstruction, miscellaneous steel and roadway improvements, and repainting structural steel completed in Contract No. T100.137
- c. **Schedule:** Contract No. T100.137 began mid-2011 is now complete.
- d. **Impact on Operating Budget:** Reduced short term maintenance costs.

**5. Newark Bay-Hudson County Extension Bridge Deck Reconstruction, Between Interchanges 14 and 14A**

- a. **Location:** Essex and Hudson counties.
- b. **Description:** The major bridge crossing deck is being replaced in multiple phases between Interchanges 14 and 14A.

- c. **Schedule:** Construction on the first phase began in 2010 and is now complete. Construction on the second phase, Contract No. T100.381, began in mid-2016 and will be completed in 2018. The next Contract No. T100.184 is scheduled to begin in late 2017 and will be completed by 2020.
- d. **Impact on the Operating Budget:** Will reduce short term maintenance costs.

#### 6. Newark Bay-Hudson County Extension Bridge Deck Reconstruction, Between Interchange 14C and Jersey Avenue

- a. **Location:** Hudson County
- b. **Description:** The bridge deck is being replaced from the intersection of 14th Street and Jersey Avenue in Jersey City to Interchange 14C. The scope of work involves reconstruction, superstructure strengthening and structural steel repainting of the six viaduct and ramp structures located within the project limits and will be completed in multiple phases. The westbound roadway work is included under Contract No. T100.125. Contract No. T100.321 includes eastbound roadway work at three bridges. Work at the remaining bridges will be completed in a future contract.
- c. **Schedule:** Contract No. T100.125 construction started in 2012 and will be completed in 2016. Contract No. T100.321 construction will start in late 2017 and is scheduled to be completed in 2020.
- d. **Impact on the Operating Budget:** Will reduce short term maintenance costs.

#### 7. Interchange 14A Improvements

- a. **Location:** Hudson County
- b. **Description:** The interchange will be reconfigured to accommodate existing traffic volumes and the future growth in traffic volume resulting from the expansion of an adjacent port facility and a large residential/commercial development.
- c. **Schedule:** Construction began in early 2015 and is scheduled to be completed in 2018.
- d. **Impact on Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 8. Interchange 15W Improvements

- a. **Location:** Hudson County
- b. **Description:** Minor ramp realignments and signing improvements will be undertaken to improve traffic flow and reduce the potential for truck overturns.
- c. **Schedule:** Construction began in April 2015 and was completed in September 2016.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 9. Interchange 16W Improvements

- a. **Location:** Bergen County
- b. **Description:** The interchange ramps will be modified to improve traffic operations and safety. The improvements will include widening the ramp from the toll plaza to the southbound Turnpike to provide for two acceleration lanes and signing improvements to address truck overturns.
- c. **Schedule:** Construction began in April 2015 and was completed in September 2016.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### Garden State Parkway

##### 1. Interchanges 9, 10, and 11 Improvements

- a. **Location:** Cape May County

- b. **Description:** The Garden State Parkway connects to local roads at these at-grade, signalized interchanges. This project will create true grade-separated intersections. Bridges will carry the Parkway over the local streets. Access to the Parkway northbound and southbound will be available at all three interchanges. The project will eliminate a traffic hazard and reduce congestion.
  - c. **Schedule:** Construction began in 2013 and was completed in July 2016.
  - d. **Impact on the Operating Budget:** Improved interchange safety increased capacity and decreased travel times thereby making the Parkway a more viable alternative to motorists.
- 2. Great Egg Harbor Bridge Improvements**
- a. **Location:** Atlantic and Cape May counties
  - b. **Description:** As part of the first contract a new southbound span will be built to the west of the existing southbound span over Great Egg Harbor and Drag Channel. The nearby Beasley's Point Bridge on Route 9 will also be demolished as part of this contract. The second contract will demolish the existing southbound span and rehabilitate the existing northbound structure.
  - c. **Schedule:** Construction of the first contract began in 2013 and is scheduled to be completed in late 2016. Construction of the second contract started in 2016 and is scheduled to be completed in 2019.
  - d. **Impact on the Operating Budget:** Improved safety, increased capacity, reduced short term maintenance costs, and decreased travel times thereby making the Parkway a more viable alternative to motorists.
- 3. Bass River Bridge Widening**
- a. **Location:** Burlington County
  - b. **Description:** A new span will be built alongside the existing span, and the existing span will be redecked, repaired, and upgraded. The project is part of the second phase of the MP 30-80 Widening Project.
  - c. **Schedule:** Construction of the new span was completed in 2013. Rehabilitation of the existing span was completed in 2015.
  - d. **Impact on the Operating Budget:** Improved safety, increased capacity, reduced short term maintenance costs, and decreased travel times thereby making the Parkway a more viable alternative to motorists.
- 4. Bridge Deck Reconstruction**
- a. **Location:** Monmouth, Middlesex, union, Passaic and Bergen Counties
  - b. **Description:** Replacement of non-major bridge deck and superstructures on the Parkway. Two on-going Contract Nos. P100.233 and P100.297.
  - c. **Schedule:** Contract No. P100.233 began early in 2015 and is scheduled to be completed by late 2017. Contract No. P100.297 began in early 2015 and is scheduled to be completed by late 2018.
  - d. **Impact on Operating Budget:** Reduced short term maintenance costs.
- 5. Milepost 35 to 80 Widening**
- a. **Location:** Atlantic, Burlington, and Ocean counties
  - b. **Description:** The Parkway will be widened from two to three lanes in each direction. *Express E-ZPass* will be added at the Barnegat Toll Plaza.
  - c. **Schedule:** The project is being built in phases. Construction on the first phase of the widening (adding a lane in each direction between Mileposts 63 and 80 and installing *Express E-ZPass* at the Barnegat Toll Plaza) was completed in May 2011. Construction on the second phase (adding one travel lane in each direction from Mileposts 48 to 63 and making grading and drainage improvements from mileposts 30 to 48) was completed and opened to traffic from Mileposts 52 to

63 in the summer of 2013. The remainder of the second phase was opened to traffic in May 2015. Construction on the third phase of the Widening (Mileposts 35 to 48) began in 2014. New lanes from Mileposts 48 to 42 were opened in both directions in June 2016. The remaining section is scheduled to be completed in 2018.

- d. **Impact on the Operating Budget:** Improved safety and increased roadway capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the Parkway a more viable alternative to motorists.

#### 6. Interchanges 36, 37 and 38 Improvements

- a. **Location:** Atlantic County
- b. **Description:** This project will improve traffic operations at these closely spaced interchanges by adding a deceleration lane on the southbound Parkway and an acceleration lane on Tilton Road at Interchange 36 and by separating the traffic entering the Parkway at Interchange 38 (Atlantic City Expressway) from traffic exiting the Parkway at Interchange 37 (Washington Avenue CR 608).
- c. **Schedule:** Construction began in late 2014 and will continue until 2018 as part of the third phase on the widening of the Garden State Parkway. The new ramp from the Atlantic City Expressway eastbound to the Parkway southbound was opened in May 2016 removing the weave that existed with Parkway traffic exiting at Interchange 37.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 7. Interchange 41 Improvements

- a. **Location:** Atlantic County
- b. **Description:** This interchange will provide northbound and southbound access to and from Jimmie Leeds Road.
- c. **Schedule:** Construction began in July 2013 and was completed in 2015.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 8. Interchange 44 Improvements

- a. **Location:** Atlantic County
- b. **Description:** The project will add two non-tolled ramps to provide access to the Parkway to and from the south. Access is now available only to and from the north.
- c. **Schedule:** Construction began in July 2013 and was completed in 2015.
- d. **Impact on the Operating Budget:** Improved interchange safety, increased interchange capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 9. Interchanges 83 to 100 Shoulder Installation

- a. **Location:** Ocean and Monmouth counties
- b. **Description:** The project will restore full-width shoulders on the Parkway and improve roadway geometry to meet current design speed standards. This section of road currently had a reduced speed limit because of safety concerns.
- c. **Schedule:** Construction began in the fall of 2012 and was completed in 2015.
- d. **Impact on the Operating Budget:** Improved safety and increased roadway capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the Parkway a more viable alternative to motorists.

**10. Interchange 88/89 Improvements**

- a. **Location:** Ocean County
- b. **Description:** A joint effort between the Authority, NJDOT and Ocean County, this project will provide ramp movements currently missing at the interchange, reconstruction and safety improvements to the existing northbound ramp toll plaza, construction of two extended service roads, and improvements to nearby county roads to simplify the traffic flow pattern and relieve congestion on local roads.
- c. **Schedule:** Construction was completed in 2015.
- d. **Impact on the Operating Budget:** Improved safety and increased interchange capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the interchange a more viable alternative to motorists.

**11. Interchange 91 Improvements**

- a. **Location:** Ocean County
- b. **Description:** A joint effort between the Authority and Ocean County, this project will provide ramp movements currently missing at the interchange, along with modifications to existing movements to and from the north.
- c. **Schedule:** Construction began in late 2014 and was suspended due to the Transportation Trust Fund shutdown. Ocean County will resume work in 2017. The completion date is not known at this time.
- d. **Impact on the Operating Budget:** Improved safety and increased interchange capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the interchange a more viable alternative to motorists.

**12. Interchange 105 Improvements**

- a. **Location:** Monmouth County
- b. **Description:** This project is intended to improve access to and from the Parkway at Interchange 105 as well as safety and operations at the Hope Road/NJ Route 36 intersection. The improvements include a new southbound connection from the Parkway outer roadway to Wayside Road, the addition of a second northbound deceleration lane from the Parkway outer roadway to Interchange 105 and the reconstruction of the Hope Road/NJ Route 36 intersection.
- c. **Schedule:** The Hope Road/NJ Route 36 portion of the project was completed in 2015. Construction on the Wayside Road portion began in 2015 and is expected to be completed in 2018.
- d. **Impact on the Operating Budget:** Improved safety and increased interchange capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the interchange a more viable alternative to motorists.

**13. Interchange 109 Improvements**

- a. **Location:** Monmouth County
- b. **Description:** This project will improve operations and safety by reducing traffic queues on the Parkway and local streets at Interchange 109. The improvements include a new flyover bridge for Newman Springs Road traffic destined for the Parkway northbound. Intersection and traffic signal improvements along the Newman Springs Road corridor within vicinity of Interchange 109 are also included to mitigate operational and safety concerns on the Parkway Mainline Local roadways.



- c. **Schedule:** Design began in 2014 and is scheduled for completion in late 2016. Construction is anticipated to begin in 2017 and conclude in 2019.
- d. **Impact on Operational Budget:** Improved safety and increased interchange capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 14. Interchange 125

- a. **Location:** Middlesex County
- b. **Description:** The interchange will be reconfigured to accommodate existing traffic volumes and the future growth resulting from the development of the waterfront. New ramps from the Parkway southbound and to the Parkway northbound will provide full access to Chevalier Avenue and the waterfront development. Replacing the Parkway bridges will eliminate the height restrictions on the Chevalier Avenue.
- c. **Schedule:** Construction is expected to begin in May 2016 and be completed in December 2019.
- d. **Impact on the Operating Budget:** Improved safety, new tolls facility and increased interchange capacity which will generate additional revenue, updated bridge inventory which will reduce short term structural repair costs, and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### 15. Interchange 163 Improvements

- a. **Location:** Bergen County
- b. **Description:** In order to improve traffic operations, this project will relocate the exits onto Route 17 from the left side of the road to the right side of the road by realigning the Parkway into the existing median in the vicinity of Interchange 163.
- c. **Schedule:** Construction began in 2014 and is scheduled to be completed in mid-2017. The mainline was shifted over to its new alignment in June 2016. Now all exits at this Interchange are on the right side.
- d. **Impact on the Operating Budget:** Improved safety, increased capacity and decreased travel times thereby making the interchange a more viable alternative to motorists.

#### Authority Project Impacting Both Roadways

##### 1. Facilities Improvement Program – Phase 1

- a. **Location:** Gloucester, Burlington, Mercer, Middlesex, Hudson, Essex, Bergen, Cape May, Atlantic, Ocean, Monmouth and Passaic Counties
- b. **Description:** Construction of new and renovation of existing Maintenance multi-use buildings, salt sheds, and storage buildings at twenty sites along both roadways. In addition, vehicle wash facilities will be constructed at six of the Maintenance Districts to comply with the latest NJDEP guidelines.
- c. **Schedule:** Construction has proceeded sequentially since January 2013, and should be complete by December 2018.
- d. **Impact on the Operating Budget:** Upgraded Maintenance Department facilities will allow more efficient use of labor and equipment for the overall length of both roadways.



Individual projects within the \$7 Billion CIP along with budget status is shown below:

Project	Current Budget	Total Expended or Committed	Future Anticipated Additional Expenses	% Spent & Committed
<b><u>Turnpike Interchange 6-9 Widening</u></b>				
Turnpike Int 6-9 Widening	2,231,399,000	2,135,278,000	96,121,000	96%
<b>Total Turnpike Widening</b>	<b>\$ 2,231,399,000</b>	<b>\$ 2,135,278,000</b>	<b>\$ 96,121,000</b>	<b>96%</b>
<b><u>Bridge Construction, Preservation &amp; Security</u></b>				
Bridge Painting Phase I	110,000,000	104,828,000	5,172,000	95%
Deck Reconstruction Phase I	208,000,000	205,440,000	2,560,000	99%
Bridge Preservation & Security	136,820,000	115,537,000	21,283,000	84%
Deck Reconstruction Phase II	141,300,000	129,067,000	12,233,000	91%
Bridge Painting Phase II	100,000,000	62,100,000	37,900,000	62%
Int 16E-18E Bridge Improvement	15,147,000	15,147,000	-	100%
TP Hackensack East Bridge Rehab	153,000,000	136,001,000	16,999,000	89%
NBHCE Bridge Redecking	400,000,000	218,463,000	181,537,000	55%
TP Special Bridge Structure	15,000,000	8,775,000	6,225,000	59%
Tremley Point Connector Road	-	-	-	0%
Parkway Bass River Bridge	79,315,000	78,857,000	458,000	99%
Pky Mullica River Bridge	50,000,000	49,410,000	590,000	99%
Parkway Substructure Repairs	36,000,000	33,325,000	2,675,000	93%
Great Egg Harbor/Drag Channel	238,180,000	231,713,000	6,467,000	97%
<b>Total Bridge Improvements</b>	<b>\$ 1,682,762,000</b>	<b>\$ 1,388,663,000</b>	<b>\$ 294,099,000</b>	<b>83%</b>
<b><u>Roadway Improvements</u></b>				
Drainage Improvements	67,335,000	58,628,000	8,707,000	87%
Imp Roadway Appurtenances	47,000,000	42,219,000	4,781,000	90%
Median Barrier Improvements	50,255,000	48,064,000	2,191,000	96%
Sign Replacements Phase I	146,690,000	145,753,000	937,000	99%
Sign Replacements Phase II	124,100,000	121,883,000	2,217,000	98%
Turnpike/Parkway So Improve	17,250,000	15,845,000	1,405,000	92%
Parkway Mainline Shoulder Imp	364,153,000	361,960,000	2,193,000	99%
<b>Total Roadway Improvements</b>	<b>\$ 816,783,000</b>	<b>\$ 794,352,000</b>	<b>\$ 22,431,000</b>	<b>97%</b>
<b><u>Interchange Improvements</u></b>				
Facilities Improvements Phase II	314,080,000	296,401,000	17,679,000	94%
TP Int 8A to Rte 130 Connect	14,950,000	6,980,000	7,970,000	47%
TPK Int 14A Reconstruction	325,500,000	280,115,000	45,385,000	86%
Pky I/C 41 Improvements	24,000,000	23,497,000	503,000	98%
Pky I/C 142 Improvements	1,725,000	667,000	1,058,000	39%
Parkway Int 44 Improvements	30,000,000	28,907,000	1,093,000	96%
Parkway Int 9, 10 & 11 Improve	98,651,000	90,371,000	8,280,000	92%
Parkway Int 125 Phase I	102,665,000	100,753,000	1,912,000	98%
GSP I/C 88 Improvements	102,860,000	98,091,000	4,769,000	95%
Parkway Int 91 Improvements	12,000,000	11,311,000	689,000	94%
<b>Total Interchange Improvements</b>	<b>\$ 1,026,431,000</b>	<b>\$ 937,093,000</b>	<b>\$ 89,338,000</b>	<b>91%</b>
<b><u>Facilities Improvements</u></b>				
Salt Storage Facilities	17,725,000	17,643,000	82,000	100%
Facilities Improvements Phase I	634,900,000	597,123,000	37,777,000	94%
<b>Total Facilities Improvements</b>	<b>\$ 652,625,000</b>	<b>\$ 614,766,000</b>	<b>\$ 37,859,000</b>	<b>94%</b>
<b><u>Widening of Garden State Parkway</u></b>				
Parkway Widening Phase Int 63-80	135,000,000	129,490,000	5,510,000	96%
Parkway Widening Phase Int 35 -63	455,000,000	427,465,000	27,535,000	94%
<b>Total Parkway Widening</b>	<b>\$ 590,000,000</b>	<b>\$ 556,955,000</b>	<b>\$ 33,045,000</b>	<b>94%</b>
<b>10 Year CIP Total</b>	<b>\$ 7,000,000,000</b>	<b>\$ 6,427,107,000</b>	<b>\$ 572,893,000</b>	<b>92%</b>

Figure 112: Capital Improvement Program Projects

Individual projects within the \$7 Billion CIP with spending by year is shown below:

<u>Project Number</u>	<u>Project Name</u>	<u>LTD Expenses as of 12/31/2015</u>	<u>2016 Spending</u>	<u>2017 Spending</u>	<u>2018 Spending</u>	<u>Total CIP Spending</u>
<b>Turnpike Interchange 6-9 Widening</b>						
39018001	Turnpike Int 6-9 Widening	2,093,605,000	22,655,000	115,139,000	-	2,231,399,000
		<u>\$ 2,093,605,000</u>	<u>\$ 22,655,000</u>	<u>\$ 115,139,000</u>	<u>\$ -</u>	<u>\$ 2,231,399,000</u>
<b>Bridge Construction, Preservation &amp; Security</b>						
39001008	Bridge Painting Phase I	102,694,000	5,271,000	2,035,000	-	110,000,000
39001010	Deck Reconstruction Phase I	193,474,000	9,304,000	5,222,000	-	208,000,000
39001011	Bridge Preservation & Security	69,502,000	11,132,000	31,846,000	24,340,000	136,820,000
39001033	Deck Reconstruction Phase II	31,608,000	29,869,000	45,480,000	34,343,000	141,300,000
39001034	Bridge Painting Phase II	33,191,000	8,915,000	16,941,000	40,953,000	100,000,000
39011002	Int 16E-18E Bridge Improvement	15,147,000	-	-	-	15,147,000
39011012	TP Hackensack East Bridge Rehab	130,358,000	5,240,000	17,402,000	-	153,000,000
39011025	NBHCE Bridge Redecking	146,717,000	4,318,000	47,260,000	201,705,000	400,000,000
39011028	TP Special Bridge Structure	6,778,000	1,303,000	575,000	6,344,000	15,000,000
39021004	Parkway Bass River Bridge	76,083,000	3,232,000	-	-	79,315,000
39021015	Pky Mullica River Bridge	49,376,000	24,000	600,000	-	50,000,000
39021020	Parkway Substructure Repairs	32,983,000	1,385,000	1,632,000	-	36,000,000
39021036	Great Egg Harbor/Drag Channel	125,906,000	41,284,000	31,256,000	39,734,000	238,180,000
		<u>\$ 1,013,817,000</u>	<u>\$ 121,277,000</u>	<u>\$ 200,249,000</u>	<u>\$ 347,419,000</u>	<u>\$ 1,682,762,000</u>
<b>Roadway Improvements</b>						
39002003	Drainage Improvements	50,190,000	3,337,000	13,808,000	-	67,335,000
39002016	Imp Roadway Appurtenances	40,757,000	-	6,243,000	-	47,000,000
39002017	Median Barrier Improvements	47,984,000	-	2,271,000	-	50,255,000
39006014	Sign Replacements Phase I	93,600,000	44,459,000	8,631,000	-	146,690,000
39006019	Sign Replacements Phase II	116,773,000	2,501,000	-	4,826,000	124,100,000
39009036	Turnpike/Parkway So Improve	15,637,000	90,000	-	1,523,000	17,250,000
39018032	Turnpike Widening Int 16W to Int 18W	-	-	-	-	-
39022023	Parkway Mainline Shoulder Imp	329,719,000	15,220,000	512,000	18,702,000	364,153,000
		<u>\$ 694,660,000</u>	<u>\$ 65,607,000</u>	<u>\$ 31,465,000</u>	<u>\$ 25,051,000</u>	<u>\$ 816,783,000</u>
<b>Interchange Improvements</b>						
39003035	Facilities Improvements Phase II	191,764,000	66,462,000	55,854,000	-	314,080,000
39013005	TP Int 8A to Rte 130 Connect	5,869,000	-	8,981,000	100,000	14,950,000
39013027	TPK Int 14A Reconstruction	134,012,000	60,000,000	66,031,000	65,457,000	325,500,000
39023006	Pky I/C 41 Improvements	21,216,000	-	-	2,784,000	24,000,000
39023007	Pky I/C 142 Improvements	649,000	10,000	-	1,066,000	1,725,000
39023009	Parkway Int 44 Improvements	26,947,000	1,470,000	-	1,583,000	30,000,000
39023022	Parkway Int 9, 10 & 11 Improve	71,831,000	8,540,000	9,660,000	8,620,000	98,651,000
39023024	Parkway Int 125 Phase I	13,354,000	7,810,000	34,644,000	46,857,000	102,665,000
39023029	GSP I/C 88 Improvements	92,099,000	1,080,000	-	9,681,000	102,860,000
39023030	Parkway Int 91 Improvements	887,000	-	-	11,113,000	12,000,000
		<u>\$ 558,628,000</u>	<u>\$ 145,372,000</u>	<u>\$ 175,170,000</u>	<u>\$ 147,261,000</u>	<u>\$ 1,026,431,000</u>
<b>Facilities Improvements</b>						
39003040	Salt Storage Facilities	16,879,000	-	-	846,000	17,725,000
39005013	Facilities Improvements Phase I	221,670,000	193,000,000	90,000,000	130,230,000	634,900,000
		<u>\$ 238,549,000</u>	<u>\$ 193,000,000</u>	<u>\$ 90,000,000</u>	<u>\$ 131,076,000</u>	<u>\$ 652,625,000</u>
<b>Widening of Garden State Parkway</b>						
39028018	Parkway Widening Phase Int 63-80	126,380,000	280,000	-	8,340,000	135,000,000
39028031	Parkway Widening Phase Int 35 -63	304,525,000	57,006,000	42,123,000	51,346,000	455,000,000
		<u>\$ 430,905,000</u>	<u>\$ 57,286,000</u>	<u>\$ 42,123,000</u>	<u>\$ 59,686,000</u>	<u>\$ 590,000,000</u>
<b>GRAND TOTAL:</b>		<u><b>\$ 5,030,164,000</b></u>	<u><b>\$ 605,197,000</b></u>	<u><b>\$ 654,146,000</b></u>	<u><b>\$ 710,493,000</b></u>	<u><b>\$ 7,000,000,000</b></u>

Figure 113: Capital Improvement Program Project Spending By Year

## Debt

### Debt Limit

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 203 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 twenty-four (24) 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.

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”.

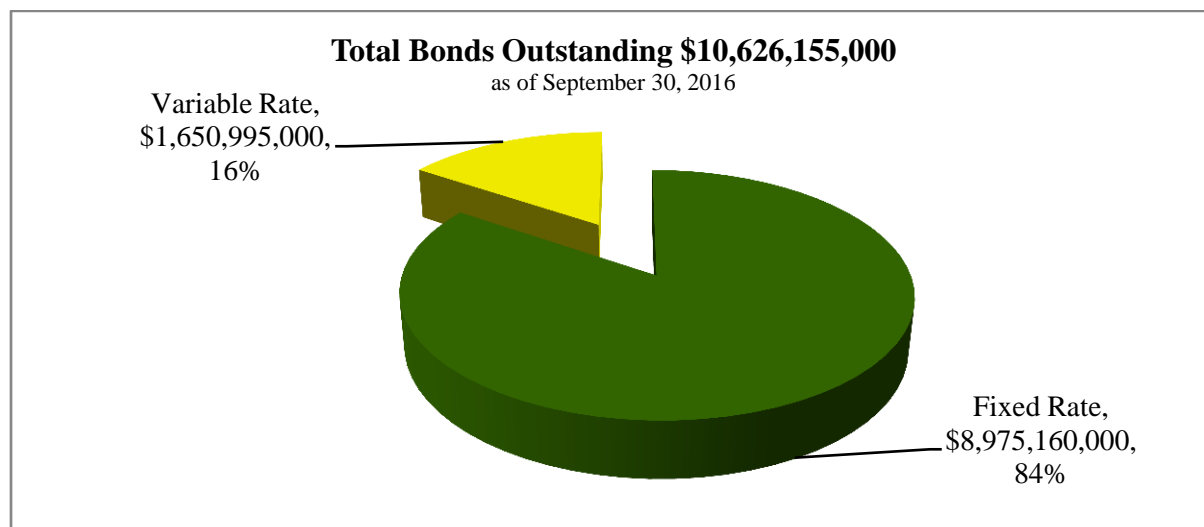


Figure 114: Total Outstanding Bond

**Bond Indebtedness**

Bond Series	Amount Outstanding September 30, 2016	Refunded or acquired and canceled in current year	Mandatory redemption / sinking fund installments	Projected Debt issuance	Amount outstanding December 31, 2017
Series 2000 B-G	\$ 400,000,000	-	-	-	\$ 400,000,000
Series 2004 C-2	132,850,000	-	-	-	132,850,000
Series 2005 A	173,650,000	-	-	-	173,650,000
Series 2005 B	32,500,000	-	-	-	32,500,000
Series 2005 D1-D4	208,735,000	-	-	-	208,735,000
Series 2009 E	300,000,000	-	-	-	300,000,000
Series 2009 F	1,375,000,000	-	-	-	1,375,000,000
Series 2009 G	34,770,000	-	(15,645,000)	-	19,125,000
Series 2009 H	306,170,000	-	-	-	306,170,000
Series 2009 I	178,005,000	-	-	-	178,005,000
Series 2010 A	1,850,000,000	-	-	-	1,850,000,000
Series 2012A	141,255,000	-	-	-	141,255,000
Series 2012B	804,435,000	-	-	-	804,435,000
Series 2013A	1,395,050,000	-	(5,095,000)	-	1,389,955,000
Series 2013B	100,000,000	-	(47,500,000)	-	52,500,000
Series 2013C	271,000,000	-	(129,500,000)	-	141,500,000
Series 2013D	152,650,000	(75,025,000)	-	-	77,625,000
Series 2013E	101,765,000	(50,015,000)	-	-	51,750,000
Series 2013F	90,880,000	-	-	-	90,880,000
Series 2014A	1,000,000,000	-	-	-	1,000,000,000
Series 2014B-2	50,000,000	(50,000,000)	-	-	-
Series 2014B-3	50,000,000	-	-	-	50,000,000
Series 2014C	201,860,000	-	-	-	201,860,000
Series 2015A	92,500,000	-	-	-	92,500,000
Series 2015B	50,000,000	-	-	-	50,000,000
Series 2015C	43,750,000	-	-	-	43,750,000
Series 2015D	43,750,000	-	-	-	43,750,000
Series 2015E	750,000,000	-	-	-	750,000,000
Series 2015F	72,350,000	-	-	-	72,350,000
Series 2015G	25,000,000	-	-	-	25,000,000
Series 2015H	48,235,000	-	-	-	48,235,000
Series 2016A	149,995,000	-	-	-	149,995,000
Series 2016B*	-	-	-	75,025,000	75,025,000
Series 2016C*	-	-	-	50,015,000	50,015,000
Series 2016D*	-	-	-	50,000,000	50,000,000
Series 2017A*	-	-	-	525,000,000	525,000,000
Series 2017B*	-	-	-	500,000,000	500,000,000
Premiums and discounts	665,175,286	-	-	-	665,175,286
	<b>\$ 11,291,330,286</b>	<b>(175,040,000)</b>	<b>\$ (197,740,000)</b>	<b>\$ 1,200,040,000</b>	<b>\$ 12,118,590,286</b>

**Figure 115: Bond Indebtedness**

## Aggregate Bond Debt Service Requirement

Fiscal Year Ending 12/31	Principal	Interest	Total Debt Service (1)
2016 <sup>(2)</sup>	\$ 197,740,000	\$ 576,668,262	\$ 774,408,262
2017 <sup>(2)</sup>	218,475,000	582,984,736	801,459,736
2018	199,685,000	569,809,360	769,494,360
2019	247,420,000	559,913,660	807,333,660
2020	274,375,000	548,387,771	822,762,771
2021	284,465,000	536,019,447	820,484,447
2022	327,375,000	523,833,078	851,208,078
2023	345,280,000	509,557,502	854,837,502
2024	353,150,000	494,189,752	847,339,752
2025	376,630,000	476,159,133	852,789,133
2026	301,635,000	457,747,323	759,382,323
2027	378,755,000	442,877,622	821,632,622
2028	320,475,000	424,164,235	744,639,235
2029	331,155,000	408,377,577	739,532,577
2030	339,970,000	392,520,750	732,490,750
2031	356,355,000	376,134,850	732,489,850
2032	374,070,000	358,317,100	732,387,100
2033	392,425,000	340,067,600	732,492,600
2034	482,133,000	320,508,000	802,641,000
2035	557,877,000	293,769,506	851,646,506
2036	593,174,000	258,414,565	851,588,565
2037	633,367,000	218,195,682	851,562,682
2038	676,339,000	175,197,230	851,536,230
2039	722,107,000	129,405,910	851,512,910
2040	771,033,000	80,448,490	851,481,490
2041	182,665,000	27,806,300	210,471,300
2042	191,525,000	18,951,750	210,476,750
2043	95,890,000	9,667,800	105,557,800
2044	100,610,000	4,950,000	105,560,000
2045	-	-	-
2046	-	-	-
	<u>\$ 10,626,155,000</u>	<u>\$ 10,115,044,992</u>	<u>\$ 20,741,199,992</u>

### Notes:

(1) Total Debt Service does not include debt service from the potential \$525 million 2017A and \$500 million 2017B new money issuance.

(2) Does not agree to the 2016 and 2017 Debt Service Fund Budget as the budget includes debt service on projected new money issuance in 2016 and 2017.

Figure 116: Aggregate Bond Debt Service Requirement

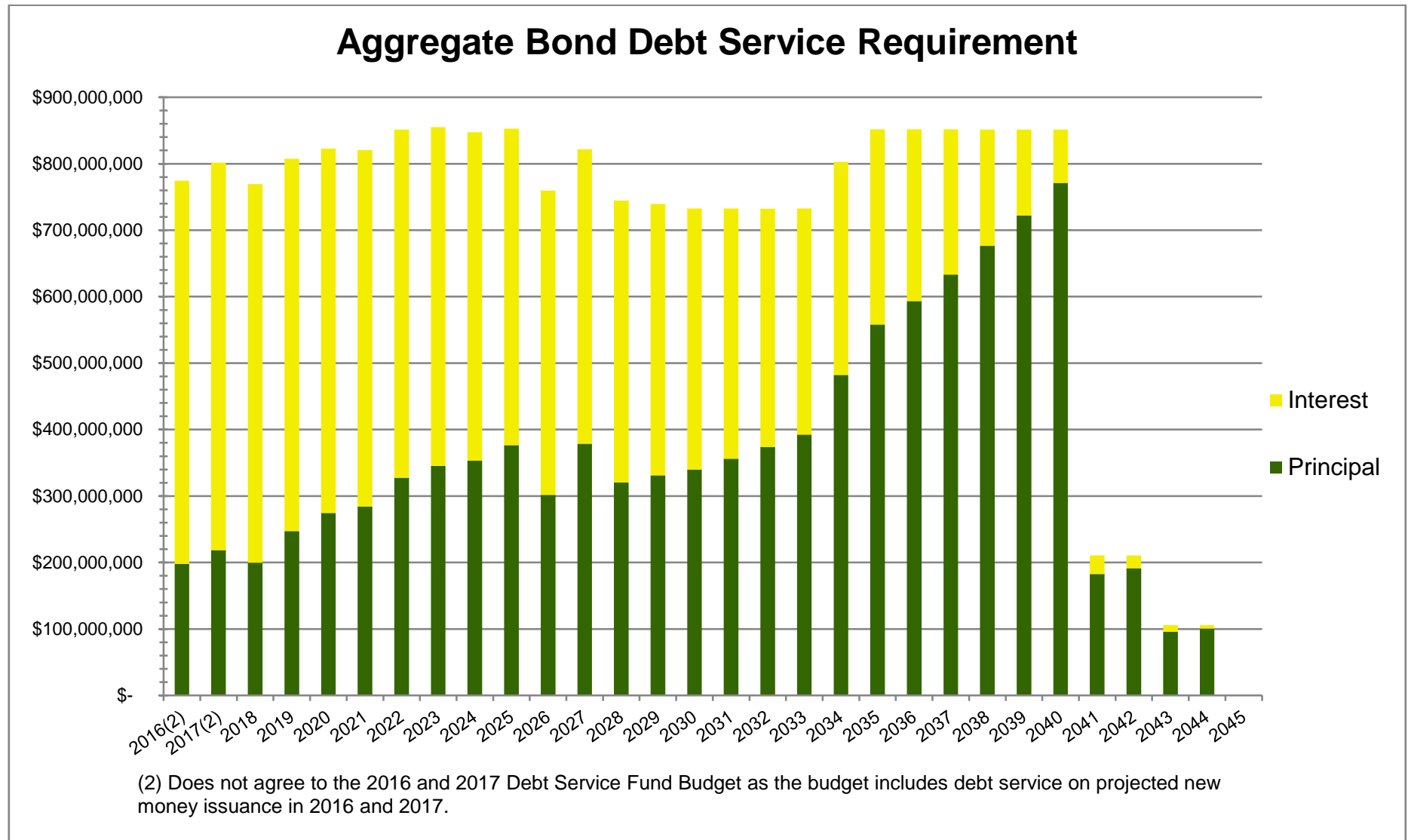


Figure 117: Aggregate Bond Debt Service Requirement Graph

## Debt Services Fund Budget

<b>Bond Series</b>	<b>2015 Actual</b>	<b>2016 Budget</b>	<b>2017 Budget</b>	<b>\$ Change from 2016 Budget</b>	<b>% Change from 2016 Budget</b>
1991 Series C	\$ 71,525,000	\$ -	\$ -	\$ -	-
2000 Series B-G (1)	13,774,000	17,248,000	17,248,000	-	-
2003 Series B	72,982,000	-	-	-	-
2004 Series B	8,685,000	8,685,000	-	(8,685,000)	-
2004 Series C-2	7,307,000	7,307,000	7,307,000	-	-
2005 Series A	9,117,000	9,117,000	9,117,000	-	-
2005 Series B	1,563,000	1,563,000	1,563,000	-	-
2005 Series D1-4	10,959,000	10,959,000	10,959,000	-	-
2009 Series A (1)(2)	203,000	-	-	-	-
2009 Series B	121,000	-	-	-	-
2009 Series E	15,750,000	15,750,000	15,750,000	-	-
2009 Series F	101,943,000	101,943,000	101,943,000	-	-
2009 Series G	1,739,000	17,384,000	20,081,000	2,697,000	-
2009 Series H	15,193,000	15,193,000	15,193,000	-	-
2009 Series I	8,900,000	8,900,000	8,900,000	-	-
2010 Series A	131,387,000	131,387,000	131,387,000	-	-
2012 Series A	6,894,000	6,894,000	6,894,000	-	-
2012 Series B	39,772,000	39,772,000	39,772,000	-	-
2012 Series G (1)(3)	1,252,000	-	-	-	-
2013 Series A	72,919,000	72,916,000	72,916,000	-	-
2013 Series B (1)(3)	6,180,000	53,665,000	55,737,000	2,072,000	-
2013 Series C (1)	16,631,000	146,133,000	150,215,000	4,082,000	-
2013 Series D 1-3 (1)	8,908,000	9,136,000	6,257,000	(2,879,000)	-
2013 Series E 1-3 (1)	5,621,000	6,091,000	4,171,000	(1,920,000)	-
2013 Series F	4,357,000	4,357,000	4,357,000	-	-
2013 Series G (1)(3)	1,253,000	-	-	-	-
2014 Series A (4)	-	29,741,000	48,890,000	19,149,000	-
2014 Series B 1-3 (1)	4,759,000	4,750,000	3,845,000	(905,000)	-
2014 Series C	10,082,000	10,093,000	10,093,000	-	-
2015 Series A (1)(2)	3,077,000	3,929,000	3,929,000	-	-
2015 Series B (1)	1,746,000	1,891,000	1,891,000	-	-
2015 Series C (1)(3)	494,000	1,728,000	1,728,000	-	-
2015 Series D (1)(3)	495,000	1,729,000	1,729,000	-	-
2015 Series E	5,765,000	36,413,000	36,413,000	-	-
2015 Series F (1)(3)	15,000	-	2,926,000	2,926,000	-
2015 Series G (1)(3)	5,000	-	988,000	988,000	-
2015 Series H (1)(3)	55,000	-	1,951,000	1,951,000	-
2016 Series A	-	-	7,312,000	7,312,000	-
2016-2017 New Money - A (5)	-	19,685,000	26,250,000	6,565,000	-
2017 New Money - B (5)	-	-	18,750,000	18,750,000	-
	<b>\$661,428,000</b>	<b>\$794,359,000</b>	<b>\$846,462,000</b>	<b>\$52,103,000</b>	<b>6.6%</b>

(1) Variable rate debt with an associated Interest Swap Agreement has interest included at the fixed swap rate.

(2) Interest on the \$5,000,000 unhedged portion is calculated at the maximum rate of 12%.

(3) Floating rate notes also include the fixed credit spread as interest expense.

(4) Funding includes capitalized interest from the date of the bond issuance through May 2016.

Therefore, there is no interest payable from Revenues in 2015 and the first four months of 2016.

(5) Assumed new money issuances in 2017 of up to \$1.025 billion to fund the \$7 billion capital program with interest at 5%. Up to \$525 million was assumed to be issued in 2016 but was not issued.

Figure 118: Debt Service Fund Budget

The Debt Service Fund Budget continues to increase as interest expense on bonds issued to fund the \$7 billion CIP become current pay interest bonds after varying terms of capitalized interest from bond proceeds end, and the Authority continues to issue new money bonds to fund the CIP. The 2017 budget assumes the issuance of up to \$1.025 billion of new money Turnpike Revenue Bonds to provide additional funds for the \$7 billion CIP at an interest rate of 5%.

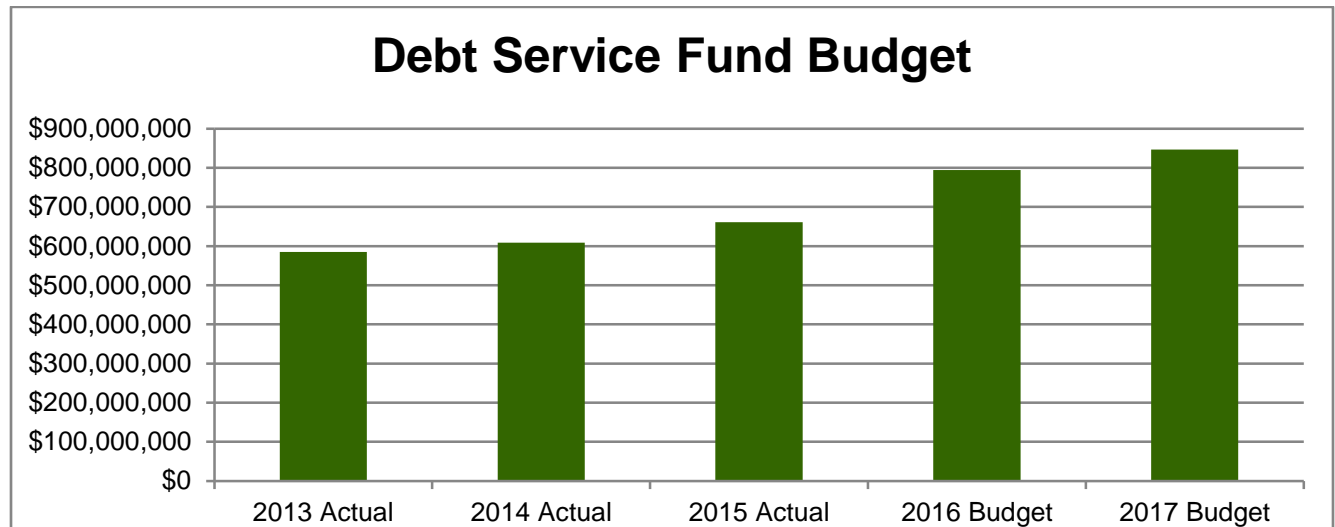


Figure 119: Debt Service Fund Budget Graph (2013-2017)

<b>Debt Service Fund Balance</b>					
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2016 to 2017</b>	<b>2016 to 2017</b>
	<b>Actual</b>	<b>Est. / Actuals</b>	<b>Budget</b>	<b>\$ Change</b>	<b>% Change</b>
Beginning Balance	\$ 164,205,000	\$ 142,115,000	\$ 197,740,000	\$ 55,625,000	
Interfund Transfers	661,426,000	773,128,000	846,460,000	73,332,000	
Interest Expense	(519,311,000)	(575,388,000)	(627,985,000)	(52,597,000)	
Principle Payments	(164,205,000)	(142,115,000)	(197,740,000)	(55,625,000)	
Ending Balance	\$ 142,115,000	\$ 197,740,000	\$ 218,475,000	\$ 20,735,000	10.5%

Figure 120: Debt Service Fund Balance (2015-2017)

### Debt Reserve Fund

No spending budget is required for the Debt Reserve Fund, as no draws on the Debt Reserve Fund are anticipated for 2017. The Authority does expect to issue up to \$1.025 billion of new money Turnpike Revenue Bonds in 2017 which would increase the debt reserve requirement. Any increase in the Debt Reserve requirement will be funded with bond proceeds.

<b>Debt Reserve Fund Balance</b>					
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2016 to 2017</b>	<b>2016 to 2017</b>
	<b>Actuals</b>	<b>Est. / Actuals</b>	<b>Budget</b>	<b>\$ Change</b>	<b>% Change</b>
Beginning Balance	\$ 561,307,000	\$ 588,911,000	\$ 588,911,000	\$ 27,604,000	
Interfund Transfers	27,604,000	-	38,100,000	(27,604,000)	
Ending Balance	\$ 588,911,000	\$ 588,911,000	\$ 627,011,000	-	0.0%

Figure 121: Debt Reserve Fund Balance (2015-2017)



### Charges Fund Budget

The Broker/Dealer fees on the Series 2000B-G Bonds were reduced due to the replacement of one broker/dealer and renegotiation of fees with the second broker/dealer. In addition, the Series 2009A-B Bonds were refunded in early 2015 eliminating the remarketing fees.

Bond Series	2015	2016	2017	\$ Change from 2016 Budget	% Change from 2016 Budget
	<u>Actual</u>	<u>Budget</u>	<u>Budget</u>		
2000B-G	\$ 534,000	\$ 155,000	\$ 155,000	\$ -	0%
2009A-B	47,000	-	-	-	0%
<b>Total Charges Fund</b>	<b>\$ 581,000</b>	<b>\$ 155,000</b>	<b>\$ 155,000</b>	<b>\$ -</b>	<b>0.0%</b>

Figure 122: Total Charges Fund Budget (2015-2017)

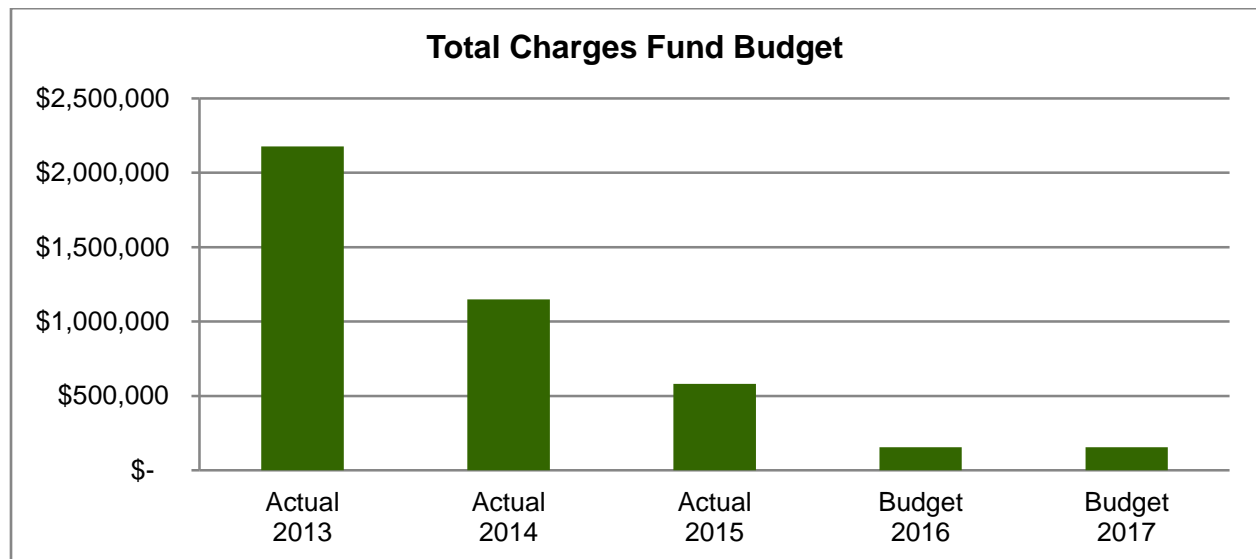


Figure 123: Total Charges Fund Budget Graph (2013-2017)

Charges Fund Balance					
	2015	2016	2017	2016 to 2017	2016 to 2017
	<u>Actual</u>	<u>Est. / Actuals</u>	<u>Budget</u>	<u>\$ Change</u>	<u>% Change</u>
Beginning Balance	\$ 129,000	\$ 83,000	\$ 83,000	\$ -	
Interfund Transfers	535,000	155,000	155,000	-	
Payments	(581,000)	(155,000)	(155,000)	-	
<b>Ending Balance</b>	<b>\$ 83,000</b>	<b>\$ 83,000</b>	<b>\$ 83,000</b>	<b>\$ -</b>	<b>0.0%</b>

Figure 124: Charges Fund Balance (2015-2017)

## Debt Management Policy

### I. INTRODUCTION

#### A. Purpose of Policy

This Debt Management Policy is intended to serve as a management tool to enable the New Jersey Turnpike Authority (the "Authority") to identify circumstances and transactions under which the Authority can issue and manage its bonds, notes and other obligations in the most efficient manner and provide for the full and timely repayment thereof. This policy is also intended to serve as guidance for management of the Authority with respect to:

- (i) the issuance and incurrence of Authority debt in appropriate amounts and types with the goals of achieving the lowest possible costs of capital within prudent risk parameters and ensuring ongoing access to the capital markets;
- (ii) compliance by the Authority with all provisions of the Act (as hereinafter defined) relating to bonds, notes or other obligations of the Authority, as well as all provisions of the Authority's Bond Resolution (as hereinafter defined);
- (iii) preservation of financial flexibility to maintain appropriate resources and funding capacity for present and future capital needs;
- (iv) management of interest rate risk exposure to promote the appropriate diversification within the debt portfolio to balance risk and liquidity and promote and maintain an acceptable balance between interest rate risk and the long-term cost of capital; and
- (v) securing of highly qualified professional services firms to assist with debt issuance in an open and competitive process.

#### B. The Authority

The Authority is a public body corporate and politic of the State of New Jersey created under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act").

#### C. Review

This Policy will be reviewed by the Authority no less than once every (2) two years and any changes to this Policy will be presented to and approved by the Authority's Board of Commissioners. This Policy will also be made available on the Authority's website (<http://www.state.nj.us/turnpike>).

#### D. Best Interests of the Authority

Although adherence to this policy is desirable, deviations from the policy may be appropriate at times to address: (i) changing financial goals; (ii) emerging financial products/debt structures; and/or (iii) unique market opportunities. Consequently, the general best interests of the Authority shall supersede any provision of the policy.

## II. TURNPIKE REVENUE BONDS

### A. Legal Authority

Pursuant to the Act, the Authority is authorized and empowered to issue and incur its bonds, notes and other obligations for the purposes and on the terms and conditions set forth in the Act. All currently issued and outstanding bonds of the Authority, and all future bonds, notes or other obligations of the Authority, have been or will be issued and incurred under and pursuant to, and/or in accordance with, the terms and provisions of the Act and a resolution of the Authority adopted on August 20, 1991 and entitled, "Turnpike Revenue Bond Resolution", as amended and restated on September 26, 1991, and as further amended and restated on November 22, 1991, as the same has been and will be further amended, restated and supplemented from time to time (the "Bond Resolution") (Capitalized terms used herein which are not otherwise defined shall have the meaning given to such terms in the Bond Resolution).

### B. Approvals of Governor and State Treasurer

Pursuant to Section 3(F) of the Act (N.J.S.A. 27:23-3(F)), no resolution or other action of the Authority providing for the issuance of bonds, refunding bonds or other obligations or the fixing, revising or adjusting of tolls for the use of the Turnpike System shall be adopted or otherwise made effective by the Authority without the prior written approval of the Governor and the State Treasurer. Section 3(F) of the Act further provides that the powers conferred upon the Governor and the State Treasurer pursuant to such Section shall be exercised with due regard of the rights of the holders of the Authority's bonds at any time outstanding and nothing in such Section shall in any way limit, restrict or alter the obligation or powers of the Authority to carry out and perform each and every covenant, agreement or contract at any time made or enter into by or on behalf of the Authority with respect to its bonds or for the benefit, protection and security of the holders thereof.

### C. Use of Debt Proceeds

As more fully described in this Policy, bonds, notes and other obligations will be issued by the Authority solely for the purposes of financing its essential capital activities or refunding outstanding debt. Debt will not be issued by the Authority to fund, in whole or in part, operation and maintenance costs of the Turnpike System or capital assets with average useful lives which are shorter than the average maturity of the associated debt. All bonds, notes and other obligations issued by the Authority will comply with the requirements of the Act and the Bond Resolution, as well as all other applicable federal and state laws, rules and regulations.

### D. Types of Debt

Under the Bond Resolution, the Authority is authorized to issue Turnpike Revenue Bonds payable from and secured by a lien on and pledge of the Pledged Revenues of the Turnpike System on a parity with all Bonds Outstanding under the Bond Resolution from time to time and the reimbursement and payment obligations under certain Credit Facilities and Qualified Swap (as such terms are defined in the Bond Resolution). Specific types of debt that can be issued are as follows:

(i) Long-Term Debt: Although the Statute and Bond Resolution allow debt to be issued up to forty (40) years, the Authority will limit its maturities to up to thirty (30) years from date of issuance to finance essential capital activities for the Turnpike System, including the acquisition, construction, and rehabilitation of major capital assets for and/or additions to the New Jersey Turnpike, the Garden State Parkway, and any other component of the Turnpike System.

(ii) Short-Term Debt: Short-term debt with maturities of two (2) years or shorter may be used to provide interim financing for the acquisition, construction, and rehabilitation of capital assets for and/or additions to the Turnpike System and/or to reduce or hedge interest rate costs. Short-term debt obligations may include bond anticipation notes and variable rate bonds or notes, as well as any other appropriate instrument(s).

(iii) Variable Rate Debt: In addition to fixed rate debt, the Authority may issue bonds/notes with a variable interest rate to: (i) diversify its debt portfolio; (ii) reduce interest costs; (iii) improve its match of assets to liabilities; and/or (iv) provide budgetary relief. Pursuant to and in accordance with the provisions of the Bond Resolution and its Interest Rate Swap Management Plan, the Authority may also enter Qualified Swap Agreements and/or Exchange Agreements to hedge its interest rate risk on variable rate debt where appropriate.

#### E. Purposes

The Authority may issue debt for either new money or refunding purposes.

(i) New Money: New money debt may be issued by the Authority to provide funding for essential capital activities as described in the Section entitled "Types of Debt" above.

(ii) Economic Refunding: The Authority may issue refunding debt to achieve debt service savings on its outstanding debt by redeeming outstanding debt with lower interest rate debt. The Authority may structure the savings from these refunding issues on a level, accelerated or deferred basis depending on the Authority's financing goals.

(iii) Non-Economic Refunding: In certain instances, it may be advantageous for the Authority to issue refunding debt that does not produce positive economic savings but serves to restructure existing debt or retire debt in order to remove undesirable debt covenants. Prior to issuing non-economic refunding debt, the Authority will evaluate the benefits (both intangible and tangible) of issuing such debt as well as the economic cost of such debt.

#### F. Debt Limit

The amount of bonds to be issued is limited by the following in the Bond Resolution:

(i) Additional Bonds Test - New Money Purposes: In accordance with Section 203 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 twenty-four (24) 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.

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.

(ii) 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 (i) 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 (ii) 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".

### G. State Non-Impairment Agreement

Pursuant to Section 7 of the Act (N.J.S.A. 27:23-7), the State of New Jersey has pledged and agreed with the holders of the Authority's bonds that it will not limit or restrict the rights vested in the Authority to acquire, maintain, construct, improve, manage, repair, reconstruct and operate the Turnpike System, or to establish and collect such charges and tolls as may be convenient or necessary to produce sufficient revenue to meet the expenses of maintenance and operation thereof and to fulfill the terms of any agreements made with the holders of the Authority's bonds or in any way impair the rights and remedies of the holders of such bonds until the bonds, together with interest thereon, are fully paid and discharged.

## III. DEBT STRUCTURING

### A. Maximum Term

The Authority will limit its maturities to a maximum of thirty (30) years from date of issuance. The average maturity of the Authority's bonds may not exceed the average remaining useful life of the assets being financed or the limitations set forth in the Act.

### B. Bond and Debt Service Structure

Turnpike Revenue Bonds can be structured using discount, par, or premium coupons or any combination, utilizing the coupon structure, which produces the lowest True Interest Cost (TIC), taking into consideration the call option value of any callable maturities. When comparing yields associated with callable premium bonds and callable discount bonds of the same maturity, the yield-to-maturity should be evaluated in addition to the yield-to-call date. The use of capital appreciation bonds or zero-coupon bonds should be used only when necessary to meet minimum Net Revenue Requirement targets or minimum General Reserve Fund target balances as specified in the Authority's Financial Management Principles and Guidelines, or if they produce the lowest TIC compared to other structures. The Authority will structure its new money debt maturities to achieve either an overall level debt service structure for its debt portfolio or a standalone level debt service structure. The determination of debt service structure will consider Net Revenue Requirement targeted levels and minimum General Reserve Fund balance target levels as specified in the Authority's Financial Management Principles and Guidelines, as well as the TIC for various debt service structures to achieve the optimum structure.

### C. Maturities

Bonds or notes may be serial bonds or notes, or term bonds or notes, or any combination thereof.

### D. Composition of Debt

The aggregate amount of the Authority's long-term variable rate debt should not exceed 20% of its outstanding long-term debt.

### E. Credit Enhancement

The Authority may secure credit and/or liquidity enhancement for all or a portion of each debt issuance, which may be in the form of municipal bond insurance, a letter/line of credit or a standby purchase arrangement. The Executive Director and the Chief Financial Officer shall make the final recommendation to use bond insurance for a particular debt issuance after taking into account such factors as the economic benefit of the enhancement, the Authority's available insurance capacity with the insurance community, and future secondary market trading conditions. The Authority will not secure credit enhancement through the final maturity date of a particular debt issuance unless it meets the minimum threshold of providing a net economic benefit to the transaction, assuming the debt remains outstanding until its final maturity date. With respect to bond insurance or any other form of credit enhancement which is paid for with an upfront premium, the Authority will analyze the economic benefit both to the final maturity date of the debt and to the first optional redemption date of the debt.

The Authority may also use a letter/line of credit and/or a standby purchase arrangement (collectively, a "Credit/Liquidity Facility") to provide credit and/or liquidity support for its debt. The Authority shall consider the following criteria when selecting the provider of a Credit/Liquidity Facility: (i) the long-term ratings of the provider, which shall be at least equal to or better than the Authority's long-term ratings; (ii) the short-term ratings of the provider, which shall be at least P-1/A-1; (iii) the legal and business terms and conditions of the agreement with the provider, which shall be acceptable to the Authority; (iv) a representative list of clients similar to the Authority for whom the provider has provided credit and/or liquidity support; (v) the costs to the Authority associated with the proposed Credit/Liquidity Facility, including the cost of the Credit/Liquidity Facility itself, the fees associated with any drawings on the Credit/Liquidity Facility, the fees and expenses of counsel to the provider and any other administrative costs associated with the Credit/Liquidity Facility, and (vi) the trading differential cost between the Authority's debt which is supported by the proposed Credit/Liquidity Facility and its unenhanced debt.

#### F. Capitalized Interest

Capitalized Interest may be used if needed for new money bonds but is limited to two (2) years.

#### G. Derivative Agreements

The Authority shall maintain an Interest Rate Swap Management Plan and the time to time use by the Authority of any Qualified Swap Agreements, Exchange Agreements, and other derivative agreements and instruments in connection with its debt shall comply with the terms of its Interest Rate Swap Management Plan as in effect. The Authority shall consult with its Bond Counsel and Financial/Swap Advisor in the event that the Authority is considering entering into any Qualified Swap Agreement, Exchange Agreement, and other derivative agreement or instrument in connection with any debt.

#### H. Call Provisions

Long-term fixed rate tax-exempt debt should generally be callable in ten (10) years. This provides flexibility to refund bonds if interest rates decline. An analysis should be performed to determine the economic benefit of utilizing call provisions shorter than ten (10) years.

#### I. Tax Status

The Authority may issue debt on a taxable or tax-exempt basis. The Authority has a preference for issuing debt on a tax-exempt basis to take advantage of the expected interest costs savings compared to issuing taxable debt.

### IV. DEBT ISSUANCE

#### A. Sale of Bonds

The Authority shall determine the method of sale of its bonds (competitive versus negotiated) by evaluating the benefits that are associated with each method of sale, in addition to examining financial and market conditions. Due to the size and complexity of the Authority's debt issues, bonds are normally sold on a negotiated basis. Underwriters shall be selected through a Request For Proposal (RFP) process and the Authority will encourage the participation of minority-owned and women-owned business enterprises, and will take into consideration an applicant's presence in New Jersey. The RFP process will be in compliance with the Authority's procurement policies and Executive Order 37 (Corzine). The Authority will use the services of a financial advisor and bond counsel, each of which will be selected through an RFP process.

In accordance with Article IX of the Bond Resolution, the Authority shall appoint a Trustee, Paying Agent, and Registrar for the new bond series. All Fiduciaries shall accept all responsibilities as outlined in Article IX of the Bond Resolution.

## B. Credit Ratings

The Authority shall have a ratings strategy that is guided by achieving the best economic results for the Authority, including attaining a proper balance between minimizing borrowing costs and maximizing financial flexibility for the Authority's debt program. The Authority shall strive to maintain or improve the credit ratings for its debt without adversely affecting the levels or types of debt that may be issued by the Authority to finance its essential capital activities, including the acquisition, construction and rehabilitation of major capital assets for and/or additions to the Turnpike System. The Authority recognizes and acknowledges, however, that as market conditions and financing needs change and evolve, so should the Authority's credit ratings strategy. The Authority may accept a lower credit rating or downgrade to its existing ratings (and thus incur a modest financing cost differential) in order to gain the flexibility needed to effect significant policy initiatives. The Authority will periodically review its credit rating strategy to assess whether market or capital plan developments warrant a revision in the Authority's approach to its ratings.

As of January 2014, the Authority is rated A3 by Moody's Investors Services, A+ by Standard and Poor's Ratings Services, and A by Fitch Ratings Inc. The Authority will receive ratings from at least two (2) of the four (4) nationally recognized credit rating agencies, which are currently Moody's Investors Services, Standard and Poor's Rating Services, Fitch Ratings Inc., and Kroll Bond Rating Agency. Selection of the ultimate number of ratings and credit rating agency will be based upon overall cost, service to the Authority, any investor requirements and the recommendation of the Authority's financial advisor.

The Authority will strive to communicate regularly and frequently with the credit rating agencies. To the extent possible and/or necessary, the Authority will forward periodic information to the credit rating agencies, arrange regular conference calls to update the rating analysts on any significant financial developments and communicate with the credit rating agencies prior to each Authority debt issuance. The Authority will also maintain periodic communication with its credit enhancement providers, updating them on financial developments as a means of facilitating future market participation with the credit enhancement community.

## C. Economic Refunding Criteria

When identifying potential refunding candidates for economic refunding, the Authority will generally seek a minimum per transaction present value savings threshold of three percent (3%). Notwithstanding the above, the 3% savings threshold shall not apply for debt with a call date between one (1) and three (3) years from their stated maturity, or for small principal maturities and bonds that produce significant negative arbitrage. In addition, for an advance refunding, the Authority will consider the refunding efficiency of potential bond refunding, considering the negative arbitrage, if any, on the refunding escrow and will seek a minimum refunding efficiency percentage of at least seventy percent (70%).

## V. DEBT MANAGEMENT

### A. Investment of Funds

The Authority shall invest all of its funds (including the proceeds received from the sale of its bonds, notes or other obligations), which are not immediately needed for the purposes of the Authority, in Investment Securities as provided in the Bond Resolution. The Authority shall invest all of its funds in a manner that allows such funds to be available when needed to be applied for their intended purposes. Investments are further governed by the terms of the Authority's Investment Policy.

## B. Compliance with Bond Resolution

The Bond Resolution, including specifically Article VII thereof, contains several covenants, requirements and other provisions which the Authority has agreed to comply with for the benefit, protection and security of the holders of its outstanding bonds issued from time to time under and pursuant to the Bond Resolution. The Authority shall at all times manage its debt portfolio and operate and manage the Turnpike System in a manner which results in the Authority being in compliance with all covenants, requirements, and other provisions of the Bond Resolution, including, without limitation, the Sections of the Bond Resolution more fully described below.

### (i) Tolls and Charges

Pursuant to Section 713 of the Bond Resolution, the Authority has covenanted to, at all times, fix, charge and collect such tolls for the use of the Turnpike System as shall be required in order that in each calendar year the Net Revenues shall at least equal the Net Revenue Requirement for such year. Section 713 of the Bond Resolution furthers provides that, on or before December 1 in each year, the Authority shall complete a review of its financial condition for the purpose of estimating whether the Net Revenues for such year and the next succeeding year will be sufficient to meet the Net Revenue Requirement and shall by resolution of its Board of Commissioners make a determination with respect thereto. The Authority shall file a copy of its determination with the Trustee under the Bond Resolution on or before December 20 of each year. If the Authority determines that the Net Revenues may not be sufficient to meet the Net Revenue Requirement, the Authority shall cause its Traffic Engineers to make a study for the purpose of recommending a new schedule of tolls which will cause the Authority to have sufficient Net Revenues to meet the Net Revenue Requirement, and, as promptly as practicable, but by no later than the following April 1, the Authority shall adopt and place into effect the schedule of tolls recommended by the Traffic Engineers.

### (ii) Annual Budget

Section 710 of the Bond Resolution contains certain covenants, agreements and provisions relating to the preparation, filing and adoption of the Authority's annual budget for each calendar year. The Authority shall at all times comply with the provisions of Section 710 in connection with the adoption of each annual budget.

### (iii) Sale, Lease or Disposal of Property

Section 708 of the Bond Resolution provides that no part of the Turnpike System shall be sold, mortgaged, leased or otherwise disposed of, except as permitted by such Section. Among other things, Section 708 permits the Authority to sell, lease or exchange any property or facilities constituting part of the Turnpike System and not useful or necessary in the operations thereof, but any proceeds of any such transaction not used to acquire other property necessary or desirable for the safe and efficient operation of the Turnpike System shall be deposited in the Revenue Fund or the General Reserve Fund as the Authority may determine. The Authority shall at all times comply with the provisions of Section 708 of the Bond Resolution.

### (iv) Consulting and Traffic Engineers

As required by Section 709 of the Bond Resolution, the Authority shall employ, at the times and in the manner set forth in Section 709, the services of separate, independently nationally recognized engineering firms or entities to perform the functions and duties of the Consulting Engineers and the Traffic Engineers, respectively, set forth in the Bond Resolution.



(v) Books, Accounts, Records and Reports

As required by Section 717 of the Bond Resolution, the Authority shall keep and maintain proper books of record and accounts in which complete and correct entries shall be made of all transactions relating to the Turnpike System and all Funds and Accounts established under the Bond Resolution. The Authority shall also prepare, or caused to be prepared, and file with the Trustee, the Consulting Engineers and, if applicable, the holders of any of the Authority's bonds, all financial and statistical reports, including its annual audited financial statements, required by the provisions of Section 717 at the times and in the manner required by the provisions of such Section. The Authority shall prepare and keep its books of record and accounts and its financial statements and reports in accordance with generally accepted accounting principles applicable to governmental entities in the United States of America. The Authority shall from time to time institute such controls as may be recommended by its independent auditor and other best practices deemed appropriate by its Chief Financial Officer.

(vi) Debt Service Reserve Requirement

In connection with the issuance of any bonds by the Authority, the Bond Resolution also requires that the Debt Reserve Fund created under the Bond Resolution must be funded to the Debt Reserve Requirement, which is the lesser of (i) the greatest amount of interest accruing on all outstanding bonds of the Authority any in calendar year, or (ii) the maximum amount permitted by the provisions of the Internal Revenue Code of 1986, as amended.

B. Compliance with Financial Management Principles and Guidelines

The Authority will comply with its Financial Management Principles and Guidelines as they pertain to the issuance, structure and management of debt.

C. Arbitrage and Rebate

The Authority will engage the services of an Arbitrage and Rebate Consultant to provide written reports to assist the Authority in monitoring yield on investments and calculating any rebate that may be due for all tax-exempt bonds. The consultant will provide written reports on the arbitrage liability, if any, on an annual basis. The Authority will file all required forms with the Internal Revenue Service and make any required payments when due.

D. Continuing Disclosure Agreement

In order to enable the underwriters of its bonds to comply with SEC Rule 15c2-12, the Authority enters into a Continuing Disclosure Agreement for each bond issue to provide for the timely filing of annual financial information, and material event notifications. Under its existing Continuing Disclosure Agreements, the Authority has agreed to provide, by May 1 of each year, its Audited Financial Statements, Annual Budget, and Financial Summary for the Twelve Months Ended December 31 and its Net Revenue Certification. A Continuing Disclosure Agreement will be executed for each bond issue.

E. Investor Relations

The Authority will maintain current and meaningful financial and other information on its website for the benefit of investors, credit enhancement providers and credit rating agencies. At a minimum, the Authority's investor relations website will contain traffic and revenue statistics, audited financial statements, trustee reports, and financial summaries.

## VI. POST-ISSUANCE COMPLIANCE POLICY

### A. Purpose

This Post-Issuance Compliance Policy (the “Policy”) sets forth policies of the Authority designed to monitor compliance of tax-advantaged obligations ( “Obligations”) issued by the Authority with applicable provisions of the Internal Revenue Code of 1986 as amended (the “Code”) and regulations promulgated thereunder (“Treasury Regulations”).

The Policy documents existing practices and describes various procedures and systems designed to identify on a timely basis facts relevant to demonstrating compliance with the requirements that must be satisfied subsequent to the issuance of Obligations in order that the interest on such Obligations be, or continue to be, or would be but for certain provisions of the Code, excludable from gross income for Federal income tax purposes.

The Authority recognizes that compliance with applicable provisions of law is an ongoing process, necessary during the entire term of the Obligations. Accordingly, analysis of information and implementation of this Policy will require continual monitoring and likely, ongoing consultation with bond counsel. Further policies and procedures may be identified from time to time by Authority staff in consultation with bond counsel and the arbitrage and rebate consultant.

### B. Policy Statement

After Obligations are issued, the compliance process includes a focus on use and investment of proceeds of the Obligations and includes:

- Tracking bond proceeds spending for qualified and nonqualified purposes;
- Maintaining detailed records of expenditures and investments;
- Ensuring that the facilities financed are used in a manner consistent with legal and tax requirements;
- Providing necessary disclosure information regarding financial and operating status;
- Maintaining adequate records.

### C. Organizational Responsibility

The Executive Director has overall responsibility for post-issuance compliance for Obligations issued by the Authority and may delegate such responsibilities to a “Compliance Officer,” who will have primary responsibility for post-issuance compliance to ensure and monitor post-issuance matters with respect to Obligations. The Executive Director shall be responsible for assuring an adequate succession plan for transferring post-issuance compliance responsibility when changes in staff occur.

In the case of Obligations for which the Authority must review and approve requisitions, the Authority’s Finance Department shall review requisitions to assure that proceeds are expended on projects as authorized in the applicable bond documents, that reimbursement of pre-issuance costs are permissible, and to determine when projects are completed and/or placed in service, including for Build America Bonds. The Chief Financial Officer, or designee, shall direct investment of proceeds, review monthly bank statements from trustees or custodians and engage an Arbitrage and Rebate Consultant for each issue of Authority Obligations. The Chief Financial Officer, or designee, shall consult with the Authority’s Bond Counsel if questions should arise.

#### D. Tracking Expenditures and Investment Earnings

The Authority shall maintain detailed records regarding the use and allocation of bond proceeds, including investment earnings, throughout the term of the bonds to ensure compliance with covenants and restrictions set forth in the Tax Certificate relating to the Bonds. The Authority's Accounting System will maintain copies of approved requisitions and invoices for expenditures, as well as investment earnings records, including bank statements. The Finance Department will maintain copies of bank statements if electronic statements are not available.

The Authority's Compliance Officer will monitor the application and use of bond proceeds on an ongoing basis and inform the Executive Director and bond counsel of events relating to use of bond proceeds which may result in issues which must be analyzed for compliance with Federal tax laws.

#### E. Records Retention

The Authority will maintain the following documents for the term of each issue of bonds plus at least three (3) years:

- The bond transcript of proceedings;
- All resolutions, including reimbursement resolutions, and minutes pertaining to the projects financed, if not included in the bond transcript;
- All surveys, feasibility or demand studies and any publications, brochures and newspaper articles with respect to the bonds, if not included in the bond transcript;
- All bond yield computations including supporting certificates and investment records, including trustee records, pertaining to the issue price of the bonds, proceeds of the bonds, investment agreements and related bidding documents, credit enhancement and liquidity documents, swap documents, rebate reports and rebate payments;
- All documents pertaining to the expenditure or granting of bond proceeds for the acquisition, construction or renovation of bond financed property including any trustee records, requisitions, reimbursements, draw schedules, draw requests, construction contracts, invoices, bills, land/project related appraisals, payment records, requisition statements, reimbursement records, cancelled checks, a final schedule of property financed by the bonds and final allocations of bond proceeds;
- All formal elections made for the bond financing (e.g., an election to employ an accounting methodology other than specific tracing);
- All records of trade or business use, purchase, lease, sublease or sale of bond financed property including any leasehold improvement contracts and ownership documentations such as joint venture arrangements, limited liability corporation arrangements or partnership arrangements;
- All management contracts and other service agreements, research contracts, and naming rights contracts;
- All accounting audits for bond financed property;
- All information reports filed for the bonds;
- All documentation pertaining to any prior IRS examination of Authority and/or tax-exempt bonds; and
- All correspondence related to the above including faxes, emails, and letters.

The Authority, in the Tax Certificate and/or other documents pertaining to the bonds that are finalized in connection with the issuance of the bonds, shall designate an employee responsible for retaining the records listed above. Records may be retained in electronic format.

#### F. Arbitrage and Rebate

The Authority will engage the services of an Arbitrage and Rebate Consultant to provide written reports to assist the Authority in monitoring yield on investments and calculating any rebate that may be due. The Consultant will work with the Chief Financial Officer to review the yield on investments to determine if there is a possible rebate liability. If the Consultant provides a written report that rebate is due, the Authority will make any required payments to the IRS and any required filings.

#### G. Credit Enhancement or Other Agreements Relating to Bonds

The Compliance Officer will monitor any extension or alteration of any credit enhancement relating to the Authority's tax-exempt debt or of any changes to other agreements relating to Authority Obligations such as guaranteed investment contracts or derivative products to assure that any changes meet post-issuance compliance requirements. The Compliance Officer will also monitor information relating to the ratings of counterparties to such agreements to assure that provisions of such agreements are fulfilled. The Compliance Officer will report any questions or issues to bond counsel.

#### H. Disclosures and Filings

The Authority will, according to the bond documents, enter into Continuing Disclosure Agreements with the trustee for the applicable Obligations and to comply with continuing disclosure requirements. In addition, the Authority will provide bond documents, as applicable, and copies of reports sent to credit providers and insurance companies and other parties to transactions, as well as financial information. The Authority's bond counsel will be responsible for completing any necessary material event notice filings.

#### I. Continuity and Training

The Compliance Officer will receive periodic training regarding the tax and other requirements applicable to Obligations and provide periodic training to staff with responsibilities relating to the procedures set forth above. Such training will cover the purposes and importance of these procedures. Training may be provided by bond counsel and shall include a review of the IRS Code and the IRS's web site established for the use of the tax-exempt bond community located at:  
<http://www.irs.gov/taxexemptbond/index.html?navmenu=menu1>.

To provide for continuity of compliance with post-issuance debt requirements, the Authority will periodically review this policy but no less frequent than once every two (2) years, to assure that it comports with current law.

#### J. Remedial Action

Should the Authority become aware of events which may affect the permissible use and investment of bond proceeds the Authority will take steps, with advice from bond counsel, to seek remedial action with respect to such events.

## **Interest Rate Swap Management Plan**

### **1. PURPOSE**

This Interest Rate Swap Management Plan sets forth the manner of execution of interest rate swaps and related agreements, provides for security and payment provisions, and sets forth certain other provisions related to interest rate swap agreements between the New Jersey Turnpike Authority ("Authority") and qualified swap counterparties. The Interest Rate Swap Management Plan also outlines procedures to be followed to insure compliance with all applicable federal and state laws. This Interest Rate Swap Management Plan will be reviewed by the Authority no less than once every two (2) years and any changes to this Interest Rate Swap Management Plan will be presented to the Authority's Board of Commissioners for approval. This Interest Rate Swap Management Plan will be made available on the Authority's website, <http://www.state.nj.us/turnpike>.

### **2. BEST INTERESTS OF THE AUTHORITY**

Although adherence to this Interest Rate Swap Management Plan ("Plan") is desirable, deviations from this Plan may be appropriate from time to time to address: (i) changing financial goals; (ii) emerging financial products/debt structures; and (iii) unique market opportunities. As a result, the general best interests of the Authority shall supersede any provision of this Swap Management Plan.

### **3. THE AUTHORITY**

The Authority is a public body corporate and politic of the State Of New Jersey operated under and by virtue of the New Jersey Turnpike Authority Act of 1948, constituting Chapter 454 of the Laws of New Jersey of 1948, as amended and supplemented (the "Act"). Pursuant to Section 5 of the Act, and Section 201 of the General Bond Resolution, the Authority is authorized to enter into interest rate swap transactions as it deems fit in order to obtain lower costs of capital or other advantages associated with this financing technique. The Authority may only enter into a swap transaction in connection with a specifically identified series of Authority bonds issued under its senior lien General Bond Resolution.

### **4. INTEREST RATE SWAP MANAGEMENT GOALS**

The Authority intends to execute interest rate swaps if the transaction can be expected to result in the following:

- A. Hedging to reduced exposure to changes in interest rates on a particular financial transaction;

B. Reduction in interest rate risk in order to maintain from the Authority's overall asset/liability balance;

C. Obtain a lower net cost of borrowing with respect to the Authority's debt; and

D. Manage variable interest rate exposure consistent with prudent debt practices.

The Authority shall not enter into interest rate swaps for speculative purposes or not in connection with a specified bond issue.

## 5. PROCUREMENT OF INTEREST RATE SWAP AGREEMENTS

The Authority will award interest rate swap transactions to one or more qualified counterparties (as herein defined) through competitive or negotiated procurement methods. The general method of procurement and the specific procurement process will be determined based on the prevailing market conditions at the time. Regardless of the procurement method employed, the Authority shall endeavor to obtain the best pricing and execution possible, diversify counterparty exposure and minimize aggregate counterparty risk. To that end, before entering into a transaction, the Authority, with input from its financial advisor and/or swap advisor, will evaluate the prevailing market conditions to determine the optimal procurement process and will evaluate how the proposed transaction would affect the Authority's aggregate counterparty exposure.

## 6. INTEREST RATE SWAP RISK FACTORS

The Authority recognizes that there are certain risks associated with interest rate swap transactions that it will consider prior to entering into each transaction. Such risks include:

A. **Counterparty risk** is the risk that the swap counterparty will not fulfill its obligation to honor its obligations as specified under the contracts. Failure of a counterparty could result in an unplanned change in the expected costs of funds of a particular transaction that could increase debt service costs to the Authority, depending upon the interest rate environment when this occurred.

In order to mitigate against this risk the Authority intends to diversify its counterparties and expects that going forward, no more than 25% of its interest rate swap exposure will be with any one counterparty. An exception will be made for fully collateralized swaps or if market conditions are such that it is not economically feasible to diversify or the interest rate swap market is such that no additional counterparties exist.

In order to diversify the Authority's counterparty risk, and to limit the Authority's credit exposure to any one counterparty, limits will be established by the Executive Director based in part upon the credit rating of the counterparty as well as the relative level of risk associated with each existing interest rate swap transaction.

The Authority shall be authorized to enter into interest swap transactions only with qualified swap counterparties rated at least A1/A+, or equivalent, by any two (2) of the nationally recognized rating agencies (e.g. Moody's, Standard and Poor's, or Fitch); or a "AAA" subsidiary as rated by at least one nationally recognized credit rating agency.

**B.) Termination risk** is the risk that the interest rate swap could be terminated by the counterparty due to any of several events, which may include issuer or counterparty ratings downgrade, covenant violation by either party, bankruptcy of either party, swap payment default by either party, and default events as defined in the issuer's bond indenture.

In order to mitigate against these risks the Authority will require collateral postings from counterparties if the counterparties ratings decline below A2/A and other protection measures. As a general rule, the Authority will not enter into swaps where the counterparty has any optional right of termination.

The Authority shall consider including in all interest rate swap transactions provisions granting the Authority the right to optionally terminate a swap agreement at any time over the term of the agreement. The Executive Director shall determine if it is financially advantageous for the Authority to terminate a swap agreement.

A termination payment to or from the Authority may be required in the event of termination of a interest rate swap agreement due to a default or a decrease in credit rating of either the Authority or the counterparty. It is the intent of the Authority not to make a termination payment to a counterparty that does not meet its contractual obligations. Prior to making any such termination payment, the Executive Director shall evaluate whether it is financially advantageous for the Authority to obtain a replacement counterparty to avoid making such termination payment.

As part of any interest rate swap agreement, the Authority may require collateralization or other credit enhancement to secure any or all swap payment obligations. As appropriate, the Authority may require collateral or other credit enhancement to be posted by each swap counterparty under the following circumstances:

- i. Each counterparty to the Authority may be required to post collateral if the credit rating of the counterparty or parent falls below the A2/A category. Additional collateral for further decreases in credit ratings of each counterparty shall be posted by each counterparty in accordance with the provisions contained in the collateral support agreement to each interest rate swap agreement with the Authority.
- ii. The Collateral shall consist of cash, U.S. Treasury securities and Federal agency securities.

iii. Collateral shall be deposited with a third party trustee, or as mutually agreed upon between the Authority and each counterparty.

iv. A list of acceptable securities that may be posted as collateral and the valuation of such collateral will be determined and mutually agreed upon during negotiation of the swap agreement with each swap counterparty.

v. The market value of the collateral shall be determined on at least a monthly basis.

vi. The Authority will determine reasonable threshold limits for the initial deposit and for increments of collateral posting thereafter.

The Executive Director shall determine on a case by case basis whether other forms of credit enhancement are more beneficial to the Authority

**C. Basis risk** refers to a mismatch between the interest rate received from the interest rate swap contract and the interest actually owed on the Authority's variable rate bonds. Prior to the execution of any interest rate swap, the Authority will undertake any analysis of both the starting basis risk match and the historical basis risk match in order to select an index payment of the interest rate swap and a mode mechanic for the variable rate debt that most closely approximates a zero basis risk profile, while still maintaining the economic advantages of the interest rate swap.

**D. Tax event risk.** All issuers who issue tax-exempt variable rate bonds that trade accept risk stemming from changes in marginal income tax rates. These risks are best mitigated by limiting the amount of variable rate debt as a percentage of the Authority's total debt outstanding. The Authority does not expect to issue more than 20% of its total debt in a variable rate mode of any form.

**E. Rollover risk is** the risk that the swap contract is not coterminous with related bonds. The Executive Director shall determine the appropriate term for an interest rate swap agreement on a case-by-case basis. The slope of the interest rate swap curve, the marginal change in interest rate swap rates from year to year along the interest rate swap curve, and the impact that the term of the interest rate swap has on the overall exposure of the Authority shall be considered in determining the appropriate term of any interest rate swap agreement. In connection with the issuance or carrying of bonds, the term of the interest rate swap agreement between the Authority and a qualified interest rate swap counterparty shall not extend beyond the final maturity date of existing debt of the Authority, or in the case of a refunding transaction, beyond the final maturity date of the refunding bonds. The Authority does not intend to execute interest rate swaps that have rollover risk.

**F. Amortization risk** represents the cost to the issuer of servicing debt or honoring interest rate swap payments due to a mismatch between bonds and the notional



amount of the interest rate swap. The Authority intends to always match the principal amount of bonds with the notional amount of the interest rate swap.

**G. Liquidity risk** refers to the issuer's inability to continue or renew a liquidity facility to assist in the sale of outstanding debt. The Authority will endeavor to provide sufficient liquidity available for swapped debt.

## 7. PAYMENT OBLIGATIONS

Pursuant to Section 201 of the General Bond Resolution, the Authority's payment obligation under any qualified interest rate swap shall be made from the Debt Service Fund.

## 8. LEGAL MATTERS

Each interest rate swap executed by the Authority shall contain terms and conditions as set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, including any schedules and confirmations. The interest rate swap agreements between the Authority and each qualified swap counterparty shall include payment, term, security, collateral, default, remedy, termination, and other terms, conditions and provisions as the Executive Director or his/her designee deems necessary or desirable. The Executive Director is authorized to sign all representations and disclosures as required.

## 9. REGULATORY COMPLIANCE

Following is a list of regulatory requirements imposed at the Federal level with which the Authority shall make every reasonable effort to comply:

**A.) Dodd-Frank Compliance.** Pursuant to the authority of Section 731 of Title VII of Dodd-Frank Act, which includes amendments to the Commodity Exchange Act ("CEA") regarding over-the-counter derivative instruments, regulations were published by the Commodities Futures Trading Commission ("CFTC") that define business conduct between Swap Dealers or Major Swap Participants and their counterparties, including Swap Dealers or Major Swap Participants engaged in transactions with state and local governmental counterparties such as the Authority (referred to in the regulations as "Special Entities"). The new business conduct rules are far ranging and they can impact the Authority on several fronts as the Authority enters into or modifies transactions. The following sections are included in this Swap Management Plan in order to assist the Authority in complying with the CEA as amended by Dodd-Frank:

### (1) Qualified Independent Representative

a) In accordance with the CEA and as amended by Dodd-Frank, the Authority shall select a QIR that meets the following enumerated criteria:

- 
- i. has sufficient knowledge to evaluate the transaction and risks;
  - ii. is not subject to a statutory disqualification;
  - iii. is independent of the interest rate swap provider or major interest rate swap participant. To be independent the QIR must currently not, and was not with a one-year look back, an associated person of the swap dealer; has no principal relationship with the swap dealer, provides timely disclosures of all potential conflicts of interest, complies with procedures designed to manage and mitigate conflicts of interest, is not controlled by, in control of, or under common control with the swap dealer, and was not recommended to the issuer by the swap dealer within one year of the transaction date;
  - iv. undertakes a duty to act in the best interests of the Authority;
  - v. makes appropriate and timely disclosures to the Authority;
  - vi. evaluates, consistent with any guidelines provided by the Authority, fair pricing and the appropriateness of the transaction; and
  - vii. is subject to restrictions on certain political contributions imposed by the CFTC, the SEC, or a self-regulatory organization subject to the jurisdiction of the CFTC or the SEC.
- b) At least annually, or as required by the Board of Commissioners, the Authority shall conduct a review of its QIR to ensure that the QIR still meets the above enumerated criteria. In the event that it is determined that the QIR no longer meets the enumerated criteria, then prior to the execution of any transaction the Authority shall select a replacement QIR that meets the enumerated criteria.
- (2) Written Representations. In order to ensure that the Authority is in compliance with the new regulations imposed by Dodd-Frank, the Authority may, but is not required to, execute a ISDA August 2012 DF Protocol Agreement with its QIR and each Counterparty prior to executing any transactions. If the Authority elects not to execute a ISDA August 2012 DF Protocol Agreement with a counterparty, then the Authority shall provide an alternate form of written representation to such Counterparty that meets all applicable disclosure requirements as required by Dodd-Frank.
- (3) Derivative Clearing Requirement.
- (a) The CEA, as amended by Dodd-Frank, requires that certain derivative transactions, including those commonly entered into by state and local

governmental entities, must be cleared through a derivatives clearing organization unless otherwise exempt from clearing under the "End User Exception" as specified in Section 2(h)(7) of the CEA. In order to qualify for the End User Exception to the clearing requirements of the CEA, the Special Entity must report to the CFTC on either an annual or a transaction-by-transaction basis that it:

(i) is not a financial entity;

(ii) is using swaps to hedge or mitigate commercial risk; and

(iii) will notify the CFTC, in a manner set forth by the CFTC, how it generally meets its financial obligations associated with entering into non-cleared swaps.

(b) The Authority, in consultation with its QIR, shall make its best efforts to comply with the applicable derivative clearing requirements of the CEA as amended by Dodd-Frank.

## **10. SELECTION OF QIR**

The Authority will competitively procure the services of a financial advisor or a swap advisor, whose scope of work shall include swap advisory services which will allow the firm to serve as the Authority's QIR under Dodd-Frank.

## **11. RECORD KEEPING**

Written records noting the status of all interest rate swap agreements will be maintained by the Authority and shall include the following information:

1. Highlights of all material changes to swap agreements or new swap agreements entered into by the Authority since the last report
2. Market value of each of the Authority's interest rate swap agreements.
3. For each counterparty, the Authority shall provide the total notional amount position, the average life of each swap agreement, the available capacity to enter into a swap transaction, and the remaining term of each swap agreement.
4. The credit rating of each swap counterparty and credit enhancer insuring swap payments
5. Actual collateral posting by swap counterparty, if any, per swap agreement and in total by swap counterparty.

6. A summary of each swap agreement, including but not limited to the type of swap, the rates paid by the Authority and received by the Authority, and other terms.
7. results of the default, including but not limited to the financial impact to the Authority, if any.
8. A summary of any swap agreements that were terminated.

## **12. COMPLIANCE WITH ACCOUNTING STANDARDS**

Any interest rate swap agreement entered into by the Authority under this Interest Rate Swap Management Plan shall be described in the Authority's annual audited financial statements in accordance with applicable accounting standards. This Interest Rate Swap Management plan shall be reviewed on an annual basis with the Authority's external auditor and any necessary changes shall be promptly implemented.

## Appendices

### Appendix A: General Consulting Engineer's Approval

**HNTB Corporation**  
The HNTB Companies  
Infrastructure Solutions

9 Entin Road  
Suite 202  
Parsippany, NJ 07054

Telephone (973) 434-3100  
Facsimile (973) 434-3101  
www.hntb.com

November 14, 2016

Mr. Joseph Mrozek  
Executive Director  
New Jersey Turnpike Authority  
P.O. Box 5042  
Woodbridge, NJ 07095-5042



Re: Order for Professional Services No. A3584  
General Consulting Engineering Services  
**Review of Final 2017 Annual Budget**  
**Turnpike Revenue Bond Resolution**

Dear Mr. Mrozek:

In accordance with the provisions of Section 710(a) of the Turnpike Revenue Bond Resolution, adopted August 20, 1991, as amended and restated September 26, 1991 and as Further Amended and Restated as of November 22, 1991, HNTB has reviewed the New Jersey Turnpike Authority Final 2017 Annual Budget.

HNTB hereby approves the New Jersey Turnpike Authority Final 2017 Annual Budget. The Final 2017 Annual Budget includes:

- Operating Expense Budget .....\$528,762,400
- Debt Service Budget .....\$846,462,000
- Charges Fund Budget .....\$155,000
- Maintenance Reserve Fund Spending Budget .....\$132,500,000
- Special Project Reserve Fund Spending Budget ....\$48,438,500
- Supplemental Capital Fund Spending Budget .....\$81,905,000
- General Reserve Fund Spending Budget .....\$286,595,000

In addition, the Final 2017 Annual Budget includes the following deposits:

- Maintenance Reserve Fund .....\$116,751,000
- Special Projects Reserve Fund .....\$39,696,000

We appreciate being of service to you in this regard. Should you have any questions or comments related to our review of this budget, please contact us.

Very truly yours,

Gregory A. LeFrois, PE  
Sr. Vice President and Project Manager

Copy: Ms. Donna Manuelli, CFO

GAL/sb

## Appendix B: Management Salaries

Pay Grade	Job Title	Employee's Name	Annual Salary	Employee's Department
V35	Executive Director	Mrozek, Joseph	\$174,000.00	Executive
U35	General Counsel	Harris, Bruce	\$165,000.00	Law
U35	Chief Engineer	Fischer, Robert J.	\$145,656.02	Engineering
U35	Chief Financial Officer	Manuelli, Donna	\$145,656.02	Finance
U35	Chief Information Officer	Dios, Jose	\$136,909.50	ITS
U35	Chief Operating Officer & DED	O'Hern, John	\$136,909.50	Executive
T35	Director of Human Resources	Garrity, Mary-Elizabeth	\$128,250.50	Human Resources
T35	Director of Internal Audit	Carone, James D.	\$127,353.62	Internal Audit
T35	Director of Maintenance	McGoldrick, Kenneth	\$132,600.00	Maintenance
T35	Director of Operations	Eibel, Henry	\$125,477.29	Operations
T35	Director of Procurement and Materials Management	Ward, Andrea	\$128,250.83	PMM
T35	Director of Tolls	Quirk, Robert B.	\$126,586.99	Tolls
S35	Deputy Chief Engineer - Construction	Williams, James L.	\$134,927.10	Engineering
S35	Deputy Chief Engineer - Design	Keller, John	\$131,090.40	Engineering
S35	Deputy Chief Financial Officer	Varga, Pamela J.	\$131,090.40	Finance
S35	Deputy Director Internal Audit	Walters, Tracey	\$132,044.84	Internal Audit
S35	Deputy Director Maintenance	Perna, William	\$121,975.00	Maintenance
S35	Deputy Director Operations	Dunn, Kevin	\$111,198.36	Operations
S35	Deputy Director Tolls	Roberts, James L.	\$124,473.46	Tolls
S35	Deputy Director Procurement and Materials Management	Wilser, Donna C.	\$121,103.50	PMM
S35	Deputy General Counsel	Tully, Maura K.	\$121,103.50	Law
R35	Assistant Director ITS, Data Performance Management	Ciszewski, Stanley	\$128,457.50	ITS
R35	Assistant Director ITS, Software Engineer	Ding, Ning	\$128,457.50	ITS
N35	Secretary to the Authority	Schurman, Kim	\$86,249.80	Executive
N35	Senior Security Manager	McGowan, Thomas	\$88,459.58	Internal Audit
M35	Assistant Secretary to the Authority	Burns, Lisa	\$68,705.00	Executive
M35	Benefits Manager	Mustillo, James	\$73,962.45	Human Resources
M35	Security Manager	Rosko, Michael	\$65,944.91	Internal Audit
L35	Security Supervisor	Volante, Thomas	\$61,152.64	Internal Audit

Figure 125: Management Salaries

**Appendix C: NJTA Non-Bargaining Salary Scale**

Pay Grade	35 Hours/ week	40 Hours/ week	Minimum Base Annual Salary	Maximum Base Annual Salary	Job Title
B	B35	B40	\$20,913	\$32,938	Confidential Aide
					Human Resources Aide
C	C35	C40	\$23,057	\$36,314	Senior Confidential Aide
					Senior Human Resources Aide
D	D35	D40	\$25,420	\$40,036	Confidential Clerk
					Human Resources Clerk
E	E35	E40	\$28,025	\$44,140	Senior Confidential Clerk
					Senior Human Resources Clerk
F	F35	F40	\$30,898	\$48,644	Confidential Secretarial Aide
					Human Resources Coordinator
G	G35	G40	\$34,065	\$53,652	Human Resources Floater
					Senior Confidential Secretarial Aide
					Senior Human Resources Coordinator
					Security Officer
H	H35	H40	\$37,557	\$59,152	Human Resources Assistant
					Legal Document Support Specialist
					Senior Security Officer
I	I35	I40	\$41,406	\$65,215	Confidential Secretary
					Security Inspector
					Senior Human Resources Assistant
J	J35	J40	\$45,650	\$71,899	Benefits Administrator
					Human Resources Generalist
					Human Resources Office Administrator
					Senior Confidential Secretary
K	K35	K40	\$50,330	\$79,269	Auditor
					Benefits Analyst
					Nurse
					Senior Benefits Administrator
					Senior Human Resources Generalist
					Senior Human Resources Office Administrator
					Senior Security Inspector

Pay Grade	35 Hours/ week	40 Hours/ week	Minimum Base Annual Salary	Maximum Base Annual Salary	Job Title
L	L35	L40	\$55,488	\$87,394	
					Administrative Assistant
					Benefits Supervisor
					Claims Specialist
					Employment Supervisor
					Security Supervisor
					Tolls Investigation Supervisor
M	M35	M40	\$61,176	\$96,352	
					Assistant Secretary to the Authority
					Benefits Manager
					Claims Manager
					Compliance Manager
					Employment Manager
					Executive Assistant
					Manager - Safety Programs
					Security Manager
					Senior Auditor
					Senior Nurse
					Senior Payroll Manager
N	N35	N40	\$67,447	\$106,366	
					Audit Manager
					Case Manager
					Human Resources Manager
					Secretary to the Authority
					Senior Security Manager
					Tolls Investigation Manager
O	O35	O40	\$74,360	\$117,117	
					Maintenance Administrative Manager
					Maintenance Automotive Manager
					Maintenance Financial and Office Manager
					Senior Audit Manager
P	P35	P40	\$81,982	\$129,121	
					Assistant Comptroller
					Manager of Business Admin Software
					Media Relations Coordinator
					Senior Benefits Manager
					Senior Human Resources Manager
Q	Q35	Q40	\$90,385	\$135,577	
					Comptroller
					Equal Employment Opportunity Officer
					Supervising Engineer



Pay Grade	35 Hours/ week	40 Hours/ week	Minimum Base Annual Salary	Maximum Base Annual Salary	Job Title
R	R35	R40	\$97,163	\$142,356	
					Assistant Director of Finance
					Assistant Director HR Policy & Training
					Assistant Director ITS - Data and Performance Management Services
					Assistant Director ITS -- Software Engineering
					Assistant Director of Law
					Assistant Director of Maintenance -- Roadway
					Assistant Director of Maintenance -- Buildings
					Assistant Director Tolls - Technical Services
					Senior Supervising Engineer
S	S35	S40	\$104,207	\$149,474	
					Chief of Staff
					Deputy Chief Engineer - Construction
					Deputy Chief Engineer - Design
					Deputy Chief Financial Officer
					Deputy Chief Information Officer
					Deputy Director of Human Resources
					Deputy Director of Internal Audit
					Deputy Director of Maintenance
					Deputy Director of Operations
					Deputy Director of Procurement and Materials
					Deputy Director of Tolls
					Deputy General Counsel
T	T35	T40	\$111,762	\$156,948	
					Deputy Executive Director
					Director of Human Resources
					Director of Internal Audit
					Director of Maintenance
					Director of Operations
					Director of Procurement and Materials Management
					Director of Tolls
U	U35	U40	\$119,865	\$165,000	
					Chief Engineer
					Chief Financial Officer
					Chief Information Officer
					Chief Operating Officer & DED
					General Counsel
V	V35	V40	\$128,555	\$174,000	
					Executive Director

Figure 126: NJTA Non-Bargaining Salary Scale

- Pay Grades M and above are considered Management job titles.
- Pay Grades L and below are eligible to be compensated at overtime rate when they work beyond regularly scheduled shift or work on an unscheduled day.
- Pay Grades M, N, and O are eligible to be compensated at straight time rate when the employee works beyond his/her regularly scheduled shift or works on an unscheduled day according to the following:
  - A. work performed on non-scheduled days when excess hours are:
    - (1) mandatory; or
    - (2) pre-approved; or
    - (3) as the result of an emergency declared by the Executive Director of the Authority.
  - B. work performed on scheduled days when excess hours are:
    - (1) pre-approved by the Department Head; and
    - (2) exceed one (1) hour. In other words, employees shall be paid for all excess hours worked only if they work more than one (1) hour of excess time.
- Pay Grades P and above are ineligible to be compensated when they work beyond their regularly scheduled shift or work on an unscheduled day.
- No employee can earn an annual salary, with or without longevity, of more than \$174,000

### Appendix D: Statistical Data

#### New Jersey State Highway System

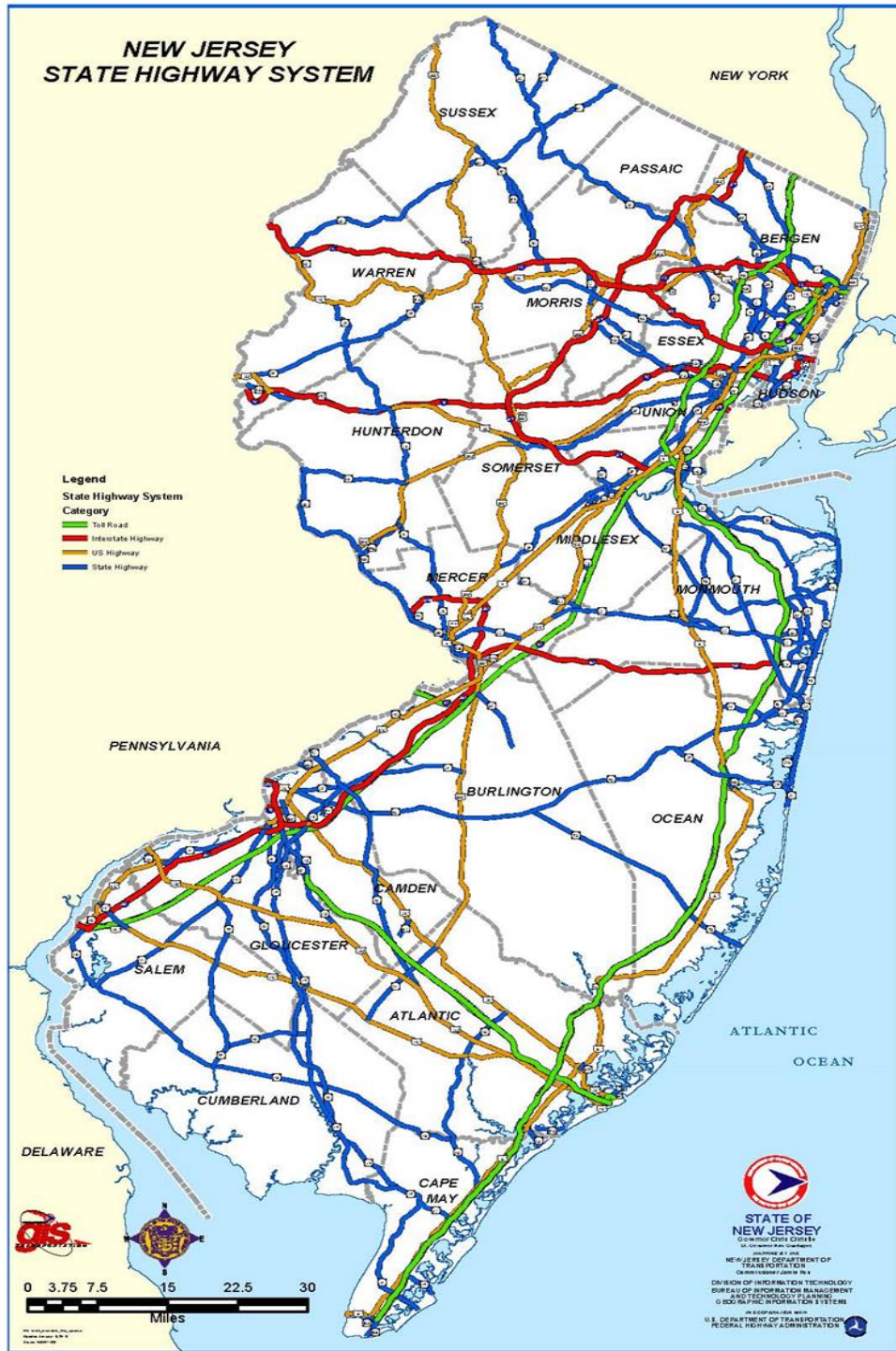


Figure 127: Map of New Jersey State Highway System

### **New Jersey Turnpike Authority**

The Authority operates the State's two busiest toll roads, two of the busiest in the United States -- the New Jersey Turnpike and the Garden State Parkway. These two roadways run through 15 of New Jersey's 21 counties. The two Roadways intersect in Woodbridge Township, Middlesex County and intersect with every interstate and many major roadways across the State. The highways effectively serve as links for the entire State, Air and Sea Ports, and the Northeast Corridor.

### **New Jersey Turnpike**

The Turnpike was the first toll road in New Jersey and the third in the nation when it opened in 1951. It has grown over time from 118 linear miles to 148 linear miles with the addition of the Newark Bay Hudson County Extension (1956), the Pearl Harbor Memorial Turnpike Extension (1956), the Western Spur (1970) and the I-95 Extension (1992). The road has also grown wider over the years. Originally, it was four lanes for its full length. Today, it is as wide as 14 lanes in some areas and as of November 2016 includes approximately 1,819 lane miles. There are 28 toll interchanges and 375 toll lanes -- 145 entry lanes and 230 exit lanes.

This roadway serves as a major corridor for I-95 linking travel:

- 1) Between four states -- New Jersey, New York, Pennsylvania and Delaware;
- 2) Two major cities -- New York and Philadelphia;
- 3) Military roadway use for Joint Base McGuire-Dix-Lakehurst; and
- 4) Access to the port of New Jersey for use in transporting goods for global trade along the east coast.

### **Garden State Parkway**

The Parkway, which opened to traffic in 1954, passes through 10 counties between the Cape May-Lewes Ferry in Cape May County and the New York State Thruway at the New York State line in Bergen County. Originally four lanes wide, the Parkway is now 12 lanes at its widest point in Monmouth and Middlesex counties and has approximately 1,778 lane miles. The Parkway has a total of 359 exit and entrance points.

The Parkway is a major commuter highway throughout the year and during the summer months is the principal travel route to the Jersey Shore. It also provides access to the Delmarva Peninsula via the Cape May – Lewes Ferry.

## Population

The two roadways pass through 15 of New Jersey's 21 counties, they include: Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Mercer, Middlesex, Monmouth, Ocean, Passaic, Salem and Union. Population growth serves as one indicator of roadway usage. The chart below provides the official United States Census Bureau statistics from April 1, 2010 and its estimate as of July 1, 2015. Additionally, Monmouth, Ocean, Atlantic and Cape May counties experience seasonal population growth as the Jersey Shore is a popular destination site for vacationers from neighboring States and around the World. While the State has seen a population growth of 1.9% over the time period measured, the counties served by the Authority experienced above average growth rates with the counties that either roadway passes through increased in population by an average of 2.8%. Whereas counties that neither roadway passes through increased by an average of only 0.5%. These statistics demonstrate the importance of the roadways to the State's overall economic well-being.

County	2015 Population	2010 Population	Increase/ (Decrease)	% Change
Atlantic	274,219	274,549	(330)	-0.1%
Bergen	938,506	905,116	33,390	3.7%
Burlington	450,226	448,734	1,492	0.3%
Camden	510,923	513,657	(2,734)	-0.5%
Cape May	94,727	97,265	(2,538)	-2.6%
Cumberland	155,854	156,898	(1,044)	-0.7%
Essex	797,434	783,969	13,465	1.7%
Gloucester	291,479	288,288	3,191	1.1%
Hudson	674,836	634,266	40,570	6.4%
Hunterdon	125,488	128,349	(2,861)	-2.2%
Mercer	371,398	366,513	4,885	1.3%
Middlesex	840,900	809,858	31,042	3.8%
Monmouth	628,715	630,380	(1,665)	-0.3%
Morris	499,509	492,276	7,233	1.5%
Ocean	588,721	576,567	12,154	2.1%
Passaic	510,916	501,226	9,690	1.9%
Salem	64,180	66,083	(1,903)	-2.9%
Somerset	333,654	323,444	10,210	3.2%
Sussex	143,673	149,265	(5,592)	-3.7%
Union	555,786	536,499	19,287	3.6%
Warren	106,869	108,692	(1,823)	-1.7%
<b>Total</b>	<b>8,958,013</b>	<b>8,791,894</b>	<b>166,119</b>	<b>1.9%</b>
Counties Served by Parkway Only	1,823,079	1,805,438	17,641	1.0%
All Counties Served by Parkway	5,680,150	5,564,163	115,987	2.1%
Counties Served by Turnpike Only	1,912,816	1,868,807	44,009	2.4%
All Counties Served by Turnpike	5,495,668	5,352,983	142,685	2.7%
Counties Served by Both Roadways	3,582,852	3,484,176	98,676	2.8%
Counties Not Served by Either Roadway	1,365,047	1,358,924	6,123	0.5%
<b>Dk Green Parkway</b>	<b>Light Green Turnpike and Parkway</b>		<b>Chartreuse Turnpike</b>	

Figure 128: New Jersey Population by County

## Employment

Employment growth is a key indicator of service and economic growth. The total number of residents who both reside and work in New Jersey is 3,553,070 and the number of residents who commute to work out of state is 554,658. According to the New Jersey Department of Labor and Workforce Development, Bergen, Essex, Hudson, Monmouth and Union counties have shown an increase in employment.

The importance of the Authority's roadways in providing key connections to neighboring states is highlighted by the percentage of residents who work out of state. The chart below indicates the 2009-2013 five year average of where the residences of each county are employed as reported by the New Jersey State Data Center. Overall, 13.5% of New Jersey state workers are employed out of state while more than 79% of employees working out of state are living in counties served by the New Jersey Turnpike. Further, only 7.1% of employees residing in counties that are not directly served by either roadway work out of state.

County	In State	Out of State	% in State	% Out of State
Atlantic	119,725	4,075	96.7%	3.3%
Bergen	339,069	99,542	77.3%	22.7%
Burlington	187,535	30,777	85.9%	14.1%
Camden	187,407	46,332	80.2%	19.8%
Cape May	40,540	2,170	94.9%	5.1%
Cumberland	57,746	1,873	96.9%	3.1%
Essex	294,344	46,334	86.4%	13.6%
Gloucester	109,309	27,399	80.0%	20.0%
Hudson	223,100	96,430	69.8%	30.2%
Hunterdon	58,387	4,840	92.3%	7.7%
Mercer	156,274	16,575	90.4%	9.6%
Middlesex	340,858	45,150	88.3%	11.7%
Monmouth	263,740	35,323	88.2%	11.8%
Morris	227,443	18,688	92.4%	7.6%
Ocean	226,019	9,522	96.0%	4.0%
Passaic	203,593	17,134	92.2%	7.8%
Salem	23,562	4,553	83.8%	16.2%
Somerset	150,450	11,855	92.7%	7.3%
Sussex	68,709	5,266	92.9%	7.1%
Union	227,680	26,555	89.6%	10.4%
Warren	47,580	4,265	91.8%	8.2%
<b>Total</b>	<b>3,553,070</b>	<b>554,658</b>	<b>86.5%</b>	<b>13.5%</b>
Counties Served by Parkway Only	733,892	64,149	92.0%	8.0%
All Counties Served by Parkway	2,243,103	316,582	87.6%	12.4%
Counties Served by Turnpike Only	699,652	191,289	78.5%	21.5%
All Counties Served by Turnpike	2,089,138	439,647	82.6%	17.4%
Counties Served by Both Roadways	1,389,486	248,358	84.8%	15.2%
Counties Not Served by Either Roadway	610,315	46,787	92.9%	7.1%
<b>Dk Green Parkway</b>	<b>Light Green Turnpike and Parkway</b>	<b>Chartreuse Turnpike</b>		

Figure 129: New Jersey In/Out of State Employment by County

With the increase in employment reported by the New Jersey Department of Labor, the State has experienced a steady decline in unemployment since 2011.

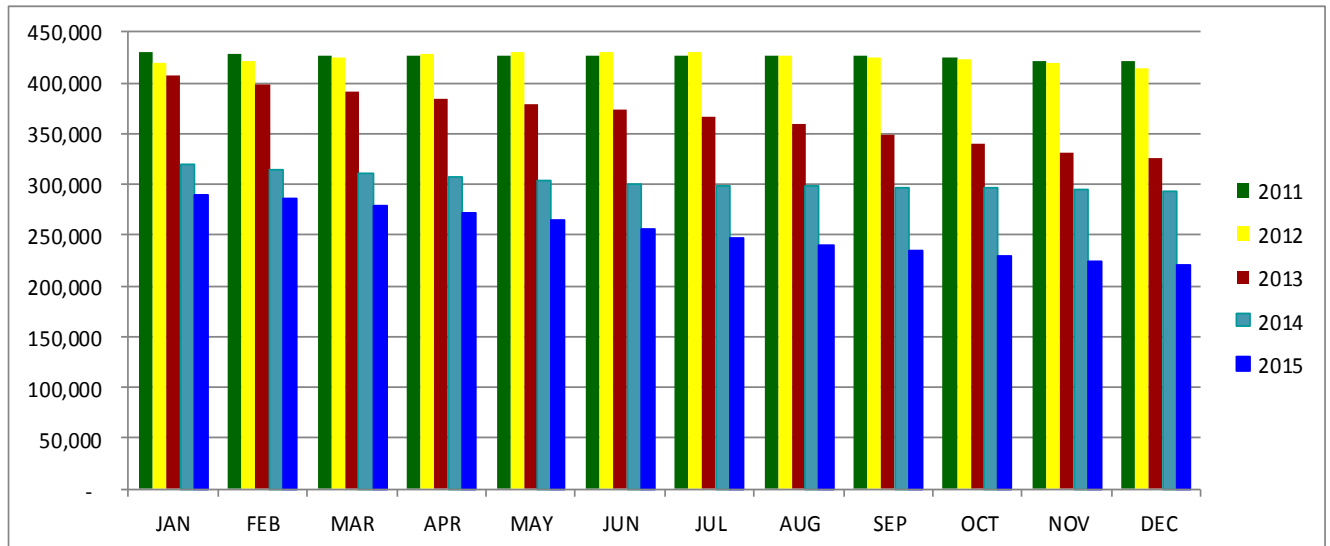


Figure 130: New Jersey Employment Totals (2011-2015)

Employment in the 21 counties in New Jersey increased 58,900 and unemployment decreased by 33,750 between 2014 and 2015. The county reporting the largest increase in employment was Bergen, which reported an increase of 7,100 jobs. Bergen was followed by Middlesex at 5,750, Hudson 5,300 and Essex 4,650. The top 4 counties reporting a decrease in unemployment were Essex, which reported a decrease of 3,300 unemployed, followed by Middlesex at 3,100, Hudson at 3,050 and Bergen at 2,700.

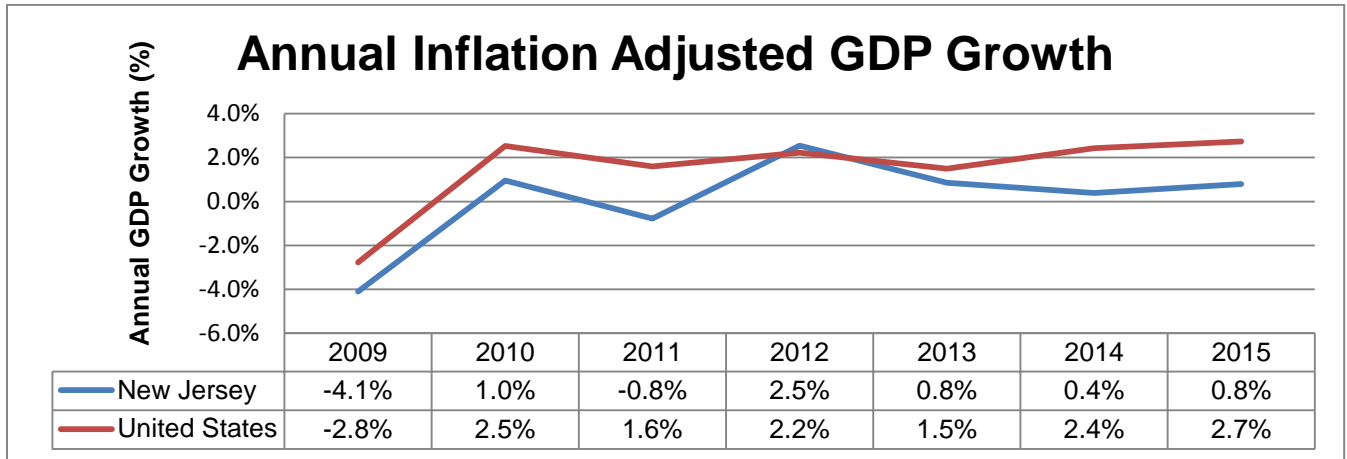
County	2014			2015		
	Employed	Unemployed	Change	Employed	Unemployed	Change
Atlantic County	119,300	13,800	(700)	118,600	12,500	(1,300)
Bergen County	453,700	25,750	7,100	460,800	23,050	(2,700)
Burlington County	217,350	14,650	3,100	220,450	12,700	(1,950)
Camden County	236,400	19,150	3,350	239,750	16,800	(2,350)
Cape May County	43,050	5,900	650	43,700	5,550	(350)
Cumberland County	60,550	6,650	350	60,900	6,100	(550)
Essex County	346,250	29,600	4,650	350,900	26,300	(3,300)
Gloucester County	138,250	10,600	1,950	140,200	9,200	(1,400)
Hudson County	334,600	23,250	5,300	339,900	20,200	(3,050)
Hunterdon County	63,200	3,150	850	64,050	2,850	(300)
Mercer County	183,400	11,150	4,000	187,400	10,000	(1,150)
Middlesex County	406,150	25,950	5,750	411,900	22,850	(3,100)
Monmouth County	309,100	19,550	4,250	313,350	17,250	(2,300)
Morris County	250,900	12,950	3,400	254,300	11,650	(1,300)
Ocean County	246,250	19,050	3,350	249,600	16,750	(2,300)
Passaic County	228,250	20,150	3,650	231,900	17,900	(2,250)
Salem County	28,850	2,600	500	29,350	2,300	(300)
Somerset County	165,100	8,900	2,200	167,300	8,050	(850)
Sussex County	73,750	4,900	1,000	74,750	4,250	(650)
Union County	260,100	19,000	3,550	263,650	17,100	(1,900)
Warren County	53,900	3,500	650	54,550	3,100	(400)
<b>Grand Total</b>	<b>4,218,400</b>	<b>300,200</b>	<b>58,900</b>	<b>4,277,300</b>	<b>266,450</b>	<b>(33,750)</b>

Figure 131: New Jersey Employment by County



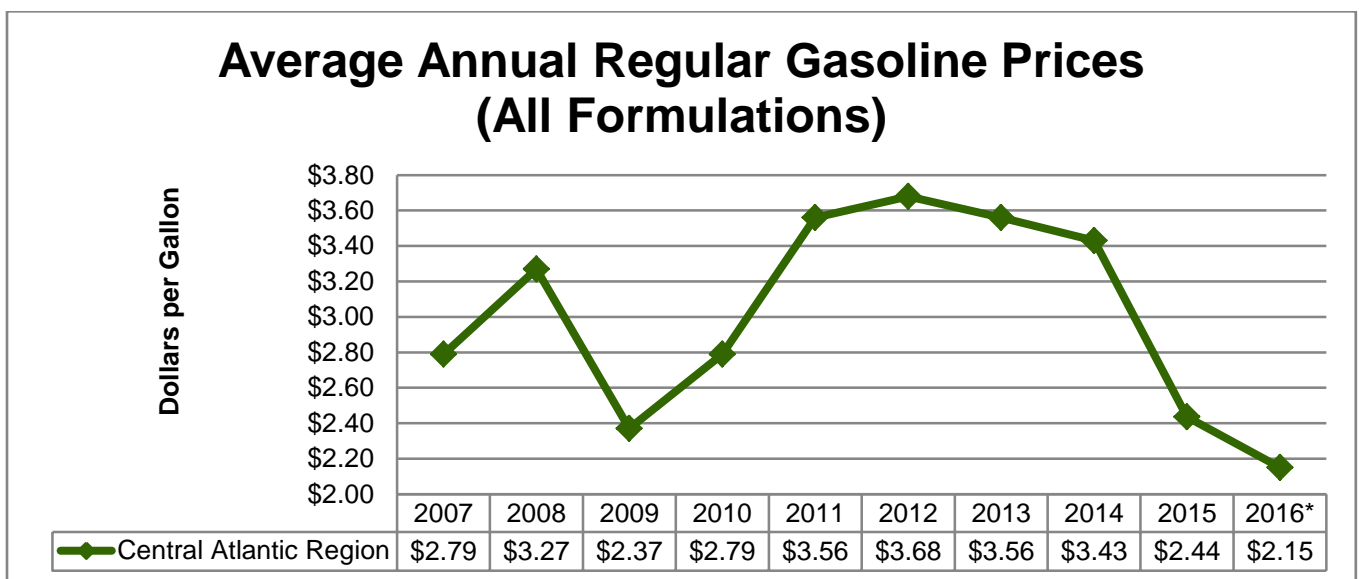
**Economic Indicators**

The latest estimates of state and national GDP growth released by the Bureau of Economic Analysis are for 2015. New Jersey has now seen four consecutive years of growth in the state's gross domestic product since contractions in 2009 and 2011. However, New Jersey's GDP growth continues to lag behind that at the national level since emerging from the recent recession at the end of 2009.



**Figure 132: Annual Inflation Adjusted GDP Growth (2009-2015)**

The average price for regular grade gasoline reached a 10 year low in 2016. According to projections from the U.S. Energy Information Administration (EIA) the average annual price for regular grade gas will rise to a national average of \$2.26 per gallon in 2017. This would reverse the previous four year trend of declining gas prices. New Jersey is included in the EIA's Central Atlantic Region (PADD 1B), where gas prices have closely tracked the national average for the past 10 years. Even if fuel prices rise to \$2.26 they will still be lower than any period in the last ten years other than last year.



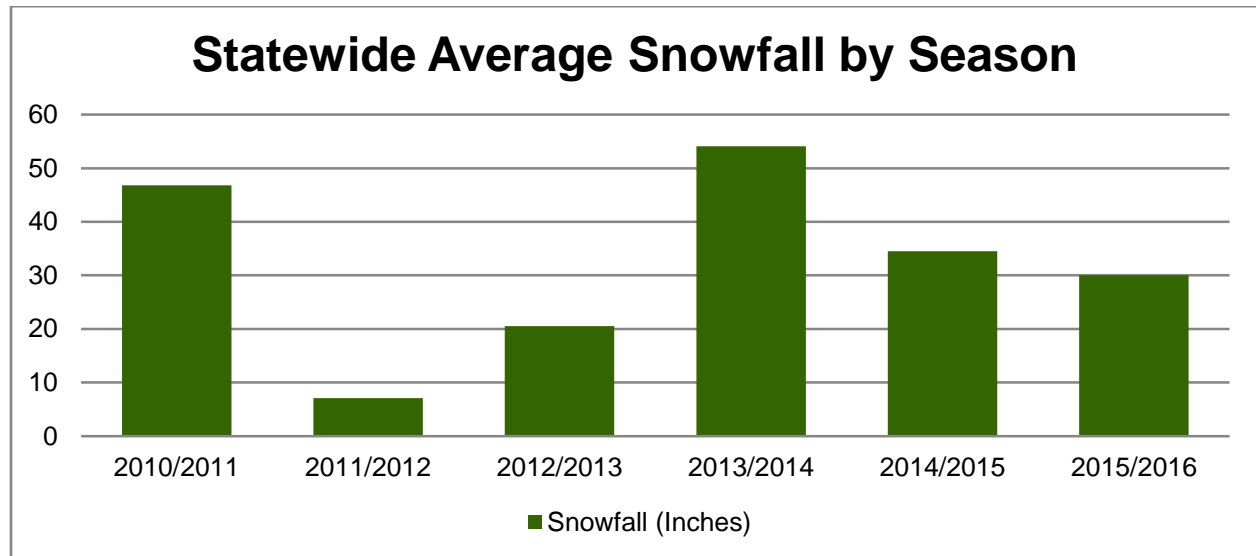
\*2016 is through October

**Figure 133: Average Annual Regular Gasoline Prices (2007-2016)**



**Weather**

Snowfall can have a major effect on the Authority’s Operating Budget for the fiscal year. In 2016, the Authority spent approximately \$22 million on snow removal, the 5<sup>th</sup> highest total in the Authority’s history. After two consecutive years of record expenditures on snow fall removal, 2014 spending of \$43 million and 2015 spending of \$46 million, 2016 was a comparably lighter year in both snowfall totals and spending. The 2015-2016 winter was the 5<sup>th</sup> mildest winter in New Jersey history. According to annual snowfall totals compiled by the New Jersey State Climatologist, snowfall has varied wildly over the previous five winter seasons. The Authority changed its method of calculating the snow removal budget in 2016 in an effort to account for the high variance in snow removal costs.



**Figure 134: Statewide Average Snowfall by Season (2011-2016)**

## Glossary

**ACCRETION** – Accumulation of capital gains on discount bonds.

**ACCRUAL BASIS** – Accounting practice in which expenses and income are accounted for as they are earned or incurred.

**AMORTIZATION** – Gradual repayment of debt over a period of time.

**ANNUAL BUDGET** – Includes the Authority's Revenue Budget, Operating Budget, Debt Service Fund budget, Charges Fund Budget, Maintenance Reserve Fund Budget, Special Project Reserve Fund Budget, General Reserve Fund Budget, and Supplemental Capital Fund Budget.

**ANNUAL PROCUREMENT PLAN** – Active document listing all of the Authority's procurement contracts necessitating board approval for the current fiscal year.

**APPROPRIATIONS** – A sum of money or total of assets devoted to a specific purpose.

**ARBITRAGE** – The simultaneous purchase and sale of an asset in order to profit from a difference in price.

**AUCTION AGENT** – A financial institution responsible for conducting the auction used in connection with the periodic interest rate reset and remarketing of the Authority's bonds.

**AUDITED YEAR-END FINANCIAL STATEMENTS** – The Authority's end of fiscal year financial statements reviewed and audited by an independent auditor.

**BASIS OF ACCOUNTING** – The method of accounting used to track and report revenues and expenses, for example, cash or accrual.

**BONDS** – A written guarantee to pay a principal amount and/or interest at a specified date or dates known as the maturity date(s).

**BOND COVENANTS** – The Authority's contractual obligations set forth in issued bond contracts.

**BOND INSURANCE** – Insurance purchased by a bond issuer that guarantees the repayment of principal and all associated interest payments to the bondholders in the event of a default.

**BOND RATING** – An assessment of the credit risk with respect to a specific bond issue.

**BOND RESOLUTION** – The agreement that defines the Authority's obligations and requirements when issuing new-money bonds.

**BROKER/DEALER** – A financial institution responsible for both buying and selling securities for the Authority.

**BUDGET** – Plan of coordinating estimated expenses and income for a given period of time.

**CALL** – An option contract giving the owner the right to buy a specified amount of an underlying security at a specified price within a specified time.

**CALL OPTION VALUE** – The present value of a call option in light of present market conditions.

**CAPITAL ASSETS** – Land and improvements, easements, building and improvements, vehicles, machinery, equipment, infrastructure, and all other tangible and intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period.

**CAPITAL EXPENDITURE** – The costs in the acquisition of fixed assets and the non-recurring expenditures for the preservation, replacement, repair, renewal, reconstruction, modification or expansion of the roadway.

**CAPITAL IMPROVEMENT PROGRAM** – The Authority's 10 year, \$7 billion program to increase investment in projects focused on capacity, state of good repair, safety and security. The program is funded by the issuance of Turnpike Revenue Bonds, of which \$6.75 billion worth of bonds have been issued.

**CAPITALIZED INTEREST** – A portion of the proceeds from the issue of Turnpike Revenue Bonds set aside to pay interest on those bonds for a set period of time.

**CAPITALIZATION** – Recordation of a cost as an asset, rather than an expense. This approach is used when a cost is not expected to be entirely consumed in the current period, but rather over an extended period of time. The asset is recorded on the Authority's balance sheet and depreciated over its useful life.

**CAPITALIZATION POLICY** – The Authority's policy on allowable levels of asset capitalization.

**CASH FLOW** – The net amount of cash and cash-equivalents moving into and out of the Authority.

**CHARGES FUND** – Fund held for the purpose of paying accrued fees and charges of any credit issuer, remarketing agent, and tender agent not otherwise paid as an operating expense.

**COMMISSIONERS** – The eight members of the Authority's governing Board of Commissioners. Commissioners are appointed by the Governor of New Jersey.

**CONSTRUCTION FUND** – Fund created for the purpose of paying all costs of acquiring or constructing new projects and for the capital improvements of the roadway.

**COUPONS** – The interest rate stated on a bond when it is issued.

**CREDIT QUALITY** – An assessment of the credit risk with respect to a specific investment.

**CREDIT RATING AGENCY** – A company that assigns credit ratings for debt financed securities, assessing their credit quality.

**CURRENT PAY INTEREST BOND** – A bond that pays interest at regular intervals.

**DEBT COVERAGE COVENANTS** – The Authority's debt coverage obligations as defined by its Bond Resolution.

**DEBT FINANCING** – Raising money for working capital or capital expenditures by selling bonds.

**DEBT ISSUANCE** – The process of raising funds through the issue of bonds.

**DEBT RESERVE FUND** – Fund created to hold an amount equal to the greatest amount of interest accruing on all outstanding bonds in a calendar year to ensure full and timely payments to bond holders.

**DEBT RESERVE REQUIREMENT** – The amount required to be held in the Debt Reserve Fund under the Authority's Bond Resolution.

**DEBT SERVICE** – Payment of principal, interest and other obligations associated with the retirement of debt.

**DEBT SERVICE BUDGET** – Amounts held to pay the principal and accrued interest due on all outstanding bonds.

**DEBT SERVICE COVERAGE RATIO** – A measure of the Authority's cash flow available to pay current debt obligations; the ratio of cash available for debt servicing to interest, principal and lease payments.

**DEPARTMENT** – A major administrative division of the Authority that has overall management responsibility for an operation or group of related operations within a functional area.

**DEPARTMENTAL REQUEST** – This request represents the various departmental budgets to be presented to the budget section of the Finance Department.

**DEPRECIATION** – Allocation of the cost of a tangible asset over its useful life.

**ELECTRONIC TOLL COLLECTION** – An electronic means for motorists to pay toll charges without using coins or currency. Motorists attach an electronic signal device, known as a transponder, on their windshield to automatically deduct the toll charge as they drive through a toll plaza.

**E-ZPASS** – Brand name by which the New Jersey Turnpike Authority collects toll electronically.

**FAIR MARKET VALUE** – The accurate valuation or assessment of an asset's worth.

**FEDERAL SUBSIDY FOR BUILD AMERICA BONDS** – A federal subsidy of payable interest on bonds issued by state or local government agencies to raise necessary capital to pursue infrastructure improvements.

**FIDUCIARIES** – A party legally appointed and authorized to hold assets in a trust for another party.

**FISCAL YEAR** – The New Jersey Turnpike's fiscal year is January 1 through December 31. This is the period used for the annual operating budget and the reporting of financial position and results of operations of the Authority. The State of New Jersey's fiscal year is July 1 through June 30.

**FIXED CREDIT SPREAD** – The fixed spread between a benchmark interest rate and floating rate notes.

**FIXED RATE** – An interest rate that does not change over the life of a credit security.

**FIXED SWAP RATE** – The fixed rate that the receiver of floating rate notes demands in an interest rate swap.

**FLOATING RATE NOTES** – A debt instrument with a variable interest rate tied to a benchmark interest rate.

**FULL-TIME EMPLOYEE** – A full-time employee's work is based on a 35 hour or a 40-hour work week for 52 weeks depending on job title and function.

**FUND** – An account established to hold money for specific programs, activities or objectives.

**FUND BALANCE** – Represents the difference between fund assets and fund liabilities at year-end. For budgetary presentation purposes, fund balance excludes capitalized assets.

**GENERAL RESERVE FUND** – Used to make payments under any agreements with the State of New Jersey or for any other corporate purpose. The General Reserve Fund includes the Supplemental Capital Fund, which was established only for budgetary purposes.

**GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB)** – The source of generally accepted accounting principles (GAAP) used by State and Local governments in the United States.

**HEADCOUNT** – A statement or description of the number of employees for a specific time period in each department.

**INELASTIC** – Insensitive to changes in price or income.

**INFRASTRUCTURE** – The roads and facilities needed for daily operation.

**INTERCHANGE**– A road junction that uses one or more ramps to allow traffic on one highway to pass through a junction without directly crossing any other traffic stream.

**INTEREST INCOME** – The Authority's income from interest and investments.

**INTEREST RATE SWAP** – An agreement between two parties where one stream of future interest payments is exchanged for another based on a specified principal amount.

**LANE MILES** – The total length of a road multiplied by the number of lanes. For example a 6-lane road that is 10 miles long has a total of 60 lane miles.

**LIMITED ACCESS TOLL ROAD** – A toll highway system in which the user pays tolls at plazas along the toll road.

**MAINTENANCE RESERVE FUND** – Used to pay for the cost of major resurfacing, replacement or reconstruction of the Turnpike System and major or extraordinary repairs, renewals or replacements of the Turnpike System necessary to restore or prevent physical damage to the Turnpike System, for the safe and efficient operation of the Turnpike system or to prevent loss of Pledged Revenues.

**MILE POSTS** – A marker set up to indicate a distance from a particular point.

**NET REVENUE REQUIREMENT** – The minimum net revenue level allowed under the Authority's Bond Resolution.

**NET REVENUE** – The Authority's total revenue less its operating expenses for the fiscal year, interest paid, depreciation and taxes.

**NEW JERSEY TURNPIKE AUTHORITY ACT** – 1948 Act enacted by the State of New Jersey creating the New Jersey Turnpike Authority and bestowing ownership and operational authority over the New Jersey Turnpike upon the Authority.

**OPERATING BUDGET** – The Authority's Operating Budget consists of funds for Maintenance, Engineering, Toll Collection, State Police and Traffic Control operations, Integrated Technology Services, and General and Administrative Services.

**OTHER POSTEMPLOYMENT BENIFITS (OPEB)** – are benefits (other than pensions) that the Authority provides to retired employees. These benefits principally involve health care benefits.

**OUTSTANDING DEBT** – The as-of-yet unpaid portion of the Authority's previously issued Turnpike Revenue Bonds.

**PAYING AGENT** – An agent who accepts payment from the Authority and then distributes those payments to the holders of the Authority's bonds.

**PLEGGED REVENUES** – Includes, among other things, all toll revenues, fees, rents, charges and other income and receipts derived from the operation of the Turnpike System.

**PNC BANK ARTS CENTER** – an outdoor amphitheater in Holmdel, NJ. Owned by the Authority, and leased and operated by Live Nation.

**POLLUTION REMEDIATION LIABILITY RESERVE** – Fund maintained to meet the obligations of the Government Accounting Standards Board’s pollution remediation policy.

**PRELIMINARY BUDGET** – The draft of the Authority’s fiscal year budget of operating expenses and reserves submitted to the Trustee for examination and approval.

**PROCUREMENT** – The buying of supplies and materials as needed for project completion.

**REGISTRAR** – An institution responsible for keeping records of the Authority’s bondholders.

**REMARKETING** – A formal underwriting of the Authority’s Revenue Bonds for which the form or structure is being changed.

**RESERVE** – Funds set aside to pay future liabilities.

**REVENUE FUND** – General operating fund of the Authority. The fund is used to account for all pledged revenues and operating expenses.

**REVENUE REQUIREMENT** – Requirement under the Authority’s Bond Resolution establishing Net Revenue Requirements.

**REVENUES** – All tolls, fees, charges, rents and other income and receipts derived from the operation of the Turnpike and Parkway. Revenues also include investment income from any monies or securities and the Federal Subsidy for Build America Bonds.

**SERIAL BONDS** – A bond issue in which a portion of the outstanding bonds matures at regular intervals until eventually all the bonds eventually mature.

**SHORT TERM INTEREST RATES** – The interest rates on loan contract or other debt instruments with a maturity of less than one year.

**SPECIAL PROJECT RESERVE FUND** – Used to pay for any major resurfacing, renewals or replacements of the Turnpike System and for studies, surveys, estimates and investigations.

**STANDBY AGREEMENT** – An agreement between the Authority and its Revenue Bond underwriters that the underwriters are responsible for any unsold portion of a bond issue.

**SUBORDINATE BOND ANTICIPATION NOTES** – A short-term interest-bearing security issued by the Authority in advance of a larger bond issue.

**SUPPLEMENTAL CAPITAL FUND** – 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.

**SWAP DEALER** – An individual who acts as a counterparty in a swap agreement for a fee.

**TENDER AGENT** – The financial institution responsible for coordinating the process of soliciting bondholders for the issue of the Authority’s bonds.

**TERMINUS** – The end of the roadway.

**TOLL** – A fee for usage or passage over a toll roadway.

**TOLL BOOTH** – A booth on a highway where tolls are taken.

TOLL COLLECTOR – An employee hired to take tolls manually from customers.

TOLL REVENUE – The revenue from the tolls collected by the Authority. It is the main source of revenue for the Authority.

TOLL TRANSACTION – A passenger or commercial vehicle that passes through a toll plaza causing a toll to be collected.

TOTAL DEBT SERVICE – The total cash amount required to repay the interest and principal due on the Authority's issued bonds for the fiscal year.

TOTAL REQUIREMENTS COVERAGE RATIO – A measure of the Authority's cash flow available to meet all financial requirements for the fiscal year, including debt service, debt reserve and revenue requirements.

TOTAL REVENUE – Includes the Authority's Toll Revenue, E-Z Pass Fees, Concessions Revenue, Miscellaneous Revenue, Federal Subsidies, Interest Income, and Arts Center Revenues.

TRANSPONDER – An electronic device placed in a vehicle to communicate through radio signals with the toll plaza collection equipment as the vehicle passes through the lane, making a record of a paid toll.

TRUE INTEREST COST – The actual cost of issuing a bond including all ancillary fees and costs.

TRUSTEE – The Authority's Trustee is Bank of New York Mellon. The Authority's Co-Trustee is US Bank.

USEFUL LIFE – The period of time for which the asset will be economically feasible for use.

VARIABLE RATE DEBT – A tax-exempt short-term investment instrument based on the Authority's long-term bonds.

## Acronyms

**ADA** Americans with Disabilities Act  
**AIX** Advanced Interactive Executive  
**ATMP** Advanced Traffic Management Program  
**CAAD** Computer Aided Architecture Design  
**CAFR** Comprehensive Annual Report  
**CEA** Commodity Exchange Act  
**CFTC** Commodities Futures Trading Commission  
**CIP** Capital Improvement Program  
**CQI** Continuous Quality Initiative  
**CSC** Customer Service Center  
**CVI** Commercial Vehicle Inspection  
**DED** Deputy Executive Director  
**DF** Dodd-Frank Act  
**DWDM** Dense Wavelength Division Multiplexing (fiber optic communications)  
**EEO** Equal Employment Opportunity  
**EGIS** Enterprise Geographic Information System  
**ERP** Enterprise Resource Planning  
**ESW** Emergency Safety Warnings  
**ETC** Electronic Toll Collection  
**FTE** Full Time Employees  
**GAAP** Generally Accepted Accounting Principles  
**GASB** Government Accounting Standards Board  
**GDP** Gross Domestic Product  
**GFOA** Government Finance Officers Association  
**GIS** Geospatial Information System  
**GSAC** Garden State Arts Center  
**GSOR** General Staff Operational Requirements  
**GSP** Garden State Parkway  
**GWB** George Washington Bridge  
**HCM** Human Capital Management  
**HR** Human Resources  
**HVAC** Heating, Ventilation, and Cooling  
**IP** Internet Phone  
**IRS** Internal Revenue Service  
**ISDA** International Swap and Derivatives Association  
**ITS** Integrated Technology Services  
**LAN** Local Area Network  
**LED** Light Emitting Diode  
**NBHCE** Newark Bay Hudson County Extension  
**NCGAS** National Council on Governmental Accounting Statements  
**NJDOT** New Jersey Department of Transportation  
**NJTA** New Jersey Turnpike Authority  
**OCIP** Owner Controlled Insurance Program  
**OPEB** Other Post-Employment Benefits  
**OPRA** Open Public Records Act



**OPS** Order for Professional Services  
**PANYNJ** Port Authority of New York and New Jersey  
**PDQ** Portable Dock Scissor Lift  
**PERS** Public Employees Retirement System  
**PNC** Pittsburgh National Corporation  
**PTC** Pennsylvania Turnpike Commission  
**QIR** Qualified Independent Representative  
**QPL** Quality Products List  
**RFP** Request for Proposal  
**RFQ** Request for Quotation  
**ROW** Right of Way  
**RWIS** Road Weather Information System  
**SAN** Storage Area Network  
**SBE** Small Business Enterprise  
**SEC** Securities and Exchange Commission  
**STMC** State Transportation Management Center  
**TIC** True Interest Cost  
**TCO** Total Cost of Ownership  
**TCP** Transportation Capital Program  
**TOC** Traffic Operations Center  
**TPA** Third Party Administrator  
**TMC** Transportation Management Center  
**UPS** Uninterruptible Power Supply  
**VMS** Variable Messaging System  
**VPC** Vehicle Processing Center  
**WAN** Wide Area Network  
**WMS** Warehouse Management System